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Henk C. van Riemsdijk

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Arezzo

1. Preliminaries

Silent, phonetically empty, elements have played an important role throughout the history of generative grammar. Think of traces (of various kinds), PRO, pro, ellipsis (of various kinds), paradigms of functional elements in which some slot(s) are 'filled' with zeromorphemes, etc. In all serious work on silent elements, one of the central questions must be whether there really is some element in the syntactic structure, but something that lacks a phonetic expression, or whether there simply is nothing there (see Van Riemsdijk 2002, 2003, 2012). In the cited works I have mainly concentrated on silent verbs, in particular, though not exclusively, motion verbs. But there is a considerable literature on silent nouns as well, (cf. Kayne 2003 and many subsequent articles by the same author, and Van Riemsdijk 2005). What makes these proposals stand out is the fact that they go beyond the domain of functional heads and include semi-lexical, light and sometimes even fully lexical words. In the case of motion verbs, the main question boils down to the question of whether the silent element is thought to be part of the syntactic structure as a lexically specified element that is subsequently deleted (or not spelled-out), or whether it is a lexical item that has its own lemma in the mental lexicon but is specified there as being an element that lacks phonetic content. In my own work, cited above, I have tried to be careful in the sense that the choice between the two alternatives must always be carefully argued, leaving open the possibility that, for example, the silent motion verb GO is actually a silent lexical item that is listed as such in the lexicon in Swiss German, but is a phonetically specified lexical item that becomes silent due to deletion (of nonspell-out) in Dutch. Vanden Wyngaerd (1994) defends the view that silent elements of this kind are due to deletion at PF. Barbiers (1995, 2006) contends that silent motion

^{*}This squib is dedicated to Martin Prinzhorn, friend, wise and erudite linguist, and the most fertile disseminator of first class linguists around the world. Thanks are due to Josef Bayer, Hubert Haider and Hubert Truckenbrodt for helpful advice as well as a (not so) anonymous reviewer for some useful comments.

verbs, which must always be licensed in some way by modal auxiliaries (or verbs), come in two varieties: sometimes they are truly silent motion verb complements to modal auxiliaries, and sometimes the modal is itself the main verb that semantically incorporates the motion verb. My own position is not very different, but I have argued that in language acquisition the null hypothesis must be that modality is expressed in the form of an auxiliary because otherwise it becomes hard to explain why the semantic incorporation hypothesis is not always chosen. In the present squib I address one minor but important argument that Barbiers adduces to argue that in Dutch (as opposed to, for example, Swiss German) silent motion verbs are semantically incorporated in the lexical entries of modal (main) verbs. Let us first look at one of the arguments in favor of silent motion verbs.

2. Silent verbs

My initial purpose was to reexamine the well-known construction – found in Old English, the Germanic OV-languages and, to a certain extent in the Scandinavian languages as well – in which a modal verb is combined with a directional PP (Van Riemsdijk 2002). Typical examples are:

- (1) a. Du darfst nach hause. German you may to home 'You may go home.'
 - b. Moeten wij nog de stad in?

 must we still the town into

 'Do we still need to go into town?'
 - c. Si sött aber no in chäller. Swiss German she should but still into cellar 'But she should still go down into the basement.'

A semantic solution of the type envisaged by Barbiers (1995, 2006)² to supply the implied motion verb can undoubtedly be devised. Indeed the majority view,³ which has been that the modal verbs in such examples are main verbs, must rely on some semantic account for the missing verb. But in Van Riemsdijk 2002, I argue that these constructions should be analyzed differently: the modal is a functional verb, an auxiliary, and hence there is a silent motion verb present in the syntactic structure. The most straightforward evidence comes from the structure of verb clusters in Swiss German.⁴ Swiss German, like German and Dutch, is an OV-language. And as in these languages, verbs tend to cluster at the end in complex infinitival constructions. And like in Dutch, the order is often as might be expected under a VO-order, that is, the order is the reverse from what would be expected under the nested structure typically found in OV-languages. Finally, Swiss

¹The brief summary presented here is largely taken from Van Riemsdijk 2012.

²See also Pustejowsky's work for interesting discussion (Pustejovsky 1995).

³See in particular Lightfoot's influential argument that the modal verbs were reanalyzed from main verbs into auxiliaries in the course of the development of Modern English (Lightfoot 1979).

⁴An argument of this kind was originally presented, though in somewhat rudimentary form, in Jarich Hoekstra's work, see Hoekstra 1997.

German differs from Dutch in that dependents of verbs in a verb cluster can sometimes appear inside the verb cluster, a property usually referred to as Verb Projection Raising and discussed in Haegeman and Van Riemsdijk 1986. Against this background, consider (2).⁵

- (2) a. wil si het müese i-d schuel *Swiss German* because she would-have must in-the school 'because she should have gone to school'
 - b. das er nonig hät döörfe häi that he not-yet has may_{PastParticiple} home 'that he was not allowed to go home yet'

The surprising thing about these examples is the position of the directional PP, which is found all the way at the end of the clause, at the right edge of the verb cluster. This is surprising because directional PPs may never extrapose. Accordingly the examples given in (2) are bad when there is an overt motion verb.

- (3) a. *...wil si het müese gaa ('go') i d schuel Swiss German
 - b. *...das mer noni händ döörfe gaa ('go') häi

In view of this, the examples in (2) appear to be in violation of what we may call the general OV-template:

(4) Dependents of a verb must always precede that verb, regardless of whether that verb is part of a verb cluster and regardless of whether the dependent in question is in that verb cluster.

This somewhat complicated formulation is chosen to correctly predict that the following verb projection raising variants (that is, variants in which the directional PP is inside the verb cluster) are grammatical provided the motion verb is to the right of the directional PP.

- (5) a. ...wil si het müese i d schuel gaa
 - b. ...das mer noni händ döörfe häi gaa

In (5) the directional PP is inside the verb cluster, but it precedes the verb it is dependent on (*gaa*). If we assume, as most people do, that the examples in (2) involve a main modal verb that subcategorizes a directional PP, it is totally surprising that the directional PP follows the verb it is apparently dependent on, namely the modal verb. Suppose, however, that we assume that the modal is an auxiliary, just as in Modern English,⁶ then there is a missing motion verb in (2), call it GAA. We may then suppose that the examples in

⁵Embedded sentences are used here to avoid the complication of Verb Second in main clauses.

⁶There are differences as well, of course. In particular the paradigm for modals in the Germanic languages other than Modern English is not defective in that non-finite forms exist alongside the finite forms.

- (2) are identical in all relevant respects to those in (5), except that the motion verb has no phonetic content:
- a. ...wil si het müese i d schuel GAAb. ...das mer noni händ döörfe häi GAA

We thus have a convincing explanation for the existence in Swiss German of examples like (2). Thereby we have strong evidence for the existence of a silent motion verb. Hence no appeal to a semantic inference rule is required.

3. The case of Dutch

The very straightforward and, in my view, convincing arguments in favor of an analysis in terms of a silent verb (GAA) in Swiss German⁷ are not reproducible in Dutch. The reason is that Dutch has no (or only very marginal) Verb Projection Raising. In other words, sentences like those in (5) cannot be constructed in Dutch. This means that for independent reasons the directional PP could not end up in the clause-final position, even if we were to assume the presence of a silent motion verb (GAAN) for Dutch.

While there is nothing wrong in principle with the assumption that Dutch modal verbs are main verbs and that they incorporate the semantic notion of motion in their lexical entry, we are forced to search for more evidence. This is so because I have argued above that a theory that admits silent verbs in its mental lexicon is forced to assume that the null hypothesis for every language is that verbal modality is expressed by auxiliary (or semilexical) verbs, not by main verbs. If we did not make that assumption, there would be no way to prevent a child growing up in the Swiss German speaking part of Switzerland to make the wrong assumption that modals are main verbs that can incorporate a semantic feature of directionality, a result that we need to avoid. And looking further, there are indeed reasons to assume that Dutch is like Swiss German in that its modal verbs are auxiliaries and that there is a silent motion verb GAAN.

As Norbert Corver has observed, Left Dislocation in Dutch treats directional PPs like clausal phrases and unlike DPs, even when those DPs are part of a directional PP whose P has been stranded *in situ*. The difference shows up in the choice of the (fronted) dword (as Dutch standardly uses contrastive left dislocation (CLD)). Left dislocations with a locative DP are constructed with the d-word *daar* ('there') while Left dislocations with a directional PP are excluded unless the verb is a true motion verb. In that case the dword, however, is *dat* ('that'), not *daar*. What exactly makes a verb a 'true motion verb' is not so clear, but this does not affect the force of the argument. For the examples given here, we note that *verhuizen* ('move house') is not a true motion verb but *duiken* ('dive') is and accordingly behaves like the truest of all motion verbs: *gaan*/GAAN ('go'). With this in mind, consider the following paradigm:

⁷In addition to the argument from apparently extraposed directional PPs there is a second argument, discussed in detail in Van Riemsdijk 2002, based on the behavior of the *go* infinitive marker and its doubling in Swiss German. For reasons of space I have omitted a summary of this argument here.

⁸For a more detailed discussion, see section 6.6. of Van Riemsdijk 2002.

- (7) a. De hoofdstad, daar/*dat verhuisde zij pas later naartoe. the capital, there/that moved she only later to 'The capital, she moved (to) there only later.'
 - b. *Naar de hoofdstad, daar/dat verhuisde zij pas later. to the capital there/that moved she only later 'To the capital, she moved there only later.'
- (8) a. Naar de hoofdstad verhuizen, dat/*daar moest zij pas later. to the capital move that/there must_{Past} she only later 'Move to the capital, she only had to do that later.'
 - b. Het diepe water in duiken, dat/*daar mocht hij niet. the deep water into dive that/there may_{Past} he not 'Dive into the deep water, he was not allowed to do that.'
- (9) a. Naar de hoofdstad, dat/*daar moest zij pas later. to the capital that/there must_{Past} she only later 'To the capital, she had to go there only later.'
 - b. Het diepe water in, dat/*daar mocht hij niet. the deep water into that/there may_{Past} he not 'Into the deep water, he was not allowed to go there.'

As (7b) shows, a left dislocated directional PP in combination with a non-strictly motional verb is not possible unless, as in (7a) the directional P is stranded. In that case the d-word has to be *daar*. (8b) is different in that *duiken* is a true motion verb, and when the whole phrase containing also the verb is left dislocated it is again the d-word *dat* that must be chosen. With the whole verbal phrase, it does not matter whether the verb is a true motion verb or another verb that implies some motion, as shown in (8a). Now, (9) is important because there is apparently no motion verb. Instead there is a modal verb or auxiliary. On the assumption that the modal is a true auxiliary and that the motion verb is silent in these cases the presence of *dat* in the left dislocation is explained if the silent verb is part of the left dislocated verbal phrase, as in (10).

(10) a. Naar de hoofdstad GAAN, dat/*daar moest zij pas later. b. Het diepe water in GAAN, dat/*daar mocht hij niet.

4. Barbiers' argument from IPP

The question as to whether modal verbs are main verbs or rather auxiliaries, that is, functional or semi-lexical verbs, has been tightly connected to the issue of how defective their

⁹As in the other Germanic languages that evidence a silent motion verb (GAA/GAAN etc.), the silent verb must be licensed by a modal auxiliary. Note that the silent verb can be licensed despite the fact that it is part of the left dislocated constituent. Regardless of whether left dislocation is a case of movement, contrastive left dislocation is closely linked to the rest of the clause by a variety of connectedness properties, see Van Riemsdijk 1997 and various other articles in the same volume.

morphological paradigm is. In his important work on the history of English, Lightfoot (1979) has argued that in the older stages of Germanic all modals were main verbs, but that in English the modal verbs 'degenerated' to auxiliaries, a development that went hand in hand with the impoverishment of the morphological richness of the English modals. English modals indeed lost all non-finite forms: they lack infinitives and participles. In the other Germanic languages this impoverishment has not taken place. Dutch and German modals, for example do have participles and infinitives.

The conclusion that I have arrived at in my work, in particular Van Riemsdijk 2002, is that in all Germanic languages (and indeed in the unmarked case in all languages) verbal modal elements are functional or semi-lexical). This means that morphological defectiveness is independent of the functional or lexical status of modals in syntax. This independence is evidenced quite straightforwardly when we look at a peculiar phenomenon that is found in (some of) the Continental West Germanic languages, the Infinitivus Pro Participio (IPP). The IPP refers to situations where a (modal) verb is expected to exhibit its past participle form but instead shows up as an infinitive. Some examples, taken from Dutch, are those in (11).

- (11) a. Jan heeft zijn moeder nooit willen zoenen.

 Jan has his mother never want_{Inf} kiss

 'Jan has never wanted to kiss his mother.'
 - b. Sandra had beter morgen kunnen komen.
 Sandra would-have better tomorrow can_{Inf} come
 'Sandra would have done better to come tomorrow.'

In both of these examples we would have expected the past participle of the modal verb, triggered by the presence of the temporal auxiliary *hebben*. But choosing the participle form of the modals in (11) leads to ungrammaticality:

- (12) a. *Jan heeft zijn moeder nooit gemogen_{PastParticiple} zoenen.
 - b. *Sandra had beter morgen gekund_{PastParticiple} komen.

This is so despite the fact that there are sentences in which the (apparent) modal occurs with a temporal auxiliary but is not accompanied by another verb. 11

- (13) a. Jan heeft nooit een auto gewild_{PatParticiple}. Jan has never a car wanted 'Jan has never wanted (to have) a car.'
 - b. Petra had dat ongetwijfeld beter gekund_{PastParticiple}. Petra would-have that undoubtedly better been-able-to 'Petra would undoubtedly have done that better.'

¹⁰The IPP phenomenon actually extends to other types of verbs that trigger verb cluster formation such as *proberen* ('try'). This is irrelevant to the points made in the text. See Zwart 2011 for discussion of IPP in Dutch

¹¹For reasons of space I will leave out a discussion about whether there is a silent verb in the examples of (13).

Barbiers (1995, 2006, and Barbiers and Dooren 2017 forthcoming) argues that in examples with a missing (silent or otherwise) motion verb the IPP effect is present and that therefore we should conclude that (at least in Dutch) there is no silent motion verb but that the modal is a main verb that semantically incorporates the motional component of the meaning. His examples are of the following type. 13

- (14) a. Jan heeft altijd naar Rome gewild_{PastPart}/*willen_{Inf} GAAN. Jan has always to Rome wanted/want 'Jan has always wanted to [sc. go] to Rome.'
 - b. Sandra had ook naar huis gekund_{PastPart}/*kunnen_{Inf} GAAN. Sandra would-have also to home been-able-to 'Sandra would have been able to [sc. go] home too.'

While a successful account of the IPP-effect still eludes us, it is quite clear that the situation is not as simple as presented by Barbiers. Most strikingly, perhaps, the IPP-effect reappears when there is another modal verb in the cluster, as shown in (15) and (16).

- (15) a. Jan heeft altijd naar Rome willen/*gewild kunnen GAAN. Jan has always to Rome want/wanted can 'Jan has always wanted to be able to [sc. go to] Rome.'
 - b. Jan heeft altijd naar Rome kunnen/*gekund willen GAAN. Jan has always to Rome be-able-to/been-able-to want 'Jan has always been able to want to [sc. go] to Rome.'
- (16) a. Sandra had ook naar huis kunnen/*gekund mogen GAAN. Sandra would-have also to home be-able-to/been-able-to may 'Sandra would also have been able to be allowed to [sc. go] home'.'
 - b. Sandra had ook naar huis mogen/*gemogen
 Sandra would-have also to home be-allowed-to/been-allowed-to
 kunnen GAAN.
 be-able-to
 'Sandra would also have been allowed to be able to [sc. go] home.'

It appears evident from the above examples that the IPP-effect is quite independent of the issue of modal verbs being main verbs or auxiliaries, and that the issue of whether there is a silent motion verb GAAN in Dutch is accordingly not affected by the IPP. 14

¹²Barbiers extends the argument to all cases in which the modal verb shows up as a participle, that is, without the IPP effect, and no other overt verbal element. I will limit myself here to the case of silent (or missing) motion verbs.

¹³To save space I insert the silent verb GAAN in the example where it would have to be if we assume it exists in the first place, as I am arguing.

¹⁴Barbiers (1995, 2006, and Barbiers and Van Dooren 2017 forthcoming) presents another set of considerations that he argues sheds doubt on the presence of silent verbs in Dutch. His main observation is that modals tend to be ambiguous between a root and an epistemic interpretation. But, he says, when a main verb is missing the epistemic interpretation is not available. Take (i), for example.

In fact this conclusion can be arrived at far more easily by looking at Swiss German. On the one hand, Barbiers agrees that the evidence from Swiss German (mainly the argument summarized in section 2 above as well as another argument from the behavior of doubled infinitival markers (cf. Van Riemsdijk 2002, section 4.) strongly points in the direction of the presence of a silent verb (GAA) in Swiss German. But at the same time, Swiss German, unlike Dutch but like English, is defective in its morphological paradigm for modal verbs. Indeed, Swiss German modals lack a past participle entirely and the infinitive is used in all cases. One might say a completely grammaticalized IPP-effect.

5. Conclusion

Given the fact that semantic incorporation of 'missing' verbs is a solution that is perfectly available to languages, it would be foolhardy to make a big jump and to conclude that the existence of silent lexical motion verbs in some languages can be generalized to the assumption that

> all languages that have missing motion verbs use silent motion verbs, and that furthermore

The particle *dan* pretty much forces the epistemic reading, and indeed with silent GAAN ('go') the sentence is ungrammatical, as shown in (ib). But as a matter of fact, *gaan* does not permit an epistemic interpretation very often unless it is forced by some contextual factors (such as the particle *dan*). Perhaps the most striking factor is the modal *zou* ('should') which has a strong tendency to be interpreted epistemically. Its meaning then is 'be supposed to':

- (ii) a. Piet zou eerder naar huis gaan.
 Piet should earlier to home go
 'Piet was supposed to go home earlier.'
 - b. Piet zou eerder naar huis GAAN.

In this case, the version with the silent verb GAAN is grammatical and it has the same epistemic meaning as (iia). The inverse situation can arise as well. Take the modal *mag* ('may'), meaning 'it may be the case'. With *mag* the epistemic reading is not available regardless of whether the verb is *gaan* or GAAN:

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(iii) a. Piet mag naar huis gaan.
Piet may to home go
'Piet may go home.' (√deontic, *epistemic)

b. Piet mag naar huis GAAN (√deontic, *epistemic)
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Much, clearly, remains rather mysterious in this domain, which future research will have to attend to, but in view of the above observations I do not think that the arguments presented in the present article are affected.

⁽i) a. Jan mag dan naar Amerika gaan, hij zal er niet gelukkig worden.

Jan may particle to America go, he will there not happy become 'Jan may be going to America, but he will not be happy there.'

b.?*Jan mag dan naar Amerika GAAN, hij zal er niet gelukkig worden.

➤ all languages that evidence constructions with ostensibly missing verbs other than motion verbs use silent verbs in those cases as well.

Indeed, I have repeatedly stressed the importance of studying such 'missing verb phenomena' on a case-by-case basis. To mention just one example that raises interesting questions, colloquial German experiences an explosion of the use of the modal verb *können* ('can') used with a nominal expression. To give just one example, you very frequently see or hear sentences like (17).¹⁵

(17) Ich kann Kanzlerin.

I can chancellor

'I can function as a (good) chancellor.'

I have not heard Donald Trump say *I can president*, but he seems to think so. It now looks increasingly as if he cannot. After all, if there is a silent verb in (17), its semantics must encompass a daunting competence. And in the case of the American presidency, we are talking about an even more daunting competence indeed.

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I am inclined to believe that these constructions should also be analyzed by means of a silent verb, but so far strong syntactic arguments have eluded me. Hubert Haider (p.c.) expresses doubts about whether similar uses of modals, in particular *können* ('can', 'be able to') will survive. In view of the Dutch facts I am less optimistic (or should I say pessimistic?). That is, I would not be surprised to see this use of modals expand in German as well. Time will tell.

¹⁵The German example is chosen here because Dutch, as opposed to German, has a wide variety of constructions in which a modal verb is combined with a DP. To give just one example, take (i).

⁽i) Mag ik een kopje koffie? may I a cup coffee 'May I have a cup of coffee?'

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Henk C. van Riemsdijk villasalmi@gmail.com