Constructions of comparison in Swedish: Quantitative dominance patterns in acquisition and use

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Abstract

This article has two main objectives. The first is to outline the basic design of the system of expressing comparisons in Swedish sentences from a functional point of view. Comparisons occur in various dimensions: identity, likeness, grading, preference, and others. Within these dimensions, relations of comparison are distinguished, such as *equative/inequative*, *exclusive/inclusive* and *superior/inferior*. A set of constituting elements, here labelled *comparandum*, *standard*, *parameter*, *comparator* and *standard marker*, form crucial elements of the constructions which interact to provide a creative potential for conceptualizing comparisons in different ways.

The second part of the study concerns how these various types of comparison constructions are made use of by adult native speakers of Swedish, and how this develops in acquisition in adult learners of Swedish. This is carried out on the basis of a longitudinal corpus of learner speech in combination with a comparable corpus from native speakers. A usage-based perspective is combined with a functional approach to study quantitative *relations of frequency dominance* between paradigmatically related types of comparison constructions. A consistent pattern is found, where the same set of dominance relations is evidenced with native speaker and learners, and in the development over time in learners. This suggests that constructions of comparison develop in language with a systematic distribution of relative frequency. The set of dominance relations found is interpreted to correspond to regularly occurring degrees of communicative need and associated expressive preferences.

1. Introduction

Comparing entities is a fundamental function in language which is manifested in several types of grammatical constructions. Typological surveys of wide samples of languages (Ultan 1972; Stassen 1985, 2005; Heine 1997; Dixon 2008, 2012; Bobaljik 2012) show that languages worldwide have developed regular grammatical means to express relations of comparison.[1]

The present treatment of constructions of comparison in Swedish has a dual purpose. In the first part, the aim is to give a function-to-form account of the basic design of the system of expressing various relations of comparison in Swedish. The structure and common properties of a range of such constructions will be presented in overview.

The second part of the study aims to explore quantitative patterns in the occurrence of comparison constructions in speech in order to shed light on some systematic properties of their use and

acquisition. According to a usage-based model of language, linguistic structure is shaped and entrenched in the minds of the speakers by the recurrent use of chunks of speech that are identified as relevant units of language (cf. e.g. Langacker 1999; Kemmer & Barlow 1999; Bybee 2006). The frequency of use has been found to play a central role for the emergence and development of linguistic structure in different areas of language (Bybee & Hopper 2001; Ellis 2002). Constructions of comparison, and particularly the crucial parts of such constructions which express the relations between the compared entities, are recurrent items in speech which learners of a language have to identify and establish as parts of their language competence.

The question arises, to what extent the various types of comparison constructions tend to develop in the language with regular patterns of frequency in speech. Do certain constructions regularly occur more often than certain others in speakers' language input and in their own speech production? In the later part of this article we will introduce the notion of quantitative dominance relations between related types of constructions and examine their occurrence in a corpus of spoken native and learner Swedish.

2. Constructions of comparison in Swedish

An overview of basic constructions of comparison in Swedish and their constituting elements was presented from a functional point of view in Hammarberg (1995). Most grammar books limit their treatment of comparison to the comparison forms of adjectives. A wider scope is found in the large Swedish Academy grammar, *Svenska Akademiens grammatik* (Teleman, Hellberg & Andersson 1999) which deals with expressions of comparison in a detailed, although scattered manner within various chapters on parts of speech, phrases and subordinate clauses. For an extensive semantic study of Swedish adjective comparison, see Lundbladh (1988). The following outline, which aims at characterizing basic distinctions in the wider system of comparison constructions and the ways the elements of these constructions work together, is based on Hammarberg's (1995) account.

2.1. Dimensions and relations of comparison

Comparisons can be made in a variety of ways, and a number of different linguistic constructions may be described as constructions of comparison. Consider the following examples:

(1)   a. Igår hade du en annan bil än den du har idag.
           'Yesterday you had another car than the one you have today.'

        b. Pers handstil är likadan som Ulfs.
           'Per's handwriting is similar to Ulf's.'

        c. I motsats till brodern är Mats väldigt sportintresserad.
           'In contrast to his brother, Mats is very interested in sports.'

        d. Jämfört med förra året var årets resultat sämre.
           'Compared to last year, this year's result was worse.'

        e. Soppan är alldeles för starkt kryddad.
           'The soup is far too spicy.'

        f. Det första jag gjorde var att ringa brandkåren.
           'The first thing I did was to call the fire service.'

        g. Jag föredrar torskfilé framför vegetarisk pizza.
           'I prefer fillet of cod to vegetarian pizza.'

In a comparison, two or more entities are put in a specific relation to each other with regard to some property or phenomenon. What the comparison amounts to is determined in part by the property or phenomenon to which it refers, and in part by the relation that is indicated between the compared entities. Depending on the different respects in which comparisons are made, we may distinguish several *dimensions of comparison*:

(2)   *Dimensions*   *Typical expressions of relation*

        a. IDENTITY   samma som / annan än
                            'same as / other than'

        b. LIKENESS   likadan som / annorlunda än
                            'like, similar to / unlike, different from'

        c. POLARITY   i enlighet med / i motsats till
                            'in accordance with / contrary to'

        d. GRADING   lika X som / mer X än, X-are än
                            'as X as / more X than, X-er than'

        e. ADEQUACY   lagom; tillräckligt / för (mycket), för lite
                            'just right; enough / too (much), too little'

        f. SEQUENCE   jämsides med / först, näst, sist; första, andra, tredje etc.
                            'alongside / first, next, last; first, second, third etc.'

        g. PREFERENCE   värdera lika med / föredra framför; lika gärna som / hellre än; främst
                            'value alike / prefer to; just as well as / rather than; primarily'

The examples under (1) illustrate in turn the list of dimensions of comparison given in (2). The dimension IDENTITY, examples (1a, 2a), comprises expressions for 'same/other referent (or class of referents)'. The dimension LIKENESS (1b, 2b) comprises expressions for 'same/other kind (quality, appearance, etc.)'. POLARITY (1c, 2c) is the dimension of 'same/opposite side in a (potential or expressed) state of opposition'. The dimensions GRADING (1d, 2d) and ADEQUACY (1e, 2e) apply to 'same/other degree', and the dimensions SEQUENCE (1f, 2f) and PREFERENCE (1g, 2g) 'same/other rank or place in order'. The dimensions PREFERENCE and ADEQUACY contain an element of valuation which is not regularly present in "pure" SEQUENCING or in GRADING.

The set of dimensions proposed here should be seen as an exploratory way of characterizing different respects in which comparisons can be made. It is obvious that these categories are not all totally distinct from each other, but rather have some properties in common. Thus the dimensions of GRADING, ADEQUACY, SEQUENCING and PREFERENCE all have to do with degree in a wider sense, whereas IDENTITY, LIKENESS and POLARITY do not contain this element. SEQUENCE and PREFERENCE are variants of an ORDERING category. IDENTITY (same/other referent) and LIKENESS (same/other properties) are also obviously akin, and may in some cases converge. For example, the main criterion for identifying or distinguishing languages is based on likeness: if two groups of speakers use languages which are sufficiently alike, these languages will be counted as the same one (with the amount of variation that any language may allow). This kind of relatedness between the dimensions of comparison is also reflected in the language, in the polysemy of terms. Thus, for example, the Swedish term *olika* may vary in meaning as in (3):

(3)   a.   Estland, Lettland och Litauen är idag tre *olika* länder.

'Estonia, Latvia and Lithuania are today three *different* countries.'

b.   Estland, Lettland och Litauen är tre ganska *olika* länder.
'Estonia, Latvia and Lithuania are three rather *different* countries.'

c.   Vi reste i Europa och besökte *olika* länder.
'We travelled in Europe and visited *different* countries.'

In (3a), *olika* is used in the IDENTITY dimension, meaning 'separate'. (3b) illustrates the LIKENESS dimension, where *olika* has the sense of 'disparate'. In (3c) finally, *olika* corresponds to 'various', 'several'. It is then used as a quantifier, with no comparison intended.

In a given dimension, different *relations of comparison* can be expressed. To some extent, the same kinds of relations occur in different dimensions. A basic distinction is the one between *equative* and *inequative* relation, which occurs in all the dimensions mentioned above. It is marked by a slash (/) in the examples under (2).

The system of adjective comparison falls within the GRADING dimension. It is based on the combination of three types of relation: *equative/inequative, inclusive/exclusive* (i.e. whether the compared entity is included in the standard or not), and *superior/inferior* (i.e. whether the compared entity possesses the property to a higher or lower degree than the standard). The system of relations which is expressed by the categories of adjective comparison is the following (where "X" stands for the adjective):

(4)   Equative   *lika X som* 'as X as'
       Inequative
      Exclusive (*Comparative*)
        Superior   *mer X än* 'more X than', *X-are än* 'X-er than'
        Inferior   *mindre X än* 'less X than'
      Inclusive (*Superlative*)
        Superior   *mest X av* 'most X of', *X-ast av* 'X-est of'
        Inferior   *minst X av* 'least X of'

In connection with the *superior/inferior* distinction in comparatives and superlatives, it is interesting to note that it is only in the superior category that comparison by means of a suffix (*-are, -ast*) is available, besides comparison with an adverb (*mer, mest*). Only adverb comparison is possible with participles (e.g. *charmerande* 'charming'; *intresserad* 'interested'), and adverb comparison is in general more preferred with long adjectives and adverbs than with short ones.[2]

The relations of comparison can be manipulated by means of negation. Thus a negated equative acquires an inequative meaning: *inte*

samma sak som 'not the same thing as', *inte lika stor som* 'not as big as'. Similarly, negating an inequative expression produces an equative result: *ingen annan än* 'no one else than', *inte olik* 'not unlike'. A common way of expressing an inequative-exclusive-inferior relation, besides *mindre X än* 'less X than', is *inte så X som* 'not as X as'.

It is hard to delimit the domain of comparison sharply. Determining which kinds of relational expressions in the language should be considered "expressions of comparison" is a matter for discussion. More basically, cognitive processing is to a great extent based on comparison, and linguistic structuring rests widely on identification and distinction. (For a discussion of the role of comparison in mental events, see Langacker 1987: 99-105). Some constructions contain elements which overtly indicate that something is compared, for example *samma, lika, annan, annorlunda*, suffixes of comparison such as *-(a)re, -(a)st*, the words *som* 'as' and *än* 'than' as subjunctions or prepositions, words and phrases such as *jämföra* 'compare', *jämförelse* 'comparison', *jämfört med* 'compared with', *i förhållande till* 'in relation to', etc. The dimensions mentioned above may form a point of departure for encircling a domain of grammatical constructions of comparison, although these should not be seen as constituting a definitive or self-evident delimitation of what should be included. Some other types of constructions than the ones mentioned here, for example cases containing spatial and temporal expressions, are obviously related.

The fact that also spatial and temporal relations basically involve comparisons, is easily visible in many cases. They can be analysed according to the same categories that we have applied to GRADING. Take the two examples in (5a-b):

(5)   a.   Solen står *över* horisonten.
          'The sun is *over* the horizon.'

     b.   Vi kom hem *efter* midnatt.
          'We got home *after* midnight.'

These cases express an *inequative-exclusive-superior* relation between the sun and the horizon, and between the time when we got home and midnight, respectively. *Över* in (5a) can be paraphrased with adjective comparison as *högre än* 'higher than', and *efter* in (5b) corresponds to *senare än* 'later than'. The relation is exclusive due to the fact that the compared entity is not included in the standard. That is, the sun is not a part of the horizon, and the moment of midnight does not contain the time we got home. By contrast, example (6) expresses an *inequative-inclusive-superior* relation:

(6)   Brevet ligger *överst* i högen.
      'The letter lies at the top of the pile.'
(Literally: 'The letter lies *uppermost* in the pile.')

The relation is inclusive because the entity *brevet* 'the letter' is at the same time a part of *högen* 'the pile'. The inequative-inclusive relation is also overtly signalled by the superlative marker *-st* in *överst*. There are numerous analogous cases, where spatial and temporal expressions are marked by a superlative suffix: *underst* 'undermost', *främst* 'foremost', *bakerst* 'hindmost', *först* 'first', *sist* 'last', and others.

2.2. *Elements of grammatical constructions of comparison*

For the present purposes, we will concentrate on grammatical constructions in the dimensions presented in (1) and (2). What these have in common, besides the fact that they all express some sort of comparison, is that they contain certain types of elements which occur regularly in various constructions of comparison and form their building blocks: the entities which are compared, the property to which the comparison refers, and the items which express the relation of comparison. Ultan (1972: 126) distinguishes five such constituting elements which have their specific roles in forming constructions of comparison. The same set of five basic elements also occurs in other treatments of comparison, although the names used for these elements vary radically between authors (see Heine 1997: 110; Dixon 2008: 788, 2012: 344). I choose to use the following terms for the five elements:

CPD *Comparandum*, the entity which is judged in comparison to some other entity.

STD *Standard*, the entity with which the comparandum is compared.

PAR *Parameter*, the property or phenomenon on which the comparison is based.

CPR *Comparator*, the marker which states the relation between the comparandum and the standard with regard to the parameter.

STM *Standard marker*, the marker which connects the standard with the parameter and the comparator.

The examples in (7), (8) and (9) show how the five constituting elements appear in some common predicative constructions.

(7)	CPD		PAR	CPR	STM	STD
a.	Anders	är	äld	-re	än	Berit.
	'Anders	is	old	-er	than	Berit.'
b.	Anders	är	äld	-st	av	oss alla.
	'Anders	is	old	-est	of	us all.'

(8)	CPD	CPR	PAR	STM	STD
a.	Anders	är lika	intresserad	som	Berit.
	'Anders	is as	interested	as	Berit.'
b.	Anders	är mer	intresserad	än	Berit.
	'Anders	is more	interested	than	Berit.'
c.	Anders	är mest	intresserad	av	oss alla.
	'Anders	is most	interested	of	us all.'
d.	Myanmar	är samma	land	som	Burma.
	'Myanmar	is the same	country	as	Burma.'
e.	Slovenien	är ett annat	land	än	Slovakien.
	'Slovenia	is another	country	than	Slovakia.'
f.	Filmen	var alltför	lång.		
	'The film	was too	long.'		

(9)	CPD	CPR	STD	PAR
a.	Nisse	liknar	Einstein	till utseendet.
	'Nisse	is like	Einstein	in appearance. (looks like E.)'

	CPD	CPR	STD	
b.	Festen	överträffade	mina förväntningar	PAR

i fråga om tråkighet.
'The party surpassed my expectations in terms of dullness.'

The five constituting elements in the constructions interact with each other in a complex pattern to define the comparison. One significant property of comparison constructions is that there is often a certain freedom to choose which entities should function in which roles in the construction, and it is sometimes possible to construe a given construction in different ways, depending on perspective. Consider example (10a):

(10) a. Vinsten ökade förra året jämfört med året innan.
'The profits increased last year compared to the year before.'

Construing this as a comparison between two profit sums, the entity *vinsten förra året* (a discontinuous string in (10a)) will function as comparandum, and *vinsten året innan* (where *vinsten* is implicit in (10a)) will take the role as standard. A more straightforward and explicit way of expressing this would be *Vinsten förra året ökade jämfört med vinsten året innan* 'The profits last year increased compared to the profits the year before.' However, with the word order in (10a) and the second *vinsten* left out, an alternative interpretation is near at hand, viz. that the two years are the entities being compared. The two ways of construing (10a) will then be as in (10b) and (10c), respectively:

(10)

	CPD-	CPR	-CPD
a.	Vinsten	ökade	förra året
	STM	STD	
	jämfört med	(vinsten) året innan.	

	PAR	CPR	CPD
b.	Vinsten	ökade	förra året
	STM	STD	
	jämfört med	året innan.	

The possibilities to vary the roles of the different elements and the ways in which they work together in the construction form a major potential to conceptualize comparisons in different ways. The choice of *comparandum* (CPD) and *standard* (STD) in a comparison may vary, and this will affect the other elements in the construction. The *comparator* (CPR) interacts with the *parameter* (PAR) to define the relation between the compared entities. The comparator and the *standard marker* (STM), being the two elements in the construction which express the comparison relation, interact flexibly with each other in performing this role.

We will look in turn at the roles of the various elements in the comparison constructions.

2.2.1. Comparandum and standard

Depending on how a comparison is conceptualized, the choice of comparandum and standard may vary. This will also affect other elements. The construction (1b) above, here repeated as (11a), may for example be varied as (11b) and (11c).

(11)   a. Pers handstil är likadan som Ulfs.
'Per's handwriting is similar to Ulf's.'

b. Per har en likadan handstil som Ulf.
'Per has a similar handwriting as Ulf.'

c. Per skriver likadant som Ulf.
'Per writes similarly as Ulf.'

(11a) compares two handwritings, *Pers handstil* and *Ulfs (handstil)*, which function as CPD and STD, respectively. In (11b) the attention is focused more on the persons *Per* and *Ulf*. They are conceptualized as the two compared entities, and it is reasonable to interpret them as CPD and STD. The two are compared with regard to their *handstil*, which then assumes the role of parameter. In (11c) the comparison is again focused on *Per* and *Ulf*, and the parameter is conceptualized in the form of the verb *skriver*.

Usually, the comparison is asymmetrical in the sense that there is one entity (CPD) which is being judged with another entity (STD) as norm. This asymmetry gives the comparison a direction. STD creates a reference point against which CPD

can be measured. The asymmetry in the role division between a CPD and a STD follows the principle of *figure and ground* (Talmy 1978). STD constitutes the ground against which CPD acts as figure.

But symmetrical comparisons also occur, in which two CPDs appear on a par with each other. Thus, whereas the two asymmetrical examples (12a) and (12b) do not mean the same thing, since CPD and STD are chosen differently, (13a) and (13b) are symmetrical and do not differ in meaning. Rather, the choice between them may depend on the preferred order of information in the discourse, personal preferences, or mere chance.

(12)   CPD   CPR   STD

a. Lisa   liknar   Hilda.
'Lisa   is like   Hilda.'

b. Hilda   liknar   Lisa.
'Hilda   is like   Lisa.'

(13) CPD_1 CPD_2 CPR

a. Lisa   och   Hilda   är   lika.
'Lisa   and   Hilda   are   alike.'

b. Hilda   och   Lisa   är   lika.
'Hilda   and   Lisa   are   alike.'

Which entity is to be chosen as comparandum and which as standard, or whether the two should have equal status as comparanda, is a matter of perspective. There is a relatively great freedom to conceptualize the comparison in different ways, depending on discourse factors or the kind of entities that are compared. In many cases a natural choice is given, as in (9a-b) above. In inequative-inclusive comparison, as in (7b) and (8c), the including entity regularly assumes the role as standard. Similarly, in the dimension of ADEQUACY, see (1e) and (2e), the role distribution is given: the implicit, desirable measure is taken as standard, and the observed entity is the comparandum.

As is clear from the examples so far, not all of the five constituting elements need to be present in every grammatical construction of comparison. For example, it may not be necessary to express a standard explicitly in the sentence, if it can be identified from the context. Thus, in the various examples in (7) and (8) above it is conceivable that a suitable discourse context may allow the elements STM+STD to be left out. In connection with grading, Lyons (1977: 273–274) makes a distinction between *explicit*, *semi-explicit* and *implicit* grading, depending on which elements are overtly expressed or implicit in the construction. The closely parallel Swedish counterparts to Lyons' examples are rendered in (14).

(14)   a. Explicit:
           Vårt hus är större än ert.
                   'Our house is bigger than yours.'

       CPR+STM+STD are expressed

       b. Semi-explicit:
           Vårt hus är större.
                   'Our house is bigger.'

       CPR is expressed, but not STM+STD

       c. Implicit:
           Vårt hus är stort.
                   'Our house is big.'

       CPR+STM+STD are not expressed

As Lyons points out, implicit grading is possible with adjectives which constitute gradable antonyms, but not with other adjectives. Compare for example *Vårt hus är rött* 'Our house is red', which does not express any comparative grading. Cases like (14c), then, presuppose an imaginary "normal standard" for the size of houses. An alternative would be *Vårt hus är jämförelsevis/relativt stort* 'Our house is comparatively/relatively big'. Even though there is a latent element of comparison in (14c), it appears less meningful to regard this variant as a construction of comparison, as long as no element is expressed that explicitly signals comparison. (14c) appears to fit with contexts where the focus is rather on the choice of property (big vs. new, comfortable, red etc.) than with the aspect of grading. When considering (14a-b-c) in turn, it is obvious how an amount of *relative prominence* shifts from the standard (14a) to the comparative relation (14b) and the choice of parameter (14c).

2.2.2. Parameter and comparator

The *parameter* (PAR) complements the dimension of comparison by specifying which property or phenomenon the comparison refers to. For example, an adjective in the comparative form signals the GRADING dimension, and the adjective lexeme identifies the specific parameter to which the grading refers. Parameters occur in various dimensions of comparison, and may take the form of adjectives (15a), adverbs (15b), nouns (15c), verbs (15d), adverbial phrases (15e) or clauses (15f):

(15)   a. lika *glad* 'as *happy*'; *glad*-are '*happi*-er';
           glad-ast '*happi*-est'; alltför *glad* 'too *happy*'

       b. Det gick *bätt*-re än jag hade trott.
           'It went *bett*-er than I had thought.'

       c. samma *land* 'the same *country*';
           likadan *handstil* 'similar *handwriting*'

       d. *skriver* likadant '*writes* similarly'

       e. *I fråga om undervisningsskicklighet* sätter
           jag Annika främst.
           '*In regard to teaching skill*, I count
           Annika foremost.'

       f. *När det gäller sparsamhet* är Kalle raka
           motsatsen till Pelle.
           '*When it comes to being economical*,
           Kalle is quite the contrary of Pelle.'

In cases like (7a-b) and (8a-f), the *comparator* (CPR) appears as a syntactic modifier of PAR. When CPR is a verb or a predicative adjective, a PAR may be added optionally as a modifier of CPR:

(16)   a. Monica överträffade sina bröder *i
           slagfärdighet*.
           'Monica surpassed her brothers *in repartee*.'

       b. Hon är lik dig *på rösten*.
           'She is like you *in her voice*.'

In cases of implicit grading, where a gradable adjective in the positive form appears without any indication of comparison, as (17a), the role of the adjective as PAR in a comparison construction can be activated if an explicit standard marker and standard are added, as in (17b):

(17)   a. Vårt hus är *stort*.
           'Our house is *big*.'

       b. Vårt hus är *stort* jämfört med ert.
           'Our house is *big* compared to yours.'

It is also possible to create a PAR by building a comparison construction around a suitable characterizing word which does not in itself express a comparison. Certain concepts have a potential for being used as PAR:

(18)   a. Den här inbrottstjuven var en *amatör*
           jämfört med de organiserade ligor som
           opererar i området.
           'This burglar was an *amateur* compared to
           the organized gangs that operate in the area.'

       b. Miguel Angel Asturias "Presidenten" är en
           flickbok jämfört med vad som verkligen
           hände i Argentina under 70-talet.   [quoted
           from a newspaper]
           'Miguel Angel Asturias' "The President" is
           a *girls' book* compared to what really
           happened in Argentina in the seventies.'

It is typical that words chosen to function in this way are used in an expressive metaphorical sense. The standard marker (here *jämfört med*) then identifies the word as a parameter of comparison, and the

standard provides the key to the metaphorical interpretation.

2.2.3. Comparator and standard marker

The *comparator* (CPR) and the *standard marker* (STM) are those elements in the construction which directly signal the relation of comparison, the primary relation markers.

The comparator indicates dimensions such as IDENTITY, LIKENESS, SEQUENCING, GRADING and states relations such as *equative/inequative, exclusive/inclusive.* The standard marker, too, may signal these relations, since the choice of STM is governed in part by the type of relation. Some examples:

(19)   *Relation*   CPR   STM

      Equative: *samma*   sak   *som*
                '*the same* thing *as*'

                 lika   stor   *som*
                '*as* big *as*'

      Inequative-exclusive:
                 annan   *än*
                '*other than*'

                 annorlunda   *än*
                '*different than*'

                 stör*re*   *än*
                'bigg*er than*'

      Inequative-inclusive:
                 först   *av/bland/i* etc.
                '*first of/among/in* etc.'

                 stör*st*   *av/bland/i* etc.
                'bigg*est of/among/in* etc.'

As these examples show, the STM *som* goes with a CPR which expresses equative, and *än* matches a CPR which expresses inequative-exclusive. They remain the same even if the equative or inequative meaning is reversed by negation: *inte samma sak som*; *inte annorlunda än*. Various prepositions (*av* and a range of locative prepositions) form standard markers for inequative-inclusive. CPR and STM are thus paired in specific ways and will thereby double each other in the function of signalling comparison relations. In many cases they need not both occur in a construction for a certain comparison relation to be indicated. Rather, there appears to be a tendency towards complementary distribution between expressing CPR and expressing STM. In some cases, as in (14b) above, CPR will be the marker that signals a comparison relation, and in other cases, as in (17b), it is STM. In (17b) *jämfört med* 'compared to' functions as STM.

(14b)   Vårt hus är stör*re*.
         'Our house is bigg*er*.'

(17b)   Vårt hus är stort *jämfört med* ert.
         'Our house is big *compared to* yours.'

In (14b) we can interpret the sentence as a comparison construction and expect to be able to derive the standard from the context, thanks to the occurrence of the CPR *-re*. In (17b), STM and STD cannot be left out, because they constitute the very means for expressing a comparison. It is thus possible to give the construction different orientation with regard to how the comparison is expressed. We may call the type (14b) a *comparator based* (*CPR-based*) and the type (17b) a *standard marker based* (*STM-based*) comparison construction. CPR-based constructions tend to give prominence to the parameter, whereas STM-based constructions give more prominence to the standard.

We can observe a scale between maximally CPR-based and maximally STM-based comparison constructions, with intermediate cases balancing between the extremes. The former are represented by a CPR and the lack of STM and STD, whereas the latter may lack CPR but on the other hand require STM and STD. The examples (20a-d) represent some steps on the scale, from maximally CPR-based to maximally STM-based.

(20)   a.   Det lyckligaste vore om vi vann en miljon på tipset.
          'The luckiest thing would be if we won a million on the pools.'

        b.   Oskar är förståndigare (än Martin).
          'Oskar is wiser (than Martin).'

        c.   Bron mellan öarna har breddats (jämfört med vad som tidigare planerats).
          'The bridge between the islands has been broadened (compared to what was planned earlier.)'

        d.   Filippa har en ängels tålamod jämfört med maken.
          'Filippa has got the patience of an angel compared to her husband.'

(20a) has a separate CPR (*-aste*), but a STD (i.e. a conceivable alternative to *om vi vann en miljon på tipset*) is lacking, and in this case it does not even seem important to define one through the context. (20b), too, has a separate CPR (*-are*). STM and STD (*än Martin*) may be left out, if derivable from the context, which gives the construction a CPR-based orientation. If STM and STD are expressed, the balance between a CPR-based and an STM-based construction is more even. In (20c), CPR is integrated in the PAR-verb *breddats*, and if the speaker feels that STM and STD need to be expressed, this will transfer an amount of

prominence from the parameter to the standard. In (20d), the maximally STM-based case, no CPR is present, and STM and STD are necessary in order to achieve a comparison construction.

3. Constructions and usage

In Section 2, the different dimensions and relations of comparison and the functioning of the basic construction elements were laid out in order to give a fairly wide overview of the system. Proceeding now to usage, some essential parts of this wider system will be chosen to explore systematic quantitative patterns in the speech of native Swedes and in the development over time in non-native learners.

Many cognitively oriented linguists support the idea that the *frequency of use* has a decisive influence on the acquision and accessibility of linguistic structures. A central tenet of the *usage-based model*, as introduced by Langacker (1987) and further elucidated by him (1988, 1999) and others (Kemmer & Barlow 1999; Tomasello 2003; Croft & Cruse 2004; Bybee 2006, 2010), is that the repeated activation of a linguistic item in communication will lead to its gradual *entrenchment* as a unit of language in the mind of the speaker. The entrenchment of a linguistic unit involves automatization and higher degree of accessibility in using the unit. According to this view, language structure emerges when chunks of speech are identified by repeated occurrence and get established in the speaker's memory as units of language. This has brought the role of frequency of use to the fore as a factor promoting this process (Bybee & Hopper 2001; Bybee 2007; Ellis 2002). Both token frequency (the number of times an item appears in use) and type frequency (the number of distinct items representing a certain pattern) are relevant here. It is an ongoing process of shaping, maintaining and reshaping language structure which is thought to characterize language competence both in its buildup stages and in stages of mature proficiency.

However, even if frequency of use is seen as a shaping factor, it cannot be an ultimate cause. The fact that some unit of language occurs with a certain frequency is in turn an effect of something. A reasonable assumption is that expressive needs condition frequency of use. If a unit of language expresses an idea that is often needed in communication, it is likely to occur with high frequency. This makes it interesting to investigate the frequencies of expression units in the perspective of mappings between function and form.

We will adopt the general hypothesis that there is a chain of dependence such that (i) more frequent expressive need for an item of meaning in communication gives rise to (ii) more frequent use and earlier utilization of a corresponding expression, which in turn leads to (iii) stronger and earlier entrenchment of the unit in question, in terms of automatization and ease of access.

The units under consideration in our case are different types of constructions of comparison, and crucial parts of such constructions. We will not explore entrenchment effects here, but investigate frequencies of types of comparison constructions which differ in meaning in crucial respects. The question is whether there are systematic differences in frequency between such comparable constructions. In other words, we are seeking evidence that constructions develop in language with characteristic properties of frequency. If this appears to be the case, we will interpret these quantitative properties as conditioned by their degree of usefulness in meeting expressive needs in communication. In the following, we will seek to establish relative values of frequency by comparing constructions which are distinct from each other, but related in meaning.

Frequency of use has a receptive and a productive side. On the one hand, speakers have to identify and interpret items of speech in utterances from speakers of the ambient language, on the other hand retrieve or generate expressions for intended meanings in their own speech production. In our case, the speakers of the ambient language are adult native speakers of Swedish. Their speech production forms linguistic input to our primary informants, who are adult second language learners of Swedish. To this end, we use data from a corpus which consists of a longitudinal part from learners and a control (target language) part from native speakers. The native speakers' part does not directly represent the utterances that these learners receive as input, but the design of the corpus is such that the two categories of speakers, the methods of data collection and the corpus contents are made as equal as feasible, so as to make the control part resemble the learner's actual Swedish input as closely as possible, as will be briefly described in the next section.

Drawing on longitudinal data from learners makes it possible to trace the acquisition of Swedish over time, and in particular examine the frequency development in the learners' speech. Using adult learners as counterparts to the adult native speakers means that both groups are at a fully developed stage of general conceptual development in the languages they master, whereas the learners on their part have to successively acquire the particular constructions needed to express the various types of comparison in Swedish.

4. The data source

Grammatical constructions of comparison were retrieved from the *ASU Corpus*, constructed at the Department of Linguistics, Stockholm University, which is accessible electronically through the "ITG" resource at Språkbanken (the Swedish Language

Bank), University of Gothenburg. For a detailed description of the corpus, see Hammarberg (2010). Some basic facts are rendered here:

The ASU Corpus consists of transcribed oral conversations and written essays collected from adult learners of Swedish and native Swedish speakers. The oral parts of the corpus were used for the present study.

The learner part of the corpus is longitudinally designed. It consists of conversations recorded at regular intervals with ten foreign students at Stockholm University (3 women and 7 men, age 19-28, median 20½) while they followed the preparatory course in Swedish for foreign students in order to get admitted to regular courses at Swedish universities.The learners can be broadly characterized as *"semi-formal"* (receiving their Swedish input partly through the course and partly from the linguistic environment in Stockholm),*"qualified"* (all having secondary education and prior experience of learning foreign languages as well as a strong instrumental motivation to learn the language in order to proceed with the studies in their fields), and *"fast"* (advancing from the beginner stage to the stage required for university studies within one to two academic years). They had various first languages: Chinese (3 persons), Greek (2), Portuguese (2), Spanish (1), Polish (1) and German+English (1). All of them had knowledge of English (a requirement for university studies in Sweden) and mostly one or more other second languages as well. They were recorded at regular intervals from the beginner stage when they had recently arrived in Sweden up to a stage when they were taking regular Swedish-medium university courses.

The recording sessions took place separately from the language course with one informant and one or two native Swedish speakers at a time. Nine sessions were spread over two semesters, from the end of August to May, and a tenth occasion took place in March the following year, when the participants were pursuing their regular studies. Various tasks were performed: narration of picture series, description of objects and photos, interviews and discussions of self-selected articles from the previous day's newspaper. The total of the learners' contribution to the conversations amounts to 147,000 word tokens.

The native part of the corpus was collected from seven Swedish undergraduate students, four women and three men, age 20-29, median 23. They were all born and raised in Sweden with Swedish as their only L1. They were recruited with the aim of finding persons who corresponded as far as possible to the learners in the project. They were recorded with the same method as the learners and the same Swedish interlocutors, and with a similar, although somewhat shorter program (five sessions). One difference is of course that the corpus part with the native informants is not longitudinal, but statically represents a standard variety of spoken Swedish.

The native informants' part of the conversations totals 98,000 word tokens.

The recorded conversations have been transcribed on computer and made electronically searchable. The learners' and the native informants' text has been morphologically tagged.

5. Patterns of dominance

The role of frequency for the establishment and development of linguistic structure was discussed in Section 3 above. The question was raised whether linguistic units, such as different constructions of comparison, develop in the language with systematic differences in frequency of use, a situation which we would interpret as a result of systematic differences in expressive needs in communication. To make such differences meaningful in the case of the constructions we are dealing with, it is essential to compare constructions which are paradigmatically related and differ in a crucial respect. With constructions of comparison, this constrast is primarily effected by the relation markers, particularly the *comparator* (CPR). Consider examples (18 a-b):

(18) a. Polio är *samma* sjukdom *som*
    barnförlamning.
    'Polio is *the same* disease *as* infantile
    paralysis.'

    b. Polio är en *annan* sjukdom *än* epilepsi.
    'Polio is a *different* disease *than* epilepsy.'

Example (18a) illustrates an *equative* relation in the IDENTITY dimension, whereas (18b) represents the corresponding *inequative* relation. What we want to establish is whether one of the types in such contrasting pairs of constructions *dominates* over the other in terms of frequency, and if so, which one is dominant. Two criteria will be used in order to determine this on the basis of the occurrence of each of these construction types in the corpus:

1. The total frequency of each construction type with each group of informants.
2. The frequency profile over time in the utterances by the learners.

The two groups of informants, the learners (henceforth referred to as the *non-native speakers*, *NNS*) and the *native speakers* (*NS*), can only be compared with each other on the basis of total frequency since the NS do not display a developmental profile. The data from the NS are taken to represent (in an approximative way) the frequency proportions in the kind of language that forms input to the NNS, as well as the ideal end, or target, stage of proficiency in Swedish towards which the NNS are striving.

In order to establish the dominance relations between related types of constructions, we will examine categories within the dimensions IDENTITY, LIKENESS and GRADING, being the cases which are the most amply represented in the corpus. Here the various comparator elements were taken to represent the respective constructions. They were excerpted from the corpus with a concordance program and examined in context. Care was taken to exclude immediate repetitions of these expressions in the utterances (iterations) as well as direct repetitions from an interlocutor (echoes) before counting. After these adjustments, a total of 1,692 instances of these categories were found with the NNS and 1,209 with the NS.

Focusing first on the *total frequencies* of the various categories and subcategories counted, Table 1 displays the values for the two informant groups, NNS and NS.

Table 1. Total frequencies and dominance relations for paradigmatically related constructions of comparison. Non-native and native speakers.
The frequency of the dominant category in each pair is printed in boldface. Significance of pairwise differences as measured by t-test: ** = p<0.01; ns = not significant.

Dimension	Categories	Relation markers (CPR)	Frequency NNS	Frequency NS
IDENTITY	Equative	*samma*	186	79
	Inequative	*annan, olika*	**453** **	**264** **
LIKENESS	Equative	*lik, likadan, liknande*[a], *likartad*	41	22
	Inequative	*olik, annorlunda*	**120** **	**32** ns
GRADING	Equative, total	*lika*	8	30
	Comparative, total	*-(a)re, mer, fler, färre, mindre, inte så*[b]	**653**	**623**
	Superlative, total	*-(a)st, mest, flest, minst*	231 **	159 **
	Comparative Superior	*-(a)re, mer, fler*	**575**	**415**
	Comparative Inferior	*mindre, inte så*[b]*, färre*	78 **	19 **
	Superlative Superior	*-(a)st, mest, flest*	**229**	**159**
	Superlative Inferior	*minst*	2 **	0 **
	Comparative Suffix	*-(a)re*[c]	**352**	**347**
	Comparative Adverb	*mer*[c]	43 **	68 **
	Superlative Suffix	*-(a)st*[c]	**172**	**94**
	Superlative Adverb	*mest*[c]	4 **	6 **

a   Exluding formulaic instances of *å liknande* 'and the like', *eller liknande* 'or the like', *eller nåt liknande* 'or something like that'. These cases occur only with the native speakers.
b   Excluding instances of *inte så* in the "absolute" sense of 'not very'.
c   Counting the CPRs that are modifiers of adjectives or adverbs.

The table displays pairwise comparisons of related types of constructions, profiling the categories of relations of comparison against each other. The constructions which are included in the respective categories are indicated by the comparator words which form the crucial relation-marking elements in the constructions. The category which obtains the higher frequency value in the pair is found to be the dominant category within this pair. This is marked in boldface type in the frequency columns.

The proportions shown in the table are quite striking. An overall comparison between NNS and NS shows a consistent parallelism between the two groups in regard to which categories come out as dominant in the respective pairs, and the proportions are very robust, showing mostly highly significant differences. That is, the values for total frequencies indicate that the same categories dominate with the NNS as with the NS.

Whereas the dominance pattern is the same for the NNS and the NS for all categories, there is some variation between the two groups in the actual frequency of use of the various categories. In total, there are 1.4 times as many instances of the constructions we are focusing on in the NNS as in the NS texts (1,692 v. 1,209). This should be put in relation on the one hand to the fact that the NNS produced 1.5 times as much text as the NS (147,000 v. 98,000 words), and on the other hand to the reducing factor that they used comparison constructions less often at the early stages of proficiency (which will be further dealt with below). When these factors are taken into account, the amount of use on average of the types of comparison studied here does not appear to differ much between the NNS and the NS. However, for specific categories there are some differences which can be gathered from the table. Especially the categories in the IDENTITY and LIKENESS dimensions are used relatively more by the NNS than by the NS, whereas the opposite is true of several of the categories listed under GRADING. It is not immediately clear why these variations occur.

Looking at the dominance relations within specific categories, the results show that *inequative* comparison dominates over *equative*. This is a uniform pattern across the IDENTITY, LIKENESS and GRADING dimensions. In the latter case, comparative and superlative represent the inequative categories versus equative. Within the GRADING dimension, *inequative-exclusive* (comparative) dominates over *inequative-inclusive* (superlative), and within each of these categories *superior* comparison dominates over *inferior*.

The table also shows the relation between comparison with a suffix (*-are*, *-re*; *-ast*, *-st*) as comparator versus comparison with an adverb (*mer*; *mest*) although this is not a conceptual matter, but rather a grammatically conditioned choice. Here it is interesting to note that suffix comparison dominates greatly over adverb comparison, in spite of the fact that suffix comparison is not available in many

cases, notably with participles, as mentioned in Section 2.1. Since the two forms of the comparator element are identical in meaning, a semantic explanation for the difference in frequency is ruled out. But it might instead have to do with the degree of grammaticalization; it is well known that grammaticalization of an item in the language tends to be accompanied by higher frequency (Hopper & Traugott 2003: 126-130). The suffix comparator represents a more far-reaching stage in a grammaticalization process than the adverb comparator which has the form of a function word, a factor that can be expected to contribute to its frequency.

It should be noted that the total frequencies with the NNS represent the accumulated frequencies from successive stages of increasing general proficiency in the language as documented from session to session. What we would then want to know is whether the dominance relations reflected in the totals are consistent across the stages, and particularly whether the dominant constructions tend to take the lead at an early stage. Such a result would be expected if the expressive needs that the learners are faced with are similar to those of their NS counterparts.

Figures 1 to 7 display the learners' *frequency profiles over time* for the categories covered in Table 1. The time axis refers to the ten successive recording sessions. In order to compensate for gradually increasing text length per session, the frequencies are given as relative values, counted per 10,000 word tokens.
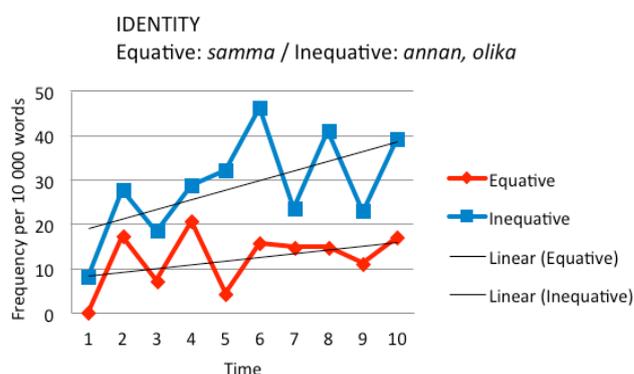

Figure 1. Developmental profile in the IDENTITY dimension: *equative* vs. *inequative*
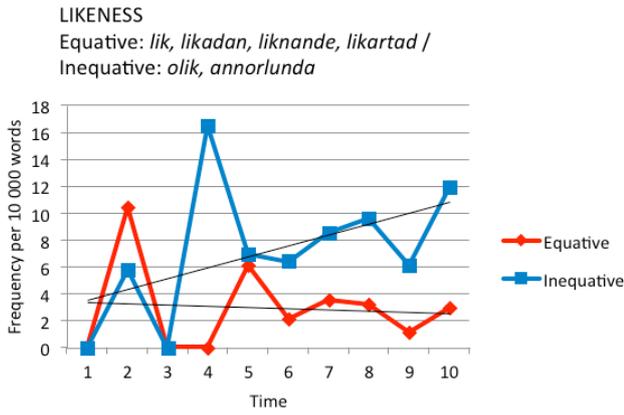
Figure 2. Developmental profile in the LIKENESS dimension: *equative* vs. *inequative*
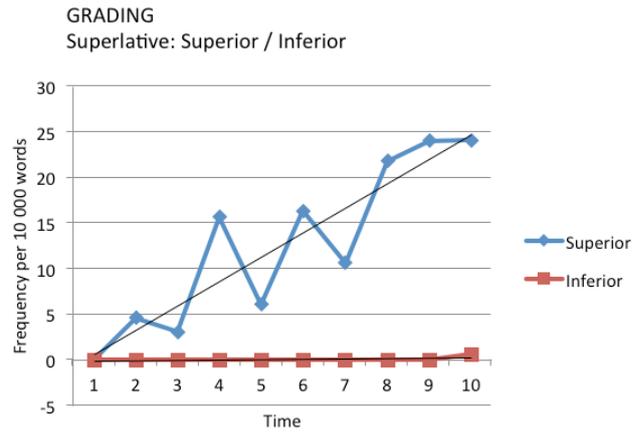

Figure 5. Developmental profile in the GRADING dimension, *superlative*: *superlative* vs. *inferior*
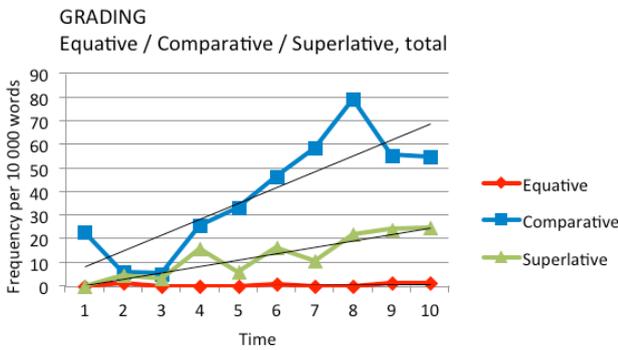

Figure 3. Developmental profile in the GRADING dimension: *equtive* vs. *comparative* (*inequative-exclusive*) vs. *superlative* (*inequative-inclusive*), total frequencies.
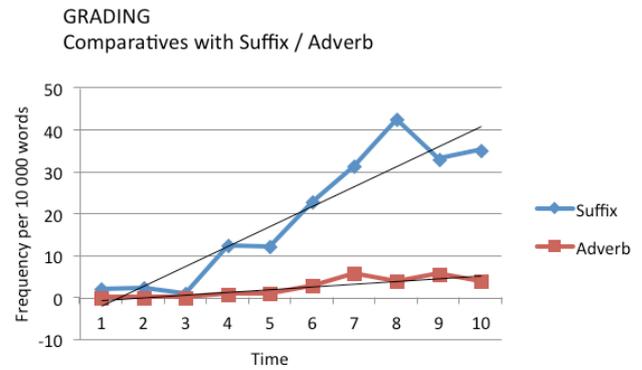

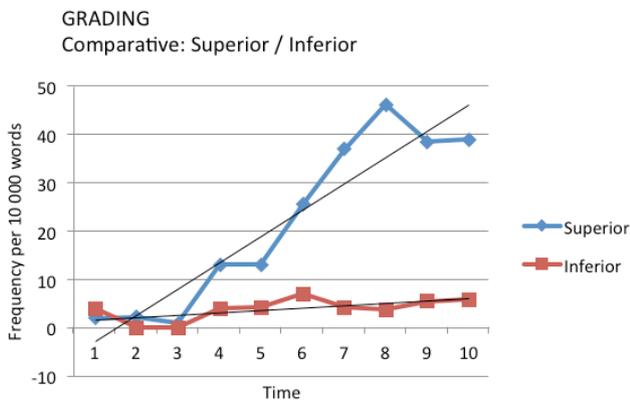Figure 6. Developmental profile in the GRADING dimension: comparatives formed with *suffix* vs. *adverb*.

Figure 4. Developmental profile in the GRADING dimension, *comparative*: *superior* vs. *inferior*
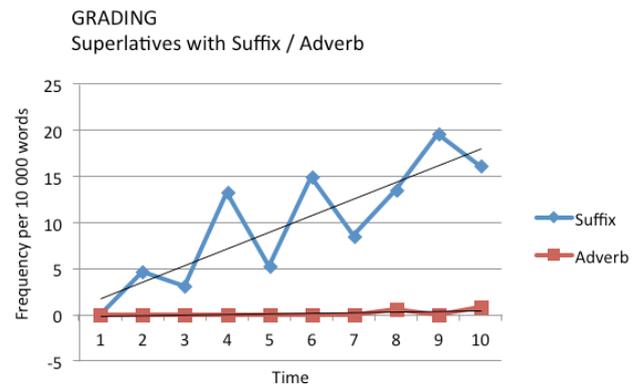

Figure 7. Developmental profile in the GRADING dimension: *superlatives* fromed with *suffix* vs. *adverb*.

An overall view of Figures 1 to 7 makes clear that the relative frequency of these comparison constructions in the NNS oral corpus tends to increase over time. Added trendlines in the charts demonstrate this clearly.[3] This means that these constructions are getting utilized more often as the learners advance in the language. In all the cases under consideration, it is the dominant category of comparison that contributes most to this increase, whereas the non-dominant counterpart increases less, if at all. This is most typically the case with the pairs of categories in the GRADING dimension (Figures 3 to 7), but is clear also in the IDENTITY and LIKENESS dimensions (Figures 1 and 2). In all cases, the same category remains dominant over time. This pattern is consistent from the time when comparison in the dominant category has gained momentum and started being used on a regular basis; through the first three occasions, however, this is not yet the case with LIKENESS (Figure 2) where an apparently unsystematic variation occurs, and with the GRADING categories where data are still very sparse at these stages. Constructions of GRADING comparison are few during the first three occasions, but after that the dominant category takes the lead and increases greatly. Figure 3, where the total frequencies of equative, comparative and superlative are plotted together, displays three degrees of dominance which of course can be broken down into pairs: comparative dominates over superlative, and each of them dominates over equative. The rate of increase over time differs accordingly, with virtually no increase at all of equative comparison.

This means that the relations of dominance that were reflected in the accumulated frequencies for NNS and NS as shown in Table 1, are established at an early stage of second language development in the NNS, and then remain consistent through their further acquisition of the language. This is a result which should be expected if the frequency relations are due to systematically occurring expressive needs, and if these adult NNS have similar expressive needs at large as the adult NS and approach the task of acquiring the Swedish constructions of comparison with a largely equivalent stage of general conceptual development from their background languages.

6. Summary and conclusion

Two objectives motivated the present study: to present the basics of the Swedish system of comparison constructions from a functional point of view, and to explore quantitative patterns in the acquisition and use of relations of comparison in adult speakers.

What we have identified here as grammatical constructions of comparison forms a system which is somewhat hard to delimit sharply. Yet there are a number of different types of constructions in the language whose main function is to express a comparison of some sort. We have chosen as a criterion for inclusion in this set the presence of some element in the construction which explicitly signals that something is compared, and distinguished a number of different *dimensions* in which *relations of comparison* are expressed. A characteristic feature of comparison constructions are the particular *constituting elements* which structure the constructions functionally: the *comparandum*, the *standard*, the *parameter*, the *comparator* and the *standard marker*. We have focused on exploring their roles and mutual interaction in some detail, because it seems clear that the creative potential as regards how comparisons are conceptualized lies in the ways these elements can be handled and varied in language performance.

The second part of the study concerns to what extent these various types of comparison constructions are made use of by speakers and how this develops in acquisition. Here a usage-based perspective was combined with a functional approach to hypothesize a chain of dependence between (i) the degree of communicative need for expressions of particular types of comparison, (ii) the frequency and rate of making use of such expressions, and (iii) the degree and rate of entrenchment of the constructions in question. Exploring entrenchment effects is beyond the scope of the present study and must be left for future research. Our concern has been with frequency relations and their interpretation in terms of expressive need. Data were gathered from a longitudinal corpus of adult learner Swedish speech in combination with a comparable corpus from adult native Swedes. In order to obtain relevant categories on which to measure frequencies, pairs of paradigmatically related constructions were selected on the basis of the relation markers that they contained, and *relations of dominance* were determined within each pair. Remarkably consistent patterns of quantitative dominance were found across the various types of constructions. Learners and native speakers displayed the same dominance relations, and these also prevailed across the learners' successive stages of development in Swedish. This suggests that the constructions of comparison that we have examined tend to develop in language use with a systematic distribution of frequency relations between paradigmatically related types. In terms of the extent to which the various constructions are being utilized, the construction that was found dominant with the native speakers develops ahead of its dominated counterpart construction in the speech of the learners.

The results point to the following dominance relations:

1.   Inequative comparison dominates over equative.
2.   Inequative-exclusive (comparative) dominates over inequative-inclusive (superlative).

3. Superior comparison dominates over inferior.

4. Suffix comparison dominates over adverb comparison.

If we interpret these results in terms of expressive preferences, we may reformulate them as a set of tentative conclusions:

1′. Comparisons are used more often for differentiating than for equating.

2′. There is more often reason to compare entities (comparandum and standard) which are distinct from each other than such where one entity (the comparandum) is included in the other (the standard).

3′. Grading comparisons tend to be conceptualized in such a way that the entity that possesses the gradable property to a higher degree is chosen as comparandum.

4′. Suffix comparison asserts itself, when available, as the chief method of expressing comparatives and superlatives (possibly having to do with a readiness to use the more grammaticalized structure).

The tentative nature of the interpretations 1′ to 4′ must be emphasized at the present stage. The more general validity of these statements certainly needs to be verified in further research. In other words, these findings invite further investigation of patterns of quantitative dominance in acquisition and use, with similar and other types of constructions.

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Notes

[1] Although grammatical constructions of comparison are widespread typologically and areally across the world (see especially the world map in Stassen 2005), Dixon (2012: 343 and 440-441) points out there are some languages that lack such constructions.

[2] The lack of a synthetic (i.e. affix) form for inferior comparison even in a language in which a synthetic form occurs with superior comparison appears to be a typologically universal phenomenon. In his study of just over 300 languages, Bobaljik (2012: 214) found that although many languages have synthetic superior comparative, a synthetic form is lacking throughout in inferior comparative.

[3] There is, to be sure, rather large fluctuation in frequency from session to session in some cases, which is especially marked in the respective dominant categories (see Figures 1, 2, 5 and 7). The origins of this are hard to trace. Some random variation should be expected here, but it is also likely that the varying topics of the conversations from time to time have had an influence on the use of comparisons. In any case, the trend over time is consistent.