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Why syntax is all about semantics and pragmatics

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Abstract

In this paper I reanalyze the data provided in Barbiers (2018) on Dutch adverbs which occur in an embedded (complement) clause while they semantically pertain to the matrix (main) clause (or vice versa). Whereas Barbiers analyzes adverb placement in Dutch along the lines of the Cinque hierarchy (Cinque 1999), I will propose an analysis and explanation along semantic lines which does not need any movement, thereby stressing the importance of semantics and pragmatics in syntactic analyses.

Keywords: adverb raising, long-distance dependency, Cinque hierarchy, factive verb, bridge verb, neg-raising

1. Introduction

The goal of this squib is to show that phenomena that are called ‘syntactic’ are often semantic or pragmatic in nature, and that what we call syntax has to do with the way we combine meaningful elements in a meaningful way (cf. Fortuin & Geerdink 2019 or Verhagen 2015). I will do so by reanalyzing an intriguing syntactic phenomenon in Dutch discussed by Barbiers (2018): adverbs that occur in an embedded (complement) clause while they semantically pertain to the matrix (main) clause, as in example (1), where *eerlijk gezegd* ‘honestly’ pertains to (or ‘has scope over’) *denken* ‘think’:

- (1) Ik denk dat ze eerlijk gezegd voor Rooney gaan.
I think that they honestly for Rooney go.
‘Honestly, I think that they will go for Rooney.’

Adopting a different terminology, one can speak of a long-distance dependency between *eerlijk gezegd* ‘honestly’ and *denken* ‘think’. Barbiers (2018: 59) also argues that this phenomenon occurs with a limited set of verbs and adverbs:

- The type of adverb in this construction depends on the type of matrix verb: speech act adverbs (e.g. *eerlijk gezegd* ‘honestly’) in the case of the matrix verb *denken* ‘think’, volitional modal adverbs (e.g. *per se*) in the case of the matrix verb *willen* ‘want’.
- The construction is only possible with what Barbiers calls ‘bridge verbs’, i.e. matrix verbs that allow for wh-extraction from their sentential complements.
- With *denken* ‘think’ as the matrix verb, the subject of the matrix clause must be interpretable as the author of the utterance. No such requirement holds in the case of matrix verb *willen* ‘want’.

According to Barbiers, these limitations can be explained by the so-called *Cinque hierarchy*. This term is used for a hierarchy discovered by the generative syntactician and typologist Cinque (1999), which describes the order in which particular adverbs can occur in all languages (cf. Figure 1).

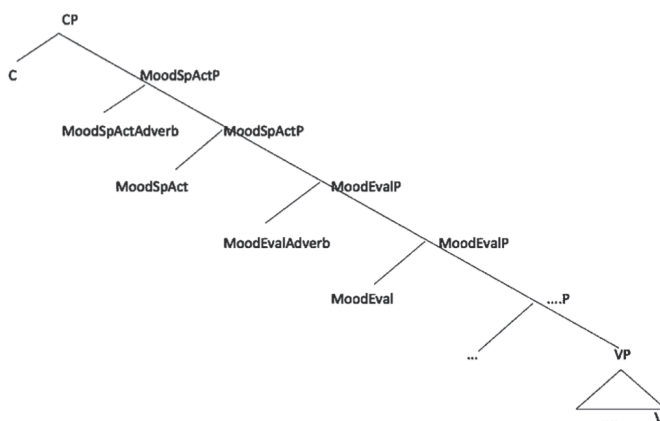


Figure 1 Cinque hierarchy (taken from Barbiers 2018: 61).

Barbiers shows that the same hierarchy applies to Dutch adverbs, and provides a syntactic analysis for the verbs *denken* ‘think’ and *willen* ‘want’ in which they move from a position in the embedded clause into the matrix clause (Barbiers 2018: 64-66). As I will show in the next sections, the syntactic analysis given by Barbiers can be supplemented with a semantic layer, which

provides, in my opinion, a deeper level of explanation. As such, I follow the tradition that treats movement in a semantic way (cf. Bartsch 1973 on the related negative raising construction).¹

2. Analysis

2.1 Why is the phenomenon restricted to certain adverb classes?

With *denken* ‘think’, only speech act adverbs such as *eerlijk gezegd* ‘honestly’ in example (1) have a matrix interpretation, where the adverb in the subordinate complement clause pertains to *denken* ‘think’. Compare (1) with (2), which contains other types of adverbs:

- (2) Ik denk [dat ze helaas/waarschijnlijk/altijd voor Rooney gaan].
 I think that they unfortunately/probably/always for Rooney go
 #I unfortunately/probably/always think that they will go for Rooney.

The reason why in (1) the adverb (*eerlijk gezegd*) in the subordinate clause pertains to the verb *denken* in the main clause, whereas this is not possible with the adverbs in (2) is quite simple: only those adverbs which naturally pertain to the verb in the main-clause due to their meaning can be placed in the subordinate clause. This is the case with *eerlijk gezegd* which provides information about the opinion of the speaker:

eerlijk gezegd x = ‘the speaker emphasizes that x is said in all honesty.’

In fact, one can even question whether *eerlijk gezegd* really pertains to the matrix verb *denken* in (1) since the sentence does not express that the thinking was honestly said. It would be more accurate to say that in (1) ‘honestly’ pertains to the content of the whole sentence, and the speech act as such. In terms of scope: ‘*eerlijk gezegd* [ik denk dat x]’. Nevertheless, expressions such as *eerlijk gezegd* which can occur at various places in the sentence differ from adverbs such as *altijd* ‘always’

¹ An early functional approach of negative transportation is Nuyts (1990). The topic of negative transportation is still debated extensively. The syntactic account of negative raising has been defended by Collins & Postal (2014), and criticized by Horn (2014), Hoeksema (2017), among others. See de Schepper et al. (2014) on prag-raising versus neg-raising, and the notion of subjectivity.

where the adverb pertains to the predicate of the clause it occurs in (cf. examples 3 and 4):

- (3) Ik denk *altijd* dat ik ga winnen.
 I think always that I go win
 'I always think that I am going to win.' (*altijd* pertains to *denk*)
- (4) Ik denk dat ik *altijd* ga winnen.
 I think that I always go win
 'I think that I am always going to win.' (*altijd* pertains to *winnen*)

In the case of *eerlijk gezegd*, the difference in meaning between the different positions (in the matrix or complement clause) is difficult to capture. This is also the case in (5) and (6) with *denken* 'think' and *sowieso* 'in any case':²

- (5) Ik denk dat ze *sowieso* pumps draagt.
 I think that she in any case pumps wears.
 'I think that she will wear pumps in any case.'
- (6) Ik denk *sowieso* dat ze pumps draagt.
 I think in any case that she pumps wears
 'In any case I think that she will wear pumps.'

There is a very subtle difference in meaning between the two placements, and for many speakers the difference is probably neglectable or even absent. In (5) the speaker states that in any case, (s)he is certain she will wear pumps (for example because she always wears them), and implies due to the accentuation of *sowieso* that she may be wearing other things as well that she normally wears. This implication is absent in (6), which merely states that the speaker is absolutely certain she will wear pumps. With the adverb *per se* 'definitely' and *willen* 'want' there is even less difference in meaning between the two placements (cf. examples 7 and 8), even though according to my intuition, the example with *per se* in the

² This sentence is based on the examples with *willen* 'want' and the predicate *pumps dragen* 'wear pumps' provided by Barbiers (2018).

subordinate clause in (7), taken from Barbiers (2018: 59), sounds slightly less acceptable to me³:

- (7) Ik wil dat je *per se* pumps aandoet die dag.
I want that you definitely pumps wear that day
'I definitely want you to wear pumps that day.'
- (8) Ik wil *per se* dat je pumps aandoet die dag.
I want definitely that you pumps wear that day
'I definitely want you to wear pumps that day.'

2.2 How does the adverb get to be interpreted in the matrix clause?

Again, the answer has to do with meaning. The adverb is interpreted as pertaining to the verb in the main clause because there is no other possible interpretation given the meaning of the adverb. This property makes it possible to have various arrangements, which can sometimes have a parenthesis-like character, that have to do with information structure, as in examples (9)–(12):

- (9) *Eerlijk gezegd* denk ik dat hij niet komt.
(10) Ik denk *eerlijk gezegd* dat hij niet komt
(11) Ik denk dat hij *eerlijk gezegd* niet komt.
(12) Ik denk dat hij niet komt *eerlijk gezegd*.
'Honestly, I don't think he will come.'

A question that needs to be answered, but falls beyond the scope of this paper, is which word order the language user chooses in which context.⁴

3 I could not find any examples of this structure with the exception of the following fragment from an internet forum: *Als mijn vriend tegen mij zou zeggen, ik wil dat je PER SE pumps aandoet die dag, of dat ik per se een hooggesloten jurkje aanmoet, dan voel ik mij er ook niet lekker in* 'lit. If my friend would tell me, I want you to definitely wear pumps that day, or that I definitely wear a high-necked dress, then I would not feel comfortable in it'. In this case, it may be that the word order is influenced by the reported speech character of the example.

4 Perhaps, the placement in the matrix clause more clearly indicates that the speaker wants to be really honest, for example in the case when the message that is to be conveyed is more controversial, for example: *Ik denk eerlijk gezegd, dat dit het einde van de carrière van Vettel is* (lit. 'I think honestly speaking that this is the end of the career of Vettel.'). If *eerlijk gezegd* occurs in the complement clause, it pertains less directly to 'denken', but to (a part of) the content of the complement clause, for example: *Ik denk dat het bestuursrecht eerlijk gezegd goed werkt* (lit. 'I think that the administrative law honestly speaking works well.'). In this case, *eerlijk gezegd*

2.3 Why is the phenomenon restricted to certain verbs?

Barbiers argues that only what he calls *bridge verbs* such as *denken* ‘think’ or *willen* ‘want’ allow embedded adverbs with matrix interpretation. For example, the phenomenon does not occur with what he calls *factive matrix verbs* such as *weten* ‘know’ (example 13) or *toegeven* ‘admit’ (example 14):

- (13) *Ik weet [dat ze eerlijk gezegd voor Rooney gaan].
 I know that they honestly for Rooney go
 # I honestly know that they will go for Rooney.’

- (14) *Ik geef toe [dat ze eerlijk gezegd voor Rooney gaan].
 I admit that they honestly for Rooney go
 # I honestly admit that they will go for Rooney.’

The term *factive verb* is used (Barbiers 2018: 66) for verbs which presuppose the truth of the situation described in the complement clause. As far as I understand, Barbiers does not provide a semantic explanation for the restriction to (some) bridge verbs and the exclusion of factive verbs (the former class is defined in syntactic terms, the latter class is defined in semantic terms), and it is not fully clear to me whether the classification into bridge verbs versus factive verbs really has explanatory value. Compare the following two examples (15) and (16):

- (15) factive verb; long distance dependency permitted:
 Ik realiseer me namelijk dat ik eerlijk gezegd altijd
 I realise refl namely that I honestly always
 al heb geweten dat een confrontatie tussen
 already have known that a confrontation between
 Tim en mij onvermijdelijk is.⁵
 Tim and me unavoidable is
 ‘I honestly realise that I have always known that a confrontation between Tim and me is unavoidable.’

- (16) bridge verb; long distance dependency not acceptable:
 ?Ik verklaar dat ze eerlijk gezegd niet zo aardig is.
 I declare that she honestly not so nice is

pertains to *goed werkt* ‘works well’, stressing that it is in fact the case that according to the honest opinion, it works well.

5 Kate Harrison (2011). *Soul Beach. Een exclusieve club*. Vianen/Antwerpen: The House of Books.

‘Honestly, I explain that she is not that nice.’

Both (15) and (16) can be explained with reference to the meaning of *eerlijk gezegd*, which is used when the speaker wants to concede or admit something.⁶ Sentence (16) is not acceptable because the meaning of *declare* is not in accordance with the idea of admitting something. Also note that in (13) and (14) the placement of the adverb *eerlijk gezegd* in the main clause would, without explicit context, also result in a pragmatically strange sentence, which is therefore difficult to interpret. In order to make such a sentence acceptable there needs to be a context of ‘admitting’ something, as in example (17) and (18):

(17) *Eerlijk gezegd* weet ik dat niet/wel.
 honestly know I that not/part
 ‘Honestly speaking, I don’t know that/I do know that.’

(18) *Eerlijk gezegd* moet ik toegeven dat...
 Honestly must I admit PRT.
 ‘I honestly must admit that...’

This suggests that the restriction to *denken* ‘think’ (or *realiseren* ‘realize’) is of a semantic-pragmatic nature. Because *denken* ‘think’ and *eerlijk gezegd* ‘honestly’ form a very natural semantic-pragmatic unit (i.e. the speaker admits that (s)he in fact has a particular, perhaps unexpected opinion), it is possible to place the adverb in the complement clause, in which case there is a long distance dependency between the two meanings. This is not possible in (13) and (14), because the message that is conveyed is semantically-pragmatically odd. If the speaker insists on conveying this (pragmatically rather marked) message, it is necessary to put the adverb in the vicinity of the matrix verb, in order to make sure that the correct interpretation arises. It is also possible to use a construction which is more in accordance with the meaning of admitting or conceding something. This is for example the case in sentences with negative *niet weten of* ‘not know whether’ and a first person. In such sentences, the placement of *eerlijk gezegd* ‘honestly’ in the complement clause is less acceptable, at least according to my speaker intuition, but certainly not as ungrammatical as

6 See also Green (1976) for an analysis of English *frankly* and other adverbs, which takes into account semantics.

(13) or (14). The following examples (19 and 20) with this structure are taken from the internet:

(19) Of hij [autolampje] *eerlijk gezegd* heeft gebrand weet ik niet zeker⁷
 whether it [the light] honestly has burnt know I not sure
 lit. Whether it has honestly speaking burnt, I am not sure.

(20) Ik begrijp niet hoe je daar *eerlijk gezegd* mee kan leven.⁸
 I understand not how you there honestly with can live
 ‘Honestly, I don’t understand how you can live with that.’

Nevertheless, with these predicates, this placement of *eerlijk gezegd* ‘honestly’ is rather marked, at least with *weten* ‘know’. A similar phenomenon also occurs in sentences with *niet denken dat* ‘not think that’, or *wel denken dat* ‘do think that’ (example 21):

- (21) a. *Eerlijk gezegd* denk ik niet dat ze komt.
 honestly think I not that she comes
 b. Ik denk *eerlijk gezegd* niet dat ze komt.
 I think honestly not that she comes
 c. Ik denk niet dat ze komt *eerlijk gezegd*.
 I think not that she comes honestly
 d. ?Ik denk niet dat ze *eerlijk gezegd* komt.
 I think not that she honestly comes
 ‘I honestly don’t think she will come.’

Because *eerlijk gezegd* ‘honestly’ pertains to the whole proposition, it can occur sentence-initially (21a) or sentence-finally (21c), to indicate the scope of the adverb over the whole proposition. It can also occur with the matrix verb (21b), since this verb expresses the main predicate (‘not think’, ‘not know’). A question is then: why is (11) with *denken* and the negation in the complement clause perfectly fine, whereas the same sentence with the negation in the matrix clause as in (21d) is more marked. In (11) the speaker admits that in his/her perspective he won’t come. In this sentence, *denken* indicates a subjective perspective (see Verhagen 2005). With *niet denken* in (21d) the speaker expresses doubt about a given statement, referred to in the complement clause. It may be that the placement of *eerlijk gezegd* in that complement clause as in (21d)

7 <https://www.vwforum.nl/viewtopic.php?f=14&t=195127>

8 <http://www.ontdekislam.nl/forum/viewtopic.php>

could suggest that *eerlijk gezegd* is part of the statement that is rejected by the speaker. Perhaps this order therefore less clearly indicates that the adverb applies to the whole proposition, due to which it is more marked.

2.4 Why is there a requirement on the verb *denken* ‘think’?

Barbiers shows that the subject of the matrix verb *denken* ‘think’ must be interpretable as the author of the utterance (example 22 and 23):

- (22) *Jij denkt [dat ze *eerlijk gezegd* voor Rooney gaan].
 you think that they honestly for Rooney go
- (23) Hij dacht [dat ze *eerlijk gezegd* voor Rooney zouden gaan].
 he thought that they honestly for Rooney would go
 ‘He honestly thought that they would go for Rooney.’

No such requirement holds with *willen* ‘want’ (example 24):

- (24) Jij wilt dat ze *per se* pumps draagt.
 you want that she definitely pumps wears
 ‘You definitely want her to wear pumps.’

From a semantic perspective this is not very surprising since *eerlijk gezegd* ‘honestly’ always pertains to the evaluation of the speaker, whereas this is not the case with *per se*. This can be shown by the fact that *eerlijk gezegd* ‘honestly’ is not acceptable with *denken* ‘think’ and a second person as opposed to a first person (example 25 and 26):

- (25) **Eerlijk gezegd* denk jij dat ze voor Rooney gaan.
 honestly think you that they for Rooney go
- (26) *Eerlijk gezegd* denk ik dat jij denkt dat ze voor Rooney gaan.
 Honestly think I that you think that they for Rooney go
 ‘Honestly I think that you think they they will go for Rooney.’

The phenomena discussed here are quite subtle pragmatic-semantic phenomena, since cases with a third person are in fact much more acceptable (example 27):

- (27) (?)*Eerlijk gezegd* denkt hij dat ze voor Rooney gaan.
 honestly thinks he that they for Rooney go
 ‘Honestly, he thinks they will go for Rooney.’

In my view, the explanation must refer to the function of *eerlijk gezegd*. This expression indicates that the speaker is going to tell things like they really are, not holding back any information. Sentence (25) is less acceptable because it is pragmatically odd that you tell someone else what (s)he really thinks. It is, however, acceptable to tell someone that, to your mind, without holding back any information, someone else is thinking something.

3. *Helaas* as a counterexample to a semantic analysis?

An adverb that, at least at first sight, is more difficult to account for in a semantic manner is *helaas* ‘unfortunately’ and similar evaluative adverbs. It can modify the predicate in the subordinate clause, or the matrix verb in the main clause. If *helaas* ‘unfortunately’ occurs in the main clause both readings are possible, but if it occurs in the subordinate clause, it modifies the predicate in the subordinate clause (example 28 and 29):

- (28) Ik denk *helaas* dat Jan niet wint.⁹
 I think unfortunately that Jan not wins
 I. unfortunately > think: ‘Unfortunately, I think that Jan will not win.’
 II. think > unfortunately: ‘I think that Jan unfortunately will not win.’

- (29) Ik denk dat Jan *helaas* niet wint.
 I think that Jan unfortunately not wins
 ‘I think that Jan unfortunately won’t win.’
 (≠ I unfortunately think that Jan won’t win)

The data can be explained in a semantic-pragmatic way as well. *Helaas* ‘unfortunately’ always modifies the clause to which it belongs. So embedded occurrences pertain to the subordinate clause, and matrix occurrences to the matrix clause. The second interpretation of (28) can be viewed as an implicature of the first: *Why is it unfortunate I think X?*

9 According to Barbiers, factive matrix verbs do not have this possibility.

Ik weet *helaas* [dat Jan niet wint].
 I know unfortunately that Jan not wins.
 I. ‘Unfortunately, I know that Jan will not win.’
 II. # I know that Jan unfortunately will not win.

However, there seems to be a generalized implicature that if you ‘know unfortunately’ that Jan won’t win, you will also find it a pity that Jan won’t win (i.e. ‘unfortunately Jan won’t win’).

Because the reason I think X is that I have evidence for X being the case and X is unfortunate. In third person cases the implicature can be cancelled (example 30):¹⁰

(30) Hij denkt helaas dat Marie gaat winnen. Dat is jammer want ze gaat verliezen.

Lit. Unfortunately he thinks that Marie will win. That is a pity because she will lose.

Here, the speaker does not express any opinion about whether Marie winning would be fortunate or unfortunate.¹¹

4. Conclusion

The data analyzed in this squib are about long-distance dependencies between a number of adverbs and verbs in Dutch. I have argued that to provide an explanation for the data, one has to look at the meanings of the adverbs and the verbs and the way they combine in a meaningful way. By looking at semantics and pragmatics, we can explain a larger domain than if we leave out semantics and pragmatics. The semantic-pragmatic perspective can explain *why* particular word order phenomena as described by Cinque (1999) are as they are (cf. Nuyts 2004). As such, the Cinque hierarchy can be seen as an epiphenomenon of a semantic-pragmatic phenomenon. Furthermore, a semantic-pragmatic approach makes it no longer necessary to work with

10 I thank the reviewer for pointing out that the implicature is cancelled in third person cases.

11 There are, however, also contexts where there is a clearer difference in meaning. The use of *helaas* 'unfortunately' in the subordinate complement clause in (1) makes clearer that the speaker finds the situation described in the subordinate clause a pity. The use of *helaas* in the matrix clause in (2) has a meaning close to 'I am afraid that', and seems to have a pragmatic function related to politeness (the speaker does not want to be blunt, and argues that (s)he would have liked to say something else, but (s)he can't):

(a) Goedemiddag, ik denk dat er *helaas* een verkeerde instelling is geweest in de bus waardoor er onterecht saldo is afgeschreven.

'Good afternoon, I think that unfortunately there was an incorrect configuration in the bus, because of which a wrong amount of money was taken from my bank account.'

(b) Ik denk *helaas* dat dit artikel nogal symptomatisch was voor de visie van de Europese bevolking op de EU.

'Unfortunately, I think that/ I am afraid that this paper is rather symptomatic for the vision of the European population on the EU.'

the theoretical notion of ‘movement’, since this is just another theoretical way of saying that some element semantically belongs to an element which is not in its vicinity. Further study should be based on the qualitative and quantitative analysis of a large number of data. I expect such a study to reveal more patterns indicating the importance of semantics in the explanation of the data.

One could perhaps argue that the data are still on a deeper level syntactic (in the sense that Barbiers 2018 uses that term), and that the syntactic account has semantic-pragmatic consequences. I personally do not think that is the case, since I have not seen any data for which a semantic-pragmatic account by itself is insufficient. But for those linguists that work within a formal (generative, Chomskyan) syntactic framework, however, it would also be interesting to see whether there are theory-internal factors which show that the syntactic account of the phenomena discussed here makes the wrong predictions. An example would be fronted indirect questions which are islands for extraction in Dutch. Example (19) and the following example from the proceedings of the Belgian parliament suggests that the prediction that no cases of *eerlijk gezegd* could occur in fronted indirect questions is incorrect (example 31):

- (31) *Of dat, eerlijk gezegd, onze langetermijnbelangen dient, is nog maar zeer de vraag.*¹²

Lit. Whether that, honestly, serves our long-term goals, is very much the question.

But whether one accepts this as evidence depends on the theoretical assumptions one works with (for a thorough discussion of different types of explanations in different syntactic frameworks and theories, see also Fortuin 2021). I leave that up to further research and discussion.

Acknowledgements

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¹² <https://www.dekamer.be/doc/CCRI/html/51/ic871.html> (Belgian Parlement, 22-2-2006). I thank the anonymous reviewer for pointing out this example and the possible consequences for the syntactic explanation of the data discussed in this squib.

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