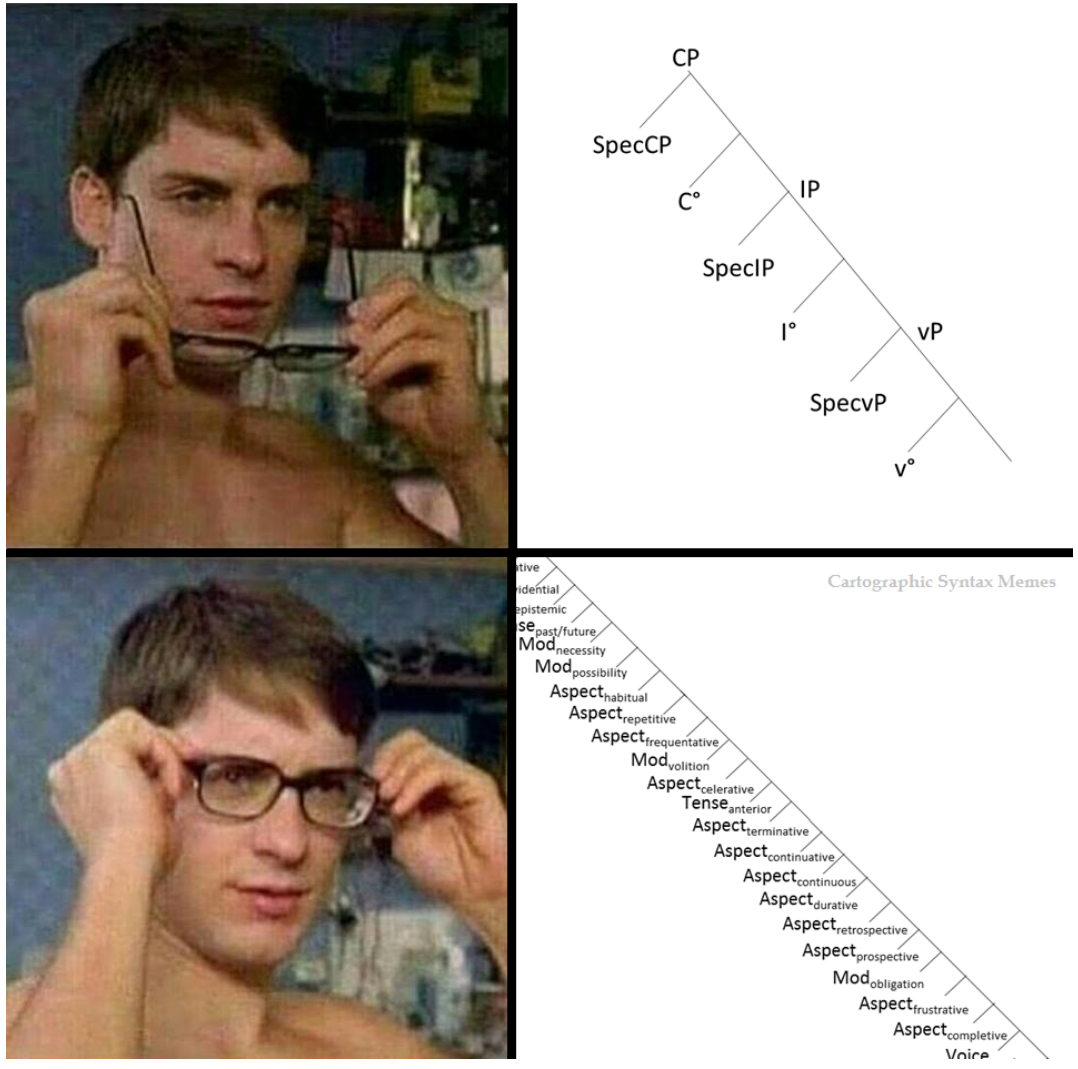

CP
SpecCP
C°
IP
SpecIP
I°
vP
SpecvP
v°
Cartographic Syntax Memes
Mod necessity
Mod possibility
Aspect habitual
Aspect repetitive
Aspect frequentative
Mod volition
Aspect celerative
Tense anterior
Aspect terminative
Aspect continuative
Aspect continuous
Aspect durative
Aspect retrospective
Aspect prospective
Mod obligation
Aspect frustrative
Aspect completive
Voice

Syntax

Word order

Order of S(ubject), O(bject) and V(erb)

- One of the first things you should figure out.
- In some languages, more than one order is possible.

Heads and dependents

Phrases in languages almost always have heads, which carry the core meanings.

- Noun phrase: *big cars*
- Verb phrase: *walk slowly*
- Adposition phrase: *to me* (preposition), *Tokyou kara* (postposition)
- Adjective phrase: *really good*

Head directionality

- Heads often consistently occur phrase-initially or -finally.
- For example, Thai is consistently head-initial:
  - บ้านหลังใหญ่
  - บ้านที่ฉันอยู่
  - เดินช้า ๆ
  - แก่ฉัน-
- But this is not necessary. English, for example, is usually head-initial, but most adjectives come before nouns.
  - *a big house*
  - *the house that I live in*

Morphosyntactic alignment

In English, we have different Subject and Object pronouns:

- *They are walking.*
- *He hated them.*

In languages with more elaborate case systems, nouns in general can have different Subject and Object forms (case), as in Latvian, which uses case suffixes:

> *putn-s* *lidoja*
> bird-SBJ fly.PST.3
> ‘The bird was flying.’

> *bērn-s* *zīmē* *sun-i*
> child-SBJ draw.PRES.3 dog-OBJ
> ‘The child is drawing a dog.’

NACLO 2009, Round 2, Dyirbal

However, in Dyirbal, intransitive Subject nouns and determiners (*bayi*) have the same form as transitive Objects.

> ***bayi*** ***ŋuma*** *ñinañu*
> DEF father sit.PST
> ‘The father sat.’

> ***bayi*** ***ŋuma*** *baŋgul* *ñalŋgaŋgu* *buṛan*
> DEF father DEF boy see.PST
> ‘The boy saw the father.’

NACLO 2009, Round 2, Dyirbal

However, in Dyirbal, intransitive Subject nouns and determiners (*bayi*) have the same form as transitive Objects.

> *bayi* *ŋuma* *ñinañu*
> DEF father sit.PST
> 'The father sat.'

> *bayi* *ŋuma* ***baŋgul*** ***ñalŋgaŋgu*** *buṛan*
> DEF father DEF boy see.PST
> 'The boy saw the father.'

... and the transitive Subject has a different form.

> *ŋinda* ***bayi*** ***ñalŋga*** *walmbin*
> 2SG DEF boy wake.PST
> 'You woke the boy.'

Subject/Object forms are no longer across across sentences.

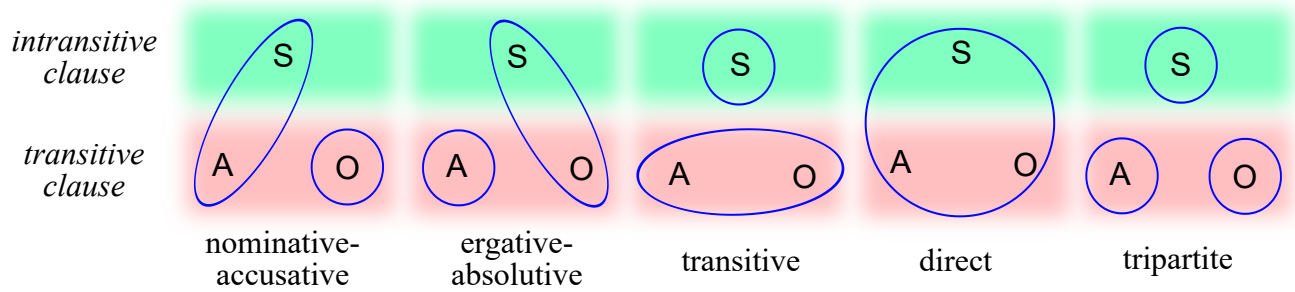
Morphosyntactic alignment

Linguists often work with S, A, O instead of Subjects and Objects.

- S(ubject) = Subject of intransitives
- A(gent) = Subject of transitives
- O(bject) = Object of transitives

Common systems:

- Nominative-accusative: S=A≠O English, Japanese, French, Latvian, Hungarian, ...
- Ergative-absolutive: S=O≠A Dyirbal, Hunzib, Basque, Tibetan, Georgian, ...



Morphosyntactic alignment

Real languages are not neat. Languages often have *split* systems, based on other features. Common features are:

- Verb meaning: In Central Pomo, S=A if the verb is agentive. S=O if the verb is not agentive.

> *ʔa·* *qʰadé·č’*
> 1SG.S$_A$ fight
> ‘I fight.’

> *ṭo·* *ló·ya*
> 1SG.S$_O$ fall
> ‘I fell.’

> *ʔa·* *mú·tu̱* *ʔé·čyadiw*
> 1SG.A 3SG.O chase_away
> ‘I chased him/her away.’

> *mu·l* *ṭo·* *ʔé·čyadiw*
> 3SG.A 1SG.O chase_away
> ‘He chased me away.’

Morphosyntactic alignment

Real languages are not neat. Languages often have *split* systems, based on other features. Common features are:

- Noun type: In Maragny, pronouns follow S=A≠O, but nouns follow S=O≠A.

> *matya* ***ngaya*** *balgangandala* *yurdi*
> before 1SG.A hit.HAB.PST meat.O
> ‘I used to kill a lot of kangaroos.’

> ***nguda-nggu*** *yurdi* *gamba:nhi*
> dog-A meat.O bury.REC.PST
> ‘The dog buried the meat.’

> ***ngaya*** *nhunu* *wabanhi*
> 1SG.S always come.PRS
> ‘I always come here.’

> ***nguda*** *nguna:labanhi*
> dog.S lie_about.PST
> ‘There's dogs lying around.’

Morphosyntactic alignment

Real languages are not neat. Languages often have *split* systems, based on other features. Common features are:

- Tense/Aspect/Mood
- Person
- Animacy
- ...

Keep your minds open!

NACLO 2017, Round 2, Proto-Algonquian

1. kewa:pameθehm
2. kewa:pameθehmwa:
3. newa:pama:ehma
4. newa:pama:ehmaki
5. kewa:pameθehmwa:ena:n
6. newa:pama:ehmena:na
7. kewa:pamiehm
8. kewa:pama:ehm
9. kewa:pamiehmwa:
10. kewa:pamiehmwa:ena:n
11. newa:pamekwehmena:naki

1. ‘I see you (sg)’
2. ‘I see you (pl)’
3. ‘I see him/her’
4. ‘I see them’
5. ‘we see you (pl)’
6. ‘we see him/her’
7. ‘you (sg) see me’
8. ‘you (sg) see her/him’
9. ‘you (pl) see me’
10. ‘you (pl) see us (excl)’
11. ‘they see us’

NACLO 2017, Round 2, Proto-Algonquian

1. ke-wa:pam-eθ-ehm
2. ke-wa:pam-eθ-ehm-wa:
3. ne-wa:pam-a:-ehm-a
4. ne-wa:pam-a:-ehm-aki
5. ke-wa:pam-eθ-ehm-wa:-ena:n
6. ne-wa:pam-a:-ehm-ena:n-a
7. ke-wa:pam-i-ehm
8. ke-wa:pam-a:-ehm
9. ke-wa:pam-i-ehm-wa:
10. ke-wa:pam-i-ehm-wa:-ena:n
11. ne-wa:pam-ekw-ehm-ena:n-aki

1. 1SG.A.see.2SG.O
2. 1SG.A.see.2PL.O
3. 1SG.A.see.3SG.O
4. 1SG.A.see.3PL.O
5. 1PL.A.see.2PL.O
6. 1PL.A.see.3SG.O
7. 2SG.A.see.1SG.O
8. 2SG.A.see.3SG.O
9. 2PL.A.see.1SG.O
10. 2PL.A.see.1PL.EXCL.O
11. 3PL.A.see.1PL.INCL.O

NACLO 2017, Round 2, Proto-Algonquian

1. ke-wa:pam-**eθ**-ehm
2. ke-wa:pam-**eθ**-ehm-wa:
3. ne-wa:pam-a:-ehm-a
4. ne-wa:pam-a:-ehm-aki
5. ke-wa:pam-**eθ**-ehm-wa:-ena:n
6. ne-wa:pam-a:-ehm-ena:n-a
7. ke-wa:pam-i-ehm
8. ke-wa:pam-a:-ehm
9. ke-wa:pam-i-ehm-wa:
10. ke-wa:pam-i-ehm-wa:-ena:n
11. ne-wa:pam-ekw-ehm-ena:n-aki

1. **1**SG.**A**.see.**2**SG.**O**
2. **1**SG.**A**.see.**2**PL.**O**
3. 1SG.A.see.3SG.O
4. 1SG.A.see.3PL.O
5. **1**PL.**A**.see.**2**PL.**O**
6. 1PL.A.see.3SG.O
7. 2SG.A.see.1SG.O
8. 2SG.A.see.3SG.O
9. 2PL.A.see.1SG.O
10. 2PL.A.see.1PL.EXCL.O
11. 3PL.A.see.1PL.INCL.O

- -eθ- = 1.A → 2.O

NACLO 2017, Round 2, Proto-Algonquian

1. ke-wa:pam-eθ-ehm
2. ke-wa:pam-eθ-ehm-wa:
3. ne-wa:pam-a:-ehm-a
4. ne-wa:pam-a:-ehm-aki
5. ke-wa:pam-eθ-ehm-wa:-ena:n
6. ne-wa:pam-a:-ehm-ena:n-a
7. ke-wa:pam-i-ehm
8. ke-wa:pam-a:-ehm
9. ke-wa:pam-i-ehm-wa:
10. ke-wa:pam-i-ehm-wa:-ena:n
11. ne-wa:pam-ekw-ehm-ena:n-aki

1. 1SG.A.see.2SG.O
2. 1SG.A.see.2PL.O
3. 1SG.A.see.3SG.O
4. 1SG.A.see.3PL.O
5. 1PL.A.see.2PL.O
6. 1PL.A.see.3SG.O
7. 2SG.A.see.1SG.O
8. 2SG.A.see.3SG.O
9. 2PL.A.see.1SG.O
10. 2PL.A.see.1PL.EXCL.O
11. 3PL.A.see.1PL.INCL.O

- -eθ- = 1.A → 2.O
- -a:- = 1.A, 2.A → 3.O
- -i- = 2.A → 1.O
- -ekw- = 3.A → 1.O

NACLO 2017, Round 2, Proto-Algonquian

1. ke-wa:pam-eθ-ehm
2. ke-wa:pam-eθ-ehm-**wa:**
3. ne-wa:pam-a:-ehm-a
4. ne-wa:pam-a:-ehm-aki
5. ke-wa:pam-eθ-ehm-**wa:**-ena:n
6. ne-wa:pam-a:-ehm-ena:n-a
7. ke-wa:pam-i-ehm
8. ke-wa:pam-a:-ehm
9. ke-wa:pam-i-ehm-**wa:**
10. ke-wa:pam-i-ehm-**wa:**-ena:n
11. ne-wa:pam-ekw-ehm-ena:n-aki

1. 1SG.A.see.2SG.O
2. 1SG.A.see.**2PL**.O
3. 1SG.A.see.3SG.O
4. 1SG.A.see.3PL.O
5. 1PL.A.see.**2PL**.O
6. 1PL.A.see.3SG.O
7. 2SG.A.see.1SG.O
8. 2SG.A.see.3SG.O
9. **2PL**.A.see.1SG.O
10. **2PL**.A.see.1PL.EXCL.O
11. 3PL.A.see.1PL.INCL.O

- -eθ- = 1.A → 2.O
- -a:- = 1.A, 2.A → 3.O
- -i- = 2.A → 1.O
- -ekw- = 3.A → 1.O

1. -wa: = 2PL

NACLO 2017, Round 2, Proto-Algonquian

1. ke-wa:pam-eθ-ehm
2. ke-wa:pam-eθ-ehm-wa:
3. ne-wa:pam-a:-ehm-a
4. ne-wa:pam-a:-ehm-aki
5. ke-wa:pam-eθ-ehm-wa:-ena:n
6. ne-wa:pam-a:-ehm-ena:n-a
7. ke-wa:pam-i-ehm
8. ke-wa:pam-a:-ehm
9. ke-wa:pam-i-ehm-wa:
10. ke-wa:pam-i-ehm-wa:-ena:n
11. ne-wa:pam-ekw-ehm-ena:n-aki

1. 1SG.A.see.2SG.O
2. 1SG.A.see.2PL.O
3. 1SG.A.see.3SG.O
4. 1SG.A.see.3PL.O
5. 1PL.A.see.2PL.O
6. 1PL.A.see.3SG.O
7. 2SG.A.see.1SG.O
8. 2SG.A.see.3SG.O
9. 2PL.A.see.1SG.O
10. 2PL.A.see.1PL.EXCL.O
11. 3PL.A.see.1PL.INCL.O

- -eθ- = 1.A → 2.O
- -a:- = 1.A, 2.A → 3.O
- -i- = 2.A → 1.O
- -ekw- = 3.A → 1.O

1. -wa: = 2PL
2. -ena:n = 1PL
3. -aki, -a = 3SG, 3PL
4. -ø = 1SG, 2SG

NACLO 2017, Round 2, Proto-Algonquian

1. ke-wa:pam-eθ-ehm
2. ke-wa:pam-eθ-ehm-wa:
3. **ne**-wa:pam-a:-ehm-a
4. **ne**-wa:pam-a:-ehm-aki
5. ke-wa:pam-eθ-ehm-wa:-ena:n
6. **ne**-wa:pam-a:-ehm-ena:n-a
7. ke-wa:pam-i-ehm
8. ke-wa:pam-a:-ehm
9. ke-wa:pam-i-ehm-wa:
10. ke-wa:pam-i-ehm-wa:-ena:n
11. **ne**-wa:pam-ekw-ehm-ena:n-aki

1. 1SG.A.see.2SG.O
2. 1SG.A.see.2PL.O
3. **1**SG.A.see.**3**SG.O
4. **1**SG.A.see.**3**PL.O
5. 1PL.A.see.2PL.O
6. **1**PL.A.see.**3**SG.O
7. 2SG.A.see.1SG.O
8. 2SG.A.see.3SG.O
9. 2PL.A.see.1SG.O
10. 2PL.A.see.1PL.EXCL.O
11. **3**PL.A.see.**1**PL.INCL.O

- -eθ- = 1.A → 2.O
- -a:- = 1.A, 2.A → 3.O
- -i- = 2.A → 1.O
- -ekw- = 3.A → 1.O

1. -wa: = 2PL
2. -ena:n = 1PL
3. -aki, -a = 3SG, 3PL
4. -ø = 1SG, 2SG

- ne- = 1 and 3
- ke- = 2

NACLO 2017, Round 2, Proto-Algonquian

Algonquian languages have the direct-inverse voice system. This kind of system cares about the **Person** feature of **both** A and O.

(Note that there is another equally valid answer that does not make use of the direct-inverse system, but the real system is a direct-inverse one.)

Valence-decreasing: Passive

We are all familiar with the passive voice in English:

- *He pushed her.*
- *She was pushed (by him).* (passive)

In terms of alignment, the passive is A-demotion.

- A is omitted or becomes an Oblique (*she* → *by her*).
- O becomes S (*her* → *she*).
- The verb becomes intransitive.

Valence-decreasing: Antipassive

There is something similar in ergative languages (S=O≠A). This is the antipassive.

> *yero-m* *keme-q* *nere-llru-a*
> Yero-A meat-O eat-PST-3SG.A:3SG.O
> ‘Yero ate the meat.’

> *yero-q* *(kemer-meng)* *nere-llru-u-q*
> Yero-S meat-INS eat-PST-INTR-3SG
> ‘Yero ate (the meat).’

The antipassive is O-demotion.

- O is omitted or becomes an Oblique (*keme-q* → *kemer-meng*).
- A becomes S (*yero-m* → *yero-q*).

Valence-increasing: Causative

Some languages have causative forms that add the meaning “make sb V” to a verb. Examples from Quechua:

> *noqa* *puñu-u*
> 1SG sleep-1SG
> ‘I sleep.’

> ∅ *noqa-ta* *puñu-**chi**-ma-n*
> 3SG.A 1SG-O sleep-CAUS-1SG.O-3SG.A
> ‘It makes me sleep.’

Valence-increasing: Applicative

Obliques get promoted to O (*rá-viimú* → *-ra*)

In Yagua, the Oblique occurs as a separate word:

> *sa-duu* *rá-viimú*
> 3SG-blow INAN-into
> ‘He blows into it.’

When the verb is in the applicative, O-agreement suffix (technically, clitic) occurs with the verb.

> *sa-duu-**ta**-ra*
> 3SG.A-blow-APPL-INAN.O
> ‘He blows it.’

Valence-increasing: Applicative

Applicatives may also occur with transitive verbs. This makes them ditransitives and add meaning such as, 'for someone'.

In Kinyawarda,

> *umukôobwa* *a-rá-som-**er**-a* *umuhuûngu* *igitabo*
> girl 3SG.F-PROG-read-BEN.APPL-ASP boy book
> ‘The girl is reading the boy a book (= the girl is reading a book for the boy).’