

# Perfect auxiliaries with reflexive objects: *have vs. be*

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**Abstract:** I will try to update the analysis of Vikner & Sprouse (1988) and of Vikner (1990) that in languages with auxiliary selection like Danish, German, French and Italian, *be* is used as the auxiliary to form perfect tenses when the perfect auxiliary is positioned between two DPs with the same index. I will show how this works for unaccusative vs. unergative verbs, and then go on to show how it also may provide an analysis of why in French and Italian *be* can even be the perfect auxiliary with transitive verbs, provided that the object is reflexive.

## 1. Introduction

The original idea, which goes back at least to Perlmutter (1978) and Burzio (1986) is that there are two kinds of intransitive verbs, i.e. two kinds of verbs with only one argument:

- (1) **Unergatives**, where the verb's only argument corresponds to the **subject** of a transitive verb (= it is an external argument).  
**Unaccusatives**, where the verb's only argument corresponds to the **object** of a transitive verb (= it is an internal argument).

("corresponds to"  $\approx$  "is base-generated as")

- (2) a. Transitive verbs [VP external  $\theta$ -role [v' V° internal  $\theta$ -role ]] e.g. (3)  
 b. Unergative verbs [VP external  $\theta$ -role [v' V° ]] e.g. (4)  
 c. Unaccusative verbs [VP [v' V° internal  $\theta$ -role ]] e.g. (5)
- (3) a. En. The thief has stolen the necklace from the hotel room. TRANSITIVE  
 b. Da. Tyven har stjålet halskæden fra hotelværelset.
- (4) a. En. The thief has worked in the hotel room. UNERGATIVE  
 b. Da. Tyven har arbejdet på hotelværelset.
- (5) a. En. The necklace has disappeared \_\_\_\_\_ from the hotel room. UNACCUSATIVE  
 b. Da. Halskæden er forsvundet \_\_\_\_\_ fra hotelværelset.
- 

The internal  $\theta$ -role (the 'object' role) is assigned to the complement of the verb, i.e. the sister of V°, whereas the external  $\theta$ -role (the 'subject' role) is assigned to the specifier of VP/the specifier of vP.

## 1.1 Movement, case and Burzio's generalisation

Constituents can only move to positions which are not occupied and never have been. Constituents can only move upwards in the tree, not downwards, because a moved constituent must c-command its trace (i.e. the position it came from).

Two kinds of constituents may move: Phrases (XP) and heads (X°), but not X'.

- An XP may only move to another XP-position. The landing position cannot be a complement position, also because of the c-command requirement.
- An X° may only move to another X°-position. This landing position is necessarily a "functional" X° (C°, I°, or D°), not a lexical one (N°, V°, P°, etc.), because a lexical X° always contains (or has contained) lexical material, and therefore counts as "occupied".

(6)	Type of movement	What?	Where to?
	X°-movement	moves an X°	into the next X°-position (which must be empty)
	A-movement	moves a DP	into the next IP-spec (which must be empty)
	A-bar-movement	moves an XP	into the next CP-spec (which must be empty)

- (7) **A-bar-movement:** movement into a non-argument position (position w/o case)  
 e.g. • *wh*-movement (XP must be *wh*)  
 • topicalisation (XP must be topic)

- A-movement** (= NP-movement): movement into an argument position (position w/ case)  
 e.g. • passivisation (and middles)  
 • raising  
 • **with unaccusative verbs**



All three movements are subject to **locality**: They target the **next** position of the relevant type (X° / IP-spec / CP-spec). The target position therefore has to be empty. If not, the movement is blocked.

- **X°-movement** (head movement, e.g. V°-to-I° movement or I°-to-C° movement) moves an X°-element into a higher X°-position.

- **A-bar-movement** moves an element that already has whatever it needs with respect to case (and also  $\theta$ -roles) into a higher XP-position (e.g. CP-spec), i.e. if a DP undergoes *wh*-movement, it has already been assigned both case and a  $\theta$ -role, whereas if e.g. an AdvP undergoes *wh*-movement, it has neither case nor a  $\theta$ -role. (Presumably there are more A-bar-positions than CP-spec, i.e. more positions into which all sorts of XP's can be moved, not just DP's.)
- **A-movement** (= DP-movement), which includes the movement of the argument of an unaccusative verb from the object position to the subject position, is typically motivated by case (it is 'case-driven'), as it moves an element in need of case into a position where it is assigned case, just like passivisation or raising does. This is the reason why it only applies to DPs (only DPs require case), and why it typically moves into IP-spec. (Presumably there are more A-positions than IP-spec, i.e. more positions into which only DP's can be moved, e.g. all VP-specs.)

Movement into the subject position of a finite clause (i.e. A-movement) thus results in the moved DP being assigned nominative in its new position. A-movement thus also requires that no case is assigned to the base position of the moved DP, and this is where **Burzio's generalisation** comes in. This generalisation (Burzio 1986, 178–86) says that a verb assigns **accusative case if and only if** it also assigns an **external thematic role**. This generalisation is actually **not** necessary to account for the lack of case assigned to the base position of a DP that has undergone raising (because a subject position of a non-finite clause is not assigned case) or passivisation (because we assume that accusative case is assigned to/absorbed by the passive morphology, *-en*, cf. *broken*). The generalisation **is** necessary to account for the lack of case assigned to the complement by an unaccusative verb, (5), (9), or by a middle verb (*This dictionary has sold t really well this year*).

With unaccusative verbs (as with middle verbs), movement into the subject position takes place even though there is no passive morphology, (9). Furthermore, a *by*-phrase is impossible, as opposed to with passives, (9)/(10).

- |      |    |     |           |       |         |   |                               |              |
|------|----|-----|-----------|-------|---------|---|-------------------------------|--------------|
| (8)  | a. | En. | The sun   | has   | melted  | the ice.  |                               | TRANSITIVE   |
|      | b. | Da. | Solen     | har   | smeltet | isen.   |                               |              |
|      | c. | Ge. | Die Sonne | hat   |         | das Eis   | geschmolzen.                  |              |
|      |    |     |           |       |         |   |                               |              |
| (9)  | a. | En. | The ice   | has   | melted  | _____   | (*by the sun).                | UNACCUSATIVE |
|      | b. | Da. | Isen      | er    | smeltet | _____   | (*af solen).                  |              |
|      | c. | Ge. | Das Eis   | ist   |         | _____   | (*von der Sonne) geschmolzen. |              |
|      |    |     |           |       |         |  |                               |              |
|      |    |     |           |       |         |   |                               |              |
| (10) | a. | En. | The ice   | was   | melted  | _____   | (by the sun).                 | PASSIVE      |
|      | b. | Da. | Isen      | blev  | smeltet | _____   | (af solen).                   |              |
|      | c. | Ge. | Das Eis   | wurde |         | _____   | (von der Sonne) geschmolzen.  |              |
|      |    |     |           |       |         |  |                               |              |

The above examples further show that some unaccusative verbs are alternating, i.e. they also exist in a transitive version, like *melt/smelte* in (8)/(9), whereas other unaccusative verbs are non-alternating, i.e. they do not also exist in a transitive version, like *disappear/forsvinde* in (5) above.

- (11) a. **Unergative**, cf. (4)  
*bark, cry, dance, hesitate, laugh, scream, shout, sing, sleep, smile, wave, wink, work*
- b. **Unaccusative (non-alternating)**, cf. (5)  
*appear, arise, arrive, come, depart, descend, disappear, emerge, exist, fall, occur, stand, wilt*
- c. **Unaccusative (alternating)**, cf. (8)/(9)  
*break, close, cook, freeze, grow, melt, move, open, roll, shut, sink, swing*

## 1.2 Auxiliary selection

When the subject is an internal argument, the perfect auxiliary is *be*, but when the subject is an external argument, the perfect auxiliary is *have* (Burzio 1986, 53–63). (See also e.g. Ackema and Sorace 2017; Mateu Fontana 2016.)

Unaccusative subjects: *be/have*

- (12) a. Ge. Der Student ist /\*hat zum Konzert mit Beyoncé gegangen.  
 b. Da. Den studerende er /\*har gået til koncert med Beyoncé.  
 c. Fr. L' étudiant est /\*a allé au concert de Beyoncé.  
*The student is /has gone to concert with Beyoncé*

Unergative subjects: *have/be*

- (13) a. Ge. Der Student hat /\*ist nie in der Vorlesung geschlafen.  
 b. Da. Den studerende har /\*er aldrig sovet til forelæsningen.  
 c. Fr. L' étudiant n'a /\*est jamais dormi au cours.  
*The student has/is/is never slept in class*

Transitive subjects: *have/be*

- (14) a. Ge. Der Verfasser hat /\*ist den Präsidenten erwähnt.  
 b. Da. Forfatteren har /\*er nævnt præsidenten.  
 c. Fr. L'auteur a /\*est mentionné le président.  
*The author has/is mentioned the president*

Transitive objects (passive): *be/have*

- (15) a. Ge. Der Präsident ist /\*hat im Buch erwähnt.  
 b. Da. Præsidenten er /\*har nævnt i bogen.  
 c. Fr. Le président est /\*a mentionné dans le livre.  
*The president is /has mentioned in the book*

Although auxiliary selection is thus found in German, Danish and French, far from all the Germanic and Romance languages have it, cf. that the auxiliary would be *have* and not *be* in examples like (12) in English, Swedish and Spanish, (41)a, (42)a, (43)a. Still, it would seem that at least Irish English (as opposed to other variants of English) has auxiliary selection, as seen in the following examples with unaccusative subjects and *be*:

- (16) IrE. The majority of people, they come from the North. All of 'm people **are** come down here, now. Nearly. (Kerry: D.B.) (Filppula 1999, 116–17, (69))

- (17) IrE. There was a lot about fairies long ago — whether they were right or wrong — but I'm thinkin' that most of 'em **are** vanished. (Clare: M.R.) (Filppula 1999, 117, (70))
- (18) IrE. And there was a big ash-tree growing there one time = and it is = it is = it **is** withered and fade' away now. (Kerry: M.McG.) (Filppula 1999, 117, (72))
- (19) IrE. [...] the thing **isn't** happened out in the States, when we have it here = before a = half an hour or an hour. (Clare: J.N.) (Filppula 1999, 118, (75))

(cf. Danish *være* 'be' in the same contexts: *er kommet herved* / *er forsvundet* / *er visnet* / *ikke er sket*)

### 1.3 The Auxiliary Selection Hierarchy

As more and more languages have been examined, it would appear that a more fine-grained description is necessary, to capture the differences as to where individual languages draw the line between unaccusative and unergative verbs. One such description is the Auxiliary Selection Hierarchy (ASH) proposed by Antonella Sorace in e.g. Sorace (2000, 863), Keller and Sorace (2003, 60), Sorace (2004, 256), and Cennamo and Sorace (2007, 67).

In many languages, unaccusative verbs form perfect tense with auxiliary *be*, as opposed to unergative and transitive verbs, which form perfect tense with auxiliary *have*, as seen in (4)/(5) and (8)/(9) above. This is called **Auxiliary Selection** (cf. also § 1.2 below), and it is even found in one variant of English, Irish English, cf. (16)-(19) below and Filppula (2008, 330, iv; 2004, 75, iv; 1999, 116–22).

The idea behind Sorace's Auxiliary Selection Hierarchy is that verbal predicates fall into a series of semantic classes, which can be set up in a hierarchy. The higher a verb is on the hierarchy, the more strongly it prefers auxiliary *be*; the lower it is, the more strongly it prefers *have*, both within and across languages.

(20) **Auxiliary Selection Hierarchy**

a. change of location	<b>be</b> (unaccusative)	<i>er stukket af, er rejst</i>
b. change of state		<i>er vokset, er visnet</i>
c. continuation of a pre-existing state		<i>har overlevet, er forblevet</i>
d. existence of a state		<i>har eksisteret, har siddet</i>
e. uncontrolled process		<i>har vaklet,</i>
f. controlled process (motional)		<i>har svømmet</i>
g. controlled process (non-motional)	<b>have</b> (unergative)	<i>har talt</i>

Verbs at either end of the hierarchy show the most consistent selection cross-linguistically and inspire the clearest judgments on the part of native speakers. Verbs toward the middle show variation and indeterminacy, with languages differing in where on the hierarchy they draw the line between *be* and *have*.

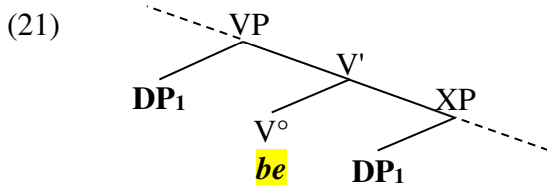
What I like about this is that it recognises that there is more variation than you might see at first glance, i.e. that the picture I painted in section (12)-(19) above.

What I like less, is that it is sort of arbitrary, i.e. you might as well have had most *have* at the top of (20) and most *be* at the bottom.

## 1.4 "be is like an equal sign, as opposed to have"

In the rather old and dusty analysis in Vikner and Sprouse (1988) and in Vikner (1990), the basic idea is that that *be* and *have* are completely identical, except that

- *be* requires that ***be*'s specifier** is coindexed with **the specifier of *be*'s complement**
- and also that the coindexed specifier is an A-position
- and that *have* is not compatible with exactly the same contexts.



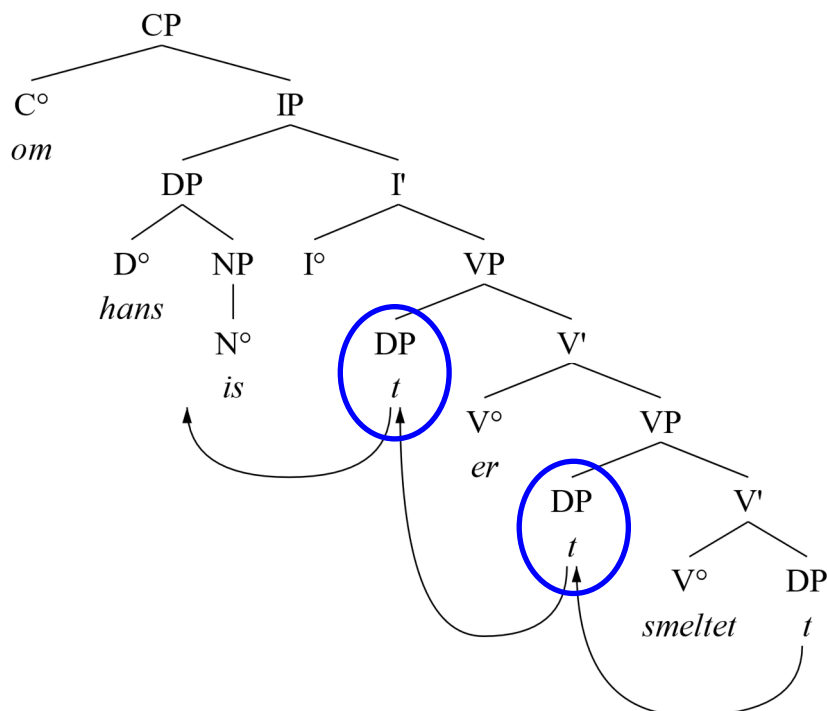
The intuition is that *be* signals identity, cf. also Benveniste (1966, 198), i.e. *be* somehow corresponds to an equal sign, in that it must occur between two DPs that have the same index.

(It is also possible that *be* is happy if ***be*'s specifier** is coindexed with ***be*'s complement** itself).

So the basic idea is that in the unaccusative examples (22)/(23) *være/sein* 'be' is selected as the perfect auxiliary (cf. (9)b,c above), and not *have/haben* 'have' because the V° of the auxiliary is "surrounded" by two coindexed DPs, due to the fact that on its way from its base position to the subject position, *hans is* 'his ice cream' moves via all the intervening VP-specifier positions (which are A-positions).

- (22) a. Da. ... om hans is er smeltet \_\_\_\_\_  
 b. Ge. ... ob sein Eis \_\_\_\_\_ geschmolzen ist.  
 ... *whether his ice cream is melted*

- (23) a. Da.



(The movement via various VP-specs is supported by agreement evidence in Italian: *i nonni sono arrivati<sub>i</sub>* vs. *la nonna è arrivata<sub>a</sub>* vs. *il nonno è arrivato<sub>o</sub>* 'the grandparents/grandmother/grandfather have/has arrived', where the agreement on the participle *arrivato/-al/-i* is triggered by the movement of the relevant subject DP through VP-spec. If the verb is unergative, there is no such movement via VP-spec of the main verb, and therefore there is no agreement, *i nonni hanno ballato<sub>o</sub>*, *la nonna ha ballato<sub>o</sub>* and *il nonno ha ballato<sub>o</sub>* 'the grandparents/grandmother/grandfather have/has danced'.)

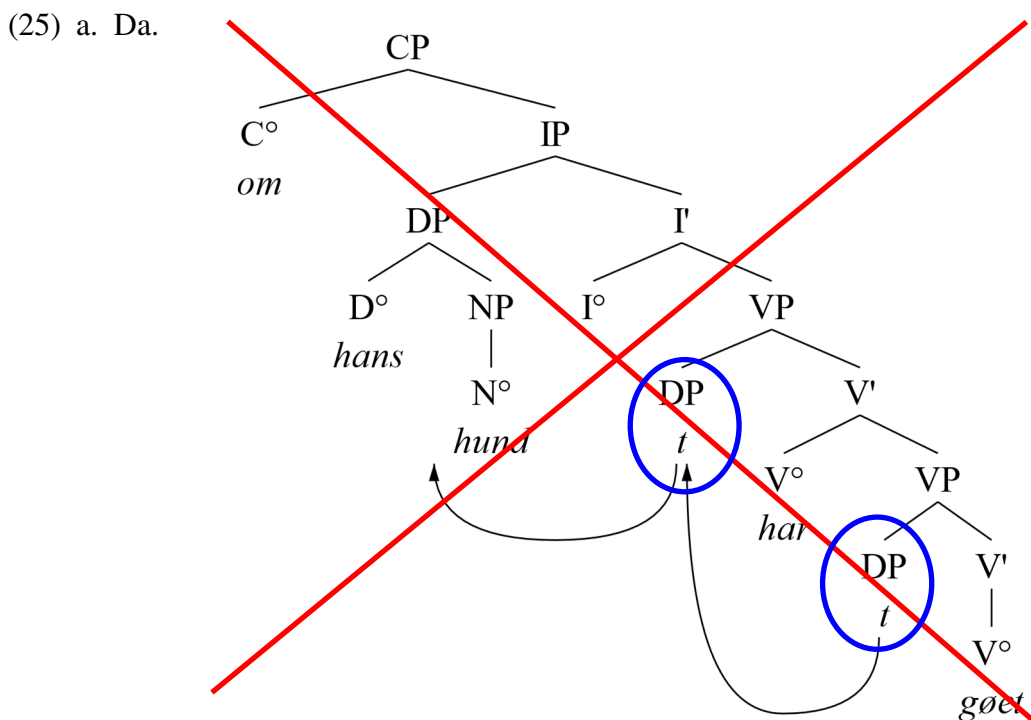
In the unergative examples (24)/(25)/(26), on the other hand, *være/sein* 'be' is **NOT** selected as the perfect auxiliary (cf. (4) above), because the V° of the auxiliary is not "surrounded" by two coindexed DPs. Therefore, we instead end up with *have/haben* 'have'.

- (24) a. Da. ... om hans hund har gøet  
 b. Ge. ... ob sein Hund gebellt hat.  
 ... whether his dog has barked

At first glance, this looks very straightforward, because the subject here does not start out in the object position, and so there is no reason to expect a series of co-indexed traces in the various VP-specs.

However, this becomes much more complicated when we look at this in more detail, especially if we assume the VP-internal subject hypothesis, which goes back to Fillmore (1968) and McCawley (1970), and which receives the form I will assume here in treatments like Fukui (1986, 55), Sportiche (1988), Koopman and Sportiche (1991), and McCloskey (1997) (for Danish, see also Vikner 2023a; 2023b).

It might look as if this is parallel to the *smelte/schmelzen* 'melt' case in (22)/(23) above, in that we would assume the base position of the subject to be in the VP-spec of *gø/bellen* 'bark'. After all, the idea of the VP-internal subject hypothesis is that the base position of the subject is not IP-spec but VP-spec. This would look as follows, but it would incorrectly predict *være/sein* 'be' as the perfect auxiliary, not *have/haben* 'have' because also the V° of the auxiliary is "surrounded" by two coindexed DPs:



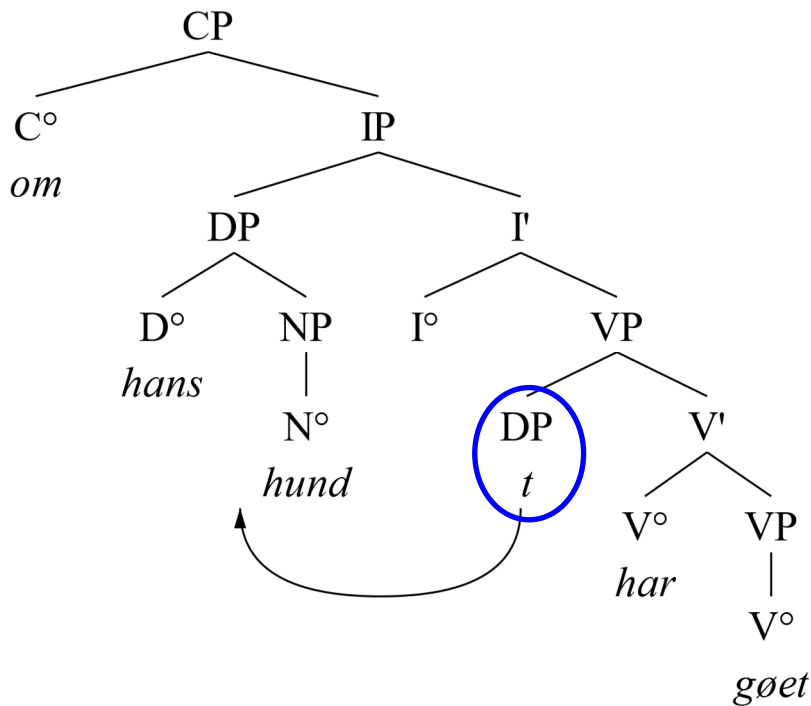
So obviously, I want to get rid of this analysis, (25), but on what supporting evidence?

Well, whereas (25) would work fine for the infinitive *gø/bellen* 'bark' or for the present tense *gør/bellt* 'barks', both of which are active forms, it does not actually work for perfect participle *gøet/gebellt* 'barked', which is a passive form. This is because the passive morphology of the perfect participle is assumed to absorb the thematic role normally assigned to the subject (AGENT of *bark*). In fact, it is precisely this absorption of the AGENT role which allows what would have been an object in the active (*I made a mistake*) to become a subject in the passive (*A mistake was made*), as now there is no AGENT DP occupying the subject position.

But if perfect participles are passive, how can there be an AGENT DP in the subject position?

One way out could be to follow Haider (1986) and say that the perfect auxiliary has the ability "deblock", i.e. to grab the AGENT role from the perfect participle and then assign it to its own specifier. In other words, the AGENT role would still be assigned to a VP-spec, but the VP-spec of the perfect auxiliary, and **not** to the VP-spec of the perfect participle:

(26) a. Da.



Now the prediction is again that *have/haben* 'have' should be the perfect auxiliary here because the V° of the auxiliary is not "surrounded" by two coindexed DPs.



## 1.5 Reflexive objects and auxiliary selection

We have now set up an analysis of the difference between the unaccusative *smelte/schmelzen* 'melt' in (22)/(23) which tend to take *be* as the perfect auxiliary in languages with auxiliary selection and the unergative *gø/bellen* 'bark' in (24)/(26) which tend to take *have* as the perfect auxiliary in languages with auxiliary selection.

With this in mind, we can now turn to an internal difference in the group of languages with auxiliary selection, namely one which concerns transitive examples with reflexive objects. Here we find that German and Danish use *have* as the perfect auxiliary regardless of whether the object is coreferent with the subject (as in *Mary has photographed herself*, see (30)a/(31)a), or not coreferent with the subject (as in *Mary has photographed it*, see (30)b/(31)b). This is in fact what we would expect with transitive verbs.

		<i>be</i>	<i>have</i>	
	a.		b.	
(27)	It.	Maria si <u>è</u> fotografata.	Maria l' <u>ha</u> fotografato.	(I)
(28)	Fr.	Marie s' <u>est</u> photographiée.	Marie l' <u>a</u> photographié.	(II)
(29)	Sp.	María se <u>ha</u> fotografiado.	María l' <u>ha</u> fotografiado.	(III)
(30)	Ge.	Maria <u>hat</u> sich fotografiert.	Maria <u>hat</u> es fotografiert.	(I)
(31)	Da.	Marie <u>har</u> fotograferet sig selv.	Marie <u>har</u> fotograferet det.	(II)
(32)	En.	Mary <u>has</u> photographed herself.	Mary <u>has</u> photographed it.	(III)

What is unexpected is that in Italian and French, it makes a difference for which perfect auxiliary is selected whether there is coreference between subject and object or not.

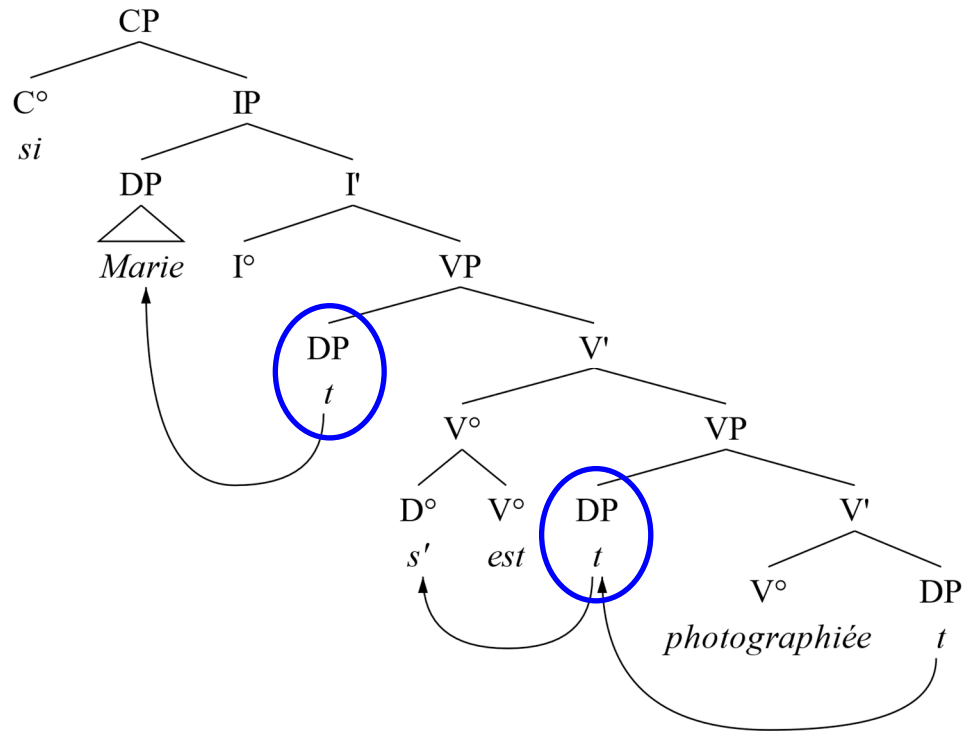
Italian and French use *be* as the perfect auxiliary when the object is coreferent with the subject (as in *Mary has photographed herself*, see (27)a/(28)a), but *have* when the object is not coreferent with the subject (as in *Mary has photographed it*, see (27)b/(28)b).

The crucial difference between German and Danish on one hand and Italian and French on the other, is that only in Italian and French is the reflexive a clitic pronoun that cliticises to the finite verb.

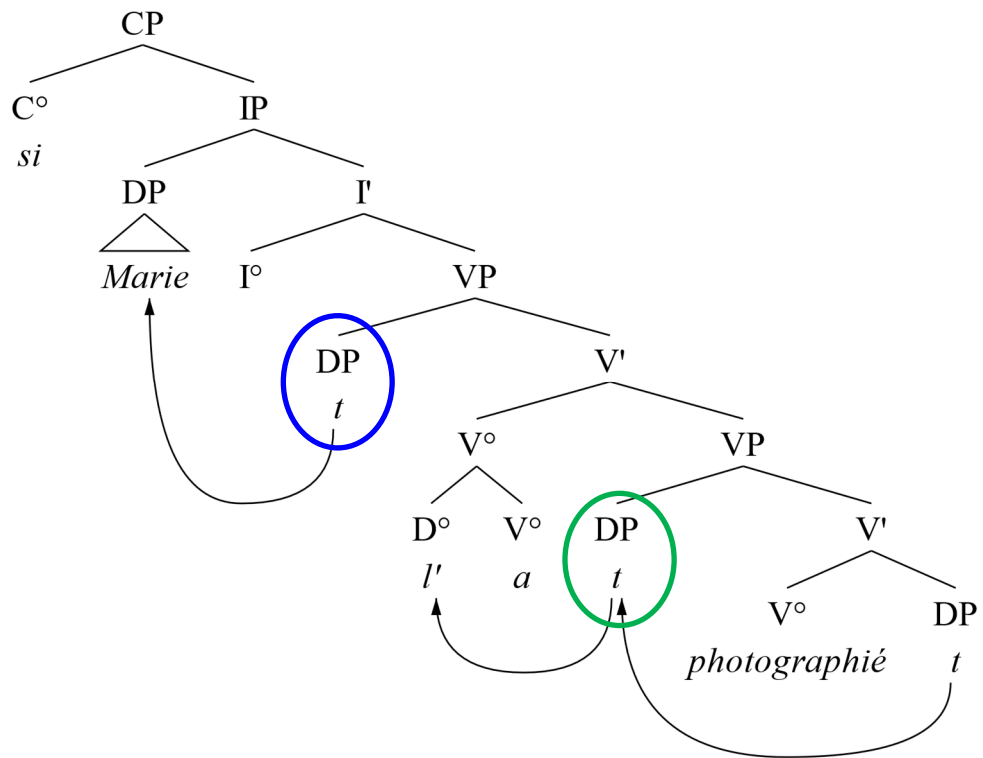
We therefore get the situation (33)a,b in French (and Italian) at the relevant point in the derivation, i.e. before  $V^\circ$ -to- $I^\circ$ -movement. The only thing that has not yet happened here is the subsequent movement of *s'est* from  $V^\circ$  to  $I^\circ$ .

The two analyses are almost identical, (33)a for the reflexive clitic object and (33)b for the non-reflexive clitic object. In both cases, the clitic object first moves as a DP into the VP-spec of the perfect participle *photographié(e)*, and from there the clitic undergoes head movement to the  $V^\circ$  of the auxiliary which is also the finite verb. There is thus a trace of the subject in the VP-spec of the auxiliary, and there is a trace of the object in the spec of the complement of the auxiliary (i.e. the spec of *photographié(e)*). If there is coreference between the subject and the object as there is in the reflexive situation, (33)a, then the perfect auxiliary is surrounded by two coindexed DPs, and the conditions for *be* are fulfilled. If there is no coreference between the subject and the object as in the non-reflexive situation, (33)b, then the perfect auxiliary is not surrounded by two coindexed DPs, and the conditions for *be* are not fulfilled, and the result is *have*.

(33) Fr. a.

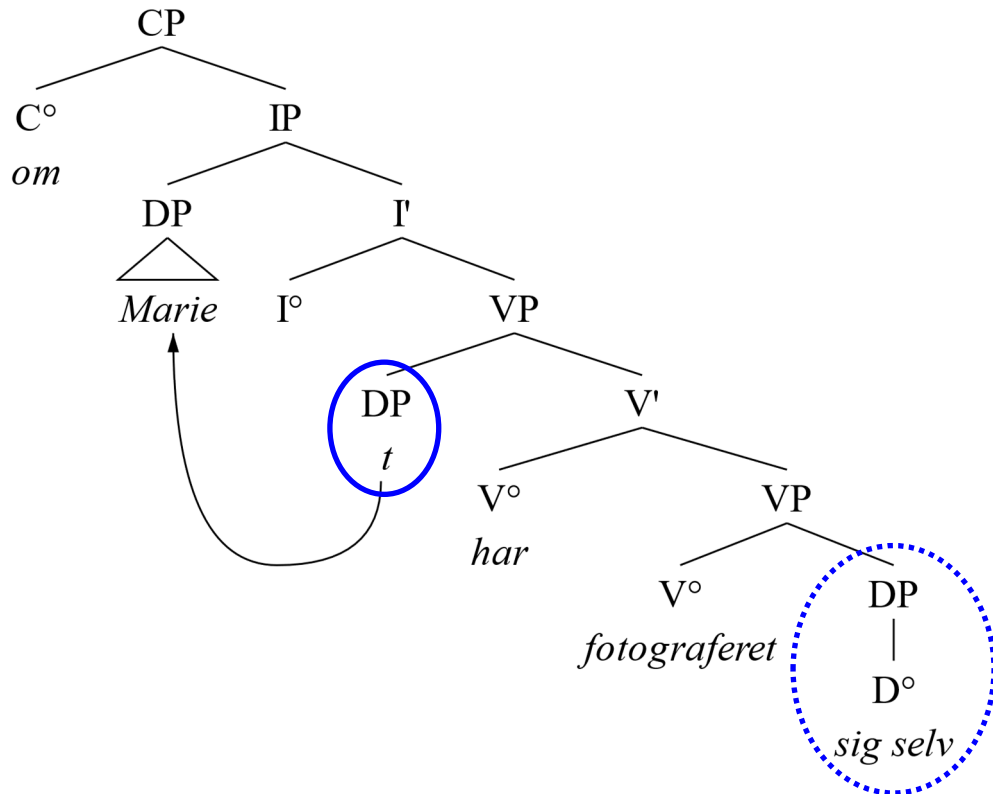


b.



In Danish, (34), neither the reflexive nor the non-reflexive object is a clitic, as seen in (31)a,b, and the object, therefore stays in the object position. there is thus no way of getting into the spec of the perfect participle a DP which is coindexed with the trace of the subject in the spec of the perfect auxiliary, and therefore the conditions for *be* are not fulfilled, irrespective of whether there is coreference between subject and object or not. (34) is also the relevant analysis of the many cases in French and Italian where the objects are non-clitic DPs.

(34) Da.



Now the prediction is again that *have/haben* 'have' should be the perfect auxiliary here because the V° of the auxiliary is not "surrounded" by two coindexed DPs.

The trees in (23), (25), (26), (33)a,b and (34), were made by means of the inputs below into the **SVG Syntax Tree Generator**, <https://tildeweb.au.dk/au132769/syntree/> = <https://tildeweb.au.dk/au572/syntree/> = <https://syntree.abitcreative.co/>.

[CP [C° om][IP [DP\_b [D° hans][NP [N° is]]] [I' [I° []] [VP [DP\_e t<b>] [V' [V° er] [VP [DP\_f t<e>] [V' [V° smeltet] [DP t<f>]]]]]]]]]

[CP [C° om][IP [DP\_b [D° hans][NP [N° hund]]] [I' [I° []] [VP [DP\_e t<b>] [V' [V° har] [VP [DP t<e>] [V' [V° gøet] ]]]]]]]]

[CP [C° om][IP [DP\_b [D° hans][NP [N° hund]]] [I' [I° []] [VP [DP\_e t<b>] [V' [V° har] [VP [V° gøet] ]]]]]]

[CP [C° si][IP [^DP\_b Marie] [I' [I° []] [VP [DP t<b>] [V' [V° [D°\_e s'] [V° est]] [VP [DP\_f t<e>] [V' [V° photographiée] [DP t<f>]]]]]]]]]

[CP [C° si][IP [^DP\_b Marie] [I' [I° []] [VP [DP t<b>] [V' [V° [D°\_e I'] [V° a]] [VP [DP\_f t<e>] [V' [V° photographié] [DP t<f>]]]]]]]]]

[CP [C° om][IP [^DP\_b Marie] [I' [I° []] [VP [DP t<b>] [V' [V° har] [VP [V° fotograferet] [DP [D° sig selv]]]]]]]]]

## 1.6 More auxiliary selection variation

- All nine languages in (35)-(43) use *have*:
  - with a participle like *slept* (unergative) (cf. the c-examples).
- Group **I** languages use *be*, Groups **II and III** *have*:
  - with the participle *been* (cf. the b-examples).
- Groups **I and II** use *be*, Group **III** *have*:
  - with a participle like *come* (unaccusative) (cf. the a-examples).
- All nine languages use *be*:
  - with a predicative adjective (e.g. *Mary is ill*) (cf. the participle in the b-examples).
  - as a passive auxiliary (e.g. *This problem is not described in the book*).

		<i>be</i>	<i>have</i>
<b>I.</b>	a.	b.	c.
(35) Ge.	Maria <u>ist</u> gekommen.	Maria <u>ist</u> krank gewesen.	Maria <u>hat</u> geschlafen.
(36) Du.	Maria <u>is</u> gekomen.	Maria <u>is</u> ziek geweest.	Maria <u>heeft</u> geslapen.
(37) It.	Maria <u>è</u> venuta.	Maria <u>è</u> stata malata.	Maria <u>ha</u> dormito.
<b>II.</b>			
(38) Da.	Marie <u>er</u> kommet.	Marie <u>har</u> været syg.	Marie <u>har</u> sovet.
(39) Fs.	Maria <u>is</u> kommen.	Maria <u>hat</u> siik west.	Maria <u>hat</u> sliept.
(40) Fr.	Marie <u>est</u> venu.	Marie <u>a</u> été malade.	Marie <u>a</u> dormi.
<b>III.</b>			
(41) En.	Mary <u>has</u> come.	Mary <u>has</u> been ill.	Mary <u>has</u> slept.
(42) Sw.	Maria <u>har</u> kommit.	Maria <u>har</u> varit sjuk.	Maria <u>har</u> sovit.
(43) Sp.	María <u>ha</u> venido.	María <u>ha</u> estado enferma.	María <u>ha</u> dormido.

I think I can capture the language specific variation in (35)-(43) by assuming two conditions on the relationship between *be* and its complement: semantic independence and thematic closeness. The former distinguishes English/Spanish/Swedish from the rest, whereas the latter distinguishes between Danish/French/ Frisian and German/Italian/Dutch.

## 2. Appendix: Further tests for unaccusativity

(44)	a.	Transitive verbs	[ <u>VP external <math>\theta</math>-role</u> [ <u>V' V° internal <math>\theta</math>-role</u> ]]
	b.	Unergative verbs	[ <u>VP external <math>\theta</math>-role</u> [ <u>V' V°</u> ]]
	c.	Unaccusative verbs	[ <u>VP</u> [ <u>V' V° internal <math>\theta</math>-role</u> ]]

§	Test	<i>have</i>	<i>be</i>
1.2	<b>Auxiliary selection</b>		
2.1	<b>Passivisation</b>	+	-
2.2	<b>-er-nominalisation</b>	+	-
2.3	<b>Modification by past participles</b>	-	+
2.4	<b>-ling-nominalisation</b>	-	+
2.5	<b>Directional/resultative predication</b>	-	+
2.6	<b>as-clauses</b>	-	+
2.7	<b>Post-verbal arguments</b>	-	+
2.8	<b>ne/en-cliticisation</b>	-	+

## 2.1 Passivisation

Only clauses with external arguments may be passivised (in Germanic V2-languages) (Perlmutter 1978).

Unaccusative verbs cannot be passivized, presumably because they have no external argument that can be absorbed:

- |             |   |    |  |
|-------------|---|----|--|
| (45) Ge. a. | <u>Das Kind</u> ist gewachsen.                        | b. | * Es wurde gewachsen.                        |
| (46) Da. a. | <u>Barnet</u> er vokset.<br><i>The child is grown</i> | b. | * Der blev vokset.<br><i>There was grown</i> |

OK with unergative verbs:

- |             |   |    |   |
|-------------|---|----|---|
| (47) Ge. a. | <u>Der Student</u> hat hart gearbeitet.   | b. | Es wurde gearbeitet.                          |
| (48) Da. a. | <u>Den studerende</u> har arbejdet hårdt.<br><i>The student has worked hard</i> | b. | Der blev arbejdet.<br><i>There was worked</i> |

OK with transitive verbs:

- |             |   |    |   |
|-------------|---|----|---|
| (49) Ge. a. | <u>Der Mann</u> kritisierte den Film.                                   | b. | Der Film wurde kritisiert.                                |
| (50) Da. a. | <u>Manden</u> kritiserede filmen.<br><i>The man criticised the film</i> | b. | Filmen blev kritiseret.<br><i>The film was criticised</i> |

## 2.2 -er-nominalisation

Only external arguments can be referred to by an *er*-nominalisation (Burzio 1986, 161).

Not possible with unaccusative verbs:

- |             |                                |    |               |
|-------------|--------------------------------|----|---------------|
| (51) En. a. | <u>The child</u> has grown.    | b. | * a grower    |
| (52) Ge. a. | <u>Das Kind</u> ist gewachsen. | b. | * ein Wachser |
| (53) Da. a. | <u>Barnet</u> er vokset.       | b. | * en vokser   |

Possible with unergative verbs:

- |             |   |    |              |
|-------------|---|----|--------------|
| (54) En. a. | <u>The student</u> has worked hard.     | b. | a worker     |
| (55) Ge. a. | <u>Der Student</u> hat hart gearbeitet. | b. | ein Arbeiter |
| (56) Da. a. | <u>Studenten</u> har arbejdet hårdt.    | b. | en arbejder  |

Possible with the subjects of transitive verbs, but not with the objects:

- |             |                                      |    |                                  |
|-------------|--------------------------------------|----|----------------------------------|
| (57) En. a. | <u>The woman</u> only smokes cigars. | b. | a smoker = woman, ≠ cigar        |
| (58) Ge. a. | <u>Die Frau</u> raucht nur Zigarren. | b. | eine Raucherin = Frau, ≠ Zigarre |
| (59) Da. a. | <u>Kvinden</u> ryger kun cigarer.    | b. | en ryger = kvinde, ≠ cigar       |

## 2.3 Modification by past participles

Only internal arguments (Paul 1920, 80, §323; cited in Grewendorf 1989, 12).

OK with unaccusative verbs:

- |             |                                  |    |                              |
|-------------|----------------------------------|----|------------------------------|
| (60) En. a. | <u>The flowers</u> have wilted.  | b. | the <b>wilted</b> flowers    |
| (61) Ge. a. | <u>Die Blumen</u> sind verwelkt. | b. | die <b>verwelkten</b> Blumen |
| (62) Da. a. | <u>Blomsterne</u> er visnet.     | b. | de <b>visnede</b> blomster   |

Not with unergative verbs:

- |             |                                 |    |                                     |
|-------------|---------------------------------|----|-------------------------------------|
| (63) En. a. | The students have slept.        | b. | * the <b>slept</b> students         |
| (64) Ge. a. | Die Studenten haben geschlafen. | b. | * die <b>geschlafenen</b> Studenten |
| (65) Da. a. | De studerende har sovet.        | b. | * de <b>sovede</b> studerende       |

OK with the objects of transitive verbs, not with the subjects:

- |             |  |    |  |
|-------------|--|----|--|
| (66) En. a. | The student criticised <u>the film</u> .   | b. | the <b>criticised</b> film /*student     |
| (67) Ge. a. | Der Student kritisierte <u>den Film</u> .  | b. | der <b>kritisierte</b> Film /*Student    |
| (68) Da. a. | Den studerende kritiserede <u>filmen</u> . | b. | den <b>kritiserede</b> film /*studerende |

## 2.4 -ling-nominalisation

Only internal arguments and only German (Grewendorf 1989, 22).

With unaccusative verbs:

- |             |  |    |   |
|-------------|--|----|---|
| (69) Ge. a. | <u>Die Frau</u> ist eingedrungen.<br><i>The woman is entered</i>               | b. | der Eindring <b>ling</b><br><i>the intruder</i> |
| (70) a.     | <u>Die Frau</u> ist emporgekommen.<br><i>The woman is 'risen in the world'</i> | b. | der Emporkömml <b>ing</b><br><i>the upstart</i> |

Not with unergative verbs:

- |             |   |    |                          |
|-------------|---|----|--------------------------|
| (71) Ge. a. | Der Mann hat geschlafen.<br><i>The man has slept</i>    | b. | * der Schläf <b>ling</b> |
| (72) a.     | Die Frau hat gearbeitet.<br><i>The woman has worked</i> | b. | * der Arbeit <b>ling</b> |

With the objects of transitive verbs, not with the subjects:

- |             |   |    |   |
|-------------|---|----|---|
| (73) Ge. a. | Die Mutter säugt <u>das Baby</u> .<br><i>The mother breastfeeds the baby</i>    | b. | der Säug <b>ling</b> = Baby, ≠ Mutter<br><i>the infant</i>      |
| (74) a.     | Der Dozent prüft <u>den Studenten</u> .<br><i>The teacher tests the student</i> | b. | der Prüf <b>ling</b> = Student, ≠ Dozent<br><i>the examinee</i> |

## 2.5 Directional and resultative predication

Only internal arguments (Levin and Hovav 1995, 34–78).

With unaccusative verbs:

- |             |                                       |    |                 |
|-------------|---------------------------------------|----|-----------------|
| (75) En. a. | <u>The snow</u> melts (in)to water.   | b. | water = snow    |
| (76) Ge. a. | <u>Der Schnee</u> schmilzt zu Wasser. | b. | Wasser = Schnee |
| (77) Da. a. | <u>Sneen</u> smelter til vand.        | b. | vand = sne      |

Not with unergative verbs:

- (78) En. \* The sun melts (in)to water.  
 (79) Ge. \* Die Sonne schmilzt zu Wasser.  
 (80) Da. \* Solen smelter til vand.

With the objects of transitive verbs, not with the subjects:

- |             |   |    |                          |
|-------------|---|----|--------------------------|
| (81) En. a. | The sun melts <u>the snow</u> (in)to water.     | b. | water = snow, ≠ sun      |
| (82) Ge. a. | Die Sonne schmilzt <u>den Schnee</u> zu Wasser. | b. | Wasser = Schnee, ≠ Sonne |
| (83) Da. a. | Solen smelter <u>sneen</u> til vand.            | b. | vand = sne, ≠ sol        |

## 2.6 *as*-clauses

Only internal arguments (Stowell 1991).

With unaccusative verbs:

- |             |                          |  |
|-------------|--------------------------|--|
| (84) a. En. | That Trump lost          | appeared on every front page that day.     |
| b. Ge.      | Dass Trump verloren hat, | hat in jeder Zeitung gestanden.            |
| c. Da.      | At Trump tabte,          | stod i alle aviser.                        |
| (85) a. En. | Trump lost, as           | ___ appeared on every front page that day. |
| b. Ge.      | Trump hat verloren, wie  | ___ in jeder Zeitung gestanden hat.        |
| c. Da.      | Trump tabte, som der     | ___ stod i alle aviser.                    |

Not with unergative verbs:

- |             |                           |  |
|-------------|---------------------------|--|
| (86) a. En. | That Trump lost           | fit in very well with my mood.                 |
| b. Ge.      | Dass Trump verloren hat,  | hat mit meiner Laune gut zusammen gepasst.     |
| c. Da.      | At Trump tabte,           | passede godt sammen med mit humør.             |
| (87) a. En. | * Trump lost, as          | ___ fit in very well with my mood.             |
| b. Ge.      | * Trump hat verloren, wie | ___ mit meiner Laune gut zusammen gepasst hat. |
| c. Da.      | * Trump tabte, som (der)  | ___ passede godt sammen med mit humør.         |

Not with subjects of transitive verbs:

- |             |                          |                        |
|-------------|--------------------------|------------------------|
| (88) a. En. | That Trump lost          | impressed everyone.    |
| b. Ge.      | Dass Trump verloren hat, | hat jeden beeindruckt. |
| c. Da.      | At Trump tabte,          | imponerede enhver.     |

- (89) a. En. \* Trump lost, as \_\_\_ impressed everyone.  
 b. Ge. \* Trump hat verloren, wie \_\_\_ jeden beeindruckt hat.  
 c. Da. \* Trump tabte, som (der) \_\_\_ imponerede enhver.

With objects of transitive verbs:

- (90) a. En. Everyone knows that Trump lost.  
 b. Ge. Jeder weiß, dass Trump verloren hat.  
 c. Da. Enhver ved at Trump tabte.
- (91) a. En. Trump lost, as everyone knows \_\_\_.  
 b. Ge. Trump hat verloren, wie jeder \_\_\_ weiß.  
 c. Da. Trump tabte, som enhver ved \_\_\_.

## 2.7 Post-verbal arguments ("inversion")

Only internal arguments and only French/Italian (Belletti 1988).

(In Danish, both (92) and (93) are possible, and in English and German, both are impossible.)

With unaccusative verbs:

- (92) a. Fr. Il est entré un garçon par la fenêtre. POSTVERBAL UNACCUSATIVE SUBJECT  
 b. It. È entrato un ragazzo dalla finestra.  
*It is entered a boy through the window*

Not with unergative verbs:

- (93) a. Fr. \* Il a dansé un garçon sur la terrasse. POSTVERBAL UNERGATIVE SUBJECT  
 b. It. \* Ha ballato un ragazzo sulla terrazza.  
*It has danced a boy on the terrace*

With the objects of transitive verbs, not with the subjects:

- (94) a. Fr. \* Il (en) a mangé un garçon une pomme. POSTVERBAL TRANSITIVE SUBJECT  
 b. It. \* (Ne) ha mangiato un ragazzo una mela.  
*It (thereof) has eaten a boy an apple*
- (95) a. Fr. \* Il (en) a mangé une pomme un garçon. POSTVERBAL TRANSITIVE SUBJECT  
 b. It. \* (Ne) ha mangiato una mela un ragazzo.  
*It (thereof) has eaten an apple a boy*
- (96) a. Fr. Le garçon a mangé une pomme. POSTVERBAL TRANSITIVE OBJECT  
 b. It. Il ragazzo ha mangiato una mela.  
*The boy has eaten an apple*



## 2.8 en/ne-cliticisation

Only internal arguments and only French/Italian(?) (Burzio 1986, 22–36).

With unaccusative verbs:

- (97) a. Fr. Il en est entré trois par la fenêtre. UNACCUSATIVE SUBJECT  
 b. It. Ne sono entrati tre dalla finestra.  
*It thereof is/are entered three through the window*

Not with unergative verbs:

- (98) a. Fr. \* Il en a dansé trois sur la terrasse. UNERGATIVE SUBJECT  
 b. It. \* Ne hanno ballato tre sulla terrazza.  
*It thereof has/have danced three on the terrace*

With transitive verbs, but only with objects:

- (99) a. Fr. \* Il en ont mangé trois une pomme. TRANSITIVE SUBJECT  
 b. It. \* Ne hanno mangiato tre una mela.  
*It thereof have eaten three an apple*

- (100) a. Fr. \* Il en ont mangé une pomme trois. TRANSITIVE SUBJECT  
 b. It. \* Ne hanno mangiato una mela tre.  
*It thereof have eaten an apple three*

- (101) a. Fr. Le garçon en a mangé trois. TRANSITIVE OBJECT  
 b. It. Il ragazzo ne ha mangiato tre.  
*The boy thereof has eaten three*

## 3. Conclusion

I first gave a brief introduction to the unaccusativity hypothesis and to auxiliary selection, which is the choice between *be* and *have* as perfect auxiliaries (these are the auxiliaries involved in the present perfect, the past perfect and the perfect infinitive).

I then presented the beginning of an update of the analysis of Vikner & Sprouse (1988) and Vikner (1990) which was that in languages with auxiliary selection like Danish, German, French and Italian, *be* is used as the perfect auxiliary when and only when this perfect auxiliary is positioned between two DPs with the same index (i.e. the spec of *be* and the spec of the complement of *be* have to be coindexed). The idea is that *be* signals identity, and if it is on the right track, it would **not** be arbitrary whether *be* is selected rather than *have* or vice versa.

I showed how this works for unaccusative vs. unergative verbs, and then I went on to show how it also provides an analysis of why in French and Italian *be* can even be the perfect auxiliary with transitive verbs, provided that the object is reflexive.

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