

Auxiliary selection

1. Introduction

In the Germanic and Romance languages, the perfect tense is formed via a combination of the past participle of the main verb and an auxiliary verb. In modern English, there is only one such auxiliary of the perfect tense, namely *to have*:

- (1) a. Mary has read many books.
 b. Charles has never slept well.
 c. The Eagle has landed.
 etc.

In many of the languages, however, there is a second perfect auxiliary, usually a cognate of *to be*. It is not the case that there is simply an optional choice between ‘have’ and ‘be’ in these languages, however. It depends on which verb we are dealing with. (Things are actually somewhat more subtle than this suggests in some respects, as we will see later on). Transitive verbs take ‘have’ in the perfect tense; intransitive verbs can be divided in two classes, a ‘have’-taking class and a ‘be’-taking class. Here are some examples from a Germanic language (Dutch) and from a Romance language (Italian).

- (2) a. Marie heeft/*is een hoop boeken gelezen.
Mary has is a lot books read
 b. Karel heeft/*is vannacht goed geslapen.
Charles has/is tonight well slept
 c. Het vliegtuig *heeft/is veilig geland.
the plane has is safely landed
- (3) a. Gianni *è/ha lavorato.
John is has worked
 b. Gianni è/*ha già arrivato.
John is has already arrived

Languages that show this ‘have’-‘be’ alternation include Dutch, German, Danish, some dialects of Norwegian (Norwegian seems to be in the final stages of becoming a ‘have only’ language like English, and like Swedish and Afrikaans), Icelandic and Frisian in Germanic and Italian and French in Romance (although French, too, seems to be in the process of turning into a ‘have only’ language – Canadian French, for example, is well on its way in this respect). The alternation can also be found in older stages of those languages that now have only one perfect auxiliary, such as Old English and Old Spanish. (A similar alternation can also be found in languages from different families, even outside Indo-European – for example, Old Japanese is said to have shown the same phenomenon!).

2. Unaccusativity

In some languages, then, we can divide the intransitive verbs in two classes: those that take ‘have’ and those that take ‘be’. There is an influential hypothesis as to what sets

these two sets of verbs apart. Before we can properly appreciate what that hypothesis amounts to, we first must look at another verbal category, the passive.

In English, the passive of a verb is formed by using a combination of the past participle of the verb and the auxiliary verb *to be*:

- (4) a. Mary invited Boris to the party
 a'. Boris was invited to the party by Mary
 (5) b. Joan has fed the elephants
 b'. The elephants have been fed by Joan

A verb can impose so-called 'selectional restrictions' on the type of subject or objects it combines with. A verb like *invite*, for example, only goes well together with human objects, while a verb like *feed* only goes together with objects that refer to things that can take food. It turns out that the selectional restrictions on the object in an active clause are exactly the same as the selectional restrictions on the subject in the passive counterpart of the clause:

- (6) a. Mary invited her parents / #the clouds / #three bottles of wine
 b. Her parents / #the clouds / #three bottles of wine were invited too
 (7) a. Joan feeds her cat / #her bike / #her shoe
 a'. Her cat / #her bike / #her shoe is regularly fed by Joan

One may hypothesize, therefore, that the subject of the passive clause actually is the object argument of the verb. What happens in a passive, then, is that the object is 'promoted' to the subject position in the clause:

- (8) [the elephants] were fed ---

Surprisingly, it turns out that some *active* intransitive verbs show behaviour that resembles that of passives. Examples are *arrive, fall, die, leave, stay, grow* and *rise*. (These verbs seem to have a particular aspect of meaning in common, something that has been taken to define them as a distinct class, as opposed to such intransitives as *walk, cry, swim, work* – as an exercise, try to work out what aspect of meaning this is, before consulting the 'further reading' on this). The behaviour hinted at is clearer in some languages other than English. We will illustrate it on the basis of examples from Dutch, Italian, Hebrew, and Russian.

In Dutch, the passive participle of a verb can be used as an attributive modifier of a noun (9a). The perfect participle of verbs like 'arrive' or 'fall' can occur as an attributive modifier as well (9b), whereas the perfect participle of other verbs cannot (9c).

- (9) a. De door Klaas gevoederde olifanten / De door Marie gelezen romans
the by Klaas fed elephants the by Marie read novels
 b. De gearriveerde/gevallen/gestorven/gebleven mensen
the arrived / fallen / died / stayed people
 c. *De gefietste/toegekeken/gelopen/geschreeuwde mensen
the cycled / watched / walked / screamed people

Because their behaviour parallels that of passive verbs, it is assumed that the subject of verbs of the ‘fall’, ‘die’ etc. class is, like the subject of a passive, really an object argument of the verb, which is promoted to subject position. For reasons we cannot go into here, such verbs are called *unaccusatives*. ‘Normal’ intransitive verbs, which take a subject argument directly, are called *unergatives*.

Various different types of evidence that the single argument of unaccusative verbs, while superficially being a subject, behaves like an object can be found in other languages. One example comes from Italian. In Italian, it is possible to realize the noun in a partitive Noun Phrase (an NP like *three of the girls* or *some of them*) as a clitic, *ne*, which cliticizes to the verb. However, this is only possible if the partitive NP is the object of the verb, not if it is the subject:

- (10) a. Ha insultato due studenti Giacomo.
has insulted two students Giacomo
 ‘Giacomo has insulted two students.’
 a’. Ne ha insultato due Giacomo.
of-them has insulted two Giacomo
 ‘Giacomo has insulted two of them.’
 b. Hanno insultato Giacomo due studenti.
have insulted Giacomo two students
 ‘Two students have insulted Giacomo.’
 b’. *Ne hanno insultato Giacomo due.
of-them insulted Giacomo two
 ‘Two of them insulted Giacomo.’

However, *ne*-cliticization from the subject of an unaccusative verb is possible (see (11a’)). This shows this constituent must have been an object at some stage in the derivation of the sentence. In contrast, *ne*-cliticization from the subject of an unergative verb is impossible, as expected (see (11b’)).

- (11) a. Arrivano molti studenti.
arrive many students
 ‘There arrive many students.’
 a’. Ne arrivano molti.
of-them arrive many
 b. Telefonato molti studenti.
telephone many students
 ‘Many students are calling.’
 b’. *Ne telefonato molti.
of-them telephone many

Similar evidence comes from Hebrew. In this language, a transitive sentence can contain a dative-marked NP that expresses who is the possessor of the thing expressed by the direct object NP in the sentence. Such a dative NP cannot express the possessor of the thing expressed by the subject NP, however. It turns out that such dative possessors can also occur with unaccusative verbs, but not with unergative verbs, see (12). This shows, again, that the argument of the former is an object argument rather than a subject argument.

- (12) a. šney sfarim naflu le-dan.
two books fell DATIVE-Dan
 ‘Two of Dan’s books fell.’
- b. *ha-yeled rakad le-dina.
the-boy danced DATIVE-Dina
 ‘Dina’s boy danced.’

In Russian, certain objects of a transitive verb can appear in the genitive case, rather than the accusative case that is usual for objects, when the sentence contains negation. Subjects never appear with this ‘genitive of negation’. This is illustrated in (13).

- (13) a. Ja ne poluchil nikakix pisem.
I not received no-kind-GENITIVE.PLUR letter-GENITIVE.PLUR
 ‘I didn’t receive any letters.’
- b. *Nikakix mal’chikov ne poluchalo pis’ma
no-kind-GENITIVE.PLUR boy-GENITIVE.PLUR not received letters
 ‘No boys received letters.’

With intransitive verbs, we again see that there are two classes: with most intransitives the subject never appears in the genitive (see (14a)), but there are some whose subject is genitive when the sentence is negated (see (14b)). Apparently, the grammatical subject of the latter is an object argument of the verb underlyingly— the property of unaccusative verbs.

- (14) a. *Nikakix devochek ne tancevalo.
no-kind-GENITIVE.PLUR girl-GENITIVE.PLUR not danced
 ‘No girls danced.’
- b. Ne rasstajalo ni odnoj snezhinki
not melted not single-GENITIVE.SING snowflake-GENITIVE.SING
 ‘Not a single snowflake melted’

So we see that in many languages evidence can be found that shows that the class of intransitive verbs is not homogeneous, but must be divided into a class that takes a subject argument (the unergatives) and a class that takes an object argument (the unaccusatives). Just as in passives, the object of an unaccusative verb is promoted to the subject position of the clause, thus becoming the grammatical subject:

- (15) a. Mary arrives/dies/falls/ascends/melts ---- (unaccusatives)
- b. Mary walks/fails/eats/snores/sleeps (unergatives)

3. Auxiliary selection

Consider now the choice of auxiliary verb in the perfect tense again. It was noted above that, also in languages showing the ‘have’/‘be’ alternation with intransitives, transitive verbs choose ‘have’. However, this statement is only valid if we are talking

about the verb in its *active* use. In the *passive*, it is actually ‘to be’ that must be used as the perfect auxiliary:

- (16) a. Zijn vriend heeft/*is Piet verraden. (Dutch)
his friend has is Piet betrayed
 ‘His friend has betrayed Piet.’
 b. Piet is/*heeft verraden door z’n vriend.
Piet is/has betrayed by his friend
 ‘Piet has been betrayed by his friend.’
- (17) I ladri sono stati inseguiti dalla polizia. (Italian)
the thieves are been pursued by-the police
 ‘The thieves have been pursued by the police.’

If there are verbs that behave like passives despite being active (unaccusatives), then we expect them to go along with the passive pattern of auxiliary selection. Hence, those verbs that behave like passives in other respects as well will take ‘be’ and those verbs that behave like proper actives take ‘have’. This correlation is fairly well corroborated by the data; for example, there is a robust correspondence between the verbs whose perfect participle can occur as an attributive noun modifier in Dutch (cf. above) and the verbs that take ‘be’ as perfect auxiliary (see (18)-(19)). The unaccusative-unergative distinction therefore is regularly taken to be at the root of the auxiliary-alternation in the perfect.

- (18) a. de gearriveerde/gevallen/gestorven/gebleven mensen
the arrived fallen died stayed
 b. Die mensen zijn/*hebben gearriveerd/gevallen/gestorven/gebleven.
those people are have arrived fallen died stayed
- (19) a. *de gelopen/geschreeuwde/gewerkte/gespeelde mensen
the walked shouted worked played people
 b. Die mensen hebben/*zijn gelopen/geschreeuwd/gewerkt/gespeeld
those people have are walked shouted worked played

4. Language variation and change

Let us speculate a bit about why the auxiliary-alternation is there in Dutch, Italian, German, French, Danish, ... but not in English, Spanish, Swedish, ...

[NB: what follows is, indeed, speculation, not received wisdom by any means]

We noted that unaccusatives pattern with passives. Given this, it is not unexpected that in English unaccusatives do not take ‘be’ as perfect auxiliary – passives do not take ‘be’ either. Rather, they take ‘have’. As a comparison between the nonperfect passive (20a) and the perfect passive (20b) makes clear, ‘be’ in (20b) is the passive auxiliary, it is ‘have’ that acts as the perfect auxiliary here.

- (20) a. The price is awarded to the best band
 b. The price has been awarded to the best band

In English, then, ‘to be’ is not perfective, only ‘to have’ is, with the consequence that the latter has to be used in each and every perfect tense. How then, can get Dutch, German, Italian, Danish, etc., get away with using ‘to be’ as a perfect auxiliary as

well? The answer is (perhaps) that in these languages there is a *third* auxiliary in the voice/mood system, which is especially used to form nonperfect passives. This is usually a cognate of English ‘to become’/‘to come’ (*worden* in Dutch, *venire* in Italian, *werden* in German):

- (21) a. De prijs wordt toegekend aan de beste band.
the price becomes awarded to the best band
 ‘The price is awarded to the best band.’
 b. De prijs is toegekend aan de beste band.
the price is awarded to the best band
 ‘The price has been awarded to the best band.’

Given the presence of this nonperfect passive auxiliary, ‘to be’ can be used as a special perfect passive (including unaccusative) auxiliary, next to active perfect ‘to have’. (French poses a problem here, as it does not have the third, nonperfect passive, auxiliary anymore and uses ‘to be’ as nonperfect auxiliary in the passive like English - but then, French appears to be losing the ‘have’/‘be’ alternation in the perfect as well. In Scandinavian, there are also various complications, having to do with the falling together in various dialects of *varda* ‘become’ and *vara* ‘to be’ and the replacement of *varda* with *bliva* (originally ‘to stay’) as imperfective passive auxiliary).

An indication that it is indeed the presence of this distinct third auxiliary in the nonperfect passive that licenses the ‘have/be’ alternation in the perfect comes from diachronic syntax. In contrast to modern English, Old English still had this third auxiliary, namely *weorthan*:

- (22) he thaer wearth fram burghwarum inn abroden
he there became from citizens in drawn
 ‘He was drawn in by the citizens.’

As it turns out, Old English also showed the *have/be* alternation for perfects of intransitives. In contrast to the present-day language, unaccusatives could take ‘to be’:

- (23) a. Whanne he escaped was ...
when he escaped was
 b. Up-resyne es a sowdane
uprisen is a sultan

Something similar can be observed in Old Spanish, a Romance language whose present day incarnation is like modern English in having only ‘have’ as perfect auxiliary.

The situation in the older stages of the languages is, however, slightly more complicated than this suggests. Although they did show the ‘have’/‘be’ alternation, it seems that, whereas in the modern languages that still have the alternation ‘be’ is obligatory with many unaccusatives, in the older stages of English there was variation between ‘have’ and ‘be’ with unaccusatives (whereas unergatives took ‘have’ only, as expected). Thus, next to sentences like (23) we find sentences like (24) in Old English, already in the oldest sources (see Ryden & Brorstrom in the ‘further reading’ list). There is no recorded stage in which unaccusatives took ‘be’ exclusively.

- (25) a. Tha Scipia haefde gefaren to dhaere niwan byrig Cartaina.
Then Scipio had travelled to the new city Carthage
 b. thaet he haefde gebeon on thes cynges swicdom
that he had been in the king's treachery

For a language like English, this might seem to be indicative of an intermediate stage in a diachronic change, from a language with 'be' only for unaccusatives to a language with 'have' only (although this would have to be a change then that lasted for more than a millennium, as it would have to have started before the oldest manuscripts, cf. above, and lasted until the beginning of the 19th century (with a verb like *to come* we still see 'to be' as perfect auxiliary in e.g. Jane Austen). However, a language like Dutch, which did not undergo the same change English may have undergone (modern Dutch still having the 'have'/'be' split and apparently not in the course of losing it), actually showed the same 'wavering' in the choice of auxiliary with unaccusatives in its older stages. Many unaccusatives that nowadays obligatorily take 'be' could appear with both 'be' and 'have' in Middle Dutch. Examples are *vallen* 'to fall', *sterven* 'to die', *omvallen* 'to topple', *groeyen* 'to grow', *sijn* 'to be', and *afnemen* 'to decline':

- (26) a. Dear heeft sunderlinghe roecke uut ghecomen.
there has strange smoke out come
 'Strange smoke came out of that.'
 b. Doe heeft hi gevallen op sijn knien voor onser Vrouwen
then has he fallen on his knees before our Lady
 'Then he fell on his knees before our Lady.'
- (27) a. Waer bi bestu so tilec comen.
why are-you so early come
 'Why have you come so early?'
 b. Nu dat gi te voeten sijt gevallen mi
now that you to feet are fallen me
 'Now that you have fallen to my feet'

As a final note of caution, although the type of variation seen in Middle Dutch is not found in the modern standard language, this is not to say that there is no variation at all. For some verbs, there is speaker variation as to which class (unaccusative or unergative) they fall into, and a few verbs do still show speaker-internal optionality in their choice of perfect auxiliary. The clearest examples of this are *vergeten* 'to forget' and *verliezen* 'to lose':

- (28) a. Ik heb/ben m'n sleutels vergeten.
I have am my keys lost
 b. Ik heb/ben z'n naam vergeten.
I have am his name forgotten

Further reading

Chapter 4 from: Peter Ackema (1999). *Issues in Morphosyntax*. Amsterdam: John Benjamins.

Teun Hoekstra (1999). Auxiliary Selection in Dutch. *Natural Language and Linguistic Theory* 17, 67-84.

Rochelle Lieber and Harald Baayen (1997). A Semantic Principle of Auxiliary Selection in Dutch. *Natural Language and Linguistic Theory* 15, 789-845.

Ximena Lois (1990). Auxiliary Selection and Past Participle Agreement in Romance. *Probus* 2, 233-255.

Mats Rydén, and Sverker Brorström (1987). *The Have/Be Variation with Intransitives in English*. Stockholm: Almqvist and Wiksell.

Gillian Sankoff and Pierrette Thibault (1977). L'alternance entre les auxiliaires *avoir* et *être* en français parlé a Montréal. *Langue Française* 34, 81-108.

Antonella Sorace (2000). Gradients in Auxiliary Selection with Intransitive Verbs. *Language* 76, 859-890.