

- **Introduction to syntax**
- **The X' model of phrase structure**

Background preparation:

- *Video - "What makes a basic sentence?" (up to 6:35)*

0. Checking in

- **Article summary** due **Th Nov 2** — any questions, clarifications, discussion?

0. Today's plan

Topics for today's discussion:

- Context: Morphology and syntax
- Clauses and phrases
 - Subject and predicate
- Phrases and their structure
 - NP, VP, PP
 - The X' schema — English vs. Japanese
- The sentence (clause) as a phrase (IP)
- Embedded sentences (CP)

1. Context: Morphology and syntax

- *Review:* **Morphology** — the structure of words and their subparts
 - **Morphemes** as minimal sound-meaning correspondences, stored in the mental lexicon
 - Rules for inflection, derivation, and other kinds of **word-formation**
 - Involves a lot of **irregular behavior**
 - Individual morphemes can be stored with unpredictable information (such as exceptional rules, or exceptions to rules)

1. Context: Morphology and syntax

- *New topic:* **Syntax** — the structure of phrases and sentences; that is, structure *above* the word level
 - Words combine together into **phrases**, which combine into **sentences** (is a sentence a type of phrase? what is a phrase?)
 - Syntax is highly **systematic** and regular
 - Speakers can create (and understand) new sentences based on their structure

1. Context: Morphology and syntax

- The boundary is **not sharply defined** between **morphology** (word-internal structure) and **syntax** (structure of word combinations)
 - It is not always easy to tell when we have a complex word vs. a combination of words
 - Sometimes, a bound form (not a word) may occupy its own position in the syntactic structure
- As we examine the syntax of Japanese, we may find some of these “gray areas”

1. Context: Morphology and syntax

Insights from syntax — for learning Japanese

- Why is Japanese sentence structure ‘backward’ from that of English?
- Why can the words in a Japanese sentence occur in so many different orders? Why/how can subjects and objects and other phrases be omitted?
- How does looking at the *structure of sentences* help us understand when we can use certain kinds of honorific forms?

1. Context: Morphology and syntax

Insights from Japanese — for research in syntax

- We've already raised the question of whether the inventory of word classes is universal
- Now we can also consider: What aspects of the syntactic structure of languages are universal?
What aspects are language-particular?
 - Japanese syntax has played a large role in this debate

2. Clauses and phrases

- The “Ling Space” video focused on some big-picture concepts related to clauses (sentences) and phrases
 - What are the **two main parts** of a sentence?
 - What is the evidence that we should think of these as consisting of **phrases** rather than just single words?
 - What is the **structure of a sentence** itself? Is a sentence a type of *phrase* in the technical sense?
- Let's consider these questions one at a time

2. Clauses and phrases

- What are the **two main parts** of a sentence?

2. Clauses and phrases

- What are the **two main parts** of a sentence?
 - **Subject** and **predicate**
- How can we define these concepts?
 - Video suggests, as an initial attempt:
 - subject “points to the sentence’s topic”
 - predicate “says something about the subject”
 - We need to be more precise here...
 - *subject* and *topic* are not the same
 - we saw last time that subject isn’t always “doer of an action” (Agent) either

2. Clauses and phrases

- What are the **two main parts** of a sentence?
 - **Subject** and **predicate**
- How can we define these concepts?
 - Last time we saw some **positional** and **morphological** diagnostics for subjects
 - Eng: Subject occurs (close) before the verb
 - Jpn: Subject can be marked with *-ga*
 - Word/phrase category:
 - Subject as a **noun phrase**
 - Predicate as “more often than not” a **verb phrase**

3. Phrases and their structure

- **noun phrase (NP)** — structural grouping of words that have a **noun (N)** as their **head**

English:

- *friends*
- *my friends*
- *friends from high school*
- *my important friends from high school*

Japanese:

- *tomodati*
- *watasi/boku-no tomodati*
- *kookoo kara no tomodati*
- *watasi/boku-no kookoo kara-no daizi-na tomodati*

- Even a single noun can be a noun phrase
 - These examples can go in the same positions
 - Try: Subject, direct object, etc.

3. Phrases and their structure

- **verb phrase (VP)** — structural grouping of words that have a **verb (V)** as their **head**

English:

- *danced*
- *fell*
- *read a book*
- *gave a book to a friend*

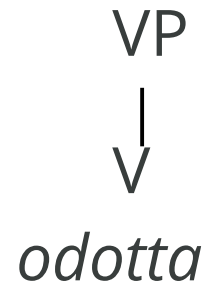
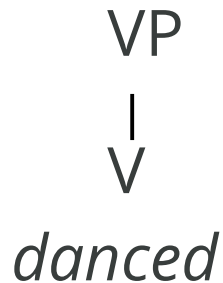
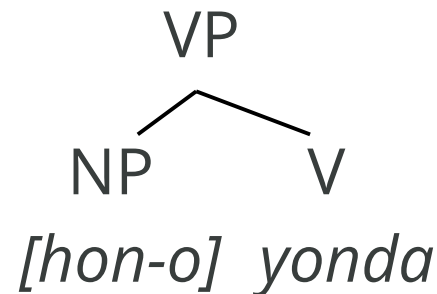
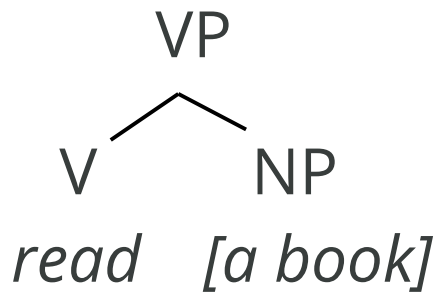
Japanese:

- *odotta*
- *otita*
- *hon-o yonda*
- *tomodati-ni hon-o ageta*

- Even a verb on its own can be a verb phrase

3. Phrases and their structure

- Proposal: The head (**V**) can combine with a phrase (called its **complement**; often NP or PP) to form a **VP**
 - A verb can also form a VP with no complement



3. Phrases and their structure

- Another category of phrase: the **PP**
 - **P** = *preposition* in English
postposition in Japanese

English:

- *from high school*
- *until tomorrow*
- *with this pen*

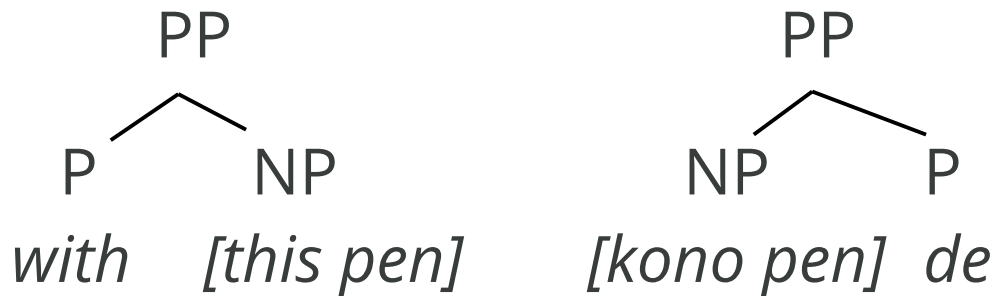
Japanese:

- *kookoo kara*
- *asita made*
- *kono pen de*

- What word is the **head** of a PP?

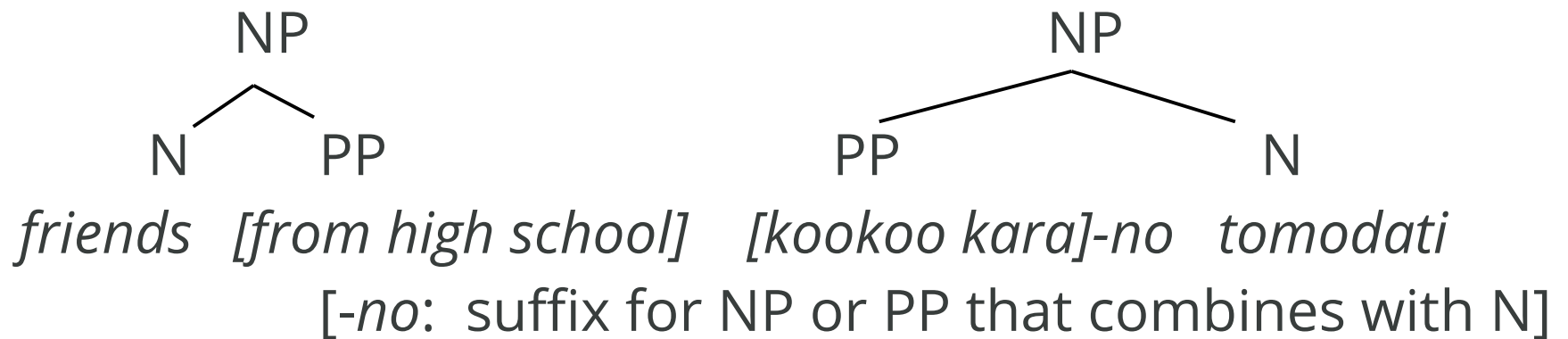
3. Phrases and their structure

- Note the similarity between the VP and PP structures that we've proposed for both languages!
 - The head (**P**) can combine with a NP (called its **complement**) to form a PP

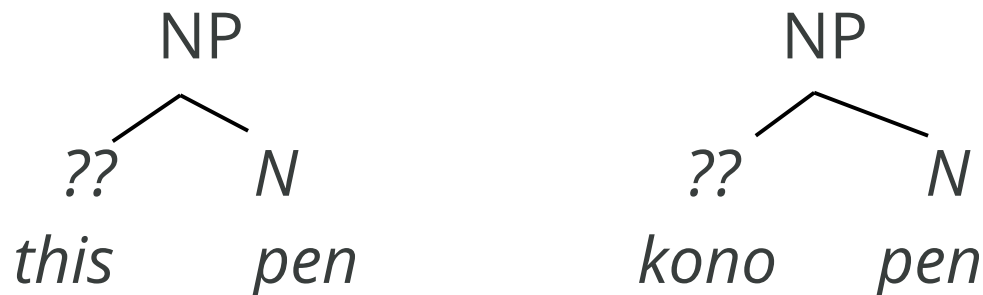


3. Phrases and their structure

- NPs also fit this general pattern: head (**N**) plus a phrase (often PP) as its **complement**



- But what about these NPs?



3. Phrases and their structure

- And these?

?? *N* *PP*
my *friends* *[from high school]*

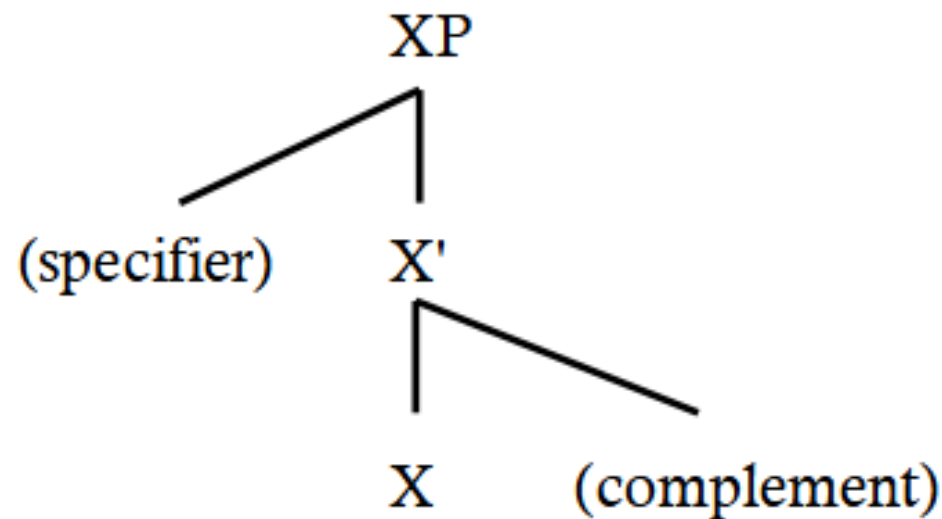
?? *PP* *N*
watasi-no *[kookoo kara]-no* *tomodati*

- Evidence for an **additional layer** of structure

3. Phrases and their structure

- A general model of phrase structure: the **X' schema** (pronounced “X-bar”) (see also [handout](#))

For English:



- **X = head** (N, V, P, etc.) → determines phrase type
- **Complement** we have seen
- **Specifier**: For NP, this can be an **article**, **demonstrative**, or **possessor**

3. Phrases and their structure

- Can all phrase types have specifiers?
 - Yes!
 - But we will only be looking at NP and sentence specifiers, which are especially relevant for future discussions

3. Phrases and their structure

Group discussion

- Draw structures consistent with the X' model
 - Treat *-no* as a non-category-changing suffix that appears when certain XPs combine with Ns

hon-o yonda

'read (a) book'

kono hon-o yonda

'read this book'

kookoo kara

'from high school'

kookoo kara-no tomodati

'friend from high school'

kono kookoo kara-no tomodati 'this friend from high school'

- How does the X' schema for Japanese **differ** from that for English?

3. Phrases and their structure

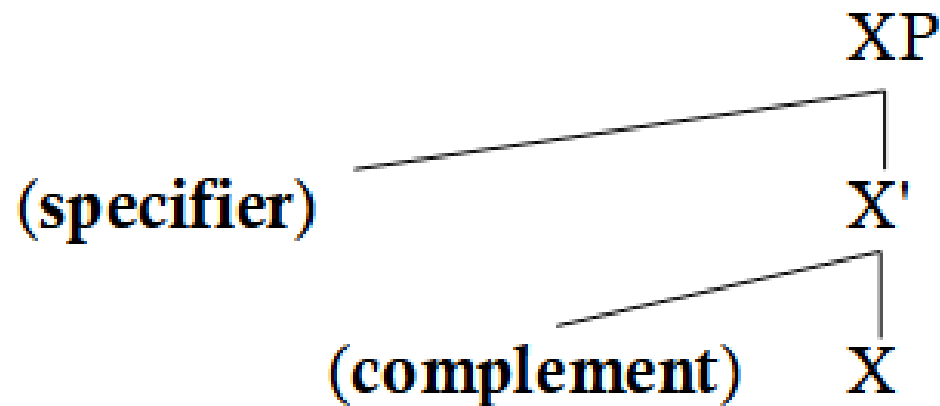
Debriefing

- How can we draw these structures?
- What is the **X' schema for Japanese?**

3. Phrases and their structure

Debriefing

- How can we draw these structures?
- What is the **X' schema for Japanese**?



- Specifier on the left (like English)
- **Head-final** — complement is to left of head

4. The sentence as a phrase

- Proposal (see also discussion in video)

A sentence (clause) is a phrase (**IP**)* with the following structure:

*[also called **TP** in some approaches]

- Specifier: The subject (**NP**)
- Complement: The predicate (**VP**)
- Head: The “inflection” (**I**) [also called **T**]

In English:

- Modal auxiliary (*can, could, may, will, should, ...*)
- An (invisible) “tense feature” [+Pst] or [-Pst]

4. The sentence as a phrase

Group discussion

- What should IP look like *in Japanese*?
 - Specifier: The subject (**NP**)
 - Complement: The predicate (what category?)
 - Head: The “inflection” (**I**)
- Try drawing an X' structure for these sentences:

Watasi-no tomodati-ga hon-o yon-da.
my friend-NOM book-ACC read-PST

Ano hon-ga omosiro-katta.
that book-NOM interesting-PST

4. The sentence as a phrase

Debriefing

- What should IP look like *in Japanese*?
 - Do we expect IP to be head-initial or head-final?
 - Does the predicate have to be VP?

- Try drawing an X' structure for these sentences:

Watasi-no tomodati-ga hon-o yon-da.
my friend-NOM book-ACC read-PST

Ano hon-ga omosiro-katta.
that book-NOM interesting-PST

4. The sentence as a phrase

Debriefing

- What should IP look like *in Japanese*?
 - IP should be **head-final** if all phrases in a language have the same structure
 - I comes *after* predicate
 - Predicate can be **any category that shows inflection (VP, AP)** — not just VP
 - The copula (*da, desu*) is generally treated as V

5. Embedded sentences — CP

- What does an **embedded sentence** look like in Japanese? (Linguists: Any guesses where the C is?)
Translate: *Aya said that Ken read (a) book.*

5. Embedded sentences — CP

- What does an **embedded sentence** look like in Japanese? (Linguists: Any guesses where the C is?)

Translate: *Aya said that Ken read (a) book.*

Aya-ga [*Ken-ga* *hon-o* *yon-da*] **to** *it-ta.*

Aya-NOM [Ken-NOM book-ACC read-PST] **that** say-PST

- What is the word category of ‘that’ in English?
- What kind of structure is inside the brackets?

5. Embedded sentences — CP

- An embedded sentence is a **CP**
 - A **complementizer** (C) is a head (i.e., word) that turns a sentence (IP [or TP]) into something that can be a complement
 - Example: Embedded clause (complement of V)
 - The *complement* of C is IP
 - A main-clause (matrix) IP is probably also contained inside a CP, but we can't necessarily see that until we start looking at the syntax of questions

5. Embedded sentences — CP | Try these:

- 1 Ken-ga Aya-ga odot-ta to omo-u
Ken-NOM Aya-NOM dance-PST that think-NPST
- 2 Tomodati-ga boku-ga yasasi-i to it-ta
friend-NOM I-NOM nice-NPST that say-PST
- 3 Kodomo-ga kabin-ga oti-ta to saken-da
child-NOM vase-NOM fall-PST that call.out-PST
- 4 Kisyā-ga kaisyā-ga tubure-ru to kaita
reporter-NOM company-NOM collapse-NPST that write-PST
- 5 Gakusee-ga tomodati-ga kurasu-o sabot-ta to mitome-ta
student-NOM friend-NOM class-ACC skip-PST that admit-PST

6. Next time

Goal: To test the proposed X' model against some of the sentence structures found in Japanese

- Is the X' model compatible with...
 - sentences that consist of **just a verb**?
 - clauses that have **two NPs** marked with *-ga*?