

CHAPTER 2

The absent, the silent, and the audible

Some thoughts on the morphology of silent verbs

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This chapter pursues the issue of phonetically silent lexical items (cf. Van Riemsdijk 2002). Two more empirical domains are examined, and in both cases I tentatively conclude that a silent verb is involved. The first of these concerns the copula/auxiliary *be* when combined with a directional PP in Dutch and Swiss German. The second has to do with what I call silent particle verbs in Dutch. In a last section I discuss the more general issue of how widespread the phenomenon of silent lexical verbs is? And if the impression that this is a relatively rare phenomenon is correct, why do languages make such a limited use of what looks like a very economical device?

1. Introduction¹

When you contemplate a stone, it is not easy to realize that you are not looking at solid matter. In fact, you are looking mostly at nothingness. This is what physicists teach us. The stone consists of many molecules of various kinds surrounded by a lot of emptiness. But even the actual matter is invisible to the extent that the molecules in question are invisible to the human eye unless instruments are used that permit us to study matter at the molecular, atomic or subatomic level. Here we distinguish two types of invisibility, on the one hand the true void, the absence of matter, and on the other hand the presence of matter which is not visible to the human eye.

If we switch from the optical to the auditory, the same situation arises. Sometimes there simply is no sound, but sometimes there is a sound, but we cannot hear it, for example because it comes to us at a frequency that humans cannot perceive.

Many issues in modern linguistics have to do with exactly this type of question. When we do not see or hear something, does that mean that it truly is not there or that it is there but we cannot see or hear it. To be more precise, and to

use current terminology, the question we must ask time and again is whether the thing (word, morpheme, etc.) is truly structurally absent, or whether it there, but we cannot directly perceive it. In the latter case, we call the element in question ‘silent’. In other words, we may think that something is there, but the question is if it is structurally there, or if it is structurally absent in syntax but inferred at the level of thought.

Consider, for example, the following sentences, borrowed from Pustejovsky (1995: 115).

- (1) a. John wants a beer (to drink)
 b. Mary enjoyed the movie (watching)
 c. John began a book (reading, writing, ...)
 d. Mary finished the article (idem, proofreading, ...)

In parentheses, the most plausible interpretation is given. Immediately we face the question of whether there is a silent verb in the syntactic structure of these sentences, or whether there is no such verb and the suggested interpretation is derived by some sort of lexico-semantic inference rule. In the former type of analysis, we would have to assume that the sentences in (1) are biclausal and that the embedded verb is elliptic, that is, deleted or represented by some silent category. On the latter view, we would posit a rule supplementing the meaning of verbs such as *want*, *enjoy*, *begin*, *finish*. Pustejovsky (1995: 110) discusses the solution proposed by Dowty (1979): “Dowty’s solution is to have meaning postulates relate the major word senses for a verb such as *want* and then allow pragmatic factors to supply the contextual information that embeds the verb sense in context.” In Pustejovsky’s opinion, this is too powerful and misses the point that “the sense enumeration necessary to account for the behavior of these verbs is systematically associated with the complements as much as they are with constraints from the verb itself.” Pustejovsky’s solution makes use of qualia structure and type coercion in ways similar to some suggestions by Jackendoff (1997). The idea is to assume that the verb semantically selects an activity. A noun phrase can satisfy this selection requirement through the intermediary of a “rule” (Jackendoff 1997: 61) like

- (2) Interpret NP as [_{Activity} F(NP)].
 (i.e. an unspecified activity involving NP, “doing something with NP”)

The “unspecified activity” mentioned in (2) is a kind of variable that remains to be fixed or approximated, presumably. The main contributors to this process of approximation are (a) the encyclopaedic knowledge about the noun itself (you drink beer, you do not eat it), (b) knowledge of the linguistic and/or pragmatic context (if we know that John in (1c) is a bookbinder, then this sentence probably means that he began to bind another book).

The interpretive procedure outlined above may very well be the correct way to handle these cases since there does not seem to be any purely syntactic evidence to assume that there is a silent verb in these constructions. But the fact that we do not see any syntactic evidence does not necessarily mean it is not there; we have to keep an open mind. What is important to keep in mind, however, is that the mere possibility to construct a semantic account for missing words can never in itself be a reason to reject a syntactic account. We always need to examine the relevant evidence.

Considerations of this kind were at the basis of my reexamination of the well-known construction, found in Old English, the Germanic OV-languages and, to a certain extent in the Scandinavian languages, in which a modal verb is combined with a directional PP (Riemsdijk 2002). Typical examples are

- (3) a. Du darfst nach hause
 you may to home
 'You may go home' *German*
- b. Moeten wij nog de stad in?
 must we still the town into
 'Do we still need to go into town?' *Dutch*
- c. Si sött aber no in chäller
 she should but still into-the cellar
 'But she should still go down into the basement' *Swiss German*

Here again, the motion verb that seems to be missing must be supplemented somehow, either in the syntax or in the semantics. A semantic solution along the lines discussed above can undoubtedly be devised, and indeed the majority view,² which has been that the modal verbs in such examples are main verbs, must therefore rely on some semantic account for the missing verb. But in my chapter, 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.³ 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 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, consider⁴

- (4) a. wil si het müese i d schuel
 because she would-have had-to into the school
 ‘because she should have gone to school’ *Swiss German*
- b. das mer noni händ döörfe häi
 that we not-yet have may_{PastParticiple} home
 ‘that we were not allowed to go home yet’ *Swiss German*

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. Observe first that directional PPs may never extrapose. Accordingly the examples given in (4) are bad when there is an overt motion verb.

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

In view of this, the examples in (4) seem to be in violation of what we may call the general OV-template:

- (6) 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 are grammatical.

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

In (7) 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 (4) involve a main modal verb that subcategorizes a directional PP, it is totally surprising that the motional 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,⁵ then there is a missing motion verb in (4), call it *GAA*. We may then suppose that the examples in (4) are identical in all relevant respects to those in (7), except that the motion verb has no phonetic content.

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

We thus have a convincing explanation for the existence in Swiss German of examples like (4). Thereby we have strong evidence for the existence of a silent motion verb.⁶ Hence no appeal to a semantic inference rule is required.

The moral, then, is that each case or an apparently missing word must be examined in detail before any conclusion can be drawn about whether that word is absent from the syntactic structure or whether it is just invisible.

2. Two more cases

In light of the above considerations, I will examine two other factual domains, also taken from the Germanic languages, in which the same central question arises as to whether the apparently missing verb is absent or invisible. Examining these in some detail, we will come across some questions that deserve to be addressed in a more general context. Section 3 will present some preliminary considerations pertaining to these questions.

2.1 Auxiliary/copula + PP_{DIR}

Both in Dutch and in Swiss German (as well as in several other Germanic languages), an auxiliary (or copula?) can be directly combined with a directional PP.

- (9) a. Jan is de stad in
 Jan is the city into
 'Jan has gone into town' *Dutch*
- b. De Hans isch i d stad
 the Hans is into the city
 'Hans went/has gone downtown' *Swiss German*

As before, it is possible, but by no means necessary, to assume that there is a silent motion verb in the syntactic structure of these sentences. That copulas are, in some sense, intermediate between functional and lexical verbs is amply illustrated by their well-known behavior in English syntax, for example, where the copula undergoes subject auxiliary inversion just like auxiliaries and unlike main verbs.

Another relevant fact is that the copula in English can license VP ellipsis, which also suggests that it is more like a functional head. But perhaps functional vs. lexical is not the most important distinction. Emonds (2000) holds that the most important distinction is between closed-class grammatical formatives on the one hand and open-class lexical items. The copula, in his view, is part of the former and is therefore listed in what he calls the syntacticon rather than in the dictionary. In Emonds' approach, the copula is V (rather than I or AUX), but it is a closed-class grammatical formative. Such items can perfectly well subcategorize for complements (cf. Emonds 2000: 138f.).

On the other hand, if we were to assume that there is an invisible motion verb in the examples in (9), we would have to conclude that the verbal element in these examples is really an auxiliary. And it is not surprising that the auxiliary would be the one corresponding to *be* and not the one to *have* since motion verbs are ergative and select *zijn/sii* ('be') rather than *hebben/haa* ('have').

From a purely semantic point of view, there is no need to assume an invisible motion verb. After all, the directional PP incorporates the semantic feature of motion all by itself. But on the other hand, this is not an argument against the presence of a silent verb because redundancy is frequently present and not prohibited, as can be seen in the equivalents of (9) with an overt motion verb added.

- (10) a. Jan is de stad in gegaan ('gone') Dutch
 b. De Hans isch i d stadt ggange ('gone') Swiss German

So far, then, all is open. But comparing (9a/b) and (10a/b) respectively reveals an interesting clue as to what is really going on here. (9a) and (9b) do not have exactly the same meaning. Dutch (9a) is fully stative. It means that Jan has gone into town and is now away. The Swiss German example (9b) is ambiguous. It can have the completely stative meaning, but it can also mean 'Hans went into town'. This difference comes to the fore when we add temporal adverbs.

- (11) a. *Toen ik thuis kwam is Jan de stad in
 when I home came is Jan the town into
 'When I came home, John has gone into town' Dutch
 b. Wo-n ich häi choo bin isch de Hans i d stadt
 when I home come am is the Hans into the town
 'When I came home, Hans went into town' Swiss German

On the other hand, consider (12).

- (12) a. Wanneer is Jan de stad in?
 when is Jan the town into
 'At what time is Jan away into town?' Dutch
 b. Wän isch de Hans i d stadt?
 when is the Hans into the town
 'At what time did Hans leave to go into town?' Swiss German

While (12a) and (12b) are both grammatical, they again have different meanings. (12a) asks for the time interval during which Jan is or will be away in town, while (12b) can, in addition, ask for the time of departure.

Observe now that this difference is reflected to a large extent in the examples that contain an overt motion verb participle given in (10) above. Alongside (11) we have

- (13) a. *Toen ik thuis kwam is Jan de stad in gegaan
 b. Wo-n-ich häi choo bin isch de Hans i d stadt ggange

And corresponding to (12) we have

- (14) a. Wanneer is Jan de stad in gegaan?
 b. Wän isch de Hans i d stadt ggange?

Consider first the Dutch examples. What is wrong with (13a) is that *toen* focuses on the simultaneity of the events described in the adverbial clause and in the main clause. But the main clause is perfective and hence does not specify an evaluable point in time. The corresponding sentence with a simple past in the matrix is fully grammatical. With (14a) things are different, because *wanneer* can ask for the beginning of an interval that may stretch into the present.

Why, then, is the Swiss German sentence (13b) grammatical? The answer, quite simply, is that Swiss German has no simple past. The distinction found in Dutch and in most other Germanic languages between a preterit (simple, imperfective past) and a perfective (composite, analytical past) has disappeared and the analytical past is used both for the perfective and for the imperfective functions. In (13b) it is the imperfective function that makes the adverbial clause, in which *wo* is like Dutch *toen*, appropriate.

The parallelism between (11/12) and (13/14) is not quite perfect. There is a difference between (12a) and (14a). (12a) essentially asks for the interval of time during which Jan is away in town. In fact, many speakers intuitively interpret the PP as a locative, even though the postposition indicates that formally it is a directional PP. In that sense (14a), which asks for the beginning of the interval is different. The difference is reminiscent of the difference found in English between what we may call the verbal and the adjectival past participle of *go*.

- (15) a. John has gone (John has left)
 b. John is gone (John is away (or dead))

Turning now to our main question, is there a silent motion verb in these constructions? Swiss German yields the most straightforward answer: yes. The point is, if we postulate that there is a silent past participle of a motion verb like *gaa* ('go'), call it GGANGE, and if, as would be the null hypothesis, this participle has all the usual properties, then the ambiguity of (9b) and the non-ambiguity of (11b) comes as no surprise. If, on the other hand, we were to assume that some semantic rule of inference à la Dowty, Jackendoff or Pustejovsky is involved, or, alternatively, if the motion feature of the PP is assumed to be sufficient to render the motional semantics, then the aspectual properties of (9b), (11b) and (12b) come out of the blue and have no natural explanation.

For Dutch, the situation is similar, except that we have to postulate that the silent past participle GEGAAN differs from its overt counterpart *gegaan* in that it is adjectival rather than verbal. This is so because (9a) is purely stative and cannot be used, for example, to express a meaning like ‘John has left to go into town, but we do not know if he has arrived there yet’. The conclusion that the silent word GEGAAN is not completely identical to the audible word *gegaan* is fully in line with a more general point that is discussed in more detail in Van Riemsdijk (2002: 160ff.). Silent lexical items are generally not 100% identical with overt counterparts. Some of the major arguments to this effect are due to Barbiers (1995). With Barbiers I share the conclusion that PF-deletion (as proposed in VandenWyngaerd 1994) cannot be the correct way to handle missing verbs. But Barbiers opts for a semantic solution without any silent verbs, and on this point we disagree. To give just one example, consider (16).

- (16) Deze boeken mogen weg
 these books may away
 ‘These books can be removed/thrown away’ *Dutch*

There simply is no paraphrase with the verb *gaan* (‘go’). The reason, presumably, is that books do not move by themselves. Instead the closest paraphrase is one with the passive of *doen* (‘do’), since *iets wegdoen* (‘do something away’) means to remove something.

- (17) a. #Deze boeken mogen weggaan
 b. Deze boeken mogen weg worden gedaan

We must therefore assume that the silent motion verb has a collocation in which it is used together with the directional particle *weg* (‘away’) and has the meaning of ‘be removed’. This collocation is either listed separately in the (mental) dictionary, or perhaps it can be made to follow from some more general property of that lexical entry. Be that as it may, it is a lexical entry that is different in some crucial respects from the lexical entry of overt *gaan*.

Returning now to Swiss German, note that my claim that there is a silent past participle GGANGE in (9b) should be straightforwardly testable by making use of the considerations concerning right edge directionals discussed in Section 1. That is, alongside examples such as those in (4) or (18a), we would expect there to be structures like (18b).

- (18) a. das si cha häi GAA
 that she can home go
 ‘...that she can go home’ *Swiss German*

- b. das si isch häi GGANGE
 that she is home gone
 ‘...that she has gone home’

Swiss German

However, it turns out that there is a contrast:

- (19) a. ...das si cha häi
 b. ?*...das si isch hai

At first sight this looks like a serious problem for our analysis. It turns out, however, that auxiliaries behave somewhat differently from modals in complex verb clusters. Whereas modals want to take their complement verb to the right, auxiliaries strongly prefer to be last in the cluster (modulo when they undergo Verb Second, of course). The closest overt counterpart of (19b), then, shows the following contrast.

- (20) a. ...das si häi ggange isch
 b. ??...das si isch häi ggange

The preferential orderings of verbs in the verb cluster are not always black and white,⁷ but the correlation between (19b) and (20b) is clearly detectable. I conclude that the absence of right edge directionals with GGANGE does not constitute a counter-argument against my claim that Swiss German has a silent motion verb participle.

2.2 Modal + Particle

Let us now turn to a second set of phenomena. Consider the following examples from Dutch.⁸

- (21) a. Jan kan zijn werk niet aan
 Jan can his work not on
 ‘John cannot cope with his work’
 b. Hij durft de halve marathon al lang niet meer aan
 he dares the half marathon already long not more on
 c. De open haard hoeft nog niet aan
 the open fireplace need yet not on
 ‘No fire need be started yet in the fireplace’

These examples are similar to the M + PP_{DIR} case briefly discussed in Section 1 and extensively in Van Riemsdijk (2002). Instead of a full directional PP they have a verbal prefix generally referred to as particle. The meanings appear to be much

more idiosyncratic, however. In view of the similarity, it is natural to ask whether there is a silent verb here as well. I must confess from the outset that I do not have a syntactic argument comparable to the reasoning based on right edge directionals in Swiss German. But now considerations of a more general nature come into play. For example, we must now ask what the null-hypothesis is. In fact, in order for a child to infer from raw data that there is a silent verb in the $M + PP_{DIR}$ case in Swiss German, it appears that we must assume the principle I call Functional Uniqueness of Modality.⁹

- (22) Functional Uniqueness of Modality: In the unmarked case, modality (an element with modal semantics) will be expressed as a functional or semi-lexical head.

If this is correct, the child would conclude that there has to be a silent lexical verb when confronted with the examples in (2) and would proceed to construct a lexical entry for that verb. This is a far from trivial task, but it must be kept in mind that the task of constructing the corresponding lexical entries for the modal verbs on the alternative theory is no less complex. In fact, if there are, say, eight modal verbs in Dutch, it might very well be argued that it is much simpler to posit a silent verb and to attribute the idiosyncratic meanings connected with the use of various particles to this verb. The alternative, listing these collocations separately for each modal verb seems unnecessarily redundant and cumbersome in comparison. The range presented in the three examples in (21) by no means exhausts the uses that silent particle verbs can have. There are (at least) two more broad areas in which they are prolific.

The first of these areas is that of wearing clothes. Consider the following examples.

- (23) a. Mag ik jouw jas /aan?
 may I your coat on
 'Can I wear (borrow) your coat?'
 b. Hij kan jouw jas niet aan
 he can your coat not on
 'He cannot wear your coat' or 'Your coat does not fit him'
 c. Nu moet ik die vervelende smoking weer aan
 now must I that stupid tuxedo again on
 'Now I'll have to wear that stupid tuxedo again'
 d. Moet je dan ook de hoge hoed op?
 must you then also the high hat on
 'Do you then also have to wear the top hat?'

Partly depending on the choice of the modal, these examples tend to be interpreted more or less dynamically. (23a), for example, is most readily interpreted as a question about whether I may put the coat on, that is when I am not wearing it yet. So, one might say that motion is also part of the semantics of the silent verb. Observe also that the second meaning of (23b) is quite specialized in that it is specifically connected with the pair *kunnen* ('can') and *aan* ('on').

A second semantic subarea is that of food/drink ingestion. Consider

- (24) a. Ik kan wel drie pannenkoeken op
I can so three pancakes on
'I can manage <to eat> as many as three pancakes'
- b. De spruitjes moeten allemaal op
the Brussels-sprouts must all up
'The Brussels sprouts must all <be eaten> up'

What is striking, of course, is that the silent verb (assuming still that there is one) has two alternative diatheses, one in which the agent (or the experiencer?) is the subject, and the other in which the theme is the subject. In that sense, it is comparable to particle verbs like *aanwakkeren* ('kindle'), *indikken* ('thicken'), *uitbreiden* ('expand') that can be used transitively or intransitively.¹⁰

As a final observation concerning the array of lexical possibilities that these silent particle verbs offer, note that in some of the uses mentioned above copular and/or small clause structures also exist. Alongside (21c) we have (25).

- (25) a. De open haard is aan
the open fireplace is on
'The fireplace is going'
- b. We hebben de open haard aan
we have the open fireplace on
'We have the fireplace going'

But (21a/b) do not have such copular equivalents. The clothing examples in (23) can be used with *hebben* ('have') but not with *zijn* ('be').

- (26) Hij heeft mijn jas aan
he has my coat on
'He is wearing my coat'

The ingestion cases, however, have both options.

- (27) a. De spruitjes zijn op
the Brussels-sprouts are up
'The Brussels sprouts are gone/finished'

- b. Ik heb al drie pannenkoeken op
I have already three pancakes up
'I have already eaten three pancakes'

Let me repeat that I have not (yet?) discovered any direct syntactic evidence for or against the presence of a silent verb in these cases. In the absence of such evidence, however, I feel that one should let oneself be guided by the more general considerations given above. First, the Functional Uniqueness of Modality principle favors any analysis in which modal verbs are treated as functional heads. Second, considerations of economy suggest that it is simpler to posit a silent verb whose dictionary entry lists the various (partly idiosyncratic) collocations than to repeat the list for all modal and copular verbs. While economy is not, perhaps, the most striking feature of the dictionary – the human mind, after all, possesses ample memory reserves – it is still legitimate, in fact it is methodologically imperative that we be guided by considerations of economy in the absence of other lines of reasoning.

Why, then, the reader may ask, do we not switch to Swiss German to test whether right edge phenomena occur with silent particle verbs, as we did with the construction discussed in Section 2.1? The answer, quite simply, is that Swiss German does not have this construction. Nor does German.¹¹ We might well ask, at this point, why German and Swiss German do not make use of silent particle verbs. And, more generally, why don't languages make more prolific use of silent verbs or silent verb roots. This is the question that I will turn to in the next and final section.

3. A "big" question

In presenting my work on silent motion verbs to scholars of the Germanic languages, I have encountered considerable resistance and skepticism.¹² Part of this resistance appeared to be traceable to beliefs that had been around and were standardly accepted for several decades. Another part has to do with a healthy repugnance, in the tradition of Occam's razor, against positing (silent) lexical entities that do not seem strictly necessary. As for myself, it took me quite some time to convince myself that I was on the right track too.

Other colleagues¹³ surprised me, however, by pointing out that the existence of silent verb roots was solidly established. The example adduced to underline this point, which is, indeed, a very striking one, is Nimboran, a Papua-New Guinea language with highly complex morphology of which Inkelas (1993) presents a detailed analysis based on the earlier descriptive work by Anceaux (1965). There

appears to be little or no doubt that Nimboran has somewhere between ten and twenty verbs in which the verb root is silent. It should be noted that, among the many positions that characterize the verb morphology in Nimboran, there is one position reserved for what, in analogy with the Germanic verb system, may be called verbal particles. And it is these particles that carry the burden of distinguishing among these silent root verbs. The following examples are taken (in slightly simplified form) from Inkelas (1993:610 ex. (92c) / 611 ex. (95))

(28)	Root	Particle	Gloss	Restrictions
	Ø-	-ta [+A]-*	'be present'	Subj = Sg.3n; -Iter
	Ø-	-rár-	'bring'	+Dir
	Ø-	-rár-	'dream (of)'	-Dir
	Ø-	-tam [+A]-*	'kiss'	Subj = Sg
	Ø-	-rá-	'laugh'	+Iter
	Ø-	-tár-*	'make cat's cradles'	-Dir
	Ø-	[+A]	'say to'	Subj = Pl; +Iter

- (29) Ø rár r̄kát t u → [rekátu]
 laugh Part Iter Pres 1sg
 'I laugh repeatedly (here)'

Let us first address the following question. Do we have eight (or more) different verb stems and hence different verbs here, or do we have a single silent verb root with eight (or more) quite distinct uses and meanings? It is not clear that this is a very crucial question. It is reminiscent of the difference between particle verbs in English on the one hand and in the Germanic OV-languages on the other. In English, since the particle follows the verb, the various uses are listed under a single lemma, while in, say, Dutch each combination of a specific verb stem with a different particle is listed as a separate dictionary lemma:

- (30) a. put b. -zetten
 -down neer-zetten
 -in in-zetten
 -off af-zetten
 -up op-zetten
 etc. etc.

The difference between English and Dutch, in this respect, appears to be more related to conventions of alphabetical sorting, and hence to practical matters pertaining to the organization of the dictionary, than to any fundamental linguistic issue.

A more significant question, it seems to me, is how widespread a phenomenon this is. This is difficult to assess. The best I can do is make an inference on the basis of the fact that relatively few cases other than the Nimborean case have come up (or brought to my attention). This seems to indicate that the use of zero verbs (or zero verb roots) is very limited cross-linguistically. But we have to be careful. After all, few people would have come up with the examples discussed in 2.2 as instances of zero roots.

A second reason to be cautious concerns the role of affixation and/or compounding. Emonds¹⁴ has suggested, for example, that the Nimborean examples could be reduced to cases of verbal compounding. I am not sure to what extent that makes a difference, since we would still have compounds consisting of an overt particle and a zero verb root. But more generally, the question arises whether cases of zero derivation should not be included. Indeed, it appears that verbs are often de-adpositional, as in *to down*, *to up*, *to in*, *to off*, *to over*, *to out*.

Nevertheless, I will tentatively assume that the use of zero verbs and zero roots is a relatively rare phenomenon cross-linguistically. The question is why. After all, economy is widely believed to be a major force in the design of natural language. And given the fact that syntactic context will generally provide a sufficient number of licensing elements to make it easy to recover the invisible or inaudible element, why don't we go easy on our articulatory apparatus by making maximal use of zero elements? The best I can do here is to point out that there is a kind of trade-off. Given the fact that a licensing environment is obligatorily present in order to ensure the recoverability of the zero verb, a certain minimum length is always required. Take, for example, the case of modal auxiliaries with a directional PP. Jointly, these elements serve to license the presence of a silent motion verb. Might we not expect the directional PP alone to be sufficient? It is indeed conceivable that it might be sufficient, but at the same time there would be a serious problem with finite inflection. For you do not have to be a morphologist to see that silent verbal roots cannot host inflectional morphology of the type found in the Germanic OV-languages. So the choice is really between a drastically defective paradigm and the inclusion of the modal as an obligatory licenser. In addition, the modal verb might also be necessary for theoretical reasons. I have suggested in Van Riemsdijk (2002:187ff.), following Lobeck (1995) and others, that zero verbs must be licensed by an adjacent functional head.¹⁵ If that is correct, the modal verb (or some such element) would have to be part of the licensing environment regardless of how inflectional morphology is expressed in the language in question.

Another source of enlightenment, one might have hoped, would be the psycholinguistic work on lexical access. But as far as I have been able to ascertain, there have been no studies on the type of trade-off found here. In other words,

would we expect there to be a difference in the accessing speed of a lexically complex modal verb subcategorizing for a directional PP vs. the accessing speed of a simple modal auxiliary plus a moderately complex silent verb subcategorizing for a directional PP? Or, for that matter, would we expect there to be any difference, all other things being equal, between accessing a phonetically overt verb and accessing a phonetically silent verb? It would seem that this is a worthwhile issue for psycholinguistic research to address in the near future.¹⁶

Beyond these speculations, I have no insights to offer. Instead, let me finish by a brief discussion of a much more low-level question.

4. A “small” question

Given the fact that all Germanic OV-languages appear to avail themselves of silent motion verb constructions, why is the silent particle verb construction, discussed in the present chapter in Section 2.2, possible in Dutch but excluded in Swiss German (and German)?¹⁷ I suspect that the answer is to be found in the morphological properties of the verbal particles.

In the literature on OV-Germanic, verbal particles are often referred to as separable prefixes. This sounds like a *contradictio in terminis*, and for a good reason. Indeed, these prefixes show ambivalent behavior. On the one hand they behave like independent syntactic agents that can be separated from their host. On the other hand, they behave like true prefixes in that they sometimes move around with their verbal host. The former is shown by Verb Second, the rule by which the finite verb is moved into second position in the main clause. This is illustrated (for Dutch) in (31).¹⁸

- (31) a. omdat Jan zijn tijd anders in deelt
 because Jan his time differently in divides
 ‘because Jan distributes his time differently’
 b. Jan deelt zijn tijd anders in
 Jan divides his time differently in
 ‘Jan distributes his time differently’

The prefixal property is found when we study the positioning of the prefix and the host verb in verb clusters. Consider the following example from Ackema (2004).

- (32) a. dat hij haar op kan hebben gebeld
 that he her up can have called
 ‘...that he can have called her up’

- b. ?dat hij haar kan **op** hebben gebeld
 c. dat hij haar kan hebben **op** gebeld
 d. *dat hij haar kan hebben gebeld **op**

The position of the particle in (32a) corresponds to where we would expect it to be given the nesting structure typical of OV-languages. The structure in (32d) is expected to be ungrammatical given the general OV-template discussed above in (6). (32c) is the variant in which the particle attaches to the verbal host stem, suggesting that it is like a prefix. And finally, (32b) is an intermediate structure that is not considered fully felicitous by all speakers.¹⁹ The particle behavior found in (32a–c) is also found in Hungarian, where the particles are traditionally referred to as preverbs, and where the positioning behavior of the preverb is called preverb climbing.

Observe now that Swiss German differs from Dutch in that prefixation of the preverb is obligatory.²⁰

- (33) a. *das er sini ziit anderscht **ii** het müese täile
 that he his time differently in would-have must divide
 ‘...that he should have distributed his time differently’
 b. *das er sini ziit anderscht het **ii** müese täile
 c. das er sini ziit anderscht het müese **ii** täile
 d. *das er sini ziit anderscht het müese täile **ii**

The ungrammaticality of (33d) is as expected. Sentence (33c), the prefix-variant, is grammatical, also as expected. But (33a/b) are ungrammatical, in sharp contrast with Dutch. While I do not know what this difference between Dutch and Swiss German is due to, I believe that it is this contrast that holds the key to understanding why Swiss German has no silent particle verbs.

Let us assume the following perfectly intuitive principle.

- (34) A silent verb root cannot host a verbal prefix (in Germanic).

With this in mind, consider the following paradigm of silent particle verbs in Dutch, where the verb in capitals is the phonetically silent verb root.

- (35) a. dat Jan deze hoed niet **op** had gemogen ZETTEN
 that Jan this hat not up would-have may put
 ‘...that Jan should not have been allowed to put on this hat’
 b. dat Jan deze hoed niet had **op** gemogen ZETTEN
 c. *dat Jan deze hoed niet had gemogen **op** ZETTEN
 d. *dat Jan deze hoed niet had gemogen ZETTEN **op**

(35a/b) are as expected. And (35c) is correctly excluded by (34). (35d), which is acoustically indistinguishable from (35c), is excluded by (6). In Dutch, then, while prefixation is prohibited, the climbing property guarantees that there is a grammatical output.

Consider now the equivalent example in Swiss German.²¹

- (36) a. *das de Hans dëe huet nöd **uuf** het döörfe SETZE
 that the Hans this hat not up would-have may put
 ‘...that Hans should not have been allowed to put on this hat’
 b. *das de Hans dëe huet nöd het **uuf** döörfe SETZE
 c. *das de Hans dëe huet nöd het döörfe **uuf** SETZE
 d. *das de Hans dëe huet nöd het döörfe SETZE **uuf**

Again, (36c) is excluded by (34) and (36d) is ruled out by (6). But now (36a/b) are unavailable. The preverb may not climb because prefixation is obligatory in Swiss German. In other words, there cannot be a grammatical output. Under the circumstances, it would be totally counterproductive for the Swiss German dictionary to contain silent particle verbs.

In conclusion, I feel that the above discussion of the absence of silent particle verbs in Swiss German, if on the right track, is revealing in that it shows that many conditions need to be fulfilled in the grammars of particular languages for silent verbs or verb roots to be successfully employed. Thereby, perhaps, we have gained some insight into the more general questions of why silent verbs seem to be relatively rare among the world’s languages.

Notes

1. The present text elaborates on a number of issues in Van Riemsdijk (Riemsdijk 2002). It was originally prepared for presentation at the Linguistics and Phonetics 2002 Conference at Meikai University, Japan and intended for publication in the proceedings, which, however, never materialized. Some of the elaborations were presented in various talks in Innsbruck, Salzburg, Kyoto, Verona, Siena, and St. Petersburg. Thanks are due to the audiences at all these meetings, and in particular to Denis Delfitto, Joseph Emonds and Hubert Haider for insightful comments. Thanks also to an anonymous reviewer.

2. See in particular Lightfoot (1979) with his famous argument that the modal verbs were reanalyzed from main verbs into auxiliaries in the course of the development of Modern English.

3. The argument was originally presented, though in somewhat rudimentary form, in Hoekstra (1997: 26f.).

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

5. There 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.
6. One issue has not been addressed in this brief summary. The missing motion verb could be absent because it is deleted at PF, or it could be an independent lexical entry that has all the usual properties of lexical entries in general but lacks a phonetic matrix. It is the latter position that I am adopting here, following Hoekstra (1997). See Van Riemsdijk (2002: 160ff.) for extensive motivation of this choice. In both approaches, however, the problem of licensing arises. For some additional discussion of this issue, which also transcends the limits of the present contribution, see Van Riemsdijk (2003).
7. See Wurmbrand (2004, 2006) for extensive discussion. Wurmbrand lists PARTICIPLE – AUXILIARY as the only possible order for Swiss German, and I agree, though I feel that the contrast is somewhat sharper in the simple verb raising cases and, as illustrated in the main text, slightly less sharp in verb projection raising structures.
8. Barbiers (1995: 151f.) discusses such examples in the framework of his arguments against a PF-deletion account.
9. See Van Riemsdijk (2002: 192) for more discussion. For the notion of ‘semi-lexical head’ used in this formulation, see Corver and Van Riemsdijk (2001).
10. By way of illustration, here is a pair of examples with the first of these verbs:
- (i) De padvinder / de storm wakkerde het vuur aan
the boy-scout / the storm kindled the fire PRT
 - (ii) Het vuur wakkerde aan (door de storm)
the fire kindled PRT (by the storm)
11. A few marginal cases come to mind, but not with modals. The missing verb, if there is one, might be taken to be close to the past participle of *gehen* (‘go’), that is *gegangen* (‘gone’), again.
- (i) Die Tomaten sind aus <gegangen>
the tomatoes are out <gone>
‘The tomatoes are sold out’
 - (ii) Die Türe ist zu
the door is to
‘The door is closed’
 - (iii) Die Frist ist um
the set-time is around
‘The set time has elapsed’
 - (iv) Die Post ist ab
the mail is off
‘It is too late to do anything now’

Many of these, in particular the last two, are really idioms in that the choice of subject is largely limited to the one given in the example.

12. Needless to say, I am not talking about a general resistance to positing silent elements of category V. Few people would reject the idea that a verb that undergoes Verb Second leaves behind a trace, for example. The scepticism is limited to those cases that were called specified

deletion until the late seventies and which I now refer to as phonetically silent lexical dictionary items.

13. Thanks to Jonathan Bobaljik and Susi Wurmbrand, who set my mind straight on this point.

14. In a lecture entitled 'Conditions of silent (allo-)morphs: two types of lexical access' presented in Verona on March 3, 2003 in a workshop on 'Nuove tendenze in sintassi comparativa: elementi nulli e parametri di variazione'.

15. It should be pointed out, however, that certain facts in Slavic are problematic for this proposal, see McShane (1998, 2000). Basically, it appears that in Slavic, most extensively in Russian, subcategorizational frames can license specified verb ellipsis, apparently without the help of a functional head. Here are some examples from McShane (2000: 226f.):

- (i) a. Èto vy [e] Remarka?
PRT you_{NOM} [e] Remarque_{ACC}
'Is that Remarque you are reading?'
b. Èto vy [e] sardel'ku?
PRT you_{NOM} [e] a-sausage_{ACC}
'Is that a sausage you are eating?'
- (ii) a. A èti tufli ty [e] ščetkoy odežnoj
and these shoes_{ACC} you_{NOM} [e] brush_{INSTR} clothes_{INSTR.ADJ}
'And do you clean these shoes with a clothes brush?'
b. On nogoj o bort kak-to neudačno [e]
he_{NOM} leg_{INSTR} against side-of-the-ship_{ACC} somehow in-a-bad-way
'Somehow he banged his leg badly on the side of the ship'

16. A pilot study addressing precisely these questions and based on the material on Dutch contained in Van Riemsdijk (2002) was designed and tested by Lyn Frazier of the University of Massachusetts at Amherst and Steven Frisson of the University of Antwerp. But unfortunately, the study did not yield any interpretable contrasts. Thanks also to Jacques Mehler and Marina Nespor for helpful discussion.

17. I have not investigated the situation in West Flemish, Afrikaans, and some of the other languages scrutinized in Van Riemsdijk (2002). As far as German is concerned, it is less revealing than Swiss German though I believe that my findings carry over to German as well.

18. According to the Dutch spelling conventions, the particle (prefix) is joined to the verbal stem when the two are adjacent. In the text example I have kept them separate for the sake of transparency.

19. I am among the stricter speakers and have, in the past, rejected the intermediate position shown in (32b), cf. Van Riemsdijk (1978). While I still feel that (32b) is not as good as (32a/c), I now tend to classify (32b) as grammatical.

20. The facts given are those I find to be true in my own dialect, which is the dialect of Zurich (Züritütsch). There may be some slight variation depending on the degree of transparent directional interpretation of the particle, but the generalization holds that particles must be prefixed in verbal clusters.

21. It should be noted that the modal verb in the Dutch example shows up as *gemogen*, not as *mogen*. In other words, it must take the overt participial form and cannot appear as an infinitive. This means that there is no IPP (*infinitivus pro participio*) effect in these examples,

where the counterparts with an overt verb would have the infinitive rather than the participle. I conclude from this that whatever triggers the IPP-effect, a controversial issue, is sensitive to the distinction between overt and silent main verbs. See also Van Riemsdijk (2002: fn. 9) for discussion. In Swiss German, we do get the infinitival form, but there is no IPP-effect due to the fact that the paradigm of modals is defective: they do not have a participial form at all.

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