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Quantity Superlatives in Germanic, or, ‘Life on the fault line between adjective and determiner’

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1 Introduction

This paper concerns the words *many*, *much*, *few*, and *little*, and their comparative and superlative forms:

- (1) a. *many - more - most*
- b. *much - more - most*
- c. *few - fewer - fewest*
- d. *little - less - least*

as well as their equivalents in other Germanic languages, including Scandinavian languages. The main focus will be on the interpretation of the superlative forms of quantity words (henceforth *quantity superlatives*). Besides their basic morphological structure, quantity superlatives share a number of properties with quality superlatives such as *tallest*, but there are also some important differences. In general, quantity superlatives are more variable across languages in their morphosyntax and interpretation.

For a dramatic example of the kind of variability in question, observe that definiteness has opposite effects on the interpretation of quantity superlatives in Swedish and English (Teleman, 1969; Teleman et al., 1999; Coppock & Josefson, 2015). What English marks as definite, Swedish leaves bare, and *vice versa*. Compare the Swedish examples to their translations into English in the following examples:

- (2) Socialdemokraterna fick **flest** **röster**. [Swedish]
The Social Democrats got many.SPRL votes.
‘The Social Democrats got **the most votes**.’
- (3) **De flesta** **människor**(na) gillar choklad. [Swedish]
the.PL many.SPRL.WK person.PL(.DEF) like chocolate
‘**Most people** like chocolate’

In the terminology of Hackl (2000), the example in (2) has a *relative* reading and the one in (3) has a *proportional* reading. German and Dutch exhibit yet a third pattern, with definite-marked quantity superlatives used for both a proportional and a relative reading (Hackl, 2009; Roelandt, 2016a,b). The fourth cell in the paradigm – no definiteness marking for either relative or proportional – is filled by Övdalian (Kastrup, 2016; Coppock & Kastrup, 2016) and, as this paper will show, Icelandic. This paper will demonstrate, though a thorough side-by-side comparison of English, German, Swedish, Norwegian, Danish, Dalecarlian, Icelandic, and Faroese, that every possible relationship between definiteness and interpretation is attested. The majority of the data is based on a questionnaire

asking participants to translate a short story involving 17 sentences into their native language; the list of sentences is given in the appendix.

This situation poses an analytical challenge for those of us who, in the spirit of Hackl (2000, 2009), would seek to build up the semantics of these expressions from the semantics of their parts (quantity words, superlative morphology, and definiteness). How can the same atomic units combine to produce such radically different results from one language to another?

An important first step towards understanding this variability is to recognize the opposing forces that these words are torn between. Consider where information about the declension and use of quantity words is found: Invariably, it is distributed across two parts of a descriptive grammar: the part on adjectives, which covers the comparative and superlative grades, and the part on what descriptive grammars often label ‘pronouns’, including determiners. They have the morphological structure of adjectives insofar as they have comparative and superlative forms, but many syntactic and semantic properties of quantifiers. As Solt (2015) discusses, quantity words like *much* and *little* have a distribution that partially overlaps with quantifiers (as in *many students attended the lecture*), partially overlaps with adjectives (as in *they are few* and *the many students*), and partially diverges from both classes (as in *many/few more than 100*). This unstable identity is also reflected in the diversity of analyses that have been given: quantificational, adjectival, and degree-modificational; see Solt 2015 for a recent overview. According to Sapp & Roehrs (2016), German *viel* ‘many’ has undergone a syntactic reanalysis over the course of its development. And in Dutch, inflected *vele* and uninflected *veel* are thought to occupy different syntactic positions (Kester 1996, 107, Broekhuis 2013, 283 Ruys 2014). So such words lie on a fault line between the realm of the adjective and the realm of the quantifier, a rather unstable plot of grammatical real estate.

A detailed look at the data reveals range of cracks on the surface as it were, in the form of agreement mismatches and partitive structures. These are found both with relative readings and with proportional readings, but different kinds of agreement mismatches in each case. One consistent pattern is that a quantity superlative with adverbial morphology and neuter singular agreement features is used with relative superlatives. On the other hand, whenever definiteness-marking appears on a quantity superlative with a proportional reading, it shows plural number marking, if it shows number marking. This suggests that the definiteness-marking in the case of relative readings is driven by a different force than the definiteness-marking in proportional readings. I conclude that quantity superlatives are not structurally analogous to quality superlatives on either relative or proportional readings, but they depart from a plain attributive structure in different ways. On relative readings they can be akin to pseudopartitives (as in *a cup of tea*), while proportional readings are more closely related to partitives (as in *a piece of the cake*). More specifically, I suggest that the agreement features of a superlative exhibits depend on the domain from which the target is drawn (the *target-domain hypothesis*). When the target is a degree, as it is with adverbial superlatives and certain relative superlatives, default neuter singular emerges. Definiteness there is driven by the same process that drives definiteness with adverbial superlatives. With proportional readings, the target argument of the superlative is a subpart or subset of the domain indicated by the substance noun, hence number agreement. Subtle aspects of how the comparison class and the superlative marker are construed determine definiteness for proportional readings.

2 The puzzle

This section will show that all four logically possible correlations between definiteness-marking and interpretation are attested for quantity superlatives among the Germanic languages. We will discuss these four patterns in turn, taking the opportunity to introduce the relevant distinctions and some

of the diagnostics that can be used to get at them as we go.

2.1 English

2.1.1 Quality superlatives

Let us begin with the superlatives of ordinary gradable adjectives like *tallest*, which have been argued to be ambiguous between two readings, called *absolute* and *relative*. As far as I know, this contrast was first discussed by Szabolcsi (1986), who observed that superlatives were capable of obviating certain constraints on definites. For example, definite-marked superlative noun phrases do not constitute barriers to extraction, can function as the argument to relational *have*, and can serve as the pivot of an existential construction.¹

- (4) a. Who did you take **a picture** of?
b. *Who did you take **the picture** of?
c. Who did you take **the best picture** of?
- (5) a. John has **a sister**.
b. *John has **the sister**.
c. *John* has **the smartest sister**.
- (6) a. *There was **the box of chocolate** on the table yesterday.
b. There was **the largest box of chocolate** on the table *yesterday*.

Apparently, certain definite noun phrases containing superlatives can behave as indefinites.

Szabolcsi (1986) also pointed out that these indefinite-like superlative noun phrases exhibit focus-sensitivity. For instance, her example (7) has two different interpretations, depending on where focal emphasis lies:

- (7) John showed **the highest mountain** to Bill.

With focus on *Bill*, it has an interpretation where John showed a higher mountain to Bill than to any other relevant alternative; with focus on *John*, it has an interpretation where John showed a higher mountain to Bill than anybody else did.

In light of the apparent semantic indefiniteness of these nominals, it is sometimes assumed that the definite article does not contribute anything to the meaning in these cases, and is replaced by an indefinite article at LF. The conditions under which this process takes place are not spelled out, but even if they were, such a theory would be difficult to reconcile with the fact that the definite article cannot be exchanged with an overt indefinite article without loss of acceptability and change in meaning:

- (8) Gloria climbed $\left\{ \begin{array}{l} \mathbf{the} \\ \#a \end{array} \right\}$ highest mountain.

Coppock & Beaver (2014) argue that the apparent indefiniteness of these superlative nominals means that they are *indeterminate*, but not necessarily semantically *indefinite*. If definiteness marks a uniqueness presupposition, but not a presupposition of existence, as they argue in Coppock & Beaver 2015, then it is possible for a nominal to be semantically definite without referring to an individual and thus presupposing existence. Such a view allows us to maintain that the definite article is

¹Example (6-b) has two readings: a *relative reading*, on which there was a larger box of chocolate on the table yesterday than any other day, and an *elative reading* (confusingly also called *absolute* in some traditions), meaning ‘extremely large box of chocolate’.

meaningful in these superlative nominals, despite the appearance of indefinite-like behavior. I will therefore characterize the above evidence as evidence of indeterminacy, rather than indefiniteness.

It has also been observed that an overt comparison class can eliminate the focus-sensitivity of superlatives.

(9) Gloria climbed **the highest mountain in Kenya** yesterday.

Even if *Gloria* or *yesterday* is emphasized, it is hard to interpret this sentence as meaning anything other than that Gloria climbed that mountain in Kenya that is higher than all other mountains in Kenya. The insertion of this kind of overt comparison class simultaneously renders the noun phrase ‘determinate’, in Coppock & Beaver’s (2015) terminology, i.e., a well-behaved definite.

(10) ??Who did you take **the best picture in the album** of?

(11) ??John has **the smartest sister living in Amsterdam**.

(12) ??There was the largest box of chocolate in the store on the table yesterday.

Following Heim (1999), we call the determinate, non-focus-sensitive reading an *absolute reading*, and the indeterminate, focus-sensitive reading a *relative reading*.²

As Heim (1985) discusses, a related way to disambiguate in favor of a relative reading is with an overt *of*-phrase corresponding to the focal element of the sentence. For example:

(13) **Of her friends**, Gloria climbed **the highest mountain**.

Using this tool, Coppock & Beaver (2014) give additional evidence for the indeterminacy of superlative nominals under a relative reading. They do not license anaphora or non-restrictive readings of relative clauses:

(14) #Perhaps Gloria climbed **the highest mountain out of all of her friends**. **It** is covered in snow.

(15) #You win if **out of all the players**, you lift **the heaviest weight**, **which** is this one.

And with an *of*-phrase of this kind, the superlative phrase is consistent with the absence of any satisfier of the description:

(16) Sue wanted to eat **the juiciest apple out of all of her friends**, but there were **no apples**.

If we have an overt comparison class inside the nominal instead, the preferred reading is one on which existence is required:

(17) ??Sue wanted to eat **the juiciest apple in the bowl**, but there were **no apples**.

To summarize: Quality superlatives can have either absolute or relative readings. On absolute readings, they are determinate and focus-insensitive, and on relative readings, they are indeterminate and focus-sensitive. An overt comparison class can bias in favor of an absolute or a relative reading, and thereby force or eliminate focus-sensitivity, and make the noun phrase behave as determinate or indeterminate, as measured by an array of diagnostics.

²Szabolcsi (1986) originally called the relative reading a ‘comparative reading’; I don’t know of any reason for the change in terminology but the later usage seems to be most common in the current literature.

2.1.2 Quantity superlatives

Inventory. Now let us turn to quantity superlatives. These are the superlatives of quantity words like English *much*, *many*, *little*, and *few* (often called ‘Q-adjectives’; see e.g. Stateva (2002), Solt (2011, 2015), Krasikova (2011), Kotek et al. (2012), and Wellwood (2014); Rett (2008) calls them ‘m-words’). Note that, following Schwarzschild (2006), I will sometimes use the term *substance noun* for the underlined noun in the following examples:

- (18) a. most of the cookies/milk
 b. most cookies/milk
 c. the most cookies/milk

(This terminology was developed in the context of a discussion on partitives and pseudopartitives, and extended to constructions involving quantity words by Schwarzschild (2006).)

The inventory of quantity words in English is as follows.³

	+ /COUNT	+ /MASS	- /COUNT	- /MASS
POSITIVE	many	much	few	little
COMPARATIVE	more	more	fewer	less
SUPERLATIVE	most	most	fewest	least

With quantity words of superiority, there is a distinction for count vs. mass in the positive (*many* vs. *much*), but not in the comparative or the superlative (where *more* and *most* are used respectively for both count and mass). With quantity words of inferiority, the count/mass distinction extends from the positive through the comparative and the superlative.

The forms that are used for the positive (as in *Many people came to the rally*) are also used with a *neutral* meaning. The neutral meaning for *tall* is exemplified in a sentence like *John is 5 feet tall*, which does not imply that John is tall, or *How tall is John?* Similarly, *many* has a neutral meaning in examples like the following (Roelandt, 2016a, 51).

- (19) **How many children** does John have?
 (20) John has **this many children**. [indicating with hand gesture]
 (21) There is only one nuclear warhead in Belgium, but that is already **one too many**.

One can wonder *how much money* one has, or *how little money is too little for schools to function well*, or find it remarkable *how few species of cats have vertical stripes*. These are naturally-occurring examples. So all of the quantity words listed in the row labelled POSITIVE in the table above have neutral uses. (This should not be taken as given; in French, for example, the word *beaucoup* is used to translate *many* in positive contexts, but it does not have a neutral use.)

With quantity superlatives, we find a morphological distinction between the two relevant readings in English. In this case, the two readings in question are called *proportional* and *relative*.⁴ As Hackl discusses, these two readings are morphologically distinguished by definiteness in English, with definite-marked quantity superlatives being unambiguously relative:

³In the header row of the table, the symbol + stands for ‘superiority’ (a term for positive antonyms of quantity) and – stands for ‘inferiority’ (a term for negative antonyms of quantity).

⁴Hackl (2009) says that quantity superlatives do not have absolute readings, assuming that an absolute reading of *John read (the) most books* would be ‘John read the number of books that is greater than all contextually-relevant numbers of books’. However, his analysis of proportional readings is parallel to his analysis of absolute readings; in both cases, *-est* remains within the DP rather than moving to take sentential scope.

(22) John visited **the most continents** last year.

Note that we have focus-sensitivity in this case as well: With focus on *John*, this sentence means that John visited more continents than anybody else; with focus on *last year*, it means that John visited more continents last year than during any other comparable and relevant timespan.

If we remove the definite article, we obtain a reading on which John visited more than half of the continents:

(23) John visited **most continents** last year.

The ‘more than half’ reading is the ‘proportional reading’. As discussed by Szabolcsi (2012), bare *most* does have a relative reading as well; she offers a number of corpus examples, such as the following:

(24) Which animal has **most hair per square inches** on its body?

However, a partitive phrase can disambiguate in favor of a proportional reading:

(25) John visited $\left\{ \begin{array}{l} \text{most} \\ \text{*the most} \end{array} \right\}$ **of the continents** last year.

Relative readings can also arise with the superlatives of ‘few’ and ‘little’, as in the following example:

(26) a. Which girl received $\left\{ \begin{array}{l} \text{fewest} \\ \text{the fewest} \end{array} \right\}$ letters?
b. Who drank $\left\{ \begin{array}{l} \text{least} \\ \text{the least} \end{array} \right\}$ coffee?

But, as Hackl notes, these cases do not have proportional readings; they cannot be interpreted as ‘less than half’. Note that not even a partitive phrase can force such a reading; the following examples have only a relative reading:

(27) a. Which girl received $\left\{ \begin{array}{l} \text{fewest} \\ \text{the fewest} \end{array} \right\}$ **of the letters**?
b. Who drank $\left\{ \begin{array}{l} \text{least} \\ \text{the least} \end{array} \right\}$ **of the coffee**?

(It is curious that *the fewest of the letters* is acceptable even though **the most of the letters* is not.)

As Hackl discusses, relative readings with quantity and quality superlatives are dependent on the presence of a ‘licensor’, which is typically focus. In the following example, there is no licensor for a relative reading, so the definite-marked variants are ungrammatical (examples from Coppock & Josefson 2015):

(28) a. There are people living on $\left\{ \begin{array}{l} \text{most} \\ \text{*the most} \end{array} \right\}$ **continents**.
b. There is contamination in $\left\{ \begin{array}{l} \text{most} \\ \text{*the most} \end{array} \right\}$ **oil**.

Since *least* and *fewest* have only relative readings, there is no morphological setting on which the following examples are grammatical:

- (29) a. There are people living on $\left\{ \begin{array}{l} \text{fewest} \\ * \text{the fewest} \end{array} \right\}$ **continents**.
 b. There is contamination in $\left\{ \begin{array}{l} \text{least} \\ * \text{the least} \end{array} \right\}$ **oil**.

Another environment in which relative readings disappear is with universally quantified subjects (Hackl, 2009). Here again, we see that the variant with the definite article is ungrammatical:

- (30) Everyone knows $\left\{ \begin{array}{l} \text{most} \\ * \text{the most} \end{array} \right\}$ **U.S. state capitols**.

(Note that this kind of example only works with a relation like ‘know’, which is one-to-many.) And there is no interpretation for *least* or *fewest*:

- (31) Everyone knows $\left\{ \begin{array}{l} * \text{fewest} \\ * \text{the fewest} \end{array} \right\}$ **U.S. state capitols**.

This diagnostic confirms that *the most*, *(the) least*, and *(the) fewest* are unambiguously relative.

Relative quantity superlatives, like relative absolute superlatives, are indeterminate, as Szabolcsi (1986) observed and Coppock & Beaver (2014) gave further evidence for. For example, they can occur as the pivot of an existential construction or as the argument of relational *have*:

- (32) There were **the fewest guests** *yesterday*.
 (33) *John* has the **fewest friends**.

Szabolcsi (1986) also observes that they pattern with indefinites in being able to serve as the specifier of *ago*:

- (34) a. You met Peter **some years** ago.
 b. *You met Peter **those years** ago.
 c. *You* met Peter **the fewest years** ago.

And as Coppock & Beaver (2014) observe, they do not license anaphora or non-restrictive relative clauses, and they do not require existence:

- (35) Perhaps Sue climbed **the** $\left\{ \begin{array}{l} \# \text{most} \\ \text{snow-capped} \end{array} \right\}$ **mountains**. I took a picture of **them**.
 (36) Sue wanted to see **the** $\left\{ \begin{array}{l} \# \text{most} \\ \text{old} \end{array} \right\}$ **marble statues**, **which** were the ones I had shown her a picture of.
 (37) Sue wanted to eat **the** $\left\{ \begin{array}{l} \text{most} \\ \# \text{large} \end{array} \right\}$ apples, but there were **no apples**.

These quantity superlatives are also focus-sensitive; the following sentence has different truth-conditions depending on the placement of focus on *John*, *Peter*, or *last year*.

- (38) John got **the most/fewest letters from Peter** last year.

Proportional *most*, which we can disambiguate in favor of using a partitive phrase, is not focus-sensitive:

(39) John got **most of the letters from Peter** last year.

Regardless of where emphasis is placed, the sentence is true if and only if more than half of the letters from Peter (or a sufficient quantity to qualify as ‘most’) were received by John in the previous year.

Proportional *most* is usually classified as a ‘strong quantifier’, and as such it is not acceptable in, for example, the pivot of existential constructions:

(40) *There were **most of the students** at the party.

So proportional *most* seems not to be indeterminate by these lights. It is not clear that it is determinate either though; consider:

(41) ??John wants to invite **most of the students**, who are the ones that got an A.

The determinate/indeterminate distinction applies to descriptions, and not to quantificational expressions, so a third possibility is that proportional *most* is quantificational rather than determinate or indeterminate.

Let us summarize the situation for English. Superlatives of ordinary gradable adjectives are marked definite on both absolute and relative readings, and they can have either absolute (non-focus-sensitive, determinate) or relative (focus-sensitive, indeterminate) readings. Quantity superlatives are sometimes accompanied by definiteness-marking, and sometimes bare. In the former case, they are unambiguously relative, and when they are not, they can in principle be interpreted either as proportional or relative, although *least* and *fewest* have only relative readings for independent reasons, so this applies only to *most*. On relative readings, nominals containing quantity superlatives are indeterminate and focus-sensitive, just as with quality superlatives. On proportional readings, on the other hand, such nominals are not focus-sensitive, and are neither clearly indeterminate nor clearly determinate.

2.2 German

Data on German was reported by Hackl (2009), who shows that quantity superlatives accompanied by definiteness-marking have both proportional and relative readings. This is supported by the survey data I collected from 16 native speakers, which also spotlights certain additional subtleties.

2.2.1 Background

Before going through the data, it may be useful to review the paradigm of definite articles in German:

	MASC	NEU	FEM	PLURAL
NOMINATIVE	der	das	die	die
ACCUSATIVE	den	das	die	die
DATIVE	dem	dem	der	den
GENITIVE	des	des	der	der

In the glosses for the definite determiners below, I will not specify the case value if it is nominative or accusative.

Adjectives following a definite determiner take weak inflection. The weak inflection is *-en* whenever the noun is dative, genitive, or plural; otherwise it is *-e* except in the case of masculine singular

accusative; then it is *-en*. (Since all of our examples are definite, we need not review the weak inflection paradigms.)

2.2.2 Quality superlatives

Superlatives of ordinary gradable adjectives modifying a noun are always preceded by a definite article that agrees in number and gender with the noun. Here are two examples involving absolute readings, one singular and one plural (the latter from my translation survey):

- (42) Wir haben **den trocken-st-en Wein** bestellt.
 we have the.ACC.MASC.SG dry-SPRL-WK wein ordered
 ‘We ordered the driest wine.’
- (43) Mama backt **die lecker-st-en Kekse** in der ganzen Welt.
 Mama bakes the.PL yummy-SPRL-WK cookie.PL in the whole world
 ‘Mom bakes the yummiest cookies in the whole world.’

And here is an example with a relative reading:

- (44) Ich bin nicht diejeniger in der Familie mit **der schlanke-st-en Taille**.
 I am not the_one in the family with the.DAT.FEM.SG thin-SPRL-WK waist
 ‘I’m not the one in the family with the thinnest waist.’

Again, the superlative bears a weak inflection and is preceded by a definite article with the appropriate case value that agrees in number and gender with the noun.

2.2.3 Quantity superlatives

Now let us turn to quantity superlatives. Below is the inventory of quantity words in German.

	+ /COUNT	+ /MASS	- /COUNT	- /MASS
POSITIVE	viel	viel	wenig	wenig
COMPARATIVE	mehr	mehr	weniger	weniger
SUPERLATIVE	meiste	meiste	wenigste	wenigste

So German does not make a distinction like the one English makes between *little* and *few*, or any other count/mass distinctions.

Hackl (2009) reports that the following sentence is ambiguous between ‘Hans read most of the books’ and ‘John read more books than anybody else’:

- (45) Hans hat **die meisten Bücher** gelesen.
 Hans has the.PL many.SPRL.WK book.PL read
 ‘Hans has read {the most books, most of the books}’

Leaving off the definite article is not a grammatical option here, in contrast to English.

For superlatives of inferiority, Hackl (2009) reports that *die wenigsten* ‘the least/fewest’ has a relative but no proportional reading, so the following can only mean that Hans read fewer books than anybody else, not that Hans read less than half of the books:

- (46) Hans hat **die wenig-st-en Bücher** gelesen.
 Hans has the.PL little.SPRL.WK book.PL read
 ‘Hans has read the fewest books.’

In line with this, he reports that quantity superlatives of inferiority are not acceptable in the absence of a licenser:

- (47) *Es schneite auf **den** **wenigsten** **Bergen**.
 it snowed on the.DAT.PL little.SPRL.WK mountain.PL

or when the only potential licenser position is filled by a universal quantifier:

- (48) *Jede Gemeinde hat **die** **wenigsten** **Berge** beschneit.
 every town has the.PL little.SPRL.WK mountain.PL snowed

However, some German speakers I have consulted report that *die wenigsten* can in fact have a proportional interpretation, and naturally-occurring examples can be found, as reported in Coppock & Josefson 2015:

- (49) **Die wenigsten Leute** haben auch nur einen Augenblick ihres Lebens wirklich gewollt, ebensowenig als geliebt.
 ‘A minority of people have even for one moment in their lives really wanted, much less loved.’

Note that the corresponding example in English certainly does not have that interpretation:

- (50) { ***Fewest**
 ***The fewest** } **people** have ever truly loved.

So it is not just a matter of finding the right context; this seems to be a real difference between English and German. But it should also be mentioned that some German speakers find (49) archaic. In any case, proportional readings for quantity superlatives of inferiority do not appear to constitute a conceptual impossibility, contra Hackl (2009).

Let me now supplement Hackl’s observations with some further data on German. The ambiguity of (45) is supported by the data that I collected, where *die meisten* was used to translate sentences in both relative and proportional contexts. All sixteen of my German-speaking participants translated the sentence *Most of the kids who go to my school like to play music* using *Die meisten Kinder*, for example:

- (51) **Die meisten Kinder** an meiner Schule spielen gerne Musik.
 the.PL many.SPRL.WK child.PL in my school play gladly music
 ‘Most of the kids who go to my school like to play music.’

But proportional readings with mass nouns do not follow this pattern exactly. For *I drank most of the milk*, many participants avoided simple *die meiste Milch* gave alternative formulations such as *fast die ganze Milch* ‘almost the whole milk’ or *einen großen Teil der Milch* ‘a big part of the milk’, and two gave:

- (52) Ich habe **das** **meiste** **von der** **Milch** getrunken.
 I have the.NEU.SG much.SPRL-WK of the.GEN.FEM.SG milk drunk
 ‘I drank **most of the milk**.’

One participant commented, “If I say *Ich habe auch die meiste Milch getrunken*, it would imply that I drank e.g. 2 l of milk, my brother 1.5 l, and nobody else more than 1 l.” In other words, this would have only a relative reading.⁵ This is consistent with the results on mass nouns for other

⁵There were a number of participants that did give *die meiste Milch*, but there were also a number who have *am*

languages, as we will see below.

Furthermore, as Roelandt (2016b) points out, there is a “rogue” form in German that can only take a relative reading:

- (53) Hans hat **am** **meisten** **Berge** bestiegen.
 Hans has on_the.NEU.SG much.SPRLWK mountain[MASC].PL climbed
 ‘Hans climbed the most mountains.’

That this *am* construction can only give rise to a relative reading is shown by its inability to serve as the pivot of an existential construction (Roelandt, 2016b):

- (54) Es gibt {**die**, ***am**} **meisten** **Berge** in Kanada.
 it gives {the.PL, on_the.DAT.NEU.SG} much.SPRL.WK mountain.PL in Canada
 ‘Canada has the most mountains.’

The *am* construction also rejects universally quantified subjects:

- (55) Alle haben {**die**, ***am**} **meisten** **Bücher** gelesen
 everyone has {the.PL, on_the.DAT.NEU.SG} much.SPRL book.PL read
 ‘Everyone read (***the**) **most books**.’

Note that this construction involves a mismatch in the number feature between the article and the substance noun. In the cases we have just seen, the noun is plural, but *am* is singular; *am* is a contraction of *an* and *dem*, where *dem* is masculine or neuter dative singular. This form does not agree in gender either; we also have for example *am meisten Frauen* ‘the most women’, where the noun is feminine. Given that agreement feature mismatches of this kind throughout the Germanic family tend to involve a singular neuter form (as we will see evidence of later), it strikes me as reasonable to suspect that *am* in *am meisten* is a neuter form so I gloss it as neuter singular.

This form was chosen by many of the German participants in my translation questionnaire. For the sentence designed to elicit a relative reading, *Of all the kids in my school, I’m the one who plays the most instruments*, there was a mix; some participants used *die meisten Instrumente* and some participants used *am meisten Instrumente*.

- (56) Von allen Kindern auf meiner Schule, bin ich dasjenige, das {**die**, **am**}
 of all kids in my school am I the_one that {the.PL, on_the.DAT.SG}
meisten **Instrumente** spielt
 many.SPRL.WK instrument.PL plays
 ‘Of all the kids in my school, I’m the one who plays the most instruments.’

There was a similar mix of translations for the sentence *The member of my family who plays fewest instruments is my sister Karin*.

- (57) Das Familienmitglied, das {**die**, **am**} **wenigsten** **Instrumente** spielt,
 the family.member that {the.PL, on_the.DAT.SG} little.SPRL.WK instrument.PL plays
 ist meine Schwester Karin.
 is my sister Karin
 ‘The member of my family who plays fewest instruments is my sister Karin.’

There was a very high proportion of *am meisten* for the sentence ... *But it is probably Hans who meisten Milch*, and the latter clearly did not take the sentence to have a proportional interpretation, and the same might hold for the former as well.

has drunk the most coffee (12/16):

- (58) Hans war derjenige, der **am** **meisten** **Kaffee** getrunken hat.
Hans was the_one who on_the.DAT.SG many.SPRL.WK coffee drunk has
'It was probably Hans drank the most coffee.'

One participant also gave the comment, “*den meisten Kaffee getrunken hat* sounds slightly odd in my opinion,” and another participant said, “If you say *den meisten Kaffee* instead of *am meisten Kaffee* I have the idea that Hans drank the majority of the coffee rather than that he drank more than anyone else.” So at least for this example, the *am*-strategy seems to be preferred.

This tendency was even stronger for *the least coffee*; only one participant offered *den wenigsten Kaffee* instead of *am wenigsten Kaffee*.

- (59) Ich bin diejenige, die **am** **wenigsten** **Kaffee** trinkt.
I am the_one that on_the.DAT.SG little.SPRL.WK coffee drinks
'I'm the one who drinks the least coffee.'

One participant commented, “I find the alternative *den wenigsten Kaffee* instead of *am wenigsten Kaffee* not too bad, but less good.”

So: the *am*-form is always a good option for relative readings, and never a good option for proportional readings, but the degree to which it is preferred over an ordinary definite seems to vary across different types of sentences with relative readings.

2.3 Dutch

Dutch behaves very much like German insofar as definiteness-marking is pervasive, but there are some interesting differences: Although the *am* form does not seem to be used, the non-agreeing neuter singular definite determiner *het* is an option in the case of relative readings. This was documented by Roelandt (2016a) and confirmed by my survey of 10 native Dutch speakers (carried out prior to the publication of Roelandt's work).

2.3.1 Quality superlatives

Let us begin with the basic case. As in German, superlatives of ordinary gradable adjectives are accompanied by a determiner that agrees in number and gender with the noun being modified, regardless of whether they receive an absolute or a relative interpretation:

- (60) Ik ben niet degene in de familie met ...
I am not the_one in the family with ...
'I am not the one in the family with ...
- a. **de** **dunste taille**.
the.FEM.SG thinnest waist[FEM]
... **the thinnest waist**.'
- b. **het** **dunste middel**.
the.NEU.SG thinnest middle[NEU]
... **the thinnest waist**.'
- (61) Mama bakt **de** **lekkerste koekjes** van de wereld.
Mom bakes the.PL yummiest cookies of the world
'Mom bakes **the most delicious cookies** in the world.'

2.3.2 Quantity superlatives

With quantity superlatives, we find a definite determiner combined with *meeste* to express both relative and proportional readings, as in German. But the agreement on the determiner follows a slightly different pattern.

Roelandt (2016a, Chapter 18) reports that in Flemish Dutch, the determiner that is used for relative readings is the neuter singular *het*, regardless of the gender or number feature of the noun:⁶

- (62) a. Jan heeft **het** **meeste bergen** beklommen.
 John has the.NEU.SG most mountains climbed.
 ‘John has climbed **the most mountains** (relative)’
 b. Jan heeft **de** **meeste bergen** beklommen.
 John has the.PL most mountains climbed.
 ‘John has climbed **most (of the) mountains** (proportional)’

Roelandt also reports that the neuter variant *het meeste* can be used in the pivot of an existential construction while the agreeing variant *de meeste* cannot:

- (63) Er zijn {**het**/***de**} **meeste bergen** in Canada.
 it is {the.SG.NEU/the.PL} most mountains in Canada.
 ‘There are **the most mountains** in Canada.’

This pattern was also found in the data I collected, from speakers who did not identify as Flemish Dutch speakers. Although all speakers translated *most of the kids* in subject position as *de meeste kinderen*, some of the speakers (2/10) translated *the most instruments* as *het meeste instrumenten*, with a singular neuter definite determiner, in a sentence supporting a relative reading.

- (64) Van alle kinderen in mijn school ben ik degene die {**de**, **het**} **meeste**
 of all kids in my school am i the_one that {the.PL, the.NEU.SG} most
instrumenten speelt.
 instruments plays
 ‘Of all the kids in my school, I’m the one who plays **the most instruments**.’

One of these participants also translated *the most cookies* with *het*, along with another participant (who did not chose *het* for *the most instruments*).

Six out of the 10 Dutch-speaking participants used *het* in the translation of *the fewest instruments*:

- (65) Het familielid dat {**de**, **het**} **minste instrumenten** bespeelt, is mijn
 the family_member that {the.PL, the.NEU.SG} least instruments plays is my
 zus Karin.
 sister Karin
 ‘The member of my family who plays **the fewest instruments** is my sister Karin’

We also find this kind of variation with mass nouns. Two out of the 10 Dutch-speaking participants used it in the translation of *the most coffee* in a sentence supporting a relative reading (*het meeste koffie*); the others used *de meeste koffie*, showing gender agreement with *koffie*. Four out of 10 used *het* for *the least coffee*. More than half of the participants used the *het*-pattern at least once and none of them used it consistently, which suggests that it is a less common pattern that is not

⁶See Roelandt (2016a, 344) for corpus examples.

completely absent in Standard Dutch.

A non-agreeing *het* also appeared in translations of some sentences with proportional readings, in this case accompanied by a partitive phrase:

- (66) Ik heb ook **het meeste van de melk** gedronken.
I have also the.NEU.SG most of the milk drunk
'I drank **most of the milk**, too.'

One participant, who opted for *bijna alle melk* 'almost all [the] milk' instead of anything involving *meeste* for this sentence, offered the following comments: "I think *de meeste* is used in Dutch more when it comes to numberable things" and "*Ik heb ook de meeste melk opgedronken* is really weird. Then it sounds like you have many small packages of milk and you have opened and drank most of them." Indeed, only one participant offered *de meeste melk* in this case, with the majority using *bijna alle melk* 'almost all [the] milk' or *het grootste deel van de melk* 'the greatest part of the milk'. This suggests a fairly strong split between count and mass for proportional readings in Dutch.

To summarize: Dutch is just like German at a gross level of generalization: Both relative and proportional readings are associated with definiteness-marking. But there are some subtle differences, which may provide the key to understanding how other Germanic languages can differ so dramatically from each other. This non-agreeing neuter singular form emerges in a number of other cases, and I would like to suggest that it forms the link that ties together the dramatic variability we see. But let us now continue the exposition of that variability, and come back to this hypothesis once it is laid out.

2.4 Mainland Scandinavian

As mentioned above in connection with examples (2) and (3), what English marks as definite, Swedish leaves bare. This section illustrates the pattern more completely, on the basis of data from 10 native Swedish speakers. This section also includes a discussion of Danish and Norwegian, on the basis of data from 4 native Danish speakers and 1 native Norwegian speaker.

2.4.1 Quality superlatives

As with ordinary adjectives in Swedish, this weak ending is added to superlatives when they are accompanied by a definite article:

- (67) **Den störst-a tall-en** blev ner-skuren.
the big.SPRL-WK pine-DEF became down-cut
'**The biggest pine tree** was cut down.'

This example has an absolute reading, referring to the pine tree that is taller than all other pine trees. Note that *-a* is the 'weak' ending that is found on adjectives in definite and plural contexts, which I gloss WK.

A superlative description that completely lacks definiteness-marking, on the other hand, has only a relative reading. For example, (68) doesn't mean that Gloria sold the ice cream that was more delicious than any other ice cream; it means that Gloria sold more delicious ice cream than all of her competitors.

- (68) Gloria sålde **godast glass**.
Gloria sold good.SPRL ice_cream
'Gloria sold **the most delicious ice cream** (compared to anybody else).'

According to the Swedish Academy Grammar (Teleman et al., 1999), example (67) involves “direct selection”, where “the member of the group that has the given property to a greater degree than the others” is distinguished (Vol. II §45-46); example (68) involves what they call “indirect selection”, presumably because Gloria is compared with other ice cream sellers indirectly, through the tastiness of their ice cream.⁷

Note that this pattern extends to plurals, where we find neither definiteness-marking nor plural marking on the superlative:

- (69) Det är alltid min fru som köper **dyrast kläder**.
 It is always my wife as buys expensive.SPRL clothes
 ‘It’s always my wife who buys **the most expensive clothes**.’

The plural form of *dyrast* ‘most expensive’ is *dyraste*, but that is not what we find here. This is not just because of the pluralia tantum; Swedish speakers I consulted agreed that the following was the best description of a picture in which three people had each caught one to three fish, and one person had caught two equally big fish which were bigger than everyone else’s.

- (70) Anna fick **störst fisk-ar**.
 Anna got big.SPRL fish-PL
 ‘Anna caught **the biggest fish**[PL].’

So the superlative adjective in this construction is completely devoid of inflectional morphology, including both definiteness and plural marking.

However, degree superlatives accompanied by definiteness-marking can have a relative reading in some cases: Teleman et al. (1999, II, p. 79), write that “indirect selection can also be expressed with the same type of noun phrase as direct selection”. For example, (71) can mean either that Fredrik bought the wine that is more expensive than all other wine or that Fredrik bought more expensive wine than anyone else.

- (71) Fredrik köpte **det dyraste vin-et**.
 Fredrik bought the.NEU.SG expensive.SPRL.WK wine-DEF
 ‘Fredrik bought **the most expensive wine**’ [absolute or relative]

Nevertheless, there is some evidence to suggest that is preferable to use a completely bare form when a relative interpretation is intended. The pattern in (68) was also offered in all eight Swedish translations of *I’m not the one in the family with the thinnest waist*:

- (72) Jag är inte den i familjen som har **smalast midja**.
 I am not DEM.COM.SG in family.DEF as has thin.SPRL waist
 ‘I’m not the one in the family who has **the thinnest waist**.’

One participant gave in addition *den smalaste midjan*, with definiteness-marking, in addition to the completely bare form; all others gave only the bare form in (72).

So, with ordinary gradable adjectives, complete absence of definiteness marking on a superlative description unambiguously signals a relative reading, and a definite-marked superlative description can be interpreted with either an absolute or a relative reading.

There is one further wrinkle in the empirical picture: According to the Swedish Academy Grammar (Teleman et al., 1999, Vol. II, pp. 78-9), which incorporates earlier work by Teleman (1969),

⁷Although I find the terms *direct selection* and *indirect selection* more insightful and informative than *absolute* and *relative*, I will stick with the latter for the sake of congruity with the rest of the literature on this topic.

bare Swedish superlatives tend to occur where bare arguments are allowed more generally. Mass nouns and plurals in Swedish, as in English, don't require an article. Concomitantly, completely bare superlatives are acceptable with mass nouns and plurals:

- (73) a. Jönköping har **lägst lufttryck**.
 'Jönköping has **the lowest air pressure**.'
 b. Jönköping har **lågt lufttryck**.
 'Jönköping has **low air pressure**.'
- (74) a. Det är alltid min fru som köper **dyrast kläder**.
 'It's always my wife who buys **the most expensive clothes**.'
 b. Min fru köper **dyra kläder**.
 'My wife buys **expensive clothes**.'

Singular count nouns typically do require an article, but there are some exceptions, and this is reported to correlate with the acceptability of superlatives.

- (75) a. *Lindberg skrev **bäst bok**.
 'Lindberg wrote **the best book**.'
 b. *Lindberg skrev **bra bok**.
 Intended: 'Lindberg wrote **a good book**.'
- (76) a. Johan hade **rödast näsa**.
 'Johan had **the reddest nose**.'
 b. Johan hade **röd näsa**.
 'Johan has **a red nose**.'

The correlation does not appear to perfect however. For example:

- (77) a. Vem har **roligast bana**?
 'Who has **the funnest track**?'
 b. *Vem har **rolig bana**?
 Intended: 'Who has **a fun track**?'

More research is needed in order to determine how strong this correlation is, and whether there are any additional or alternative factors that can be used to better explain the restrictions on the pattern.

2.4.2 Quantity superlatives

The inventory of quantity words in Swedish is slightly richer than the one in English; there are two words for *more* and *most*, one for count nouns and one for mass nouns (just as English distinguishes between *less* and *fewer*, which Swedish also distinguishes).⁸

⁸*Mången* is the singular common gender form; the singular neuter form is *månget* and the plural form is *många*. The singular forms are quite rare. Similarly, *mycken* is the common gender form of the word for 'much' but it is almost always heard in the neuter form *mycket*. Other forms of *mycken* include *myckna* (plural) and *myckne* (animate masculine singular). (Source: Wiktionary.)

	+ /COUNT	+ /MASS	- /COUNT	- /MASS
POSITIVE	mången	mycken	få	lite
COMPARATIVE	fler	mer	färre	mindre
SUPERLATIVE	flest	mest	??färst/?minst	minst

Since English *many* is specialized for count nouns and *much* is not, I will gloss *flest* as many.SPRL and *mest* as much.SPRL.

Quantity superlatives accompanied by a definite article have a proportional interpretation; this is reported by Teleman et al. (1999) and confirmed by the eight translations of the 17-sentence story into Swedish that I collected. Here are two examples with a plural count noun (or pronoun):

- (78) **De flest-a** (av) **barn-en** i min skola tycker om att spela musik.
the.PL many.SPRL-WK of child-PL.DEF in my school think about to play music
‘**Most of the kids** in my school like to play music.’
- (79) Mamma bakade kakor igår och jag åt **de flest-a** av dem.
Mom baked cookies yesterday and I ate the.PL many.SPRL-WK of them
‘Mom baked cookies yesterday and I ate **most of them**.’

Note that the partitive *av* ‘of’ is optional in (78) but not (79).

Definiteness-marking yields a proportional reading with mass nouns as well, although with mass nouns, there is a preference to use a neuter singular determiner with the quantity superlative along with a partitive phrase:

- (80) ?Jag drack **den mest-a mjölk-en**.
I drank the.COM.SG much.SPRL-WK milk-COM.SG.DEF
‘I drank **most of the milk**.’
- (81) Jag drack **det mest-a av mjölk-en**.
I drank the.NEU.SG much.SPRL-WK of milk-COM.SG.DEF
‘I drank **most of the milk**.’

The noun *mjölk* ‘milk’ is common gender, as shown by the *-en* ending that it bears (as opposed to *-et*), but the determiner *det* is neuter gender, so it is clearly not agreeing with *mjölk*. The same pattern was most common with ‘most of the music they play on the radio’; this sentence was most often translated as *det mesta av musiken som spelas på radio*, again with a neuter gender determiner for *mesta* and a partitive phrase including a common gender definiteness-marker. The pattern *den mesta musiken* was also offered as a translation by some participants, and native speakers I have consulted confirm that this pattern is acceptable, but the pattern with *det mesta* appears to be preferable.

There are also examples where the substance noun is not definite, e.g.:

- (82) **De flest-a kvinn-or** gillar choklad.
the.PL many.SPRL-WK woman-PL like chocolate
‘**Most women** like chocolate.’

(The definite form would be *kvinn-or-na* ‘the women’.) It is also possible to find examples of this sort with mass nouns:

- (83) **Den mest-a ost** går att frysa.
the.COM.SG much.SPRL-WK cheese works to freeze
‘**Most cheese** can be frozen.’

(The definite form would be *ost-en* ‘the cheese’.) In general, cases that would be translated into English with *most N* rather than *most of the N* are those where the substance noun is not marked definite. In these cases, it is not possible to insert an overt partitive proposition: **De flesta av kvinnor gillar choklad* is ungrammatical. Note that even though there is no agreement in definiteness between the quantity superlative and the substance noun in (82) and (83), there is still agreement in gender and number. So these elements appear to stand in a somewhat tenuous syntactic relationship.

In the absence of definiteness-marking, quantity superlatives receive a relative interpretation in Swedish. Here are some examples from the 17-sentence story:⁹

- (84) Av alla barn i skolan är jag den som spelar **flest instrument**.
of all kids in school.DEF am I DEM as plays many.SPRL instrument.PL
‘Of all the kids in my school, I’m the one who plays **the most instruments**.’
- (85) Den i min familj som spelar **minst (antal) instrument** är min syster Karin.
DEM in my family as plays little.SPRL number instrument.PL is my sister Karin
‘The member of my family who plays **fewest instruments** is my sister Karin.’
- (86) Det är troligen Hans som har druckit **mest kaffe**.
it is probably Hans as has drunk much.SPRL coffee
‘It’s probably Hans who has drunk **the most coffee**.’
- (87) Jag är den som dricker **minst kaffe**.
I am DEM that drinks little.SPRL coffee
‘I am the one who drinks **the least coffee**.’

The eight Swedish speakers were unanimous on how these sentences should be translated; all gave translations using the patterns just reported, and there were no other strategies used.

As with ordinary gradable adjectives, completely bare quantity superlatives have *only* a relative interpretation. Hence they are ungrammatical in sentences that lack a licenser for a relative reading (Coppock & Josefson, 2015):

- (88) *Det finns flygplatser vid **flest städer**.
It is_found airports in many.SPRL cities
‘*There are airports in **the most cities**.’
- (89) *Det finns kolhydrater i **mest mat**.
It is_found carbohydrates in much.SPRL food
‘*There are carbohydrates in **the most food**.’

As in English, neither definite nor bare negative amount superlatives are acceptable in this construction, whether the noun is plural or mass (ibid.):

- (90) Det bor folk på $\left\{ \begin{array}{l} \text{*färst/minst kontinenter.} \\ \text{*de första/minsta kontinenterna.} \end{array} \right\}$
‘There are people living on **(the) most continents**.’
- (91) Det är kontaminanter i $\left\{ \begin{array}{l} \text{*minst olja.} \\ \text{*den minsta oljan.} \end{array} \right\}$
‘There are contaminants in **(the) most oil**.’

⁹Notes on the glosses: DEM stands for ‘demonstrative’, here used correlatively. (The form *den* encodes the features of common gender and singularity, which I have suppressed in the gloss.) I have chosen to gloss *som* as ‘as’, even though it does not match English *as* exactly; it can be used to translate *as* but it also functions as a complementizer in subject relative clauses as it does here.

The same is true in the other direction as well: Unlike with ordinary gradable adjectives, definite-marked quantity superlatives cannot receive a relative interpretation in Swedish. We can see this by attempting to use them as the pivot of an existential construction (cf. (40) above).

- (92) a. Det finns **flest** **problem** hos yngre barnfamiljer.
 it is_found many.SPRL problem.pl at younger child-families
 ‘There are **the most problems** with younger families.’
 b. *Det finns **de flesta** **problem** hos yngre barnfamiljer.
 it is_found the.pl many.SPRL.WK problem.pl at younger child-families
 ‘*There are **most of the problems** with younger families.’

So, abstracting away from certain details: A definite-marked quantity superlative in Swedish has only a proportional reading, and a bare one has only a relative reading.

2.4.3 Norwegian and Danish

Based primarily on translations I collected for the 17-sentence story, along with short interviews with native speakers, Norwegian Bokmål and Danish behave exactly like Swedish with quantity superlatives for our purposes, but Danish differs slightly when it comes to ordinary gradable adjectives.

Let us first review the inventory of quantity superlatives in these languages, which is structurally identical to that of Swedish except that they have no gap for the superlative of ‘few’ (when two variants are given, the first is Danish and the second is Norwegian Bokmål):

	+ / COUNT	+ / MASS	- / COUNT	- / MASS
POSITIVE	mangen/mang	meget/mye	få	lite
COMPARATIVE	flere	mere	færre/ferre	mindre
SUPERLATIVE	flest	mest	færrest	mindst/minst

For proportional readings, Norwegian and Danish regularly use a quantity superlative with definiteness-marking. For ‘most of the kids’ we have *de fleste børn* in Danish and *de fleste barn* in Norwegian, and for ‘most of them’, we have *de fleste af dem* in Danish and *de fleste av dem* in Norwegian. This matches Swedish exactly. With mass nouns, Norwegian and Danish are similar to Swedish, modulo independent differences in the grammar of definiteness-marking. For ‘most of the milk’, we have *det meste af mælken* in Danish and *det meste av melken* in Norwegian. The Norwegian speaker used *det meste av musikken som spilles i radioen*, following the Swedish pattern. Almost all Danish speakers translated ‘most of the music they play on the radio’ as *det meste af den musik de spiller i radioen*, using the prenominal article *den* rather than a suffix. This reflects the fact that the grammar of Danish allows a prenominal definite article when the noun phrase is modified by a relative clause (Hankamer & Mikkelsen, 2002), a fact which is orthogonal to the issue at hand.

Danish and Norwegian speakers use *flest* exactly the way Swedish speakers do. Here is a table:

EX.	ENGLISH	SWEDISH	NORWEGIAN/DANISH
(84)	<i>the most instruments</i>	<i>flest instrument</i>	<i>flest instrumenter</i>
(85)	<i>the fewest instruments</i>	<i>minst (antal) instrument</i>	<i>faerrest instrumenter</i>
(86)	<i>the most coffee</i>	<i>mest kaffe</i>	<i>mest kaffe</i>
(87)	<i>the least coffee</i>	<i>minst kaffe</i>	<i>mindst/minst kaffe</i>

For the present purposes, the interesting difference between Danish and Swedish is that ordinary gradable adjectives under relative readings are obligatorily definite-marked. All four of the Danish translators of the 17-sentence story used a definite article for the *smallest waist* example:

- (93) Jeg er ikke den i famili-en med **den** **smallest-e** **talje**. [Dan.]
 I am not DEM in family-COM.SG.DEF with the.COM.SG thin.SPRL-WK waist
 ‘I’m not the one in the family with **the thinnest waist**.’

Follow-up questions with Danish speakers confirmed that the Swedish pattern without definiteness marking is not available for ordinary gradable adjectives in Danish (so **med smallest talje*). (The Norwegian speaker I consulted said that both options were available.) So lack of definiteness-marking for relative readings on quantity superlatives does not entail lack of definiteness-marking on relative readings for ordinary gradable adjectives; these appear to be two independently moving pieces.

2.5 Dalecarlian

So far we have seen three patterns of definiteness-marking with quantity superlatives:

- Definiteness-marking for relative readings, no definiteness-marking for proportional readings (English; setting aside the fact that bare *most* has both readings)
- Definiteness-marking for both relative and proportional readings (German)
- Definiteness-marking for proportional readings but not relative readings (Swedish)

What is missing from this list is the case of no definiteness-marking on either relative or proportional readings. One Germanic language that occupies the missing cell is Dalecarlian, an endangered Scandinavian language spoken in Älvdalen (western Sweden) which retains many features from Old Norse (see e.g. Bentzen et al. 2015). This section will mainly report data from the Övdalian dialect of Dalecarlian, but will also include some data from the Orsa dialect.¹⁰

The information about Övdalian reported here comes from (i) grammatical descriptions (Levander, 1909; Åkerberg, 2012), (ii) in-person interviews with five Övdalian speakers that I conducted in Älvdalen, (iii) anonymous surveys with an additional four speakers, and (iv) a diary written by an Övdalian speaker named Frost Anders during the early 1940s, recently digitized and transcribed by Bengt Åkerberg and Mats Elfqvist (two of the speakers I interviewed). The anonymous surveys and the in-person interviews all centered around translating the 17-sentence story from Swedish, supplemented with some picture-based elicitations. Some of the anonymous survey participants felt rather insecure about their knowledge of Övdalian, as they learned it as a child but moved away and mainly use Swedish in their daily life, but the five speakers I interviewed use Övdalian every day (ages 45-91), and the interview setting provided an opportunity for follow-up questions and additional comments and indicate their level of certainty about the translations given, so I will concentrate mainly on the interview data. For Orsa, I conducted an interview with two speakers (simultaneously), and made use of a dictionary that includes many naturally-occurring examples. (The two speakers happen to be the authors of the dictionary.) All of the example sentences in this section are from Övdalian unless otherwise specified.¹¹

¹⁰Here I am following Glottolog’s classification whereby Dalecarlian is the name of the language and Övdalian and Orsa are both dialects of it; other scholars treat Övdalian as a language. What I do not question is whether Övdalian and Swedish are dialects of the same language, despite the ongoing political debate on that – I take them to be distinct languages due to their major structural differences, following the scientific consensus. Certainly with respect to the grammatical features of interest here the Dalecarlian system is structurally unique among the Germanic languages.

¹¹There is an ongoing debate regarding how Övdalian should be spelled. I am using the standards advocated by

2.5.1 Background

Some background information that will be useful in making sense of the results: Like Icelandic, Övdalian inflects for nominative, accusative, and dative case (as well as genitive, but the genitive form is predictable from other forms), and there are three genders: masculine, feminine, and neuter. Here is an example inflectional paradigm for the masculine noun *kripp* ‘child’ (Åkerberg, 2012, 132):¹²

	SG INDEF	SG DEF	PL INDEF	PL DEF
NOM	<i>kripp</i>	<i>krippin</i>	<i>kripper</i>	<i>krippär</i>
DAT	<i>krippe</i>	<i>krippem</i>	<i>krippum</i>	<i>krippum</i>
ACC	<i>kripp</i>	<i>krippin</i>	<i>krippa</i>	<i>krippa</i>

Adjectives typically inflect for number, gender, case, and under certain circumstances, definiteness. For example, ‘a big man[MASC]’ is *ien stur kall* in nominative, *ienum sturum kalle* in dative, and *ien sturan kall* in accusative; ‘several big men’ is *flier stur kalla* in accusative and ‘a big house[NEU]’ is *iet sturt aus* in nominative and accusative (Åkerberg, 2012, 190). The choice of inflection depends on whether the adjective is ‘independent’ (serving as the head of the phrase, e.g. with nominal ellipsis) or ‘unified’ with a nominal complement, as in the cases we have just seen. For example:

- (94) Wen al ig tşyöp fer byttu? Du al tşöp **ien stur-a**.
 what shall I buy for bowl[FEM] you shall buy a big-fem.SG.ACC
 ‘What kind of bowl should I buy? You should buy a **big one**.’

The feminine singular accusative form of *stur* ‘big’ when preceding a noun is *stur*, as in *ien stur kullu*, so the *-a* ending in (94) is a reflection of the fact that the adjective stands ‘independently’. When the adjective stands alone in this way, it can also bear definiteness-marking.

- (95) Ukk-dier byttu al ig tågâ? Tag **stur-u!**
 which-there bowl shall I take take big-ACC.FEM.SG.DEF
 ‘Which bowl should I take? Take **the big one!**’

How adjectives would be inflected in definite noun phrases with an overt head noun is not clear, as this strategy is strongly avoided in favor of one in which the adjective is incorporated into the noun (Åkerberg, 2012, 200), e.g.:

- (96) Ann bar inn **stur-kartands-in** ini tşyötşed.
 Anna bar in big-carton-DEF into kitchen-DEF
 ‘Anna carried **the big carton** into the kitchen.’

Although Övdalian does have definiteness-marking on nouns, it only rarely makes use of definite articles. It is somewhat difficult to determine to what extent Övdalian differs from Swedish in this respect, though, given that adjectives are so often incorporated into the noun they modify

Bengt Åkerberg (consistently I hope, but with one exception), merely for practical reasons: I attended his summer course, and I am relying heavily on his grammar and the corpus that he digitized. The one exception is that Åkerberg writes a forward-tilting slash through consonants that are underlyingly present but not pronounced, and I leave this out.

¹²In the table, the forms starting with *ien* are singular indefinite articles (homophonous with the numeral one) and *flier* means ‘several’ (in this context; it can also mean ‘more’). The symbol ą denotes a nasalized /a/.

(Åkerberg, 2012, 200-1). In Swedish, definite articles only appear when there is an attributive modifier of the noun (e.g. *bilen* ‘the car’ vs. *den röda bilen* ‘the red car’). A case where the adjective is incorporated into the noun would not meet the structural description for insertion of a definite article in Swedish, so to speak.

However, cases with ordinals (and superlatives, as we will see below) give some indication that Övdalian does not require a prenominal article in combination with a modified noun; these do not appear to be incorporated but still no article shows up. Here is an example from the Frost Anders diary corpus:

- (97) ... og ses kamum upq Nęseđ min **fuäst lass-eđ**.
 ... and then came.1PL upon [place] with first load-DEF
 ‘... and then we arrived at [place] with **the first load**

2.5.2 Quality superlatives

As is to be expected given (97), superlative adjectives do not co-occur with a definite article. For example (Åkerberg, 2012, 205):

- (98) Ig tşyöpt **dyr-est bil-n**.
 I bought expensive-SPRL car-ACC.MASC.SG.DEF
 ‘I bought **the most expensive car**.’

Although an absolute reading (the car that was more expensive than all the other cars) seems most likely in (98), the sentence is arguably compatible with a relative interpretation (where the car that the speaker bought is more expensive than the car(s) that anyone else bought). Here is an example from the Frost Anders corpus which seems unambiguously absolute:

- (99) Ig ar buäriđ norter **styöst kupärketiln** i bauređ.
 I have carried north big.SPRL copper_kettle.DEF in storehouse-DEF
 ‘I have carried north **the biggest copper kettle** in the storehouse.’

Note that in addition to lacking a definite determiner the superlative adjective does not show any sign of definiteness in these examples (but as far as I can tell, there is no reason to believe that this fact is specific to superlatives).

Note that superlative adjectives can carry definiteness-marking, but only when used ‘independently’, e.g. (Åkerberg, 2012, 205):

- (100) Ulov jägg min **tynggst öks-n**, och ig jägg min
 Olov chopped with heavy.SPRL axe-DAT.FEM.SG.DEF and I chopped with
littest-un.
 little.SPRL-DAT.FEM.SG.DEF
 ‘Olov chopped with **the heaviest axe** and I chopped with **the smallest one**.’

Here is an example of this kind from the Frost Anders corpus (context: two young maids had visited):

- (101) **Styöstq** ietter Ragnhild.
 big.SPRL-NOM.FEM.SG.DEF is_named Ragnhild
 ‘**The oldest** is named Ragnhild.’

I suspect that this definiteness-marking is the realization of the definiteness feature that would be

realized on the noun if it were overt, rather than the kind of definiteness agreement that we find on attributive adjectives in other Germanic languages, where the noun is the agreement controller and the adjective is the agreement target. In other words, the examples we see in (100) and (101) do not appear to be cases of weak inflection on the adjective.

Turning now to relative readings of ordinary gradable adjectives: Övdalian appears to allow the pattern that we saw in Swedish, where definiteness-marking is absent on superlatives of ordinary gradable adjectives under a relative reading, based on the following translations that I gathered:

- (102) Ig ir itše an i familjen so ar **smalest miða**.
 I am not him i family-DEF as has thin.SPRL waist.ACC.SG
 ‘I am not the one in the family who has **the thinnest waist**.’

The Orsamål speakers also used an indefinite form:

- (103) Ä do ’nt ik sö a **smålest miö**. [Orsa]
 is then not I as has thin.SPRL waist.ACC.SG
 ‘I am not the one with **the thinnest waist**.’

But here is a possible example of a relative reading from the Frost Anders corpus:

- (104) Og slaiker påstå ðier åvå “**best witeð**’ ...’
 and such.pl claim they have best wit-DEF
 ‘And such people claim they have **the best wit** ...’

In this case, the noun has definiteness-marking. It is not clear to me whether this is a genuine relative reading, and if so, whether it is representative of an older variety.

In any case, for at least one Övdalian speaker (Bengt Åkerberg), the definite form is preferred; he helpfully provided me with several examples, including the following:

- (105) Ig ar naug **digrest miðað** just dar ig ar faið **guäðest matn**.
 I have probably fat.SPRL waist.DEF just because I have gotten yummy.SPRL food-DEF
 ‘I probably have **the fattest waist** because I have had **the most delicious food**.’
- (106) ... sortn so ar **lägst sokker-alt-n**.
 ... type.DEF as has low.SPRL sugar-content-DEF.
 ‘... the type that has **the lowest sugar content**’
- (107) An ir an so ar **best bil-n** jär i by.
 he is he as has best car-DEF here in town
 ‘He’s the one who has **the best car** here in town.’

It may be that the definite form represents a more conservative variety of Dalecarlian and the non-definite form is the result of influence from Swedish. In any case, both options seem to be attested.

2.6 Quantity superlatives

We now turn to quantity superlatives. The inventory of quantity words in Övdalian is as follows:^{13,14}

¹³*Få* is uncommon and usually avoided by use of a different wording, according to Steensland (2010) and this is supported by the translations I gathered for *Many try, but few can resist Mom’s cookies*, which typically elicited evasive strategies like *There are not many who...*

¹⁴Steensland (2010) gives *fåera* for ‘few’ but my consultants used only *minn*.

	+ /COUNT	+ /MASS	- /COUNT	- /MASS
POSITIVE	mikkel mangger, marger (NPI)	mitšin mangg, marg (NPI)	fã	liteð
COMPARATIVE	flierer	mjer	minn	minn
SUPERLATIVE	mjäst	mjäst	minst	minst

Orsa has a similar inventory, based on the Orsa dictionary and my interview data:

	+ /COUNT	+ /MASS	- /COUNT	- /MASS
POSITIVE	mikklor mönggör (NPI)	mitji	litä	lit'
COMPARATIVE	mer	mer	mindör	minn
SUPERLATIVE	mjäst	mjäst	minst	minst

An interesting feature of this inventory is that Dalecarlian varieties have a word for ‘many’ that is only used in negative environments (two, in fact; but *marger* is not used as often according to Åkerberg (2012, 247)). Hence the annotation “NPI” (for negative polarity item) in the table. Here is an example from the Frost Anders corpus (context: the narrator wanted to have some coffee, but thought better of it):

- (108) Ig syöks int dugo fq i mig noð **mangg** åv dyö.
 I seem not can get in me any much of it.DAT.NEU.SG
 ‘I probably can’t get **much** of it[=coffee] in me.’

Here is an example from the Orsa dictionary (Olhsén & Olander, 2010):

- (109) E'int **mönggör** gator kvar. [Orsa]
 it_is:not many streets left
 ‘There aren’t **many** streets left.’

It is reported by both Levander (1909, 59) and Åkerberg (2012, 247) and implied by Olhsén & Olander (2010) that this form is restricted to negative environments.

Let us now turn to inflection. According to Åkerberg (2012), *mikkel* is actually a form of *mitšin*, and the word *mitšin* inflects for case, number, and gender as follows:

	MASC SG		FEM SG		NEU SG	
NOM	mitšin	wið	mitši	mjok	mitšið	myöl
DAT	mikklum	widði	mikkel	mjok	mikkel	myöli
ACC	mikklan	wið	mikkel	mjok	mitšið	myöl
	MASC PL		FEM PL		NEU PL	
NOM	mikkel	kaller	mikkel	kullur	mikkly	buärd
DAT	mikklum	kallum	mikklum	kullum	mikklum	buärdum
ACC	mikkel	kalla	mikkel	kullur	mikkly	buärd

(This is for the case where the word is ‘unified’ with a noun; different rules apply when the word is ‘independent’ in the nominal phrase.)

We also find different inflectional forms for the word *flierer* (ambiguous between ‘several’ and ‘more’), which morphologically is the comparative of ‘many’ (cf. Swedish *många* ‘many’ - *fler*

‘many.CMPR’ - *flest* ‘many.SPRL’). Here are two examples, where the first is ‘unified’ with a following noun, and the second is ‘independent’ (Åkerberg, 2012, 248):

- (110) a. Otell-eð ar **flier-ę** ruäm eld motell-eð
 hotel-DEF has more-ACC.NEU.PL room.PL than motel-DEF
 ‘The hotel has **more** rooms than the motel’
 b. Grand Otell ar endq **flier-u**.
 Grand Hotel has even more-ACC.NEU.PL
 ‘Grand Hotel has even **more**.’

This is slightly surprising, given that comparative adjectives do not normally inflect when they modify a noun. The language may have made an exception for this case because it is a determiner.

The same generosity appears not to be extended to determiners that are morphologically superlative, though. Of these, there are only two: *mjäst* ‘most’ and *minst* ‘least’. Unlike Swedish, Övdalian does not have a superlative of ‘many’ that is specialized for count nouns; the word *mjäst* is the superlative of both ‘many’ and ‘much’, like English *most*.^{15,16} The interview data I collected suggests that uninflected *mjäst* can have both proportional and relative readings, with both mass nouns and count nouns. Here is a case of a proportional use with a count noun:

- (111) **Mjäst** äv **krippum** so går i main skaul tyttşer umm te spilå.
 much.SPRL of child.DAT.PL that go in my school think about to play
 ‘**Most of the kids** who go to my school like to play music.’

Note that the form *krippum* is ambiguous between definite and indefinite dative plural, but one of my consultants explicated it with the Swedish-like form *kripp-ar-na* ‘kid-PL-DEF.PL’, which is unambiguously definite plural, so it is clear that a definite reading was intended at least in that case. Note also that there were not many participants who gave (111) as a translation for the sentence in question (only three), and the speakers I interviewed in person clearly found it very difficult to think of a good translation for *de flesta* in Swedish. Besides the three participants who gave something like (111), one participant gave *mjast kripper* ‘much.SPRL child.NOM.PL’, and the other six participants did not use any form of *mjäst*, opting instead of alternative strategies such as ‘almost all’ or ‘the greater part’ or ‘there are many ... who’. Indeed, regarding the form *flierer* Åkerberg (2012, 248) writes (translated from Swedish) that it “functions as a comparative to *mikkler*” but “there is no superlative. For *de flesta* [proportional ‘most’ in Swedish] paraphrases are used, for example *styöst dieln äv gardum* (most of the farms).” This echoes Levander (1909, 56), which writes that there is no counterpart to *flesta* in Swedish.¹⁷ So (111) is indeed slightly

¹⁵I gloss it as ‘much.SPRL’, based on the assumption that *much* is unmarked relative to *many*, in line with Wellwood (2014) who argues that *many* is *much* plus plurality.

¹⁶This is somewhat surprising from the perspective of Bobaljik (2012), given that there is a comparative form of ‘many’ that is specialized for count nouns, namely *flierer*. But while Swedish has *fler* ‘many.cmp’ and *flest* ‘many.SPRL’, Övdalian lacks a counterpart to *flest*. The Orsa variety does not make the distinction for either the comparative or the superlative, but uses *mer* for both count and mass nouns (Olhsén & Olander, 2010).

¹⁷Bengt Åkerberg remarked to me that *mjäst* appears to be ‘occupied’ (*upptaget* in Swedish), in other words, unavailable, because it is used for other purposes. Indeed, as Kastrup (2016) shows, there are a number of uses of *mjäst* in the Frost Anders corpus but in no case is the word used in one of the ways we are looking at. Its most frequent use would be translated into English as ‘almost’, as in *Klukkå mjäst ien kwart yvyr niu*, lit. ‘The clock is **almost** a quarter after nine.’ It can also be used adverbially as in *Dier dörär war fel mjäst i bruk* ‘Those doors were presumably **mostly** in use.’ The closest we come to a quantity superlative use in the corpus is cases like *fq drikk mjäst willdum äv dyö-ðar guäð tşinnstşyrj* lit. ‘get to drink **most** we wanted of that there delicious buttermilk’, which we would normally render in English with *as much as we wanted* (although a priori a superlative also seems a fine choice for expressing that meaning). (This pattern is also reported in the Orsa dictionary for *mjäst*, and seems

uncomfortable, but I take the fact that it was offered independently three times as an indication that it is generated by the grammar of Övdalian.

In the Orsa dictionary (Olhsén & Olander, 2010), we find the following uses of *mjåst*, which is listed in the dictionary as the translation of Swedish *flest* ‘many.SPRL’:

- (112) **Mjåst krippär** a we fatigör. [Orsa]
 much.SPRL child.NOM.MASC.PL.DEF have been poor.PL
 ‘**Most (of the) children** were poor’.

Olhsén & Olander (2010) also lists the following example, where *mjåst* is ‘independent’:

- (113) **Mjåst-or kāmā** firi Järka. [Orsa]
 much.SPRL-NOM.PL came before Järka
 ‘**Most of them** came before Järka’

Since these examples were not collected under circumstances that would bias towards overuse of *mjåst*, they give clear evidence that it is natural to use indefinite *mjåst* for a proportional reading in Orsa.

Let us turn now to proportional readings involving mass nouns. The 17-sentence story also included two sentences that were intended to elicit a proportional reading with a mass noun: *I don’t like most of the music that they play on the radio* and *I drank most of the milk too*. For the first of these sentences, there were only three speakers who gave a translation involving a quantity superlative, and none of these were the same. One gave *eð mjastað åv musitsem*, with a neuter singular determiner *eð* and a definite neuter singular ending on *mjåst*. Another gave just *mjastað åv musitsem*, again with a definite neuter singular ending on *mjåst* but without *eð*. The third speaker gave *mjåst åv ollum musik* ‘most of all music’. Since each of these occurred only once, it is not clear to what extent these are part of the language. The sentence involving milk produced a somewhat more consistent pattern of results. Several informants gave the following:

- (114) Ig drokk **mjåst åv mjotsin**.
 I drank much.SPRL of milk.DEF
 ‘I drank **most of the milk**.’

The Orsa dictionary gives one example of *mjåst* that arguably has a proportional non-count interpretation, which is ‘independent’:

- (115) Ta **de mjåsta!**
 take the much.SPRL-DEF
 ‘Take **most of it!**’

I am not sure what to make of this determiner here, as Orsa does not normally use determiners, like Övdalian. It may be a borrowing from Swedish. In any case, my Orsa consultants also used a definite ending on *mjåst* for a proportional reading with *milk*:

- (116) I drakk upp **mjåst-a åv mjötjön**.
 I drank up much.SPRL-DEF av milk.DEF
 ‘I drank **most of the milk**.’

This appears to be a difference between Orsa and Övdalian. Either Orsa retains definiteness marking

to be general across superlatives, e.g. *tystest ig dugde* ‘**quietest** I could’.) But given that it does have a range of uses, the question becomes why it couldn’t have one more.

from an earlier stage or Orsa has been influenced by Swedish. (Indeed, Orsa is closer to Swedish on the dialect continuum than Övdalian.)

Turning now to relative readings, and returning to Övdalian, I found a similar avoidance of *mjäst* in translations of sentences that were intended to elicit relative readings of quantity superlatives, but there were nevertheless two kinds of responses involving quantity superlatives that emerged with some regularity:

- (117) Åv oll unger iär i skaulan ir eð ig so spiler ...
of all children here in school.DEF is it I as plays
‘Of all the children here in the school, I’m the one who plays ...’
- a. **mjäst instrument**
much.SPRL instrument.PL
... **the most instruments.**’
- b. **mjäst åv instrument-um**
much.SPRL of instrument-DAT.PL
... **the most instruments.**’

The dative variant was also elicited under somewhat more naturalistic conditions, with a picture of several animals associated with various numbers of apples.

- (118) Eð ir jan dar so ar **miäst åv epplum.**
It is DEM there as has much.SPRL of apples.DAT.NEU.PL
‘It is that one who has **the most apples.**’

Levander (1909, 59) also suggests that *miäst* can be used with a relative readings. He gives the two variants in (119), and glosses them both with ‘the greatest number of farms’ (Swedish *största antalet gårdar*) as indicated in the gloss.

- (119) Baslaeð ie {**miast gard-a, miast åv gard-um**}
Bäragslaget has {much.SPRL farm-ACC.MASC.PL, much.SPRL of farm-DAT.MASC.PL.}
iar i soken
here in parish.DEF
‘Bäragslaget own **the greatest number of farms** here in the parish.’

There is perhaps an indirect suggestion by Levander (1909) that the same strategy is not available for a proportional reading; for such a reading, he gives only:

- (120) Buödlæð ie **styäst diel-n åv gard-um** ostro Klitem
company-DEF has big.SPRL part-ACC.COM.SG.DEF of farm-PL.DAT.DEF east Klitt-DEF
‘The company owns **the greater part of the farms** east of Klitten.’

Bare *mjäst* may be used for relative readings in the Orsa dialect as well; Olhsén & Olander (2010) helpfully list two examples with relative readings, in the same pattern.

- (121) Ånnå add fändji **mjäst krippa** åv öllöm. [Orsa]
Anna had gotten much.SPRL child.PL.ACC of all.dat
‘Anna had the **most children** of all.’
- (122) Mårgita fikk **mjäst.** [Orsa]
Mårgita got much.SPRL
‘Margaret got **the most.**’

Similar results were obtained for superlatives of inferiority, and with mass nouns in Övdalian:

- (123) An so spiler **minst** (åv) **instrument** åv uäs aller ir maï syster Karin.
he as plays little.SPRL of instrument.PL of us all is my sister Karin
'The one who plays **the fewest instruments** is my sister Karin.'

(One participant gave *minst åv instrumentum*.)

- (124) Eð ir naug Ans so ar drutşeð **mjäst** (åv) **kaffi** idag.
it is probably Hans as has drunk much.SPRL of coffee today
'It's probably Hans who has drunk **the most coffee** today.'

- (125) Eð ir ig so drikk **minst** (åv) **kaffi**.
it is I as drinks little.SPRL of coffee
'I'm the one who drinks **the least coffee**.'

(*Kaffi* 'coffee' is a loanword that does not inflect for case.)

To summarize: Although quantity superlatives are not perfectly happy in sentences expressing proportional *or* relative readings, they appear without any definite determiner and without any indication of definiteness on the superlative quantity-word. The only place we see any indication of definiteness marking is on the head noun, in sentences expressing proportional readings, as in *most of the children*, but there is no reason to believe that this definiteness-marking is associated with the phrase containing the superlative, rather than being limited to a smaller phrase containing just the noun, functioning as a partitive phrase, like the definiteness-marking on *children* in *most of the children*. So regardless of whether a proportional or relative reading is intended, no definiteness-marking appears on the phrase containing the superlative. In this respect, Övdalian is in a way halfway in-between English and Swedish (as it is in a number of other interesting respects). It has the bare *most* of English, and the bare *mest* of Swedish.

But before we get too excited, we should note that it is not entirely clear whether definiteness marking on a quantity superlative is even possible given general principles of the language. As mentioned above, Övdalian does not use preposed definite articles (or if it does, only rarely), and superlative adjectives are not inflected when used attributively. So there are independent reasons not to expect definiteness marking on quantity superlatives in Övdalian. Evidence from Icelandic, which I will discuss next, gives clearer evidence for the missing cell.

2.7 Icelandic

Icelandic, like Övdalian, does not use definite articles. However, it does display inflectional endings on quantity superlatives, and these indicate definiteness among other things. Data from 20 native Icelandic speakers shows that Icelandic certainly occupies the missing cell in the two by two paradigm, where both proportional and relative readings are clearly indefinite.

This can be seen through the detailed inflections that Icelandic adjectives exhibit, and Icelandic's generous use of them on quantity superlatives. Here is the pattern of strong adjectival inflections:

	MASC SG	FEM SG	NEU SG
NOM	íslenskur ur	íslensk	íslenskt
ACC	íslenskan an	íslenska	íslenskt
DAT	íslenskum um	íslenskri	íslensku
GEN	íslensks	íslenskrar	íslensks
	MASC PL	FEM PL	NEU PL
NOM	íslenskir	íslenskar	íslensk
ACC	íslenska	íslenskar	íslensk
DAT	íslenskum um	íslenskum um	íslenskum um
GEN	íslenskra	íslenskra	íslenskra

Here are the weak inflections, found in definite contexts:

	MASC SG	FEM SG	NEU SG
NOM	íslenski	íslenska	íslenska
ACC/DAT/GEN	íslenska	íslensku	íslenska
	MASC PL	FEM PL	NEU PL
ALL CASES	íslensku	íslensku	íslensku

2.7.1 Quality superlatives

Roelandt (2016b) reports that the following sentence is ambiguous between an absolute and a relative reading in Icelandic:

- (126) Jón kleif **hæst-a** **fjallið**.
 John climbed high.SPRL-ACC.MASC.SG.WK mountain[MASC].DEF
 ‘John climbed **the highest mountain**.’

On an absolute reading, the noun is definite and the superlative adjective carries a weak ending:

- (127) Mamma bakar **best-u** **kökur-nar** í heiminum
 Mom bakes good.SPRL-PL.WK cookie[FEM].PL-PL.DEF in world.DAT.DEF
 ‘Mom bakes **the yummiest cookies** in the world.’

For relative readings, almost all of the participants gave a similar pattern:

- (128) Ég er ekki fjölskyldu-meðlimur-inn með **grennst-a** **mittið**.
 I am not family-member-DEF with thin.SPRL-NEU.SG.WK middle[NEU]
 ‘I am not the family member with the thinnest waist.’

(One participant out of 16 gave *mjóst mitti*, following the Swedish pattern.)

2.7.2 Quantity superlatives

Here is the inventory of quantity words in Icelandic:

	+ /COUNT	+ /MASS	- /COUNT	- /MASS
POSITIVE	margur	mikill	fá	lítill
COMPARATIVE	fleiri	meiri	færri	minni
SUPERLATIVE	flest	mest	fæst	minnst

Note that *margur* is the masculine singular form for ‘many’; the feminine singular is *mörg*, neuter singular is *margt*, masculine plural is *margir*, feminine plural is *margar*, and neuter plural is *mörg* (Kupča, 2016, 23). Note also that *margur* can be used in the singular to mean *much*, but *mikill* was consistently used for *how much coffee*, suggesting that it is the closest correlate of ‘much’ in Icelandic:

- (129) Ég veit ekki **hversu mikið** kaffi við höfum drukkið eða **hversu**
 I know not how much.NEU.SG coffee[NEU] we have drunk or how
margar smákökur við höfum borðað.
 many.FEM.PL cookie.[FEM].PL we have eaten
 ‘I don’t know **how much coffee** we have drunk or **how many cookies** we have eaten.’

Unlike in Övdalian, quantity superlatives inflect for gender and number, following the regular pattern for adjectives, as far as I can tell. Extrapolating from the table above gives:¹⁸

	MASC SG	FEM SG	NEU SG
NOM	flest ur	flest	flest
ACC	flest an	flest a	flest
DAT	flest um	flest ri	flest u
GEN	flest s	flest rar	flest s
	MASC PL	FEM PL	NEU PL
NOM	flest ir	flest ar	flest
ACC	flest a	flest ar	flest
DAT	flest um	flest um	flest um
GEN	flest ra	flest ra	flest ra

Here are the weak inflections, found in definite contexts:

	MASC SG	FEM SG	NEU SG	PL
NOM	flest i	flest a	flest a	flest u
ACC/DAT/GEN	flest a	flest u	flest a	flest u

These tables are consistent with the usages I have observed, shown below.

Let us begin with proportional readings. In the context of a discussion about the syntax of partitive doubling, Wood et al. (2015) give the following example:

- (130) **Flest-ir** **bílanna** hafa aldrei verið keyrðir.
 many.SPRL-MASC.PL car[MASC].GEN.PL.DEF have never been driven
 ‘**Most of the cars** have never been driven.’

¹⁸The wordlist for the *Scaldic Poetry of the Scandinavian Middle Ages* lists all of these forms for *flest* (<http://skaldic.abdn.ac.uk/db.php?id=21446&if=default&table=lemma>).

They also mention the following alternatives:

- (131) a. **Flest-ir** **af bílunum** ...
 many.SPRL-MASC.PL of car.DAT.PL.DEF
 b. **Flest-ir** **bílarnir** ...
 many.SPRL-MASC.PL car.NOM.PL.DEF

In all cases we see inflection on *flest* that is clearly negatively specified for definiteness; the definite (weak) ending would be *flestu*.

The results of the translation survey provide further corroboration for the acceptability of these patterns. Because the verb *like* takes a dative subject (sometimes), the sentence *Most of the kids in my school like to play music* elicited 12 responses involving dative case, such as the following:

- (132) **Flestum** **krökkunum** í skólanum mínum finnst gaman að spila á
 many.SPRL-MASC.DAT kid[MASC].PL.DAT in school.DAT my.DAT find fun to play on
 hljóðfæri.
 instruments
 ‘**Most of the kids** in my school like to play instruments.’

Two participants also gave *flestum krakkanna* instead of *flestum krökkunum*; the latter uses a genitive ending. A number of participants also chose the noun *barn* (‘child’, neuter) instead of *krakka* (‘child’, masculine), yielding *flestum börnunum* or *Flestum barnanna*. Eight participants used nominative *flestir* rather than dative *flestum*, and here there was another split between case-agreement and genitive case on the noun; some gave *flestir krakkarnir*, with nominative case on both the determiner and the noun, and others gave *flestir krakkanna*. Finally, two participants gave *flest börn* ‘many.SPRL child[NEU].PL’, with no inflectional endings on either word, but note that *börn* has neuter gender, and the neuter plural ending is null, so this is not a deviation from the general pattern. The following example of a proportional reading falls under this pattern as well:

- (133) Mamma bakaði smákökur í gær og ég borðaði **flest-ar** **þærra**
 Mom baked cookies yesterday and I ate many.SPRL-NOM.FEM.PL them.GEN
 ‘Mom baked cookies yesterday and I ate **most of them**.’

(Other translations given used bare *flestar*, *þær flestar*, and *mest af þeim*.)

What is common to all of these translations is that definiteness-marking is conspicuously absent from the quantity word, and not because the quantity word doesn’t inflect. Thus Icelandic shares with English the feature that there is no definiteness-marking with proportional readings.

The same is true in case of a non-definite substance noun (example from Wiktionary):

- (134) **Flest** **fólk** langar að líða vel.
 many.SPRL person[NEU].PL long to feel well
 ‘**Most people** want to feel good.’

The definite form would be *flestu*.

The results do not look quite the same for proportional readings with mass nouns. A majority of the participants used something other than *mest* to translate *I drank most of the milk*. Most common was:

- (135) Ég drakk **megnið** **af mjólkinni**.
 I drank majority.DEF av milk[FEM].DAT.DEF
 ‘I drank **most of the milk**.’

Other strategies included *næstum alla mjólkina* ‘almost all the milk.ACC.DEF’ and *meiri hlutann of mjólkinni* lit. ‘more part of the milk.DAT.DEF’. Some participants also gave *mest af mjólkinni*.

- (136) Ég drakk **mest** af mjólkinni.
 I drank much.SPRL.ACC.NEU.SG av milk[FEM].DAT.DEF
 ‘I drank **most of the milk.**’

I take *mest* to be an indefinite (strong) neuter singular form, because it is not a definite (weak) form (which would end in *-u* for accusative feminine singular or *-a* for accusative neuter singular), nor is it a indefinite accusative feminine singular (*-a*).

To make sure that this sentence really has a proportional interpretation, I asked the Icelandic speakers who participated in the study to translate the following sentences, where the relevant NP is in subject position and therefore more likely to have a proportional reading:

- (137) **Most of the milk** spilled on the floor.

- (138) **Most milk** comes from cows.

For (137), the responses included *megnið af mjólkinni* (most common), followed by *mest öll mjólkinn* ‘(al)most all milk’,¹⁹ and in one case, *mest af mjólkinni*.

- (139) **Mest** af mjólkinni helltist niður á gólfíð.
 much.SPRL.ACC.NEU.SG of milk.DAT.DEF was _spilled down on floor.DEF
 ‘**Most of the milk** spilled on the floor.’

The second example was translated with *mest af mjólkinni*, *mest öll mjólk*, *megnið af mjólk*, and *mest av (allri) mjólk*:²⁰

- (140) **Mest** af (allri) mjólk kemur úr kúm
 much.SPRL.ACC.NEU.SG of all.DAT.FEM.SG milk comes out _of cows
 ‘**Most milk** comes from cows.’

All of this suggest that *mest af* is a grammatical, though dispreferred option for expressing proportional readings of count nouns.

Let us now turn to relative readings. These are much more regular. Variations from the following patterns were exceedingly rare:

- (141) a. Ég er sá í fjölskyldunni sem borðar flestar smákökur.
 I am she in family as eats many.SPRL-ACC.FEM.PL cookie.PL
 b. Ég er sú í fjölskyldunni sem borða mest af smákökum.
 I am her in family as eats much.SPRL.NEU.SG of cookie.DAT.PL
 ‘I am the one in the family who eats **the most cookies.**’
- (142) Karin systir mín er sá í fjölskyldunni sem leikur á fæst
 Karin sister mine is she in school.DAT.DEF who plays on few.SPRL.ACC.NEU
hljóðfæri.
 instrument.pl
 ‘My sister Karin is the one in the school who plays **the fewest instruments.**’

¹⁹This is also a very common construction in Övdalian.

²⁰The consultant who gave the *allri* variant said “there needs to be an extra word between *of* and *milk*,” but another consultant offered a variant without *allri*.

Fåest does inflect with relative readings, as shown in the following example (found via Google, among a number of others of its kind):

- (143) Íslendingar hafa **flest-a** lækna en **fæst-a**
 Iceland has many.SPRL-ACC.MASC.PL doctor[MASC].PL and few.SPRL-ACC.MASC.PL
hjúkrunarfræðinga af Norðurlöndunum
 nurse.PL of Scandinavian_country.DAT.PL.DEF
 ‘Iceland has **the most doctors** and **the fewest nurses** among the Scandinavian countries.’
- (144) Það er örugglega Hans sem hefur drukkið **mest** kaffi.
 it is probably Hans as has drunk much.SPRL.ACC.NEU coffee
 ‘It is probably Hans who has drunk **the most coffee**.’
- (145) Ég er sá sem drekkur **minnst** kaffi.
 I am she as drinks little.SPRL.ACC.NEU coffee
 ‘I am the one who drinks **the least coffee**.’

In a nutshell: Icelandic uses indefinite (strong) inflections on quantity superlatives for both proportional and relative readings.

2.8 Faroese

Let us quickly review the situation in Faroese before summarizing the general situation in Germanic. Faroese is genetically classified as closer to Icelandic than to Swedish, and declines adjectives according to exactly the same paradigm (Lockwood, 1977, 46ff). Yet Faroese quantity superlatives behave more as they do in Swedish than in Icelandic, according to translations I received from seven Faroese speakers.

2.8.1 Quality superlatives

Let us begin with quality superlatives. These were translated with definiteness marking whether a relative or absolute reading was intended.

- (146) Eg eri ikki tann í familjuni við **klænast-u** **miðjuni**
 I am not DEM in family.DAT.DEF with small.SPRL-WK middle.DAT.DEF
 ‘I am not the one in the family with **the thinnest waist**.’

Other options included *ta tunnastu miðjuna* and *minstu miðju*, both with definiteness marking.

Here is a case of an absolute reading:

- (147) Mamma bakar **tær lekrastu** **smákøkurnar** í verðini.
 Mom bakes the yummy-WK cookie.PL.DEF in world.DAT.DEF
 ‘Mom bakes the yummiest cookies in the world.’

So both absolute and relative readings of quality superlatives involve definiteness-marking.

2.8.2 Quantity superlatives

The inventory of quantity superlatives in Faroese is quite similar to that of Icelandic (Lockwood, 1977, 52):

	+ /COUNT	+ /MASS	- /COUNT	- /MASS
POSITIVE	nógvur/flieri/mangur	nógvur/mikil	fáur	lítill
COMPARATIVE	fleiri	meiri	færri	minni
SUPERLATIVE	flestir	mestur	fæstur	minstur

Oddly enough, *fleiri* is ambiguous between ‘many’ and ‘more’. Multiple survey participants gave this sentence as a translation for *My brother Hans plays many instruments, but not more than me*:

- (148) Hans, beiggi mín, spælir **fleiri** ljóðføri, men ikki **fleiri** enn eg.
 Hans brother mine plays many instruments but not more than I
 ‘Hans, my brother, plays many instruments, but not more than I.’

But the first *flieri* can be replaced by *nógv*. The latter is the only word for *many* that showed up in the *how many* context:

- (149) Eg veit ikki, **hvussu nógv kaffi** vit hava drukkið, og **hvussu nógvur kakur** vit
 I know not how much coffee we have drunk and how much.PL cookies we
 hava etið
 have eaten
 ‘I don’t know **how much coffee** we have drunk and **how many cookies** we have eaten.’

In other Scandinavian languages, a cognate of *flieri* means ‘several’ in addition to ‘more’; perhaps this ‘several’ use was extended to a positive ‘many’ use in Faroese.

Now let us turn to definiteness-marking on quantity superlatives. For proportional case, quantity superlatives were always translated with definiteness-marking, although speakers differed in whether they included a prenominal article in some cases:

- (150) {**Flestu**, **Tey flestu**} **børnini** í mínum skúla dáma at
 {many.SPRL.WK, the.NEU.PL many.SPRL.WK} kid.NOM.PL.DEF in my school like to
 spæla tónleik
 play music
 ‘**Most of the kids** in my school like to play music.’
- (151) Mamma bakaði smákøkur í gjár, og eg át **tær flest-u** (**av**
 Mom baked cookies yesterday and I ate the.FEM.PL many.SPRL-WK of
teimum).
 them.DAT.PL
 ‘Mom baked cookies yesterday and I ate **most of them**.’
- (152) Eg drakk **tað mest-a av mjólkini**.
 I drank the.NEU.SG most-WK of milk.DAT.DEF
 ‘I drank **most of the milk**.’
- (153) Mær dámar ikki **tað mest-a av tí tónleikinum**, sum tey
 me.DAT like not the.NEU.SG much.SPRL-WK av the.DAT.SG music.DAT.DEF as they
 spæla í útvarpinum.
 play in radio.DEF
 ‘I don’t like **most of the music** that they play on the radio.’

With relative readings, we find always an uninflected (hence neuter singular) quantity superlative followed by an indefinite noun, as in Swedish.

- (154) Eg eri tann í familjuni, sum etur **flest** **køkur**
 I am DEM in family.DAT.DEF as eats many.SPRL.NEU.SG cookie.PL
 ‘I’m the one in the family who eats **the most cookies.**’

This case is surprising from an Icelandic perspective; the agreeing weak inflection would be *flestar*, since ‘cookies’ is feminine. Indeed, one informant (out of seven) did give *flestar køkur*, but the rest used a fully uninflected form of *flest* (in four cases) or *mest* (in two cases).

The other cases also showed no inflection on the adjective, and this is consistent with an indefinite neuter (singular or plural) interpretation, agreeing with the following noun, which is neuter gender:

- (155) Av øllum børnunum í mínum skúla, eri eg tann, sum spæli **flest**
 of all.DAT kids.DAT.PL.DEF in my school, am I DEM as plays many.SPRL.NEU.SG
ljóðføri
 instrument.PL
 ‘Of all the kids in my school, I’m the one who plays **the most instruments.**’
- (156) Tann, í mínari familju, sum spælir **fægst** **ljóðføri**, er systir mín, Karin
 DEM in my family as plays few.SPRL.NEU.SG instrument.PL is sister mine Karin
 ‘The one in my family who plays **fewest instruments** is my sister Karin.’
- (157) Tað er nokk Hans, sum hevur drukkið **mest** **kaffi**.
 It is probably Hans as has drunk much.SPRL.NEU.SG coffee
 ‘It is probably Hans who has drunk **the most coffee.**’
- (158) Eg eri tann, sum drekkur **minst** **kaffi**.
 I am DEM as drinks little.SPRL.NEU.SG coffee
 ‘I am the one who drinks **the least coffee.**’

Thus Faroese looks very much like Swedish, even though it has a much richer inflectional system. The rich inflectional system allows us to interpret the unmarked quantity superlative as a indefinite, non-agreeing, neuter singular form (whereas in Swedish, since superlatives do not show gender distinctions, the bare form is not obviously a neuter form).

3 Summary and discussion

3.1 Summary

Summary of definiteness-marking patterns. Relative readings are always definite in German and Dutch, and both of these languages offer two options.

- German: *die meisten/wenigsten* (full agreement) or *am meisten/wenigsten* (neuter singular with preposition)
- Dutch: *de meeste/minste* (full agreement) or *het meeste/minste* (neuter singular)

English also typically has definiteness-marking with relative readings but also allows a bare superlative.

- English: *(the) most/fewest/least*

In Swedish, Dalecarlian, Icelandic, and Faroese, quantity superlatives show no definiteness-marking with relative readings. In Swedish, Dalecarlian, and Faroese, there is no inflection but in Icelandic, one sees strong adjectival inflection indicating indefiniteness.

- Swedish: *flest/mest/?färst/minst*
- Övdalian: *mjäst/minst*
- Faroese: *flest/mest/fægst/minst*
- Icelandic: e.g. *flestar smákökur*

Proportional readings are definite in more languages:

- German: *die meisten Kinder, das meiste von der Milch*
- Dutch: *de meeste kinderen, het meeste van de melk*
- Swedish: *de flesta barnen, det mesta av mjölken*
- Faroese: *(tey) flestu bornini, tað mesta av mjolkini*

They are generally not marked definite in Dalecarlian (with the exception of *mjásta av mjotjön* in Orsa), but this may be due to poor morphological resources. In Icelandic, proportional readings are clearly indefinite. Övdalian and Icelandic look like English in this respect.

- Övdalian: *mjäst åv krippum/mjötşin*
- Icelandic: *flestir bílanna/bílarnir, ??mest af mjólkinni*
- English: *most of the kids, most of the milk*

So every possible pattern of definiteness-marking is attested: both, neither, one, and the other. This is at first sight a rather mind-boggling situation, given that these languages are closely related and it is hard to imagine that the atomic elements involved – definiteness, superlative-marking, and quantity words – could differ so dramatically in their meaning.

Note that the situation with quality superlatives is much tidier: Both absolute and relative readings are indicated with definiteness-marking in German, Dutch, English, Dalecarlian, Faroese, and Danish. In Norwegian, Swedish, and perhaps (modern) Dalecarlian, relative readings may or may not be marked definite. So most of the languages fit into one pattern, and there are only two patterns. Given that quality superlatives are so much more orderly than quantity superlatives, we clearly cannot account for this cross-linguistic variation by appealing to differences in how the superlative morpheme operates. The quantity words are the volatile elements.

Summary of agreement patterns. The empirical investigations have also revealed a number of different kinds of agreement mismatches, both with relative readings and with proportional readings. With relative readings, we find the following agreement mismatches:

- German *am meisten Berge*: the determiner is singular neuter and the substance noun is masculine plural
- Dutch *het meeste bergen*: the determiner is singular neuter and the substance noun is masculine plural
- Mainland Scandinavian *flest kakor, minst kakor*: the determiner is non-plural but the substance noun is plural

- Faroese *flest køkur*: the determiner is neuter singular but the substance noun is feminine plural

All of these mismatches involve a neuter singular form.

With proportional readings, we find the following mismatches:

- Swedish *de flesta kvinnor, den mesta ost*: the determiner is definite but the substance noun is not.
- Icelandic *flestir bílarnir* and *flestir bílanna*: the determiner is indefinite but the substance noun is indefinite.
- In the partitive structures *het meeste van de melk* (Dutch) and *det mesta av mjölken* (Swedish), the ‘outer’ determiner is neuter, and the substance noun is not. Across all languages surveyed, fully agreeing structures like *den mesta mjölken* were not entirely acceptable in the mass noun cases.

But there is an important difference between these two types of mismatches:

(159) **Number-marking generalization**

Mismatching *relative* readings are always *singular*, even if the substance noun is plural; mismatching *proportional* readings are plural when the substance noun is plural.

A theory of quantity superlatives in Germanic should be able to account for this generalization, as well as the puzzling variability in definiteness.

With quality superlatives, there is almost always full agreement, across all Germanic languages. There are no exceptions to this that I know of in definite constructions; the only exception involves number mismatches with completely bare superlatives in Swedish and (perhaps Swedish-influenced varieties of) Dalecarlian, which were illustrated above with *dyrast kläder* ‘most expensive clothes’ in (69) and *störst fiskar* ‘biggest fish.PL’ in (70).

Summary of mass/count contrasts. In language after language, we find that proportional readings with mass nouns are preferably expressed using a partitive structure. Swedish allows for example *den mesta mjölken* ‘most of the milk’ on a proportional reading, but speakers tend to prefer *det mesta av mjölken*. The analogous preference is extremely strong in German, Dutch, Dalecarlian, Icelandic, and Faroese. This preference was not as strong with plurals; *de flesta barnen* ‘most of the kids’ for example is perfect in Swedish as are analogous examples in many other languages.

3.2 Discussion

Given the broad empirical scope of this article, space prevents a fully technical derivation for every finding; I will merely outline a strategy for giving one, with reference to existing proposals. Each of the three main findings will be considered in turn, starting with the number-marking generalization (as these considerations will shed light on the variability in definiteness-marking).

Number-marking generalization. Observe that in the case of proportional readings, the quantity superlative characterizes an individual that falls under the extension of the substance noun. For example, *De flesta barn* characterizes a plurality of children that is greater than the plurality constituting the other children. With relative readings, the quantity superlative may characterize an abstract quantity. Indeed, the measure noun that typically surfaces with relative readings is some

synonym of ‘number’ or ‘amount’, while the measure noun that typically surfaces with proportional readings is typically ‘part’. Reading about the recent U.S. election in Swedish, I came across the following headline:

- (160) Trump vann valet - men Clinton fick flest antal röster.
 Trump won election.DEF - but Clinton got many.SPRL number votes
 ‘Trump won the election - but Clinton got **the most votes**.’

This is judged as slightly redundant and awkward (it should be *störst antal* ‘greatest number’), but it nevertheless suggests that superlatives in relative readings may be perceived as characterizing quantities rather than individuals. The measure noun that appears in proportional contexts is usually ‘part’, as in e.g. Norwegian *flesteparten* (cf. also *maggior parte* in Italian, among many other examples in many other languages).

According to Koptjevskaja-Tamm (2001, 523), the difference between parts and amounts lies behind the distinction between pseudopartitives from partitives. In a partitive case like *a piece of the cake*, we are “talking of a PART of something rather than AMOUNT of some substance, as we do in [*a cup of tea*].” And Dobrovie-Sorin & Giurgea (2015) make an analogy between pseudopartitives and relative readings of superlatives on the one hand, and true partitives and proportional uses like *most of the cookies* on the other hand.

pseudopartitives (e.g. <i>two liters of milk</i>)	partitives (e.g. <i>a piece of the cake</i>)
relative readings (e.g. <i>the most cookies</i>)	proportional readings (e.g. <i>most of the cookies</i>)

The suggestion to be made here is built on the idea that with relative readings, at least in some cases, we are “talking of an amount”. With proportional readings, we are “talking of a part”.

More specifically, the hypothesis I wish to explore is as follows:

(161) **Target-domain hypothesis**

The agreement features of the superlative adjective are determined by the domain from which the target argument of the superlative is drawn.

To give this teeth, we must specify more precisely what we mean by “the target argument” and “the domain from which [a given argument] is drawn”, as well as exactly how the agreement features are “determined”.

The term ‘target’ is borrowed from the world of comparatives, where in a sentence like *John is taller than Mary*, the target is John and the standard is Mary. Analogously, in a predicative use of a superlative like *John is the tallest*, the target is John. Under a standard view of superlatives, the three arguments that a superlative takes are a gradable predicate *G*, a comparison class *C*, and an individual *x*. The individual *x* corresponds to the target. There may not be any constituent in the sentence corresponding to the target. In a non-predicative case like *John ate the biggest sandwich*, on, say, an absolute reading, the individual argument of the superlative is bound by an operator rather than being syntactically realized.

More technically, I propose to conceive of the target as a particular discourse referent. In the spirit of Pollard & Sag (1994), I imagine that discourse referents are associated with agreement features, and in the spirit of both Pollard & Sag (1994) and Kamp et al. (2011), I imagine that syntactic phrases are associated with a ‘referential argument’, a particular discourse referent whose agreement features are shared throughout the phrase. For a superlative, the referential argument is the target.

Theories differ as to exactly what array of arguments a superlative morpheme takes (Heim, 1999; Solt, 2011; Krasikova, 2012; Szabolcsi, 2012; Coppock & Beaver, 2014), but all of the theories I am aware of involve an argument that could be labelled the ‘target’ argument. A heuristic for finding it would be to take the one that comes last in the compositional order. All of these theories would predict that the target in the case of an absolute reading of *John ate the biggest sandwich* is a sandwich. But when it comes to relative readings, the identity of the target depends somewhat more on the choice of analysis. On a movement analysis (e.g. Szabolcsi 1986, Heim 1999, Hackl 2009, i.a.), the superlative moves to a position where it can take the focus as its target argument. So in *JOHN ate the biggest sandwich*, the target is John. On in-situ analyses (Gawron, 1995; Farkas & É. Kiss, 2000; Sharvit & Stateva, 2002; Gutiérrez-Rexach, 2006; Teodorescu, 2009; Pancheva & Tomaszewicz, 2012; Coppock & Beaver, 2014; Coppock & Josefson, 2015), the target is still a sandwich. On an analysis in the style of Krasikova (2012) along the lines re-envisioned by Szabolcsi (2012), the target is actually a predicate of degrees, formed by abstraction over the position of the superlative. I will suggest below that, given the patterns of agreement-marking that we find, the target-domain hypothesis leads us to prefer a Krasikova-style analysis in some cases.

Intuitively, what is meant by “the domain from which [a given argument] is drawn” is simply the collection of sortal constraints placed on the discourse referent. If the discourse referent is constrained to be a sandwich, then it is drawn from the domain of single sandwiches. If it is constrained to be a plurality of sandwiches, then it is drawn from a plural domain. If it is constrained to be some portion of milk, then it is drawn from a mass domain. If it is constrained to be a degree, then it is drawn from the domain of degrees.

I make the following straightforward assumption regarding the mapping from domains to agreement features: If a given discourse referent is drawn from a plural individual domain, then it is associated with plural agreement features. If it is drawn from a non-plural individual domain, then it has singular agreement. For discourse referents drawn from domains of individuals, the gender feature depends on the domain. In contrast, a target drawn from a domain of non-individuals gets default neuter singular agreement.

The target-domain hypothesis can help us to explain the number-marking generalization as follows: In the case of a proportional reading (partitive or non-partitive), the target of the superlative is always a sub-part of the denotation of the substance noun. This is essential to what it means to be a proportional reading: the superlative characterizes some plurality that constitutes more than half of the (relevant) Ns. Hence, the superlative and the substance noun share a domain. This shared domain entails number agreement, even if the superlative has a distinct referential argument, as is clearly the case with partitive structures. But in the case of a relative reading, the target of the superlative may be a property of degrees, if we allow for a Krasikova-style analysis of relative readings.

On a Krasikova-style analysis, the target is not an individual, so the default agreement features neuter and singular are predicted to emerge. On an in-situ analysis, no difference in agreement features is predicted between absolute and relative readings, given that the target of the superlative is drawn from the same domain in both cases (that of the substance noun). On a movement analysis, the target is the focus, e.g. John in *JOHN ate the biggest sandwich*. If John is drawn from a different domain than the sandwich, then a difference in agreement features might be predicted, but it would also be erroneously predicted that the agreement features of superlatives would depend on the number and gender of the focus. So of the existing theories, given the target-domain hypothesis, a Krasikova-style analysis seems best suited to explain the non-agreeing neuter singular pattern.

When there is full agreement for a relative reading, on the other hand, the target-domain hypothesis suggests an in-situ analysis. On an in-situ analysis, the target is drawn from the same domain as the substance noun, so matching agreement features are expected. Bumford (2016) has recently

offered a kind of in-situ proposal that explains the definiteness-marking of quality superlatives on relative readings (rather than merely being compatible with it, as Coppock & Beaver’s (2014) proposal is). This idea could be extended to quantity superlatives under a view where quantity words like *many* are analogous to gradable adjectives like *tall*.²¹

Definiteness-marking. The proposals made above help us to understand the patterns of definiteness-marking that we see. Roelandt (2016a, 350) hypothesizes that for Dutch non-agreeing *het meeste*, the quantity word does not stand in an attributive relationship to the noun, but rather forms a constituent with the determiner to the exclusion of the noun:

(162) [DP [QP *het meeste*] *bergen*]

This is also the case for Krasikova’s analysis of relative readings, motivated above.

This bracketing has independent motivation from the fact that non-agreeing cases of relative superlatives are formally similar to adverbial superlatives. Recall the inventory of agreement mismatches that we have with relative readings:

- German *am meisten Berge*: the determiner is singular neuter and the substance noun is masculine plural
- Dutch *het meeste bergen*: the determiner is singular neuter and the substance noun is masculine plural
- Mainland Scandinavian *flest kakor*, *minst kakor*: the determiner is non-plural but the substance noun is plural
- Faroese *flest køkur*: the determiner is neuter singular but the substance noun is feminine plural

As Roelandt (2016b) mentions, all of these cases match the pattern that adverbial superlatives follow:²²

- (163) a. My sister runs **the fastest**. (English)
 b. Meine Schwester **am schnellsten** rennen. (German)
 c. Mijn zus kan **het hardst** lopen. (Dutch)
 d. Min syster springer **fortast**. (Swedish)
 e. Systir mín rennur **skjótast**. (Faroese)

²¹Why Dutch and German (and possibly English) would extend the same strategy to quantity superlatives but Scandinavian languages would not would remain a mystery as far as I can see, though. Another possibility would be that the agreeing cases in Dutch and German are the result of a kind of regularization process that engenders agreement between any determiner on the left edge and the substance noun. Since Scandinavian languages do not have a determiner on their adverbial superlatives to begin with, this regularization process does not apply. This would constitute an exception to the target-domain hypothesis.

²²It is worth considering whether phrases like *flest kakor* involving quantity superlatives are in fact adverbial phrases, but the answer to this question is clearly negative, as the kinds of phrases we are looking at can occur for example in the pivot of an existential construction, as we have seen, but adverbial phrases cannot:

- (i) *There was fastest on *Tuesday*.

(See Doetjes (1997) for related discussion about French.) But still, there appears to be something important in common between adverbial and nominal-relative uses of quantity superlatives, perhaps owing to the fact that neither type involves a nominal complement.

In an adverbial usage (as in *John ran the most*), *the most* clearly constitutes a unit, so the grammar must generate phrases consisting just of *the most*. Notice also that adverbial superlatives are focus-sensitive (Coppock et al., 2016); the following two sentences mean different things:

- (164) a. John ran the most on *Tuesday*.
 b. *John* ran the most on Tuesday.

So adverbial superlatives have many of the right properties to serve in nominals with relative readings.

This all suggests that the definiteness-marking that we observe in the case of relative readings and the definiteness-marking that we see on adverbial superlatives has a common source in the grammar. This common source must also determine the agreement features neuter and singular, presumably because these are the default features that arise in the absence of a noun to agree with. I suggest that this common source involves a Krasikova-style analysis.

Selkirk (1977, 298) suggested that the definite article that we see in for example *ran the fastest* in English “occupies the position in the tree that in deep structure was occupied by the superlative Det *-est*, and that this *-est*, which we take to be [+Definite], is posposed and encliticized to the Q. In so doing, it leaves behind an empty [+Definite] determiner note; it is into this position that *the* is inserted.” In fact, there is some reason to believe that in English, the definiteness-marker that we see in adverbial and relative superlatives may have a different source than the ordinary one. At a stage of Old English before definite articles had been established, there was an element *ðe* which co-occurred with superlatives. The following example is from Sommerer (2012), who credits Mitchell (1985); I thank Peter Hallman for pointing me to it:

- (165) Babylonia, seo ðe mæ wæs ê ærest ealra burga, seo is nu læst ê
 Babylonia, DEM the? greatest was and first of_all cities DEM is now least and
 westast
 most deserted.
 ‘Babylonia, which was the greatest and first of all cities, is now the least and most deserted.’

This element *ðe* is clearly distinct from the contemporaneous demonstrative *seo* (also seen in (165)), from which it is uncontroversial that modern *the* derives. Further research is required, but if indeed the definite article that we see in *the most* has a distinct historical source from the the definite article we see in other places, then we would be justified in treating it separately to some extent. Perhaps, then, Krasikova’s *the* derives from *ðe*.

As Coppock & Josefson (2015) point out, the indefiniteness of the quantity superlatives with relative readings in Mainland Scandinavian, Dalecarlian, Icelandic, and Faroese is in line with the predictions of the *-est*-movement theory. What one would expect under such a theory would be that relative readings of superlatives would be indefinite, as they are in these Scandinavian languages. However, notice that definiteness is not all that is missing from the quantity superlatives in Mainland Scandinavian; they also lack plural-marking. Rather than **flest-a kakor* for ‘the most cookies’, with plural marking on *flest*, we have *flest kakor*. The same is true for Faroese (e.g. *flest* rather than *flestar*). Number agreement is manifest only in Icelandic (e.g. *flestar*). This suggests that, for Mainland Scandinavian and Faroese at least, relative quantity superlatives do not stand in an attributive relationship to the noun, contra Hackl (2009). Rather, these cases should be assimilated to the definite cases with adverbial morphology; adverbial superlatives do not show adjectival inflection.

Now let us consider how to explain the variation in definiteness-marking for proportional readings. Languages where proportional readings can be analyzed along the lines of Hoeksema’s (1983)

suggestion for how to analyze Dutch *de meeste*, reinvented by Coppock & Josefson (2015) for Swedish. As Hoeksema (1983) writes (in Dutch), the semantics for proportional readings with definiteness-marking can be derived by setting the comparison class argument of the superlative morpheme to a particular, contextually specified binary partition over the denotation of the complement of the quantity word. If ‘many-SPRL [N]’ characterizes a plurality that is most numerous among all of the pluralities in C , and C is a particular binary partition over the Ns (or a salient subset thereof), then it describes more than half of the relevant Ns, relative to C . Since there is only one largest element in the partition, the uniqueness presupposition of the definite article is satisfied. This idea has been expressed several times before, first by Hoeksema (1983), then by Doetjes (1997, 169) and more recently by Coppock & Josefson (2015), as a variation on Hackl (2009) proposal.

Hackl’s (2009) proposal for proportional readings is similar but subtly different: It derives the truth conditions that *any* majority of the substance noun denotation satisfies the description. On this analysis, ‘many-SPRL [N]’ characterizes, relative to C , a plurality X such that no non-overlapping plurality Y in C is larger. (It must be stipulated as part of the semantics of the superlative morpheme that comparison is restricted to non-overlapping elements of C .) If C can contain arbitrary sums of Ns, then there are many pluralities X that satisfy the description, as many as there are majorities. Since such a description is not inherently unique, definiteness-marking is not expected. Such an analysis would be compatible with the lack of definiteness-marking on proportional quantity superlatives in Icelandic, English and Dalecarian. Overall, Hackl’s (2009) analysis works remarkably well for Icelandic, as it predicts a lack of definiteness-marking for both relative and proportional readings, and full agreement due to an underlying attributive structure.

Mass/count contrasts. The last finding to explain is the fact that mass nouns tend to require or prefer actual partitive constructions on proportional readings. Dobrovie-Sorin (2013) argues that quantification, of the kind done by classical generalized quantifiers, is restricted to count domains, and that non-partitive proportional readings involve a generalized quantifier interpretation. This view is attractive insofar as it accounts for the count/mass contrast, but it is not clear then how to explain the presence of definiteness or plural-marking. Dobrovie-Sorin & Giurgea (2015) suggest a historical process whereby [THE [MANY-SPRL NP]] is reanalyzed as [[THE MANY-SPRL] NP], but then the question is how [THE [MANY-SPRL NP]] ended up with a proportional interpretation at the earlier stage of the language, and why such an analysis would not suffice for the present stage.

I suggest that the historical process begins with one of the two accounts of proportional readings given above (Hoeksema’s and Hackl’s). In both of these accounts, we have a predicate of pluralities. A predicate of pluralities can trivially be reconceptualized as a predicate of sets. And this is the same as a generalized quantifier. Now, it may be that the foregoing analyses are for some reason unstable, leading to a tendency to reanalyze *de flesta* as a unit, functioning as a quantifier. If, as Dobrovie-Sorin (2013) suggests, non-partitive proportional quantifiers are restricted to plurals, then we have an explanation for the difference between mass nouns and count nouns.

Summary. We have arrived at the following picture: The agreement that a superlative exhibits depends on its target. When the target is a degree, as it is with adverbial superlatives and certain relative superlatives, default neuter singular emerges. For relative readings, any definiteness-marking we see is local to the QP, and driven by the same process that drives definiteness-marking in superlative adverbs. For proportional readings, definiteness-marking is at the level of the DP as a whole. A proportional reading can be realized as definite or indefinite depending on subtle aspects of how the comparison class and the superlative marker are construed: Given a comparison class that constitutes a specific binary partition, definiteness-marking emerges. Given a comparison class

consisting of all pluralities of entities of the kind denoted by the substance noun and the caveat in the semantics of the superlative morpheme that comparison is restricted to non-overlapping pluralities, an indefinite description emerges. However, there is a tendency to reanalyze quantity superlatives (with any preceding determiners) as quantifiers, leading to a preference for partitive constructions among mass nouns.

A Translation questionnaire

Instructions. Please translate the sentences below into your native language. More literal translations are preferred, but only as long as they sound natural. Give as many translations as you like, and comments are welcome but not required. (No need to translate the parts in parentheses; they are just supposed to help explain what is meant.)

1. Most of the kids who go to my school like to play music. (For example, there are 100 kids in my school, and 65 of them like to play music.)
2. Of all the kids in my school, I'm the one who plays the most instruments. (For example, I play 7 instruments, two of my friends play 6 instruments, and lots of people play one or two instruments, but nobody else plays more than 4.)
3. I don't like most of the music they play on the radio.
4. My brother Hans also plays many instruments, but not more than me.
5. The member of my family who plays fewest instruments is my sister Karin.
6. During most of the summer we have played music every day.
7. I don't know how much coffee we've drunk and how many cookies we've eaten during the summer.
8. But it is probably Hans who has drunk the most coffee. (For example, Hans drank three cups every day, and the rest of us drink one or two cups every day.)
9. Mom says that he ought to drink less coffee.
10. I am the one who drinks the least coffee.
11. But I am also the member of our family who eats the most cookies. (For example, I eat on average 5 cookies per day, and other members of my family eat on average 4 or fewer cookies per day.)
12. Mom baked cookies yesterday and I ate most of them. (For example, she baked 20 cookies and I ate 14.)
13. I drank most of the milk too. (For example, there were two liters of milk and I drank 1.5 liters.)

14. I'm not the one in the family with the thinnest waist.
15. I ought to eat fewer cookies.
16. But it's hard since mom bakes the yummiest cookies in the whole world.
17. Many try, but few can resist mom's cookies!

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