

# *(The) most* in Flemish Dutch: Definiteness and Specificity

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## 1 Introduction

### 1.1 Data

The Dutch grammatical gender system has three classes: feminine, masculine and neuter. There are two definite determiners: *de* and *het*. The former appears in combination with plural nouns and singular feminine/masculine nouns. The latter only occurs with singular neuter nouns. Both *de* and *het* appear with mass nouns (table 1).

	feminine	masculine	neuter
singular	de	de	het
mass	de	de	het
plural	de	de	de

Table 1: The distribution of definite articles in Dutch

Consider the following sentences with *de meeste* ‘(the) most’ (1) and *het meeste* ‘the most’ (2):

- (1) Jan heeft **de** (meeste) bergen beklommen.  
John has the<sub>pl.masc.</sub> most mountains<sub>pl.masc.</sub> climbed  
‘John climbed (the) most mountains.’  
a. ‘John climbed more than half of the mountains.’ (proportional)  
b. ‘John climbed more mountains than anyone else did.’ (comparative)
- (2) Jan heeft **het** \*(meeste) bergen beklommen.  
John has the<sub>sing.neut.</sub> most mountains<sub>pl.masc.</sub> climbed  
‘John climbed the most mountains.’  
a. - (proportional)  
b. ‘John climbed more mountains than anyone else did.’ (comparative)

## 1.2 Research questions and claims

Research questions:

1. What is the position of *het meeste*?
2. Why can the sentence containing *het meeste* only have a comparative reading in Flemish Dutch?
3. Why can *het meeste* appear with plural nouns?

Claims:

1. *Het meeste* is located inside the DP.
2. The different readings are linked to definiteness and specificity.
3. There are different structures underlying *de/het meeste*.

## 1.3 Outline

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## 2 The position of *het meeste*

Research questions:

1. What is the position of *het meeste*?
2. Why can the sentence containing *het meeste* only have a comparative reading in Flemish Dutch?
3. Why can *het meeste* appear with plural nouns?

There are two possibilities:

1. It is an adverb, modifying the VP
2. *Het meeste bergen* is a constituent and *het meeste* is DP-internal.

I will argue for the second option and I will use five constituency tests to make my point.

### 2.1 Topicalization

Only a constituent can be relocated to the beginning of the sentence.

- (3) Het meeste bergen heeft Jan beklommen.  
the most mountains has John climbed  
'It is John who climbed the most mountains.'

Example (3) is acceptable in Flemish Dutch (Belgium).

### 2.2 Coordination

Only constituents of the same type can be coordinated.

- (4) Jan heeft drie heuvels en het meeste bergen beklommen.  
John has three hills and the most mountains climbed.  
'John climbed three hills and the most mountains.'

Example (4) is grammatical in Flemish Dutch.

### 2.3 Fragment answers

Only a constituent can answer a question, preserving the meaning of the original sentence:

- (5) Heeft Jan het meeste heuvels beklommen? - Nee, het meeste bergen.  
has John the most hills climbed? - no, the most mountains  
'Did John climb the most hills? - No, the most mountains.'

Example (5) is grammatical in Flemish Dutch.

### 2.4 Clefting

Only a constituent can appear in a cleft sentence.

- (6) Het meeste bergen is wat Jan beklommen heeft.  
the most mountains is what John climbed has  
'The most mountains is what John climbed.'

Example (6) is grammatical in Flemish Dutch.

## 2.5 Pronoun substitution

Constituents can be replaced by a pronoun:

- (7) \*Marie heeft het meeste bergen gezien. Jan heeft ze beklommen.  
Mary has the most mountains seen. John has them climbed.  
'Mary saw the most mountains. John climbed them.'

The sentence is ungrammatical in Flemish Dutch, maybe because pronouns can't refer to degrees?

## 2.6 Language variation

*Het meeste bergen* is a constituent for speakers of Flemish Dutch, but this is not so for speakers from the Netherlands. For them, *het meeste* is always an adverb modifying the VP:

- (8) Het meest(e) heeft Jan bergen beklommen.  
the most has John mountains climbed  
'Mostly, John climbed mountains.'

Example (8) can only mean that John climbed mountains more than he climbed ladders or buildings. This reading is also available in Flemish Dutch, with the same meaning.

## 2.7 Conclusion

What is the position of *het meeste*?

- Flemish Dutch has two possible configurations *het meeste* can appear in: as an adverb modifying the VP or inside the DP. It only has the comparative reading in the latter case.
- In Northern Dutch, *het meeste* is always an adverb modifying the VP. It does not have the comparative reading.

In what follows, I will concentrate on Flemish Dutch, and in particular on the cases where *het meeste bergen* is a constituent that yields the comparative reading.

## 3 The different readings

1. What is the position of *het meeste*?
2. **Why can the sentence containing *het meeste* only have a comparative reading in Flemish Dutch?**
3. Why can *het meeste* appear with plural nouns?

I claim that the different readings of *de meeste* and *het meeste* are linked to definiteness and specificity. *Het meeste* always yields comparative readings because it is non-specific indefinite.

### 3.1 Background

The different readings originate from research into superlatives Szabolcsi [1986] and Heim [1999]. Superlatives can have:

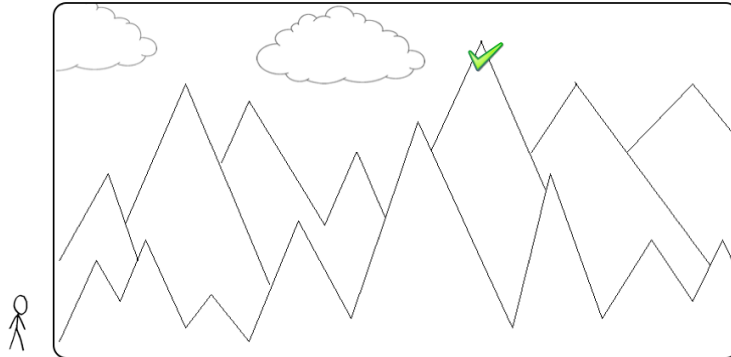
1. absolute readings
2. relative readings.

Hackl [2009] analyzes *most* as the superlative form of *many*. It has the same readings as other superlatives.

3. proportional readings
4. comparative readings.

**1. Absolute reading** In the absolute reading (9), John climbed a mountain that is higher than any other mountain.

(9) a.

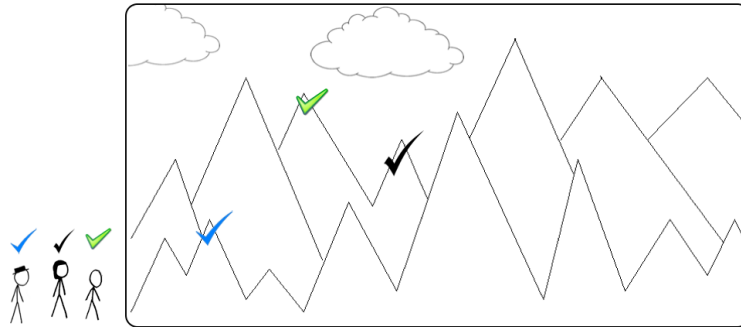


John climbed **the highest mountain** .

b.  $\llbracket [-\text{est } C]_i [d_i\text{-high mountain}] \rrbracket = \lambda x. \forall y \in C [y \neq x \rightarrow \max \{d: x \text{ is a } d\text{-high mountain}\} > \max \{d: y \text{ is a } d\text{-high mountain}\}]$

**2. Relative reading** In the comparative reading (10), John climbed a higher mountain than Bill or Mary did.

(10) a.

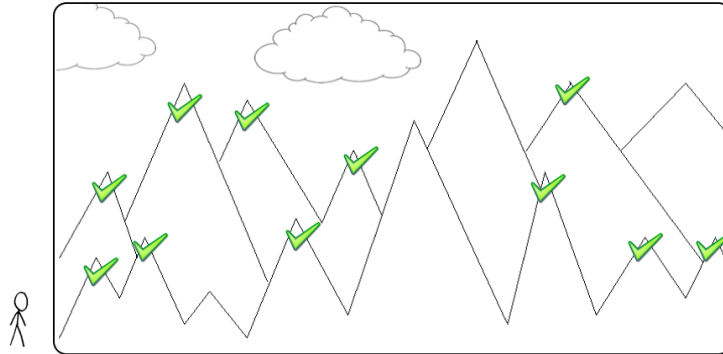


John climbed **the highest mountain**.

b.  $\llbracket [-\text{est } C]_i \text{climbed } [d_i\text{-high mountain}] \rrbracket = \lambda x. \forall y \in C [y \neq x \rightarrow \max \{d: x \text{ climbed a } d\text{-high mountain}\} > \max \{d: y \text{ climbed a } d\text{-high mountain}\}]$

**3. Proportional reading of *most*** In the proportional reading (10), John climbed more mountains than he didn't climb. Or: he climbed more than half of the mountains.

(11) a.



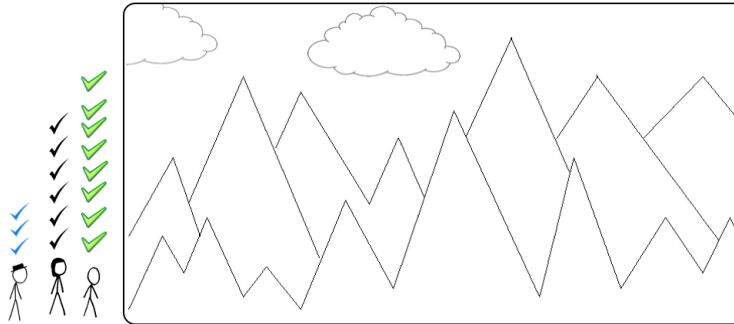
John climbed **most mountains**.

$$\text{b. } \llbracket [-\text{est } C]_i [d_i\text{-many mountains}] \rrbracket = \lambda x. \forall y \in C [y \neq x \rightarrow \max \{d:\text{mountains}(x)=1 \ \& \ |x| \geq d\} > \max \{d:\text{mountains}(y)=1 \ \& \ |y| \geq d\}]$$

The analysis in (11b) is identical to the absolute reading (9b), but it quantifies over pluralities of mountains.

**4. Comparative reading of *most*** In the comparative reading (12), John climbed more mountains than Mary or Bill did.

(12) a.



John climbed **the most mountains**.

$$\text{b. } \llbracket [-\text{est } C]_i [\text{climbed } [\emptyset \ d_i\text{-many mountains}] ] \rrbracket = \lambda x. \forall y \in C [y \neq x \rightarrow \max \{d:\exists z [\text{mountains}(z) = 1 \ \& \ |z| \geq d \ \& \ x \text{ climbed } z]\} > \max \{d:\exists z [\text{mountains}(z) = 1 \ \& \ |z| \geq d \ \& \ y \text{ climbed } z]\}]$$

### 3.2 Definiteness

I claim that definiteness and specificity are linked to the different readings of *de/het meeste* in Flemish Dutch. I will use two definiteness tests: existential *there* and DP-internal focus.

#### Existential *there*

- The definiteness effect context is a classic diagnostic for indefiniteness ([Milsark, 1974, Szabolcsi, 1986]).
- Sentences that start with *there is/are* may contain indefinites (13a), bare plurals (13b) and bare mass nouns (13c-13d) in the position immediately following the copular verb.
- Definite DPs are infelicitous in this position (14).

- (13) a. Er is een berg in Canada.  
there is a mountain in Canada  
b. Er zijn bergen in Canada.  
there are mountains in Canada  
c. Er is chocolade in België.  
there is chocolate in Belgium  
d. Er is geld in België.  
there is money in Belgium
- (14) a. \*Er is de berg in Canada.  
there is the mountain in Canada  
b. \*Er zijn de bergen in Canada.  
there are the mountains in Canada  
c. \*Er is de chocolade in België.  
there is the chocolate in Belgium  
d. \*Er is het geld in België.  
there is the money in Belgium

Let's put *de meeste* and *het meeste* in this context:

- (15) a. Er zijn het meeste bergen in Canada.  
there are the most mountains in Canada  
b. Er is het meeste chocolade in België.  
there is the most chocolate in Belgium  
c. Er is het meeste geld in België.  
there is the most money in Belgium
- (16) a. \*Er zijn de meeste bergen in Canada.  
there are the most mountains in Canada  
b. \*Er is de meeste chocolade in België.  
there is the most chocolate in Belgium

Milsark [1974] makes an additional distinction between determiners based on this test:

- Determiners that are acceptable in sentences with existential *there* fall in the group with a cardinality reading (*a, three, ten* etc.).
- Determiners that are ungrammatical have quantificational readings (*the, each, every, most* etc.).
- Following this line of reasoning, *het meeste* yields cardinality readings, while *de meeste* only produces quantificational readings.

→ *De meeste bergen* is definite, *het meeste bergen* is indefinite.

### DP-internal focus

- In the previous examples, the comparison class was determined by the subject: John is compared to other climbers.
- In Slavic languages, however, the comparison class can also be provided by a focused PP inside the DP containing *most*, but only if this DP is indefinite ([Pancheva and Tomaszewicz, 2012]).
- In Macedonian and Bulgarian, the DP can also be headed by a definite determiner, but DP-internal focus is not available then. This makes DP-internal focus an excellent diagnostic for definiteness.

The DP-internal reading is available for *het meeste bergen*:

- (17) ...dat Jan het meeste platen van Zappa beluisterd heeft.  
...that John the most records of/by Zappa listened has  
'...that John listened to the most records of/by Zappa.'  
a. John listened to more records of/by Zappa than anybody else did. (comparative - focus on *Jan*)  
b. John listened to more records of/by Zappa than he listened to records of/by any other band.  
(comparative - focus on *Zappa*)

When *het meeste* is replaced with *de meeste*, the sentence can only have a proportional reading (18a) or a comparative reading with the comparison class determined by the subject (18b). The DP-internal comparative reading is not available.

- (18) ...dat Jan de meeste platen van Zappa beluisterd heeft.  
...that John the most records of/by Zappa listened has  
'...that John listened to (the) most records of/by Zappa.'  
a. John listened to more than half of the records of/by Zappa. (proportional)  
b. John listened to more records of/by Zappa than anybody else did. (comparative - subject)

Sentences containing *het meeste* and a neuter mass noun can have all the readings associated with both definite and indefinite DPs (19).

- (19) ...dat Jan het meeste geld uit zijn portefeuille verloren heeft.  
...that John the most money from his wallet lost has  
'...that John lost (the) most money from his wallet'  
a. John lost more than half of the money from his wallet. (proportional)  
b. John lost more money from his wallet than anybody else did. (comparative - focus on *Jan*)  
c. John lost more money from his wallet than from his account.  
(comparative - focus on *portefeuille*)

→ *De meeste bergen* is definite, *het meeste bergen* is indefinite. *Het meeste geld* is ambiguous between the two.

### 3.3 Specificity

The definiteness tests offers interesting insights into the characteristics of *de meeste* and *het meeste*. Specificity indicates when the comparative reading is available.

#### Definition

- The concept of specificity has a long history and covers a wide range of data.
- von Heusinger [2011] distinguishes between referential, scopal and epistemic specificity, specificity associated with familiarity and topicality, and specificity as noteworthiness and as discourse.
- I will limit myself to one type, namely epistemic specificity, where a specific indefinite NP refers to a particular referent, the referent "the speaker has in mind" (von Heusinger [2011]).

#### Specificity in Dutch

- Scrambling is an excellent test for specificity in Dutch (de Hoop [1996], Broekhuis et al. [2012]).
  - Example (20a) shows the effect of scrambling with (non-)specific *iets* 'something' and non-specific *wat* 'something'.
- (20) a. ...dat Jan gisteren iets/wat gekregen heeft.  
...that John yesterday something gotten has  
'...that John got something yesterday.'



- b. ...dat Jan iets/\*wat gisteren t gekregen heeft.  
↑  
 ...that John something yesterday t gotten has.  
 ‘...that John got something yesterday.’

- Specific *iets* can appear both in the base-generated and in the scrambled position, while non-specific *wat* can only appear in the former.
- We see the same effect with NPs in example (21a), where *een auto* ‘a car’ is infelicitous when the DP is scrambled (Broekhuis et al. [2012]).

- (21) a. ...dat Jan gisteren de/een auto gekregen heeft.  
 ...that John yesterday the/a car gotten has  
 ‘...that John got the/a car yesterday.’  
 b. ...dat Jan [de/\*een auto] gisteren t gekregen heeft.  
↑  
 ...that John the/a car yesterday t gotten has  
 ‘...that John got the/a car yesterday.’

There are some cases where one could argue for specific readings for definites, i.e. in the cases of titles (doctor, dean...):

- (22) a. Jan heeft gisteren de dokter gezien.  
 John has yesterday the doctor seen  
 ‘John saw the doctor yesterday.’ (could be any doctor)  
 b. Jan heeft [de dokter] gisteren t gezien.  
↑  
 John has the doctor yesterday t seen  
 ‘John saw the doctor yesterday.’ (a specific doctor)

However, it is unclear whether this pertains to all the definites.

### *De/het meeste and specificity*

- When a DP containing *de meeste* is scrambled, only the proportional reading remains (23b).

- (23) a. ...dat Jan gisteren de meeste bergen beklommen heeft.  
 ...that John yesterday the most mountains climbed has  
 ‘...that John climbed (the) most mountains yesterday.’ (proportional/comparative)  
 b. ...dat Jan [de meeste bergen] gisteren t beklommen heeft.  
↑  
 ...that John the most mountains yesterday t climbed has.  
 ‘...that John climbed most mountains yesterday.’ (proportional)

- Sentences containing *het meeste bergen* can only have a comparative reading. When the DP is scrambled, the sentence becomes infelicitous (24b).

- (24) a. ...dat Jan gisteren het meeste bergen beklommen heeft.  
 ...that John yesterday the most mountains climbed has  
 ‘...that John climbed the most mountains yesterday.’ (comparative)  
 b. \*...dat Jan [het meeste bergen] gisteren t beklommen heeft.  
↑  
 ...that John the most mountains yesterday t climbed has

- Sentences containing *het meeste* in combination with a mass noun, such as *geld* have a comparative and a proportional reading in base-generated position (25a), but only a proportional reading when scrambled (25b).

- (25) a. ...dat Jan gisteren het meeste geld verloren heeft.  
...that John yesterday the most money lost has  
‘...that John lost (the) most money yesterday.’ (proportional/comparative)
- b. ...dat Jan [het meeste geld] gisteren t verloren heeft.  
...that John the most money yesterday t lost has  
...that John lost most of the money yesterday. (proportional)

→ *Het meeste* + plural nouns

- is non-specific indefinite
- can only have comparative readings.

→ *Het meeste* + neuter mass noun and *de meeste* + plural nouns

- are definite
- are ambiguous between comparative and proportional readings.

?→ Comparative readings are non-specific.

## 4 *Het meeste* and plural nouns

Research questions:

1. What is the position of *het meeste*?
2. Why can a sentence with *het meeste bergen* only have a comparative reading in Flemish Dutch?
3. **Why can *het meeste* appear with plural nouns in Flemish Dutch?**

I will present two possible analyses:

1. An account that follows Szabolcsi [1986], Heim [1999] and Hackl [2009].
2. Further observations and hypotheses.

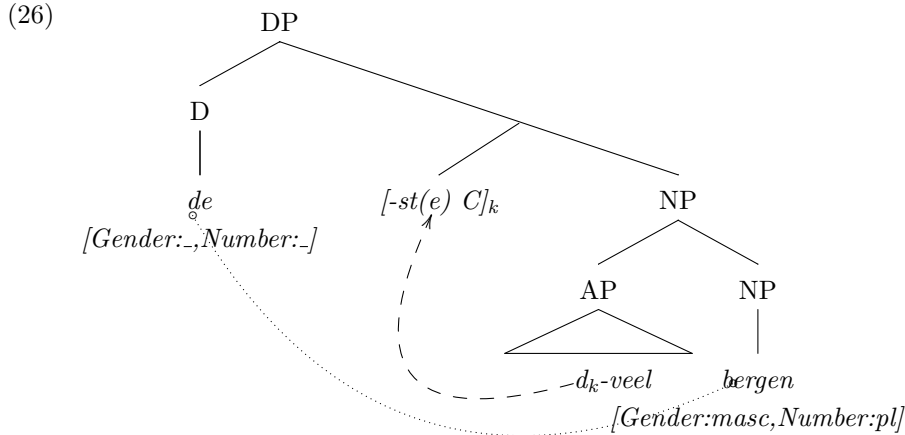
### 4.1 Movement analysis

According to Hackl [2009], *most* is the superlative form of *many*. He follows the analysis for superlatives in Heim [1999]) and assumes that the superlative morpheme *-est* is a degree quantifier restricted by a comparison class C. The status of the definite determiner is unclear:

“Szabolcsi (1986) argued that DPs like *the highest mountain* are ambiguous between a definite and an indefinite construal. Let us implement this idea by assuming that the *the* which appears on the surface is semantically vacuous, whereas the determiner that is actually interpreted is a superficially unrealized instance of either the definite or the indefinite article.” Heim [1999, page 11]

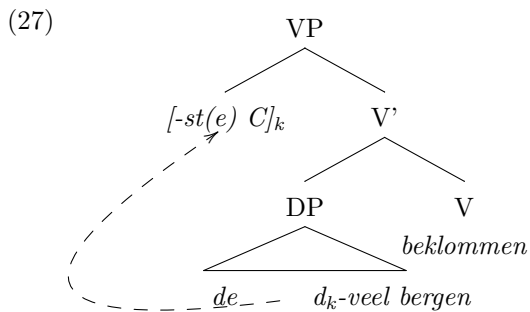
#### 4.1.1 *De meeste bergen*

The structure for *de meeste bergen* following Hackl's account is represented in (26). I assume that *de meeste* is the superlative form of *veel* 'many'. *Het meeste geld* has the same structure, since the determiner agrees with the noun.



- The definite determiner *de* and the noun *bergen* agree in gender and number. This explains why *de meeste bergen* is definite.
- The definite DP acts as an island and prevents extraction of the superlative morpheme at LF.
- This is the proportional reading, where the superlative morpheme only has scope over the NP.

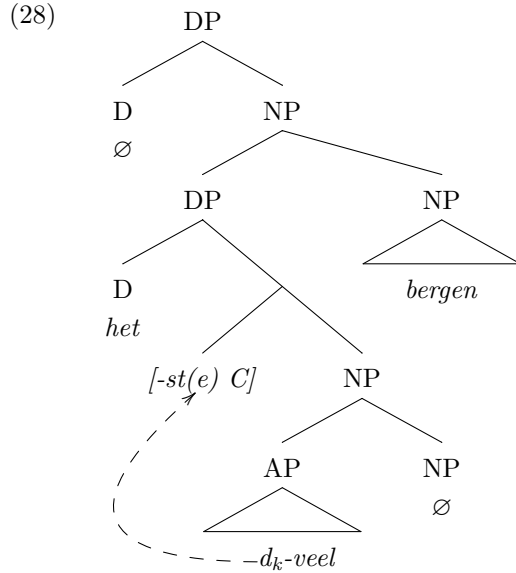
The tree for the comparative reading of *de meeste bergen* is represented in (27):



- The definite determiner *the* is now indefinite.
- This allows the superlative morpheme to move out and adjoin to [SPEC,VP].
- This is the expected comparative reading.

#### 4.1.2 *Het meeste bergen*

A possible structure for *het meeste bergen* is represented in (28):



- The null head determiner accounts for the indefiniteness of *het meeste*.
- I follow Matushansky [2008] and assume that superlative phrases without an overt noun modify a null head noun.
- The superlative morpheme  $[-st(e) C]$  moves up inside the DP, but it can only have scope over the null head noun and not over *bergen*.
- The superlative morpheme could also move to the higher DP, but then it is no longer dominated by a definite determiner.
- The proportional reading is thus blocked and the only option left for  $[-st(e) C]$  is to move out to [SPEC, VP], which produces the comparative meaning.
- This explains why *het meeste bergen* can only have comparative interpretations in Flemish Dutch.

### Issues

- The definite determiner is sometimes definite and sometimes indefinite. This is problematic, given the fact that *de meeste bergen* appears to be definite.
- The status of the null NP in (28) remains unclear. Shouldn't there be agreement between the null NP and the determiner?
- There is no account for the non-specific status of *het meeste bergen*.

## 4.2 Further research

- Observation 1: *veel* also has two readings that are influenced by scrambling the DP (29). In English, the ambiguity of *many* between a cardinal and a proportional reading has already been noted by Partee [1989].

- (29) a. Jan heeft gisteren veel bergen beklommen.  
 John has yesterday many mountains climbed  
 'John climbed a lot of mountains yesterday.' (cardinal)
- b. Jan heeft [veel bergen] gisteren t beklommen.  
 John has many mountains yesterday t climbed  
 'John climbed many of the mountains yesterday.' (proportional)

- Observation 2: the cardinal reading is the only one available in sentences with existential *there*:

(30) Er zijn veel bergen in Canada.  
 there are many mountains in Canada  
 ‘There are a lot of mountains in Canada.’ (cardinal)

? → *Veel bergen* as a non-specific indefinite yields the cardinal reading. Is it possible that *het meeste* is derived from cardinal *veel*?

- Observation 3: Dutch also has a cardinal reading inside a definite DP:

(31) Jan heeft [de vele bergen] beklommen.  
 John has the many mountains climbed  
 ‘John climbed the many mountains.’

? → Is it possible that comparative *de meeste bergen* is derived from this structure?

Problem: *de vele bergen* can be scrambled, while this is impossible for the comparative reading of *de meeste bergen*:

(32) Jan heeft [de vele bergen] gisteren t beklommen.  
↑  
 John has the many mountains yesterday t climbed  
 ‘John climbed the many mountains yesterday.’

- Observation 4: like English, Dutch has a partitive construction that can only yield a proportional reading:

(33) Jan heeft de meeste van de bergen beklommen.  
 John has the most of the mountains climbed  
 ‘John climbed most of the mountains.’

? → Is it possible that proportional *de meeste bergen* is in fact a partitive construction?

## 5 Conclusion

1. The analysis of *de/het meeste* as superlatives is a promising path.
2. Definiteness and specificity offer valuable insights into the distribution and possible readings of *de/het meeste*.
3. *De/het meeste*, *veel* and *weinig* can offer interesting insights into the nature of specificity. They can be good test cases for hypotheses about specificity in the grammar.

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