Auxiliaries and head movement

1 Tense and the main verb

Two types of tense morphology: _____. English present and past tense morphology are _____, and shows up on the verb. The verb can show ϕ-agreement.

(1) a. John studie-s the clarinet.
b. I study-$\emptyset$ the clarinet.

(2) a. John studi-ed the clarinet.
b. We studi-ed the clarinet.

The English future is a _____ morpheme, *will*. When *will* is used, the verb no longer shows subject agreement; it must be a *nonfinite* form, like *be*.

(3) John will be/*is a student.

In French, present and future morphology appears on the verb, which shows subject ϕ-agreement, but the past tense uses a free morpheme 'have' which shows agreement and a special PAST form of the verb.

(4) a. Jean manger-a des pommes.
Jean eat-FUT.3sg some apples
b. Je manger-ai des pommes.
I eat-FUT.1sg some apples

(5) a. Tu as mangé des pommes.
you have.2sg eat-PAST some apples
b. Nous avons mangé des pommes.
we have.1pl eat-PAST some apples

Consider the position of adverbs in tenses which use auxiliaries:

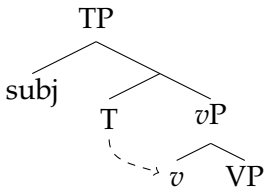
(6) John will often eat apples.

(7) Jean a souvent mangé des pommes.
Jean have.3sg often eat-PAST some apples

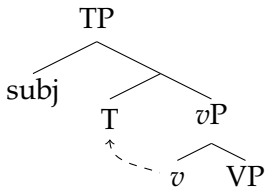
Let's assume such adverbs are _____. If the auxiliary is pronounced at T and the verb in *v*P, this word order is explained in both languages.

Q: How does the tense and the main verb get pronounced together as one word, for example in the English past or present or French future or present? Two options:

Option 1: Pronounce tense low, on the verb:



Option 2: Pronounce the verb high, with T:



The answer in English and French seem to be different!

(8) John (often) ate/eats (*often) apples.

(9) Jean (*souvent) manger-a/mange (souvent) des pommes.
Jean often eat-FUT.3sg/eat-PRESENT.3sg often some apples

► English uses _____, whereas French uses _____.

- Option 1 is traditionally called _____.
  - In modern terms, we can implement this using _____.
- Option 2 is called _____.[1]
  - What kind of movement is this? It's _____.

In Adger, this is implemented through [Infl:...] features on T:

- English T has a feature like [Infl:PAST] which can Agree and value [uInfl:__] on *v*.
- French T has a strong feature like [Infl*:PAST] which triggers head-movement.
  - Adger similarly posits [uV*] on *v* to formally motivate head-movement.
  - But again, we won't discuss the featural mechanics of head-movement in this class. See Adger chapter 5 for details.

2 *Do*-support and 6 contexts

In (colloquial) French, negation *pas* _____[2]

(10) Sarah mange **pas** des pommes.
Sarah eats not some apples
'Sarah does not eat apples.'

(11) J' ai **pas** lu le livre.
I have.1sg not read-PAST the book
'I didn't read the book.'

Negation in English also can appear between an auxiliary and a verb:

(12) Max will **not** go home.

[1] But technically it's head-movement of *v* to T, together with independent V-to-*v* head movement.
[2] In formal French, there is also a marker *ne* which precedes the verb/auxiliary in T.

But when there is no auxiliary, we cannot simply add *not* in any position:

(13) * John **not** eats/ate a sandwich.

(14) * John eats/ate **not** a sandwich.

As we saw above (in comparison with French), main verbs in English are not able to move to T, even though auxiliaries are. In certain contexts, where T is required to be pronounced, the auxiliary *do* is inserted. This is called _____.

(15) **An example of *do*-support:**
John does/did not eat a sandwich.

Six contexts that require a pronounced T, which can trigger *do*-support:
Baseline: Mary ate her soup.

1. **Sentential negation with *not*:**

   (16) Mary did not eat her soup.

   Compare this to English *never* which is simply an adverb and does not interact with auxiliaries and tenses:

   (17) John never eats/ate a sandwich.

2. **Emphatic *do* (i.e. "verum focus"):**

   (18) Mary DID eat her soup.

3. ***v*P ellipsis:**

   (19) Sue ate her soup and Mary did Δ, too.

4. ***v*P movement**

   For example, in cleft, pseudocleft, topicalization tests of *v*/VP-looking constituents:

   (20) [Eat her soup], Mary did ___.

5. **Matrix (unembedded) questions:**

   (21) Did Mary ___ eat her soup?

6. **Negative inversion:**

(22) [Not a single soup] did Mary ___ eat ___.

In questions and neg inversion, T moves to C. We will discuss this *T-to-C movement* later.

All six of these constructions _____, forcing features to be pronounced on T using a free morpheme:

(23) **Adger's Pronouncing Tense Rule (PTR):**
In English, if T and *v* are a "tense chain" — in other words, for Adger, if they Agree in Infl features — pronounce the tense features on *v* only if *v* is the head of T's sister.

3 More auxiliaries in English

(24) **Some auxiliaries in English:**[3]

a. Han *might* reconsider.

b. Darth *will* die.

c. Leia *has* written a message.

d. Somebody *is* shooting at us.

e. The Falcon *could have* escaped if the engine *had* worked.

f. Luke *has been* training in the Dagobah system.

Each auxiliary requires a certain kind of verb to follow:

(25) modal + _____

(26) perfect *have* + ____

(27) progressive *be* + _____

We can put these elements together, but only in a certain order:

(28) Lando may have been making a deal.

Adger suggests putting this order in the Hierarchy of Projections:

(29) **Hierarchy of Projections (modified, to be modified again):**
T > (Perf) > (Prog) > *v* > V

[3]Some data here from a handout by Jason Merchant.

We assume modal auxiliaries are in T, but why not add a separate head for this too? Because

_____

(30) John wants to {*can/be able to} fly.

(31) I expect Mary to {*might/maybe} come tonight.

We analyze the morpheme *to* itself as a version of T, explaining the *complementary distribution* with modal auxiliaries and (past, present, future) tense.

Nonfinite clauses can, however, include perfects and progressives:

(32) I expected Susan to *have* called by now.

(33) I expected Kevin to *be* writing right now.

The negation *not* in English introduces a puzzle:

(34) a. Han might *not* reconsider.
b. Leia has *not* written a message.
c. The Falcon is *not* working.
d. Lando may *not* have been making a deal.

Q: What's the generalization for the position of negation?

A: _____

Adger's solution:

(35) **Hierarchy of Projections (modified):** (Adger, p. 195)
T > (Neg) > (Perf) > (Prog) > *v* > V

Neg is a head. Always make sure one auxiliary moves to T, if T is not a free morpheme.[4]

[4] In class, I will not worry about how exactly this works. See Adger chapter 5 for details.