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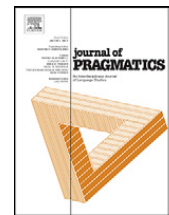
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ABSTRACT

This paper discusses a special use of the Dutch adverb *helemaal* 'wholly, entirely' as a discourse-sensitive scalar adverb with a meaning resembling English *especially*, against the background of a more general discussion of scalarity and various types of scale-sensitive expressions in natural language. The discourse-sensitive use of *helemaal* is compared and contrasted with more common uses of *helemaal* as a mereological quantifier and as an adverb of degree. It is speculated that the discourse-sensitive use of *helemaal* first originated in negative sentences.

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1. Introduction: Dutch *helemaal*¹

The purpose of this paper is to introduce and analyse an interesting case of scalarity involving an adverb of degree in Dutch, namely *helemaal* 'wholly, entirely'. The literature on *helemaal* is slender: besides the present paper, I am only aware of one recent paper (Tribushinina and Janssen, 2011) that discusses this topic. Whereas Tribushinina and Janssen are primarily concerned with *helemaal* as a degree modifier, the main focus in the present paper is on the scalar use. The behavior of scalar *helemaal* is interesting from the perspective of pragmatics, but also from that of diachronic lexical semantics. In particular the jump from an ordinary adverb of degree to a scalar particle similar to such items as *especially* has never been documented before.

This paper is structured as follows: In section 2 I introduce the topic of scalarity as a general topic in semantics and pragmatics, illustrating it with a number of examples. In section 3 I present a discussion of the pseudo-partitive construction which shows some similarity with our main topic. I then outline the relation between mereological structures and scalarity in section 4, using corpus data for a characterization of *helemaal* as an adverb of degree meaning 'wholly', which will become important for the analysis of 'superlative *helemaal*' in section 5. In section 6 I discuss the set of alternatives that *helemaal* provides a ranking of, in section 7 the role of quantifiers in establishing this set and the role of implicit quantification. Section 8 briefly deals with a common collocate of scalar *helemaal*, namely *al*, and section 9 contains the conclusions.

2. The ubiquity of scales

Scalarity is increasingly seen as a central notion in semantics and pragmatics. While some of the basic characteristics were already noted in the 1970s (e.g. Horn scales and scalar implicatures, cf. Horn, 1972, and the importance of scalarity for

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¹ An earlier version of this paper was presented at the conference on *La scalarité dans tous ses aspects*, held at the University of Ghent on December 15 and 16, 2008. I am indebted to the audience at this presentation, as well as two anonymous but excellent referees for this journal, for their valuable comments and critique.

the study of polarity items – cf. Fauconnier, 1975), the pervasiveness of scalarity is only gradually becoming clear as more and more phenomena are uncovered where ranking along some scale plays an important role. For example, scalar notions may be expressed by adverbs of degree, by various complex connectives such as *let alone*, *much less* and *least of all* (Fillmore et al., 1988; Verhagen, 2005), by minimizing and maximizing polarity items (e.g. Israel, 1996), by adverbs such as *even* or *merely* (Karttunen and Peters, 1979; Kay, 1990; Hoeksema and Rullmann, 2001; Schwenter, 2002; Giannakidou, 2007), but also by various constructions, such as several types of exclamative sentences, or comparative and superlative constructions, to name but a few topics that readily come to mind.

Scales can be pragmatic or semantic in nature. Clearly pragmatic are the scales associated with items like *even* (cf. Rooth, 1985; Kay, 1990; Hirschberg, 1991). If I say that something should be obvious, *even to John*, then you, as the hearer, will need to infer that John is located somewhere on the low end of the totem pole of human understanding. His low ranking on this scale is marked by the speaker by the use of the focus adverb *even*. This scale may be completely ad hoc, for example when John is normally a clever person, but somehow unable or unwilling to grasp some particular fact.

More semantic in nature are scales such as the natural numbers, or the rational numbers. These play a role in various linguistic constructions, such as so-called minimizing polarity items (Bolinger, 1972). Consider the sequences in (1), which involve various minimizers of English in combination with cardinal numerals:

- (1)
- a. Jones did not understand one word of what she was saying.
 - b. Jones did not understand two words of what she was saying.
 - c. Jones did not understand three words of what she was saying.
 - d. Jones did not understand four words of what she was saying.
 - e. Jones did not understand five words of what she was saying.
- Etc.

Of these sentences, (1a) is a standard way of indicating that Jones did not understand anything of what was said. Sentence (1b) may be used in this way as well, but somewhat less felicitously. Sentence (1c) is marginal, when used in this way, and (1d) and (1e) do not appear to have this use at all. In Table 1, some corpus data are given, culled from a database of occurrences of English polarity items I have collected over the years. Note that these data are not restricted to the minimizer *word*, but range over all minimizers in my dataset.

Some examples from the collection are given in (2):

- (2)
- a. None of these yobbos can be trusted half an inch.²
 - b. Now don't you worry one mite about me.³
 - c. I don't give two hoots about your team, but I am most concerned about your use of grammar.⁴
 - d. "Ay!" says the gentleman, "he does look like a cipher indeed, for he did not speak three words all last night."⁵

The reason I mention the minimizers here is that they exemplify some important properties of scales as they are typically used in natural languages. These properties are the following.

The first property is that often only the *endpoints* are of interest. There are lots of ways to refer to minimal or to complete understanding, but far fewer ways to refer to some middling level of understanding. (Of course, in some cases intermediate points are of interest, but I would maintain that endpoints are far more commonly referred to, and with greater linguistic diversity, than the vast areas of scales that fall in between endpoints.)

The second property is that the scales are rather *imprecise*. There do not seem to be any important semantic differences between the minimizers with *half*, *one*, *two* or *three* as their numeral modifier. I believe that the only reason for having some variation here is stylistic pressure: a desire to vary, if only slightly, on the theme of minimizers. There are no ways to refer to precise degrees. Presumably, this is because most of the time, we lack precise information. We might be able to accurately measure length or temperatures, but most other scales remain extremely imprecise and subjective.

The third property is *conventionalization*. Many minimizers are appropriate because convention says so. If we had to guess, without any prior knowledge, whether a unit such as the inch could be used to refer to some measure of trust, as in (2a), we probably would have guessed wrong. The mercantile nature of the Dutch might be reflected in the fact that they tend to use monetary minimizers to indicate minimal amounts of trust, as in (3)⁶:

² Elizabeth George, *Deception on his mind*, Bantam Books, New York etc., 1998, p. 576.

³ Sinclair Lewis, *Elmer Gantry*. Collier and Son, New York, 1927, p. 42.

⁴ <http://users2.cgiforme.com/...>

⁵ Henry Fielding, *Miscellanies*. Vol. 2., p 186.

⁶ When the minimizer entirely loses its etymological meaning, and becomes equivalent to quantifiers such as *nothing*, we have the kind of semantic bleaching that is usually associated with the Jespersen Cycle (cf. Jespersen, 1917; Horn, 1989, 2001; Postma, 2001; Eckardt, 2006; Hoeksema, 2009; van der Auwera, 2009, 2010; Larrivee, 2010, inter alii, for discussion of the lexico-semantic aspects of this cycle).

Table 1
Numerals in English minimizers.^a

Numeral	N
Half	2
One	84
Two	17
Three	1
Four	–
Five	–

^a As one of the reviewers points out, conventionalization of numerals shows fluctuations that point toward some arbitrariness in this process. Thus, *give two shits* is more broadly attested than *give two fucks*, English uses the numeral *two* more often in minimizers than modern Dutch (Hoeksema, 2002), etc.

- (3) Ik vertrouw hem voor geen cent.
I trust him for no cent
'I do not trust him one bit'

The examples in (1) and (2) suggest a scale based on the natural numbers, with an occasional fraction thrown in for good measure. But note that we only use the lower end of the set of numbers. We do not say "I don't trust him 55 inches" to indicate some precise amount of trust that is no longer minimal, but still far from absolute. In the case of "even", a sentence such as "Even Jones was there" may indicate that Jones was the least likely person to appear, or that he was very unlikely to appear. But there is no adverb, in any language that I know of, let's call it *tweven*, that we use to indicate that something is twice as unlikely:

- (4) Even Jones was there. In fact, *tweven* Smith showed up.

The same can be said about the structure associated with scalar connectives, such as English *let alone* and *much less*, or Dutch *laat staan*. These assume a partial order, associated with a set of alternatives, and nothing more. For instance, the sentence (5)

- (5) Jones did not like Smith, let alone Smith's wife.

Here all we need assume is that Smith and Smith's wife are ranked with respect to each other on the basis of Jones' subjective preferences. There is no way to express, using the *let alone*-construction, the precise extent to which they differ, or what their position is on some exact scale. There are no modifiers that we could use to say, for instance, that Jones dislikes Smith's wife twice as much, or 1.3 times as much, as he does Smith.

I believe this is typical for the use of scales in natural language. The scales are vague, often only their endpoints are contrasted with some remainder, and the scales are not metrical: they do not support multiplication or addition. In this respect, they differ from the scales we use for the interpretation of comparatives, where we have the means to express multiplication as well as addition:

- (6) a. Jones is 2 inches taller than Smith.
b. Jones is twice as clever as Smith.

3. The pseudo-partitive alternation

Scales come in several varieties. They may be unbounded, like the whole numbers, or bounded in one direction, like the natural numbers or the negative whole numbers. The natural numbers have an endpoint, the number one, in the downward direction, but no endpoint in the upward direction. Yet other scales are bounded both ways. Such is the case with scales based on quantification over parts of an object (cf. Kennedy and McNally, 2005). Consider the antonym pair *open-closed*. A sliding door can be completely, 100% closed, or completely, 100% open. And then there are intermediate options, indicated by predicates like *ajar* or *partially closed*. So this would seem to call for a scale with two definite endpoints and an infinity of intermediate positions. The degree of openness is determined by the portion of the door opening that is not blocked by the door.

Various verbs seem to be associated with similar scales, even in cases where it is a bit hard to speak of an actual part-whole structure. For instance, the verb *understand* can be modified by adverbs such as *partially* or *completely*. In Dutch, its counterpart *begrijpen* 'grasp, understand' takes part in a verb alternation I have dubbed the pseudo-partitive alternation (Hoeksema, 2003). In this alternation, the verb's object is replaced by a measure phrase and a PP headed by *van* 'of', that is, a

partitive-like construction. The sentences in (7) all indicate the absolute minimum of understanding, which is zero. English has some traces of the alternation, as can be seen from the translation of (7b), but in Dutch, a lot more can be done.

- (7) a. Ik begrijp er niets van.
I understand there nothing of
'I understand nothing of it = I don't understand it at all'
- b. Ik begrijp er geen woord van.
I understand there no word of
'I don't understand a word of it'
- c. Ik begrijp er geen bal / klap / barst van
I understand there no ball / slap / crack of
'I don't understand diddly of it = I don't understand it one bit'

It is also possible, though less common, to use the alternation to express higher degrees of understanding:

- (8) a. Ik begrijp er weinig van.
I understand there little of
'I understand little of it = I don't understand it very well'
- b. Ik begrijp er nu meer van.
I understand there now more of
'I now understand it better'
- c. Ik begrijp er alles van.
I understand there all of
'I understand all of it = I fully understand it'

The verbs engaging in this alternation come from various semantic subdomains, such as verbs of cognition, like *begrijpen* 'understand', *snappen* 'get, understand', *geloven* 'believe', *menen* 'mean', but also some modals, like *kunnen* 'can, be able to':

- (9) a. Ik geloof niets / geen moer van dat gerucht.
I believe nothing/no mother of that rumor
'I don't believe a word of that rumor'
- b. Ik meen niets van mijn aanbod.
I mean nothing of my offer
'I don't mean a word of my offer'
- c. Ik kan er niets / geen reet van.
I can there nothing / no ass of
'I can't do it at all / I suck at it'

The alternation is clearly lexically restricted. Many verbs do not support it, compare the examples in (10):

- (10) a. Ik zeg niets van dat gerucht. [OK, but totally different meaning than (9a–c)]
I say nothing of that rumor
'I say nothing about that rumor / *I don't say that rumor at all'
- b. *Ik zoek niets / geen bal van die oplossing.
I seek nothing/ no ball of that solution
- c. *Ik mag er niets van. [compare (8c)]
I may there nothing of

The main difference between a verb such as 'to say' and a verb like 'believe' or 'understand' appears to be gradability. If I understand something partially, that can mean I understand one part completely, and the rest not at all. However, it may also mean I understand it to some degree, but not fully. In the case of *zeggen* 'to say', I may say something in part, but that does not seem to give rise to a degree reading. Saying part of a sentence or a text is merely that: saying a part of a sentence or a text. It does not mean saying a sentence or a text to some degree. Saying, then, is all or nothing: either you say something or you do not. Understanding, on the other hand, is inherently gradable. Likewise for the difference between *kunnen* and *mogen*. Ability is a gradable notion, whereas permission is not. I either have permission, or I do not. But ability is different. Even if all of us are

able to play the piano, for instance, it does not follow that all of us have the same ability. That is why we find degree modifiers for *kunnen*, but not for *mogen*, compare (11):

- (11) a. Jij kunt goed goed luisteren.
You can well well listen
'You are good at listening well = You have a high ability to listen well'
- b. *Jij mag goed goed luisteren.
You may well well listen

Note that the degree modifiers used for the modals are a bit unusual: *goed* 'good, well' is in this respect like English *well*, which is likewise used as a degree modifier with a limited set of expressions (see Kennedy and McNally, 1999, 2005). Since *goed* may also be used as a manner adverb, I have added another occurrence in (11a) and (11b), to distinguish the manner and the degree reading more clearly.

I should add at this point that in English, unlike Dutch, one may find the degree adverb *well* in combination with the modal *may*. However, this is possible only when *may* is used as an epistemic modal, and the degree modifier indicates that the likelihood of something being about to happen is considerable. In permission-granting contexts, the use of *well* is strictly out, as the difference between (12a) and (12b) indicates.⁷

- (12) a. You may well be the worst-dressed linguist.
b. *You may well kiss the bride.

Dutch *mogen* does not have the interpretation of *may* in (12a).

One more comment on the pseudo-partitive: certain verbs with gradable semantics do not seem to take part in it. A case in point is *haten* 'to hate':

- (13) *Ik haat er geen moer van.
I hate there no mother of
'I don't hate it at all'

Hatred differs from *understanding* in invoking a different kind of scale, one with no highest point. For every degree of hatred, one may conceive of an even higher degree. In the case of understanding, there is nothing to top full and complete understanding. If we assume that the pseudo-partitive, like English *well*, is sensitive not to gradability as such, but to the type of scale that is involved, we may interpret the ungrammaticality of (13) as an effect due to a mismatch in scale-type preferences.

4. From mereological quantification to expressions of degree

The pseudopartitive is an example of how mereological quantification may develop into the expression of degree. Often, the two notions are hard to separate. Take the examples in (14):

- (14) a. The soldiers are all dead.
b. The soldier is all wet.
c. The soldier is all in favor of that.⁸

In (14a) we have universal quantification over the members of a set of soldiers. In (14b) we have quantification over the mereological parts of a soldier. The soldier is all wet if every part of him is wet. But this also entails that the degree of wetness exhibited by this soldier is maximal. Finally, in (14c), we have to view *all* as just a degree modifier, since it makes no sense, except perhaps metaphorically, to read this sentence as saying that every part of the soldier is in favor of something.

⁷ One of the reviewers points out that the phrase *You may well ask* is deontic, not epistemic. The reviewer suggests the use of the tag *for all I know* as a test to distinguish epistemic from deontic readings:

- (i) You may well be the worst-dressed linguist (for all I know).
(ii) You may well ask (#for all I know) where all the good intentions went.

It appears to me that the degree modifier *well* indicates the degree of aptness of the question in (ii), and not some degree of permission. For this reason, I take this to be a rather special case, that is not straightforwardly deontic.

⁸ One of the referees does not like the combination of *all* with *in favor of*, but finds *all for* to be OK. I would like to point out, though, that examples similar to (14c) can easily be found on the Internet. Here is one of many that could be adduced:

- (i) McCain said he was all in favor of equal pay for equal work, but that women don't need lawsuits, they need "education and training." (The Boston Globe, May 2, 2008)

There is a set of degree modifiers, like *all*, that come either from universal quantifiers over parts of a whole, or from expressions indicating the completion of an action:

- (15) all, totally, completely, fully, wholly, entirely

In Dutch, there are two floating quantifiers that express universal quantification, *helemaal* and *allemaal* (cf. Hoeksema, 1996).

- (16) a. De soldaten zijn allemaal dood.
The soldiers are all dead
'The soldiers are all dead'
b. De soldaat is helemaal nat.
The soldier is wholly wet
'The soldier is all/completely wet'

Allemaal is derived from *alle* 'all', the regular universal quantifier, and *helemaal* is derived from *heel* 'whole', the mereological universal quantifier.

- (17) allemaal < alle 'all'
helemaal < heel 'whole'

Just like the English adverbs in (15), *helemaal* may also be used as a pure degree modifier:

- (18) a. Ik begrijp het helemaal.
I understand it completely
'I fully understand it'
b. Fred was helemaal beduusd.
Fred was completely taken aback.
'Fred was completely taken aback'
c. De deur ging helemaal dicht.
The door went completely shut
'The door was shut completely'
d. De yoghurt is helemaal op.
The yoghurt is completely gone
'The yoghurt is all gone'

As noted by Rotstein and Winter (2004) and Kennedy and McNally (2005), this type of modifier tends to combine with endpoints of bounded scales. For scales without a fixed endpoint, the result tends to be degraded:

- (19) a. #Marie is helemaal jong.
Marie is completely young
'#Marie is fully/completely young'
b. #Fred is helemaal lief.
Fred is completely sweet
'#Fred is completely sweet'
c. #Het boek is helemaal zwaar.
The book is completely heavy
'#The book is completely heavy'

I want to stress here that the nature of the scale is not always easily determined, and the restriction to bounded scales is as a consequence not always maintained in the strictest fashion. While a sentence like (19a) is no good, a rather similar-looking sentence such as (20) is much better:

- (20) Ik voel me weer helemaal jong na deze kuur.
I feel refl again completely young after this treatment
'I feel totally rejuvenated after this treatment'

If you google the string *helemaal jong*, you will notice that it co-occurs pretty much all the time with the adverb *weer* ‘again’, suggesting a rejuvenation scenario. While *jong* itself has no clear endpoint, a process of rejuvenation does. You might think that the youngest person is someone who is born right now. His or her age could be less than a second. However, *helemaal jong* or its English counterpart *completely young* are not used to indicate the precise beginning of life, either outside or inside the womb. ‘Young’ seems to be used as a vague predicate with a fuzzy, not so clearly defined border, and is probably best characterized by a scale that is open-ended on both sides, isomorphic to the real number interval in (21d):

- (21) Four types of scales (Kennedy and McNally, 2005)
- a. [0; 1] (bounded in both directions)
 - b. (0;1] (upward bounded)
 - c. [0;1) (downward bounded)
 - d. (0;1) (unbounded)

As for the context of rejuvenation, any point at which one might say: Now I feel young again, would be an appropriate endpoint. This suggests that there are several scales at work here. For young, one might suppose that it is one without an endpoint. For every young object, there is a potential object even younger than it. For rejuvenation, it might be a scale that is much coarser, for example one that involves only three stages: old, intermediate, and the endpoint: young.

Kennedy (2007) discusses a similar problem in connection with the scale *inexpensive–expensive*. While there is obviously no upper bound for this scale, it is less obvious that there is no lower bound either. The maximally inexpensive item would cost nothing at all, one might think, but absolute modification is not too good: While we may say that something costs absolutely nothing, or that it comes absolutely free, it is less idiomatic to say that something comes absolutely or completely inexpensive.

Having said all this, I should hasten to admit that the actual use of *helemaal* is quite complicated, and that in many cases there is no certainty that we are dealing with bounded scales. As a general characterization of this adverb, it appears to be the best we can do right now.

Another thing I want to note here is that Dutch has two more adverbs involving the element *heel* ‘whole’: the adverbs *heel* and *geheel*. Of these two, *heel* does not have any restriction to bounded scales, whereas *geheel* is more like *helemaal*. Compare the examples in (22) with the ones in (19):

- (22)
- a. Marie is heel jong.
Marie is whole young
‘Marie is very young’
 - b. Fred is heel lief.
Fred is whole sweet
‘Fred is very sweet’
 - c. *Marie is geheel jong.
Marie is wholly young
**Marie is wholly young’
 - d. *Fred is geheel lief.
Fred is wholly sweet
**Fred is wholly sweet’
 - e. Het was een geheel nieuw voorstel.
It was a wholly new proposal
‘It was a wholly new proposal’
 - f. Fred is geheel in de war.
Fred is wholly confused
‘Fred is totally confused’

So even though *heel* has a mereological origin, just like *geheel* and *helemaal*, it does not require bounded scales. In this respect it can be compared to German *ganz* or modern slang uses of English *totally*.⁹ Compare e.g. (23b) to the English translation of (19b) above.

⁹ Tagliamonte and Roberts (2005) mention that this slang use of *totally* is fairly common among the characters of the sitcom *Friends*, it being the no. 5 intensifier in their ranking. Here is a typical example from that show:

(i) Joey: Oh, and don’t worry I’m totally okay with the gay thing.

For the various uses of German *ganz* in comparison with Dutch *heel*, see van Os (1988).

Table 2Corpus data for absolute *helemaal*.

NEG helemaal X 'not entirely X', N = 365	N	Helemaal X 'entirely X', N = 456	N
begrijpen 'understand'	17	alleen 'alone'	24
duidelijk 'clear'	37	overstuur 'upset'	12
gerust 'assured'	7	door het lint gaan 'go ape'	4
goed/in orde/OK/jofel 'OK'	16	uit zijn dak gaan 'go nuts'	5
kloppen 'be correct'	9	uit zijn bol gaan 'go wild'	2
tevreden 'satisfied'	13	van de kook 'upset'	5
waar 'true'	19	van streek 'upset'	20
zeker 'sure, certain'	29	in de war 'confused'	12
		leeg 'empty'	14
		stil 'quiet'	10
		vol 'full'	11
		Helemaal + NEG, N = 1214	
		Geen 'no'	243
		Niet 'not'	655
		Niets/niks 'nothing'	274
		Nooit 'never'	7
		Niemand 'nobody'	16
		Nergens 'nowhere'	19

- (23) a. Sie war ganz traurig. [German]
She was whole sad
'She was very sad'
- b. Stacy is totally sweet.
- c. Like most everyone at the show, he was supernice and ultrafriendly. also, he's totally short, like, chloe dao-short. (Internet)

Given the origin of such words, it seems likely that they always involve semantic bleaching. The etymological meaning is lost, and a generic degree modifier is the result.

In Table 2, some corpus data on *helemaal* are presented.¹⁰ Since there are clear effects, in the distribution of *helemaal*, I have separated negated occurrences of *helemaal* from positive occurrences. The table is divided into three parts, for besides adjectives and verbs in positive and negative environments, there is a third group, more frequent than the other two combined, of *helemaal* in combination with negation and n-words. Only some of the more common combinations are listed in the table.

When negated, the restriction of *helemaal* to bounded scales seems to be severely weakened. We see this in pairs of examples such as

- (24) a. Dat was *(niet) helemaal netjes.
That was (not) completely decent/right
'That was (not) quite decent'
- b. Hij bedoelde het ?(niet) helemaal serieus.¹¹
He intended it (not) entirely seriously
'He did (not) mean it entirely seriously'

¹⁰ Collected mainly from newspaper corpora and books. Rather similar findings are reported in Tribushinina and Janssen (2011), on the basis of data from the Corpus of Spoken Dutch.

¹¹ A reviewer asks whether the positive versions of the sentences in (24) are to be qualified as "?" even in direct rebuttal contexts. I believe they are pretty bad in such contexts, given that for direct rebuttals of previous assertions, Dutch uses the affirmative adverb *wel*. When this adverb is added, however, the result is OK, though somewhat childish-sounding:

- (i) A: Dat was niet helemaal netjes.
That was not entirely decent
B: Dat was wél helemaal netjes.
That was AFF entirely decent
'That was TOO entirely decent'

- c. Het was ?(niet) helemaal waar wat je zei.
It was (not) entirely true what you said
'It was (not) quite true what you said'

We also see sharp asymmetries in numbers: 32 cases of *niet helemaal duidelijk* 'not entirely clear' versus only 1 of *helemaal duidelijk*, without negation.

I should also mention in passing, that there is a modern usage of *helemaal*, that is not entirely standard, at least not for me, and which I associate with younger people, who use *helemaal* in sentences such as

- (25) a. Onze vakantie was helemaal fantastisch.
Our vacation was completely fantastic
'Our vacation was terrific'
- b. Het diner was helemaal geweldig.
The dinner was completely great
'The dinner was absolutely great'
- c. Het komt helemaal goed met jullie.
It comes completely good with you
'Things will be absolutely OK for the two of you'

This usage may be compared to the modern slang use of *totally* in English as illustrated in (23) and could possibly have been prompted by it.

5. Superlative *helemaal*

We saw in the previous section (cf. example 19) that combinations such as *helemaal jong* 'completely young' are semantically anomalous. However, in another use, where the adverb *helemaal* bears stress on the final syllable, sentences such as (25) are fully acceptable:

- (26) Martha is zeker niet oud, maar Marie is helemáál jong.
Martha is certainly not old, but Marie is really young
'Martha is certainly not old, but Marie is even younger'

We saw in connection with example (19a) that the predicate *helemaal jong* 'completely young' is normally not acceptable, because *jong* does not denote a scalar endpoint. However, for *helemáál jong*, this semantic restriction does not seem to apply at all. Sentence (26) is just fine. I will argue that this is one of the signs indicating that we are dealing with a different use of *helemaal*. The shift in stress is another sign. I will call this use the superlative use, for reasons that I will present in a moment.

For this superlative use to be possible at all, it is necessary that some kind of comparison is made. In example (26), Marie's youngness need not be maximal (in fact, I have argued that there is no such thing as maximal youngness), but rather, she should be younger than somebody else who is also (somewhat) young. Without support in the discourse for this type of comparison, the use of *helemáál* is not felicitous:

- (27) #Martha is oud, Lazarus ook, maar Marie is helemáál jong.
Martha is old, Lazarus too, but Marie is entirely young
'Martha is old, Lazarus too, but Marie is really young.'

That is why I used the translation *even younger* for (26).

The scale of comparison is given by the predicate following *helemaal*, and should be compatible with the preceding discourse (unlike ex. 4), but need not follow from it, e.g. the partial sentence

- (28) Jan houdt van honden, Piet houdt van katten en Klaas ...
John loves dogs, Pete loves cats and Nick ...

can be continued in various ways:

- (29) ... is helemáál een dierenvriend
... is entirely an animal-friend
'is even more of an animal-lover'

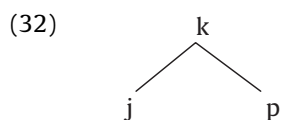
- (30) ... is helemáál gek
 ... is entirely mad
 'is mad even more completely'

depending on the subjective opinion of the speaker that loving dogs or cats is a sign of madness or merely indicative of being an animal-lover. In some cases, this may require some pragmatic accommodation (in the sense of Lewis, 1979), because the nature of the scale may be evident to the hearer only at the last stage, when the *helemaal*-expression is added.

Superlative *helemaal* requires the presence of a partially ordered set with a maximum:

- (31) A partial order with a maximum m is a set X with an ordering relation \leq such that
- (i) for all x in X : $x \leq x$ (reflexivity)
 - (ii) for all x, y in X : $x \leq y$ and $y \leq x$ entails $x = y$ (antisymmetry)
 - (iii) for all x, y, z in X : $x \leq y$ and $y \leq z$ entails $x \leq z$ (transitivity)
 - (iv) $m \in X$, and for all x in X : $x \leq m$ (m is maximum of X)

It seems reasonable to assume that (28) with the continuation in (29) requires a model such as (32):



where j , p and k are three individuals, ordered by their love for animals, with k , corresponding to Klaas, as the top animal-lover. Note that a partial order with a maximum can be viewed as a scale with an upper bound, and so the use of *helemaal* does not come as a complete surprise. The partial order, I take it, is derived from the predicate. Only inherently scalar or gradable predicates support the use of superlative *helemaal*:

- (33) a. Jan is een held, Piet is een held en Klaas is helemaal een held.
 John is a hero, Pete is a hero and Nick is completely a hero
 'John is a hero, Pete is a hero, and especially Nick is a hero.'
- b. ??Jan is een student, Piet is een student en Klaas is helemaal een student.
 ??John is a student, Pete is a student, and Nick is completely a student
 'John is a student, Pete is a student, and especially Nick is a hero'

A noun such as *hero* is inherently gradable, but *student* is not. I believe this point to be obvious, and it is supported by examples such as

- (34) a. You are such a hero / jerk / moron / doll!
 b. ??You are such a student / prisoner / electrician.¹²

Of course, any predicate may be turned into something gradable, if we insist. So we might say that John is more of a student than Pete. Normally, *student* is a pretty precise property, that either applies or does not apply. However, when we consider borderline cases, such as part-time students, or students that do not study, or whatever else, a certain order might be imposed even here, and this is why sentences such as (33b), while unusual and odd, are not completely impossible.

6. The comparison set for superlative *helemaal*

The account given so far accounts for a number of properties of superlative *helemaal*. For example, we cannot top a sentence with superlative *helemaal* with another one:

- (35) #Jan is een held, en Piet is helemáál een held. Klaas is ook helemáál een held.
 John is a hero and Pete is completely a hero. Nick is also completely a hero
 'John is a hero and Pete is especially a hero. Nick is also especially a hero.'

¹² The borderline between gradable and nongradable uses of nouns is not always an easy one to draw. Often, nouns can be forced into a gradable reading, as in e.g. *You are such a woman!*, where not the (nongradable) gender is the center of attention, but the related, and gradable, notion of femininity. See Morzycki (2009) for a formal treatment of gradability among nouns.

In this respect, (35) differs from (36):

- (36) Jan is een held, en Piet en Klaas zijn helemáál helden.
 John is a hero, and Pete and Nick are completely heroes
 'John is a hero, and Pete and Nick are especially heroes'

To deal with cases such as (36), we need to generalize our semantics a bit. Instead of insisting on a single maximum element, we should allow for a set of elements:

- (37) Let X be a set partially ordered by \leq , as above, then we define a top set M as any subset of X , such that for any x in M and any y in $X-M$: $y \leq x$.

The *helemaal*-clause will now provide either a singleton or a larger set that functions as a top set in X . For (36) in particular, I assume (38):

- (38) $X = \{j,p,k\}$
 $M = \{p,k\}$
 $j \leq p$
 $j \leq k$

Whether p and k are ordered with respect to one another, is not determined by (36). I assume that as soon as the *helemaal*-clause has been processed, the set X is closed off. Hence a sentence like (35) is odd, because we cannot reopen the set and stick in the second *helemaal*-clause without contradicting ourselves. In this respect, superlative *helemaal* is just like regular superlatives. Sentences (35) and (36) may be compared to the sentences in (39a,b):

- (39) a. #Jones is a tall man but Smith is the tallest man. In fact, Wilson is also the tallest man.
 b. Jones is a tall man but Smith and Wilson are the tallest men.

The next question we must address is how the set X is computed. In (33) we have three contrastive topics which together form a three-membered set. The ranking comes from the predicate 'be a hero'. In other cases we have a set of focus phrases, likewise presented as a series of alternatives:

- (40) Ik houd van rijst, ik houd van aardappelen en ik houd helemáál van couscous.
 I love rice, I love potatoes and I love completely couscous
 'I love rice, I love potatoes and most of all I love couscous'

Notice in this connection that comparison of pairs does not appear to be supported by *helemaal*:

- (41) #Jan houdt van rijst, Piet houdt van aardappelen en Klaas houdt helemáál van couscous.
 John loves rice, Pete loves potatoes and Nick loves especially couscous
 'John loves rice, Pete loves potatoes and most of all Nick loves couscous.'

One might consider pairs of persons and dishes, and rank them according to the degree to which the person likes the dish. Such a reading, while not implausible, does not appear to be permitted. In this respect, there is a difference with English *even more*:

- (42) John loves rice, Pete loves potatoes and Nick loves couscous even more.

As long as we bear in mind that our partial order is one of individuals (or objects), and for plural cases, an ordering of sets, and does not involve the ranking of pairs, the oddness of (41) is accounted for.

Another observation we can account for is the difference between (43) and (44):

- (43) Jan is niet slim, maar Piet is helemáál dom.
 John is not smart, but Pete is completely stupid
 'John is not smart, but Pete is even dumber.'

- (44) #Jan is niet slim, maar hij is helemáál dom.
 John is not smart, but he is completely stupid
 'John is not smart, but he is even dumber'

Sentence (44) is odd when the pronoun *hij* refers back to Jan. The reason is obvious: Unlike (43), where we have a two-membered set, with Piet as the top member, (43) does not provide a comparison of Jan with anyone else. In this respect, *helemaal* differs from other discourse markers, such as *überhaupt*, a borrowing from German:

- (45) Jan is een goede schaker. Hij is überhaupt goed in spelletjes.
 Jan is a good chess-player. he is prt good at games
 'John is a good chess-player. He is in general good at games.'

Both *überhaupt* and *helemaal* are typical discourse strengtheners. In each case you start with a claim, only to follow it up with a stronger claim. The difference is, however, that *helemaal* explicitly requires a comparison of discourse alternatives, whereas *überhaupt* only requires you to make the stronger claim such that the earlier one follows from it.

7. Quantifiers and the comparison set

The comparison set X in the examples considered so far comes from some explicit listing in the discourse. However, in real life the comparison class is often provided by overt or by hidden quantification.

- (46) Lange –termijnplannen zijn voor iedereen moeilijk, en al helemaal voor pubertjes.
 Long –term plans are voor anyone difficult and prt completely for teenagers.
 'Long-term planning is difficult for anyone, especially for teenagers.'

Here, I assume that the quantifier *iedereen* provides a set, the set of all people in the domain of discussion, with a proper subset, the teenagers, at the top of a ranking based on difficulties with long-term-planning. In this case, the relevant set is the same as the restriction of the quantifier, which I take to be a salient set. In other cases, we may have to consider a subset of the restriction set:

- (47) Veel mensen houden van biefstuk, en Jan helemaal.
 Many people love steak and John especially
 'Many people love steak, especially John.'

Here we must assume that X is the set of people that love steak, of which Jan is ranked at the top. As was noted by [Hendriks and de Hoop \(2001\)](#), this type of situation, where we consider the intersection of the quantifier restriction with the set provided by the predicate, is rather common. They call it Forward Directionality:

- (48) *Forward Directionality*: The topic range induced by the domain of quantification of a determiner (set A) is reduced to the topic range induced by the intersection of the two argument sets of this determiner ($A \cap B$). ([Hendriks and de Hoop, 2001:19](#)).

You might object that we do not need Forward Directionality as an auxiliary hypothesis. If Jan is at the top of a ranking of steak-lovers, then he will also be at the top of the entire set of people, with regard to the property of loving steak, that is. However, at this point it is useful to recall an important property of superlative *helemaal*. Consider the difference between (49) and (50):

- (49) Hij is lang en zij is helemaal lang.
 He is tall and she is completely tall
 'He is tall and she is even taller'

- (50) #Hij is kort en zij is helemaal lang.
 He is short and she is completely tall
 'He is short and she is even taller'

The comparison set for *helemaal lang* clearly has to be the set of tall people, not the set of all people. The same must apply, then, for (47). The relevant set is the set of steak-lovers, not the larger set of all people, and so the assumption of Forward Directionality does seem to be a useful one.

When the quantifier is negative, the comparison is a complement set. Take a look at the examples in (51) and (52):

- (51) #Weinig mensen houden van geitenvlees, en Jan helemaal.
 Few people like goat-meat and John completely
 'Few people like goat-meat, especially John.'

- (52) Weinig mensen houden van geitenvlees, en Jan al helemaal niet.
 Few people like goat-meat and John prt completely not
 'Few people like goat-meat, least of all John.'

Rather than focusing on the set of people who like goat-meat, in other words, on the intersection of the set of people provided by the quantifiers restriction and the set of goat-meat-afficionado's provided by the predicate, we select the set of people who don't like goat-meat, and we order that set by the property of not liking goat-meat, which I take to yield the converse of the order imposed by the predicate *like goat-meat*. It does not seem possible to continue a negative clause with a positive one, as in (51).

The reader may have noticed a certain similarity with the so-called Comp-Set reference phenomenon studied by Sanford and Moxey (cf. Moxey and Sanford, 1987; Sanford et al., 1994). This phenomenon has to do with certain preferences in anaphoric reference. A sentence such as

- (53) Not all students went to the party.

can be continued as

- (54) They stayed in their rooms, instead, to study for the final exam.

Here the set referred to by *they* is not the set of students that went to the party, but rather the set of students that did not go. While this effect need not be absolute, it does appear from psychological experiments to be quite strong. For superlative *helemaal*, the effect is absolute, from what I can tell. A sentence such as (51) not only sounds odd, but it certainly cannot mean that Jan, of the few people that do love goat-meat, is the number one fan of this type of food.

This brings me to another point, the role of negation. Unlike many degree modifiers, superlative *helemaal* may scope over negation:

- (55) Jan houdt niet van honden, en Piet houdt helemaal niet van honden
 John loves not dogs and Pete loves totally not dogs
 'John does not love dogs, and Pete even less'

I should also note that superlative *helemaal*, quite unlike absolute *helemaal* in this regard, cannot be negated itself:

- (56) a. Afrika is groot en Azië is helemaal groot.
 Africa is large and Asia is completely large
 'Africa is large and Asia is even larger'
 b. *Afrika is groot maar België is niet helemaal groot.
 Africa is large but Belgium is not completely large
 c. *België is niet groot en Nederland is niet helemaal groot.
 Belgium is not large and the Netherlands are not completely large

Regardless of whether we have a positive antecedent, as in (56b), or a negative one, as in (56c), the result is degraded. This indicates that superlative *helemaal* is a positive polarity item. Examples like (57) are fine, but can be viewed as involving absolute *helemaal*, in spite of the word-final accent¹³:

- (57) Ik ben misschien wel een béétje dom, maar ik ben niet helemaal achterlijk.
 I am perhaps AFF a little stupid but I am not entirely retarded
 'I may be a bit stupid, but I am not a complete moron'

A well-known problem with quantifiers in natural language is that they are sometimes implicit. This problem shows up in many areas of semantics, and superlative *helemaal* is no exception. Here is an example adapted from an e-mail message I received from a student:

- (58) Taalkunde-artikelen kosten mij veel tijd, en helemaal als ze in het Engels zijn.
 Linguistics-articles cost me much time and completely when they in the English are
 'Linguistics articles take a lot of my time, especially when they are in English'

¹³ The accentuation *helemaal*, then, is not only found for superlative uses, but also occasionally for contrastive stress.

To get a reference set, we have to assume some implicit universal quantifier, such as *always*, that provides a set of circumstances, and the *helemaal*-clause is then interpreted as saying that within the set of circumstances quantified over, those in which the article is in English stand out as most time-consuming. Notice that we have to assume such a universal quantifier for other cases as well, such as exception phrases.¹⁴ Exception phrases modify universal quantifiers, but can also be used as in (59):

- (59) Taalkunde-artikelen zijn gemakkelijk, behalve als ze in het Engels zijn.
Linguistics articles are easy except when they in the English are
'Linguistics articles are easy, except when they are written in English'

8. Affinity with *al* and the origin of the superlative use

In this section, I will briefly discuss the affinity of superlative *helemaal* with the particle *al*:

- (60) Ik heb verder niet zoveel verstand van politiek en al helemaal niet van
I have further not so much understanding of politics and prt especially not of
buitenlandse politiek
foreign policy.
'Furthermore, I don't know much of politics, especially foreign policy.'

Most commonly, *al* is used as an aspectual particle, meaning *already*. However, there is another use with some adverbs of degree¹⁵:

- (61) Het moet al heel gek gaan, willen wij de titel nog mislopen.
It must prt very mad go, want we the title yet miss
'Things will have to go very oddly indeed, if we are not the win the title at this point'

Presumably the use of *al* in (60) is related to this. I take it to be an optional addition to *helemaal* without a special meaning contribution of its own. What is interesting for us is that this particle helps to distinguish superlative *helemaal* from absolute *helemaal*:

- (62) a. Geen van ons houdt van tuinieren, en jij al helemaal niet.
None of us likes gardening and you prt completely not
'None of us likes gardening, especially you.'
b. Ik kan niet komen, want ik heb (#al) helemaal geen tijd.
I can not come for I have prt absolutely no time
'I can't come, for I have absolutely no time.'

Sentence (62b) is out, unless we place it in a context where some others, mentioned before by the speaker, also do not have time, in which case we may turn it into superlative *helemaal*.

Using the string "al helemaal" to search in Google Books, I managed to find some occurrences of superlative *helemaal* in books from the 1930 and 1940s.¹⁶ It seems likely that this marks the beginning of this use, as I have been unable to find any clear cases of earlier occurrences, either by searching through Google Books, or by going through the occurrences of *helemaal* that I collected myself from a variety of sources. One of the oldest occurrences I have been able to find so far, ironically comes from a linguistics text (van Haeringen, 1947):

¹⁴ And if we assume the theory of Lewis (1975), also for conditionals.

¹⁵ For an excellent overview of the uses of *al* and the related particles *nog* 'still' and *pas* 'only', see Vandeweghe, 1983. Vandeweghe discusses a number of situations in which *al* is used as a nontemporal scalar particle. One of his examples is:

- (i) De geringste opwindning kan al fataal zijn.
The slightest excitement can prt fatal be
'Even the slightest excitement can be fatal'

Both in (i) and (62) in the main text, *al* is marking a scalar endpoint.

¹⁶ The so-called snippets view of Google books does not always provide enough context to be able to ascertain with confidence whether an occurrence of *helemaal* is of the superlative type. Note that not all occurrences of *al helemaal* involve superlative *helemaal*, so the hits must be inspected individually.

- (63) En een hoogleraar komt door zijn “standing” al helemaal niet meer voor het
 And a professor comes by his standing prt totally not more for the
 s-meervoud in aanmerking.
 s-plural in consideration
 ‘And a professor qualifies least of all for the s-plural, due to his “standing”.’

The context here is a comparison of the two plural morphemes of Dutch, *-en* and *-s*. The *en*-plural is more formal, and in some cases where both *-en* and *-s* would be morphologically acceptable, sociolinguistic factors come into play as well. For *leraar* ‘teacher’, given the status of this profession, the ending *-en* would be more appropriate, and for *hoogleraar* ‘professor’ (literally: ‘high-teacher’) this ending would be even more appropriate.

Many occurrences of *helemaal* are similar to the example in (63) in that they involve negation. As we saw in Table 2, absolute *helemaal* is especially common as a strengthener of negation, and precisely in contexts such as (55) or (63), the interpretations of superlative and absolute *helemaal* boil down to much the same thing. Presumably in such an environment the reanalysis of absolute *helemaal* to superlative *helemáál* took place. Nothing is mentioned in the literature about the history of superlative *helemaal*. The WNT, the main Dutch scientific dictionary, does not even mention this use, although it is not terribly recent.

9. Conclusions

In conclusion: the Dutch adverb of degree *helemaal*, itself derived from a mereological floating quantifier, has developed a special use in which it indicates the highest element of an ordered set of alternatives. This use is discourse sensitive, and may require a fair amount of interpretation from the hearer. Given the strong association of absolute and superlative *helemaal* with negative contexts, and the fact that the two uses are almost indistinguishable in such contexts, the hypothesis was ventured that superlative *helemaal* first emerged in such contexts, and then generalized to positive contexts as well. In a diagram, we can depict the historical development as follows (Fig. 1).

What remains for further research is a broader study of scalar adverbs like *helemaal* in a variety of languages, to see what their typology is like. For scalar focus adverbs such as *even*, there is now a fair amount of comparative work (cf. Gast and van der Auwera, 2011). In the case of Dutch, I know of at least one item, *zeker*, with a use that resembles that of superlative *helemaal* (cf. Van der Wouden, 2000). Compare:

- (64) a. Schaken is een populair spel, helemáál in Rusland.
 Chess is a popular game, wholly in Russia
 ‘Chess is a popular game, especially in Russia’
 b. Schaken is een populair spel, zeker in Rusland.
 Chess is a popular game, certainly in Russia
 ‘Chess is a popular game, especially in Russia’

Such items are of equal interest to linguists working in the field of pragmatics and discourse, and historical linguists interested in the grammaticalization of scalarity.

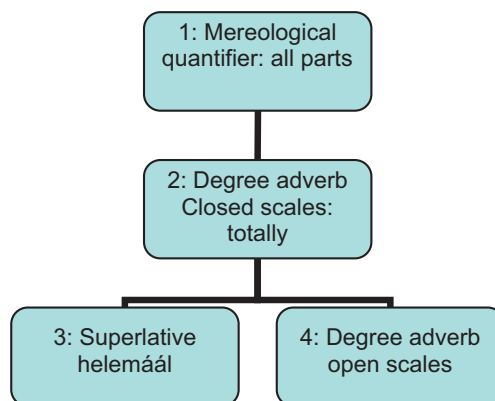


Fig. 1. Four uses of *helemaal*.

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