April 17, 2024

1 Raising verbs

I just noticed that, although we talked about raising verbs a fair bit in class, I don't seem to have included any discussion of them in the notes. So, let me take a quick detour to say something about these.

We can classify verbs in terms of their "valence," or the number of participants they relate. A transitive verb relates two entities (say, the kicker and the kickee), an intransitive verb attributes a property to a single entity (say, the dancer), a ditransitive verb relates three entities (say, the giver, the thing given, and the recipient). There are also verbs that have no participants, like the "weather verbs" such as *rain*.

Back when we were considering control verbs and whether we need a PRO in the sentence, we were counting these roles. So, recall, we distinguish between *expect* and *persuade* in terms of how many individuals are involved in an expectation vs. in a persuasion. In the examples below, Tracy does not play a direct role in the expectation (only in the overall proposition that it will be the case that Tracy will leave), whereas Tracy *does* play a direct role in the persuasion (Tracy is being persuaded of something, and what Tracy is being persuaded of is that there will be a leaving that Tracy's involved in). So for the *persuade* sentence, we need a PRO because Tracy is playing a direct role both in the persuading and in the leaving.

(1) Pat expects [Tracy to leave].

(2) Pat persuaded Tracy [PRO to leave].

In this context, consider a verb like *seem* as compared to *want*.

(3) Pat seems [to leave (after lunch)].

(4) Pat wanted [PRO to leave (after lunch)].

When we think about the *want* sentence, Pat is playing a role both in the wanting (experiencing the desire) and in the leaving. So we need a PRO. But when we think about what *seem* means, Pat's not actually playing a role in the seeming. Pat is only playing a role in the leaving. This is more obvious if we say it this way:

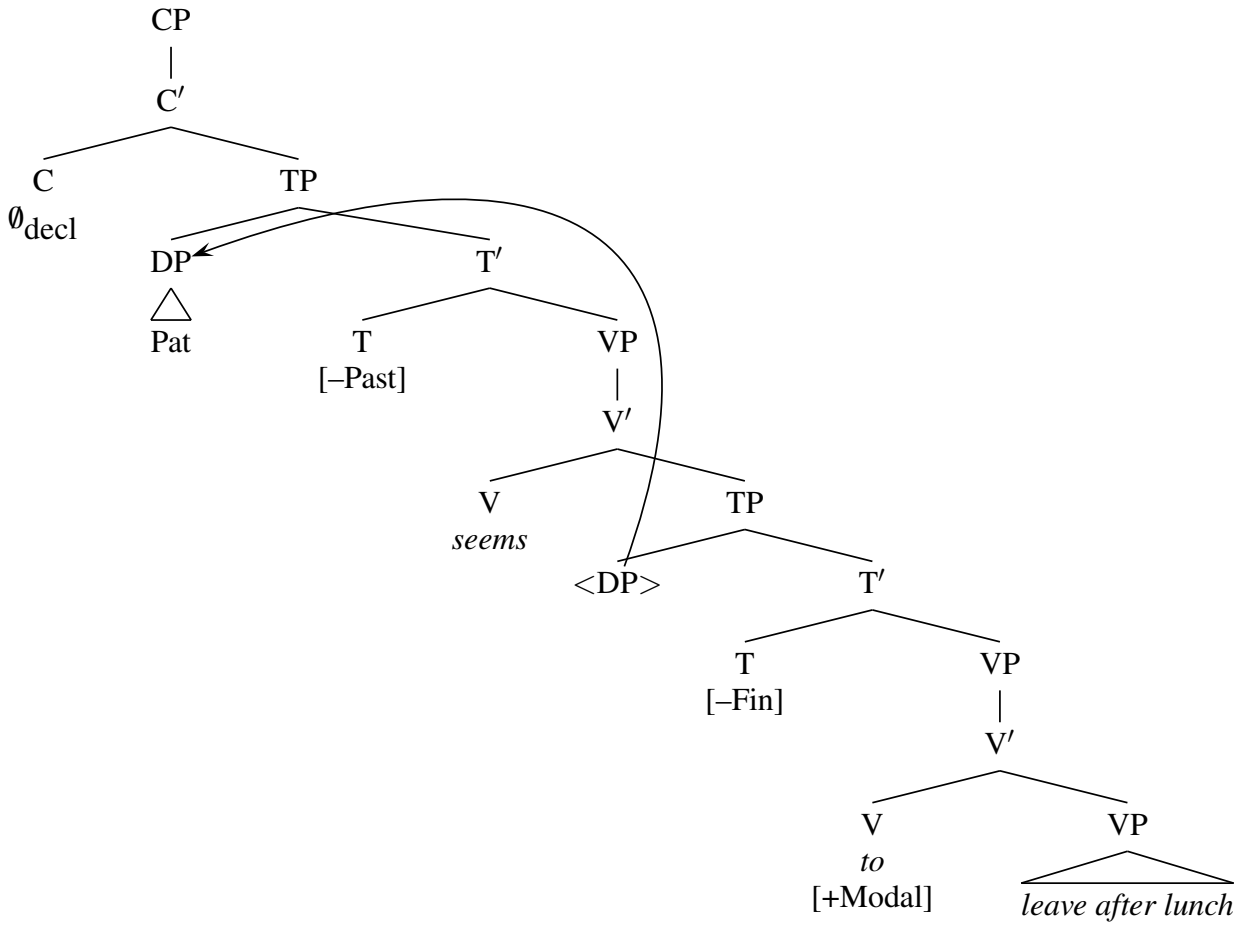
(5) It seems [that Pat leaves (after lunch)].

Both *seems* sentences mean basically the same thing. The second one has an *it* as the subject, but that *it* does not mean anything. It does not refer to anything. You can't point to something and say "IT seems that Pat leaves after lunch." No more than you can point to something and say "IT is raining." The *it* is a meaningless element that is there only to satisfy the requirement English has that sentences have a subject. *Seems* seems to be a verb that has only one participant, and it is the proposition that serves as its object. The meaning of *seems* is something like: "seems(X)" is true if based on perceivable evidence, X is true.

So, if *Pat* in (3) is not playing a role in the seeming, what is it doing in the subject position? And moreover, given that *Pat* **is** playing a role in the embedded clause (the Agent of *leave*), why is it not down there?

The idea here is that because English sentences need subjects, and because *seem* is kind of special in not providing an argument that can serve as a subject, there are two ways to solve the problem. In (5), where the embedded clause is finite, we insert a "dummy" *it*, in order to satisfy the requirement. In (3), where the embedded clause is non-finite, the main clause steals the subject from the lower clause instead of inserting a meaningless element. That is, *Pat* moves from the lower subject position (SpecTP of the embedded clause) into the higher subject position (SpecTP of the higher clause).

(6) Pat seems [<Pat> to leave (after lunch).]



If this is true, what kind of predictions would it make? One kind of prediction it makes is that we might find cases where the lower subject has not moved. That's what (5) seems to suggest, there we have *Pat* still in the lower clause.

Another kind of prediction is that the main clause subject might behave as if it belongs to the lower clause in other ways as well. One such way is in the interpretation of idioms. The idiom "the cat is out of the bag" means that the secret has become public knowledge. It is not about cats, or bags, but has a special meaning that is not derivable from its parts. This works whether the clause is finite or nonfinite, main clause (7) or embedded (8). But we lose the idiomatic meaning in (9) and (10) because the idiom is not "PRO (to be) out of the bag" but rather is "the cat (to be) out of the bag." Just like "the hamster (to be) out of the bag" doesn't have the idiomatic "revealed secret" meaning, "PRO (to be) out of the bag" doesn't. It is important that the subject is "the cat" for this idiomatic meaning. Given that, the fact that (11) still *has* the idiomatic meaning indicates that (11) has no PRO, but rather *the cat* that we see in the main clause subject position is relevantly contained in the lower clause.

(7) The cat is out of the bag.

(8) I want [the cat to be of the bag].

(9) # I persuaded the cat [PRO to be of the bag].

(10) # The cat tried [PRO to be of the bag].

(11) The cat seems [<the cat> to be of the bag].

2 Passives

Corresponding to a sentence like (12), we can form a sentence like (13). The sentence in (13) is in the "passive voice." The main characteristic of the passive sentence is that the Agent has been removed from the surface form of the sentence.

(12) Pat kicked the door.

(13) The door was kicked.

The door in both sentences retains the same role in the sentence, it is the thing that is kicked in the process of the kicking. But in (12), it is the object, and in (12), it is the subject.

One could imagine a system in which each of (12) and (13) are generated from phrase structure rules. In such a system, there would need to be two lexical entries for *kick*, one a transitive verb that has an object (for (12)), and one an intransitive that lacks an object (for (13)). The availability of the passive is quite general, so we would also probably want to posit some kind of systematic rule or constraint on the lexicon that says that for every transitive verb, there is a passive equivalent with one fewer arguments.

However, there are a number of properties of the transitive object that seem to continue to hold of the passive subject. One kind of example of this is resultatives, like in (14). Here, the meaning is that she wiped the table, as a result of which the table is clean. It cannot mean that she became clean as a result of wiping the table.[1] So the resultative construction applies to the object.

(14) She wiped the table clean

But if you passivize this, you can still use the resultative, but now it seems possible to apply it to the subject.

(15) The table was wiped clean

The generalization would seem to be that the resultative can apply to an object generally, but can apply to a subject only when the clause is passive.

We can understand this if we suppose that the subject in a passive, rather than being "base-generated" (put into the deep structure) as a subject, instead starts off in the same object position it occupies in an active transitive construction, sibling to V. In that case, whatever restricts objects in active transitives can continue to restrict the argument in passives. We just suppose that after the deep structure, the object then *moves* to become the subject. In much the same way we talked about a lower subject moving up to a higher subject position in raising verb constructions.This would mean that there is no need for extra lexical entries, and that the main difference between active and passive is that the passive doesn't have a subject initially.

It appears that one requirement English has is that its sentences require a subject. One rationale for saying this is that if you use a verb that has no participants at all (like *rained*), you still need to put in something in to serve as the subject. In this case, English uses a meaningless *it*.

(16) a. * Rained.

b. It rained.

[1] Though it can mean that she wiped the table while already being clean (compare: *She wiped the table drunk*). This is not a resultative interpretation though, it is not as a result of the wiping that she became clean/drunk.

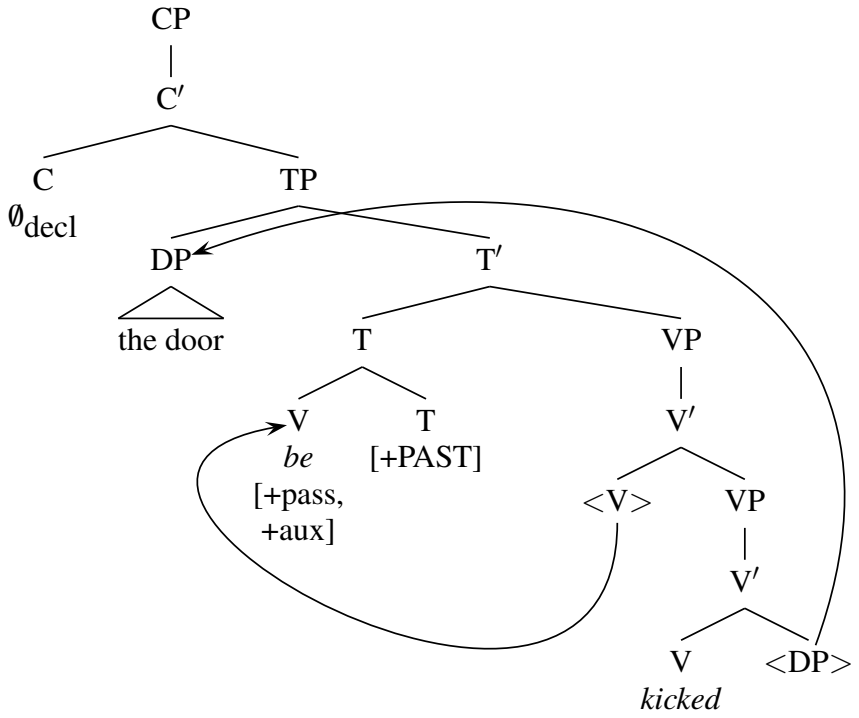
Based on this, a near-consensus view in syntax is that the subject in (13) starts off as an object, but is moved to the front of the sentence to be the subject because a subject is needed.[2]

From the early days of generative syntax, this was considered to be a "transformation." You would start with a sentence like (12), and then you would transform it into (13) by removing the subject, adding *be*, moving the object to the subject position.

Optionally, you can "put the agent back" by using a *by*-phrase, as in (17).

(17) The door was kicked by Pat.

So, we take "passivization" to be a kind of operation or structure that allows suppression of an Agent (or generally, the "external argument"—the argument of the verb that in an active form is sitting in SpecTP). Since we need something in SpecTP, we move the object DP up to become the subject.



3 Shortest move

We have seen in various contexts that if there is a problem that can be solved by movement, and two possible movements might work, only the shortest one is available. The system is "lazy" in some sense. It will conserve effort, under the assumption that longer movements are more effortful than shorter ones.

This is true in passives too, which is an additional reason to think that the subject in a passive gets there from an initial position as an object. Consider ditransitive verbs like *give*. There are two forms of *give*. In one, the object being transferred is first and the destination is second (18). In the other, the destination is first and the object being transferred is second (19). Each can be passivized, removing the Agent and putting something else in the subject. There are two DPs in each that are in-principle candidates for being the subject. But when you form the passive, you can only recruit the closest DP (the one for which the move will be shortest) to become the subject. Choosing the other one leads to ungrammaticality.

[2]Presumably the unavailability of *it kicked the door* for a passive form is due to a requirement that you can only use this "dummy" *it* as a kind of last resort. If you have an object around that can be recruited to be the subject, you use that, rather than inserting a meaningless *it*.

(18) a. Pat gave a book to Tracy.
b. A book was given _ to Tracy.
c. * Tracy was given a book to _ .

(19) a. Pat gave Tracy a book.
b. Tracy was given _ a book.
c. * A book was given Tracy _ .

This is presumably an effect of the same kind of "laziness" condition that requires that if there are two *wh*-phrases in a *wh*-question, and you need to move a single *wh*-phrase up to SpecCP, only the closest one can move.

(20) a. What did Pat give _ to who?
b. * Who did Pat give what to _ ?

(21) a. Who did Pat give _ what?
b. * What did Pat give who _ ?

(22) a. Who did Pat want _ to eat what ?
b. * What did Pat want who to eat _ ?

So, if movement is subject to this kind of "laziness" condition, the fact that we see the effects of laziness in the formation of passive sentences tends to suggest that movement (of object to subject) is involved in passives.

4 The passive auxiliary

To form the passive in English, we use a *be* auxiliary, and it triggers an *-en* ending on the following verb. This works basically the same way as the other auxiliaries we have (modals, perfective, progressive), and we will treat it the same way.

(23) *be+en*, V, [+PASS, +AUX]

(24) *be+ing*, V, [+PROG, +AUX]

(25) *have+en*, V, [+PERF, +AUX]

If passive *be* is the only auxiliary, it will move up to T (and thus move past negation). Passive comes last in the order of auxiliaries, if there are many.

(26) The sandwich was not eaten.

(27) The sandwich might not have been being eaten.

5 Unaccusatives and unergatives

Verbs come in various types, such as transitive and intransitive. A transitive verb has an object, and two participants. In a lot of cases this is an Agent and a Theme (Pat is the Agent of a kicking, the door is the Theme of a kicking). An intransitive verb has just one argument (not the surface object), but that one argument can be an Agent or it can be a Theme.

(28) The man danced

(29) The water froze

Interestingly, it seems like some of the same kinds of indicators that lead us to think that the object is promoted to subject in a passive also suggest that the single Theme argument in an intransitive verb construction also is in some deeper sense an object.

The standard terminology (clumsy as it is) calls the intransitive verbs with an Agent "unergatives" and the intransitive verbs a Theme "unaccusatives." The word "uNErGATive" has the letters of "Agent" within it, perhaps this is helpful in remembering which is which.[3]

The examples below show that unergative verbs cannot be used in a resultative construction, while unaccusative verbs can.

(30) * The man danced exhausted.

(31) The water froze solid.

You can also turn an unaccusative into an adjective-like modifier, but not an unergative.

(32) The frozen water

(33) * The danced man

Unergatives are taken to have no Theme, but just an Agent. However, it is often (always?) possible to add a "cognate object" to an unergative. Such an object must be the noun form of the verb, to a certain approximation. The analysis and constraints are not entirely clear, but it is at least plausible that "Pat danced" could be underlying something more like "Pat did a dance" where the noun *dance* combines with *do* to form a complex verb. Somehow, a cognate object re-expresses the original noun form.[4] In any event, it is often possible to have an object with unergative verbs just in case that object is a noun that corresponds to the verb.

(34) The man danced a (happy) dance.

(35) * The man danced a sandwich.

(36) * The water froze a (mighty) freeze.

Another kind of object you can add to unergatives is something like *themselves*. Maybe you can add these because unergatives don't already have something in the object position, but you cannot add them to unaccusatives because they do? Once you do add an object like this, though, it takes a resultative.[5]

(37) * The water froze itself solid.

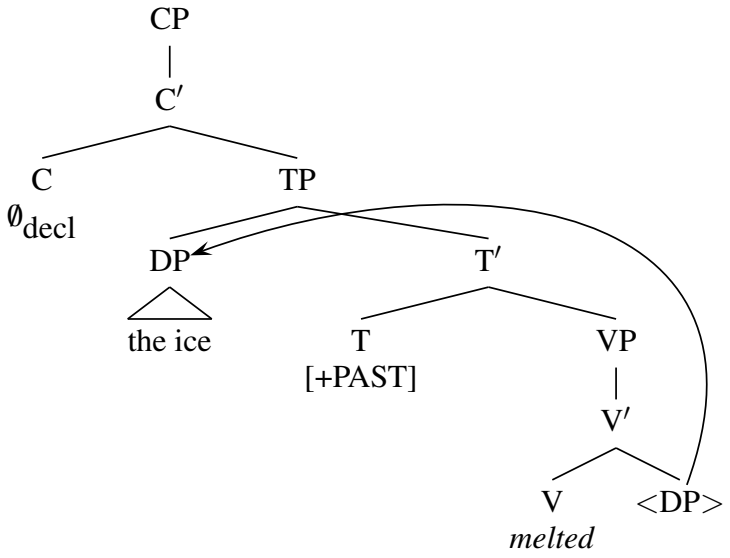
(38) The man danced himself exhausted.

The tree below shows what *The ice melted* would look like.

[3] In fact, you can rearrange the letters of "unergative" to "R U AGENTIVE?" If you wish.

[4] Interestingly, not exactly. It is possible for the man to dance a jig or a waltz. It's also weird to just say the man danced a dance—you need to add some information, like "happy" or something. Is the underlying structure of this "a waltz dance" from which *dance* is incorporated and verbalized? Maybe. This is outside our scope for the moment, we will just use the existence of cognate objects as a differentiator between unergatives and unaccusatives.

[5] In fact, it seems like the resultative is necessary. You can't say "The man danced himself" without the result state as well.



6 Passives in Japanese

In Japanese, when you count something, you need to add a "classifier" to the numeral, which correlates with properties that the thing you are counting has. So, if you are counting people, you use one classifier, and if you are counting books, you use a different classifier.

(39) a. gakusei futa-ri
student two-CL
'two students'

b. hon ni-satsu
book two-CL
'two books'

c. uguisu ni-wa
nightingale two-CL
'two nightingales'

d. ninjin ni-hon
carrot two-CL
'two carrots'

It's possible to move the noun away from its numeral. This is understood to be leftward movement of the noun, the numeral stays where it was, and shows the position where the noun moved from.

(40) a. gakusei-ga Mary-ni hon-o ni-satsu ageta.
student-NOM Mary-DAT book-ACC two-CL gave
'The student gave Mary two books.'

b. gakusei-ga hon-o Mary-ni ni-satsu ageta.
student-NOM book-ACC Mary-DAT two-CL gave
'The student gave Mary two books.'

c. hon-o gakusei-ga Mary-ni ni-satsu ageta.
book-ACC student-NOM Mary-DAT two-CL gave
'The student gave Mary two books.'

Support for the idea that the pattern above comes from leftward movement of the noun away from its numeral is that you can't put things between a subject noun and its numeral.

(41) a. gakusei-ga futa-ri Mary-ni hon-o ageta.
student-NOM two-CL Mary-DAT book-ACC gave
'Two students gave Mary books.'

b. * gakusei-ga Mary-ni futa-ri hon-o ageta.
student-NOM Mary-DAT two-CL book-ACC gave
'Two students gave Mary books.'

c. * gakusei-ga Mary-ni hon-o futa-ri ageta.
student-NOM Mary-DAT book-ACC two-CL gave
'Two students gave Mary books.'

Except in the passive. Which makes sense, actually, if we assume that in the passive, the subject was originally an object.

(42) gakusei-ga ano otoko-ni futa-ri korosareta.
student-NOM that man-DAT two-CL were-killed
'Two students were killed by that man.'[6]

[6]Sorry for the grisly nature of the example, I borrowed it from a handout online (Norvin Richards') and didn't have time to find a friendlier example.