When Uniqueness is Guaranteed: DEN-Omission in Swedish*

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1. Introduction

This work contributes to the solving of an old-standing puzzle in the grammar of definite expressions in Swedish, namely, the conditions of free-standing definite determiner omission. This pattern has not received any formal semantic treatment so far. The omission is argued to be licensed if and only if a nominal expression (i.e. noun with its modifiers) is "guaranteed" to denote a set with at most one member once context parameters are fixed. I show that the solution to this puzzle relies on (and thus supports) the grammatical distinction between the Context of the Utterance (Context) and the World of Evaluation (World), originating from Stalnaker (1970) and Kaplan (1989). At the same time, it provides new evidence that certain gradable adjectives depend on a contextually determined comparison class.

Swedish is a "double determination" language in that in definite expressions with prenominal modifiers a free-standing determiner (DEN) is used in addition to a suffixal determiner (-EN) (*cirkel-**n*** 'the circle' vs. ***den** grå cirkel-**n*** 'the grey circle').[1] DEN can be omitted with adjectives that single out a unique individual in the extension of the noun they combine with such as superlatives, (1), but also with some positive adjectives, (2), as mentioned in Dahl (2004), Julien (2005).[2]

(1) Jag ska ta (**den**) **största gris-en** till en tävling.
I will take (DEN) biggest pig-EN to a contest
'I will take the biggest pig to a contest.'

*This project was made possible by the ongoing help from Bernhard Schwarz on the theoretical side, and Marianne Akerberg on the empirical one. I'm thankful to John Christian Brannigan-Odehnal, Katarina Smedfors, Luis Alonso-Ovalle, Jessica Coon, Brendan Gillon, Alan Bale, Øystein Vangsnes, Björn Lundquist, and the audiences at CASTL LingLunch and NELS 42 for their input.

[1] I'm using DEN and -EN glosses for the free-standing and the suffixal determiner respectively in order not to give them specific semantic labels for the moment and also to abstract away from number and gender features they inflect for.

[2] Unless otherwise indicated, examples are from my sessions with native speakers.

[***Circumstances***: Peter has two pigs on his hobby farm. One pig is fatter than the other. He is showing the pigs to his friend Sven and says,]

(2) Jag ska ta (**den**) **stora gris-en** till en tävling.
I will take (DEN) big pig-EN to a contest
'I will take the big pig to a contest.'

Dahl (2004) points out the possibility of DEN-omission with *stora* giving an example of *stora hus-et* ('big house') that can be uttered, for instance, by an owner of two houses to routinely refer to one of them. However, he doesn't try capture this pattern in terms of a natural class of adjectives. It has passed unnoticed that there is a stark contrast between some positive adjectives that can allow for DEN-omission and others that never do:

[***Circumstances***: Anika has two fine carpets in her house, one striped and one dotted. She wants to give one as a wedding gift to her friend Wilma. She asks her husband,]

(3) Tror du att Wilma skulle vilja ha *(den) **randiga tapet-en**?
believe you that Wilma should want have *(DEN) striped carpet-EN
'Do you think that Wilma would like to have the striped carpet?'

The goal of this paper is to *characterize semantic conditions* on DEN-omission in view of the fact that they can be satisfied both by superlatives and by some positive adjectives such as *stora* ('big').[3] I leave to further research the question about morpho-syntactic underpinnings of this contrast, in particular, whether it involves adjective's moving into the D^o position, as proposed in Svenonius (1994) for Norwegian, or some phonologically null morpheme imposing the conditions in question.

In section 2 I present some background data and assumptions and outline the main insight. In section 3 I formulate an initial hypothesis based on the case of superlatives, making it explicit why the semantics of superlatives ensures necessary uniqueness, and why some other modifiers licensing DEN-omission fall into the same class. In section 4 I revise (weaken) the initial hypothesis to capture DEN-omission with positive Context-sensitive adjectives such as *stora* ('big') but keep it restrictive enough to exclude *randiga* ('striped') and other non-licensers. Section 5 concludes the paper.

2. The Project

DEN-omission is never obligatory in the context of an "adjective+noun-EN" predicate.[4] In other words, DEN can be used in all "adjective+noun-EN" contexts. This means that the conditions on DEN-omission equal the conditions on the use of DEN *plus* some additional conditions, the identification of which is precisely the goal of this paper. But first, what are the conditions on the use of DEN?

[3]Throughout the paper I use definite forms of adjectives as citation forms.

[4]Perhaps the only exception is *hele* 'whole' which also has a very different syntax from other modifiers: it appears in front of DEN if there is another modifier preceding the noun: *hele* ***den*** *animerte seri-****en*** 'the whole animated series'. Thanks to Björn Lundquist for pointing this out to me.

I assume for DEN the Fregean presuppositional treatment of the definite determiner. On this view it denotes a function whose one argument (corresponding to the denotation of NP) is restricted to properties that characterize singletons:

(4) $[[\text{the}]] = \lambda P : |P| = 1 . \lambda Q . \exists x[P(x) \& Q(x)]$

Given this semantics of DEN, the condition on its use can be stated as a requirement that *the property denoted by the nominal expression hold of a unique individual (in the World of Evaluation with respect to the Context of the Utterance)*. We have thus identified one part of the conditions on DEN-omission. However, this is obviously not enough, since DEN-omission is possible not in all cases where it's okay to use DEN. I identify the remaining conditions based on the semantics of the adjectives licensing DEN-omission.

Dahl (2004) notes that DEN can be omitted with what he calls "selectors" that include superlatives, as in (1), ordinals, (5), *enda* ('only'), (6), and some other modifiers.

(5) Vi skulle bo på **femte våning-en**.
we should live on fifth floor-EN
'We should live on the fifth floor.' [SUC 4242933]

(6) . . . Med **enda skillnad-en** att Kulla Gulla har rågblonda lockar. . .
with only difference-EN that Kulla Gulla has rye.blond curls
'. . . With the only difference that Kulla Gulla has rye blond curls. . . ' [SUC 10242145]

What these descriptions have in common, intuitively, is that due to their lexical properties they always hold of at most one individual. Such a hypothesis would explain why (1) is well-formed, as detailed below.[5] This would also explain why (3) is ill-formed, as there is nothing about the semantics of the positive intersective modifier *randiga* ('striped') that would guarantee the uniqueness. However, this would not capture the well-formedness of (2) with a positive form whose semantics, it would seem, also gives no such "guarantee" of uniqueness. After all, there could well be more than one pig.

In this paper I argue that a common denominator can be found for superlatives and adjectives such as *stora* ('big') to the exclusion of non-licensers. What is crucial on this account is that *stora* ('big') is Context-sensitive: this enables such adjectives to *guarantee in certain Contexts* that NP denotes a function characterizing a set with at most one member.[6]

3. Necessary Uniqueness: Superlatives, Ordinals, *enda* ('only')

I start by discussing DEN-omission with superlatives because those are related to uniqueness in the most intuitively clear way. Once I have made an explicit hypothesis about why

[5]For Norwegian, which partly shares the pattern with Swedish, Svenonius (1994) suggests that *første* ('first') and *samme* ('same'), are ". . . 'determining' adjectives in the sense that they exclusively restrict the reference of a noun phrase".

[6]Cases of DEN-omission should be distinguished from cases of adjective-noun compounding, not rare in North Germanic languages, as well as from proper names, which normally do not require DEN and which I do not discuss. Compounds are characterized by non-compositional meaning (e.g. *öppna spis-en* 'the fireplace' lit. open stove-EN).

superlatives license DEN-omission, I then try to extend that hypothesis onto other licensers.

I assume that the LF for the nominal expression *största grisen* ('biggest pig') in (1) is as in (7). In this LF the superlative morpheme undergoes a short movement from the position where it is adjoined to *big* to take scope over both the noun and the adjective, leaving a trace of type d, as in Heim (1999). CS is a phonologically null Comparison Set variable.

(7) LF for *biggest pig*: CS-*est* λd [d-big pig] (English in the formulae for clarity)

A gradable adjective such as *big* denotes a relation between degrees and individuals:

(8) [[big]] = λd. λx . the size of x equals or exceeds d

Assuming that the raising of *-est* leaves a trace of the type d which saturates the first argument of the function denoted by *big*, *d-big* denotes a property of individuals to be of size which equals or exceeds d. This property combines with the property denoted by *pig* by the Predicate Modification rule, resulting in the predicate *d-big pig* true of individuals that are pigs whose size equals or exceeds d. Lambda abstraction over the d trace creates a corresponding property of degrees:

(9) [[λd . d-big pig]] = λd . λx . the size of x equals or exceeds d and x is a pig

This means that if only one individual is related to some d, it is necessarily the biggest one, since if no other individual is related to that degree, the size of no other individual equals or exceeds d. This is exactly what the superlative morpheme does, according to Heim (1999): it picks from a Comparison Set an individual uniquely related to a degree d. Specifically, *-est* denotes a function with three arguments: a Comparison Set argument C, a relation R between degrees and individuals on a certain scale (such as the denotation of *λd [d-big pig]* in our case).

(10) [[-*est*]] = λC . λR . λx . ∃d[R(d)(x) & ∀y∈C[y ≠ x → ¬R(d)(y)]] (to be finalized)

In order for this function to produce results which would correspond to our intuitions about which comparisons make sense and which don't, some additional material needs to be introduced. First, as noted in Heim (1999), this function has be defined only for individuals that are members of the Comparison Set, that is, x has to be a member of C. This is needed in order to disallow superlatives to apply to cases where an elephant is judged biggest relative to a Comparison Set of butterflies. Second, a Comparison Set should not be chosen randomly, according to Heim (1999), but rather its members should have properties denoted by the adjective and the noun. Moving *-est* to a position scoping over both the adjective and the noun enables us to encode this intuition as a presupposition that the members of C should have the property R (in the case at hand be pigs of some degree of size). These two conditions ensuring meaningful comparison are added to the denotation of *-est* in (11), restricting the second and the third arguments of the function:

(11) [[-*est*]] = λC . λR : ∀**y**∈**C** ∃**d[R(d)(y)]** . λx : **x**∈**C** . ∃d[R(d)(x) & ∀y∈C[y ≠ x → ¬R(d)(y)]]

Applying this to the case of *biggest pig* we have the following property of individuals after the Comparison Set C and the property R have been fed into the function denoted by *-est*.

(12) [[(7)]] = λx : x∈CS . ∃d[[[λd . d-big pig]](d)(x) & ∀y∈CS[y ≠ x → ¬[[λd . d-big pig]](d)(y)]]

The set of individuals satisfying the function in (12) contains *at most one member irrespective of the Context or the World of Evaluation*. Hence the following first stab at the condition on DEN-omission can be made (Δ is a placeholder for the omitted determiner, showing that the whole constituent has the distribution of a DP, not of an NP):

(13) "Δ NP" is acceptable with respect to a pair c, w if and only if
$|[[NP]]^{c,w}| = 1$ & $|[[NP]]^{c',w'}| \leq 1$ for all c′, w′.

Adopting this hypothesis, we expect to find DEN-omission with other predicates which *always* denote a set with at most one member. This expectation is confirmed. Thus, the semantics of ordinals can be derived from the semantics of superlatives, as in Herdan and Sharvit (2006), which correctly predicts the omission in (5). The adjective *only*, according to Herdan and Sharvit (2006), denotes a function relating an individual to two sets in case this individual is the only one in the context set C to have the property P. Assuming Swedish *enda* ('only') has the same denotation as its English counterpart, DEN-omission in (6) is predicted.

4. Unique in a Context Across the Worlds: Context-Sensitive Adjectives

We come now to the main puzzle of the DEN-omission pattern, namely that some positive adjectives but not others pattern with superlatives and. I capitalize on the observation that the positive forms licensing DEN-omission happen to be Context-sensitive, in contrast to the forms that do not license DEN-omission. In light of this, I weaken the initial hypothesis so that it accounts for DEN-omission with superlatives and positive Context-sensitive licensers but not with non-licensers.

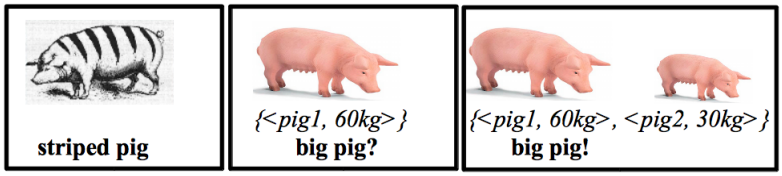
4.1 Context-Sensitivity

In this section I discuss what it takes for an NP with a positive Context-sensitive adjective to denote a function characterizing a set with at most one member, in hope that once this condition is established, it can be used to modify the hypothesis in (13) so that it covers all licensers to the exclusion of non-licensers.

It has been commonly assumed that the semantics of positive forms such as *big* or *tall* involves a Context-sensitive Standard of Comparison (Kennedy 2007 for an overview). The general intuition behind this assumption is that to tell whether something is big we need to know what it is being compared to, whereas in the case of a standardly intersective adjective like *striped* a judgement can be made of an object in isolation. Compare the following

situations:[7]

(1)



According to Syrett et al. (2010) and many others, in general, the Standard of Comparison is defined relative to some specific group or Comparison Set. I adopt a very specific view of where the Standard of Comparison comes from, namely, that it is *wholly determined* by the group of individuals amongst which the comparison is being made, as in Fernández (2009).[8] Moreover, the Comparison Set is part of the information provided by the Kaplanian Context, to make use of the notion of an interpreted sentence as a function from contexts to propositions, which are, in turn, functions from possible worlds to truth values, as proposed in Stalnaker (1970). That is, the truth-value of a sentence depends on two parameters: the Context and the World.

As in Kennedy (2007), I assume that the Standard of Comparison is introduced by a silent positive morpheme POS. So when referring to positive forms I mean *big-POS* or *tall-POS*, unlike simple adjectival roots discussed in section 2. I assume that the syntax-semantic properties of POS are quite analogous to those of *-est*, as proposed in Schwarz (2010): POS moves to take scope over the *adjective noun* predicate. The LF for the nominal expression *stora grisen* ('big pig') is given in (14).

(14) LF for *big-POS pig*: CS-POS λd [d-big pig]

Once again, a property of degrees which holds of individuals that are pigs whose size equals or exceeds the degree d is created as a result of this movement, as in (15) repeated from (9).

(15) [[λd . d-big pig]] = λd . λx . the size of x equals or exceeds d and x is a pig

I propose that the function denoted by POS takes a Comparison Set C as its first argument, a property of degrees R as its second argument, and an individual x as the third one. This function gives true in case an individual is related to the degree d on the relevant scale (size, length, etc.) associated with its second argument R which exceeds the Standard of Comparison derived from the Comparison Set C.

(16) [[POS]] = λC . λR . λ x . ∃d[R(d)(x) & d > f(C)(R)] (to be finalized)

[7]Some would argue that *striped* can also be treated as Context-sensitive since it's possible to imagine that objects can be compared in terms of how striped they are. However, what's important is that the meaning of *big crucially* depends on the Context, whereas that of *striped* clearly doesn't.

[8]According to Fernández (2009), the Standard of Comparison corresponds to the most salient gap between two neighbouring degrees in a set of degrees corresponding to a given Comparison Set ordered by a gradable adjective. She sketches a formal mechanism for determining what the most salient gap is, but I abstract away from it here. I also do not discuss whether it is possible to obtain a Standard of Comparison for any Comparison Set or not, limiting myself to a remark that it follows from the way the Standard of Comparison is defined that it cannot be a singleton.

Function f(C)(R), determined by the Kaplanian Context, maps a Comparison Set C to a Standard of Comparison given a scale associated with the relation R (e.g. size scale associated with λd *[d-big pig]*).

The function *big-POS pig* denotes is true of an individual in case it is a pig whose size exceeds the Standard of Comparison:

(17) $[[(14)]] = \lambda x\ .\ \exists d[[[\lambda d\ .$ d-big pig$]](d)(x)\ \&\ d > f(CS)([[\lambda d\ .$ d-big pig$]])]$

Under which conditions does the function in (17) characterize a singleton, or, in other words, when is there just one big pig? It seems that it depends on the Comparison Set, and, therefore, on the Context. If the Context assigns to the Comparison Set variable a set of two pigs in the rightmost box in 1, *big-POS pig* characterizes a singleton. However, once we change the Context parameter so that the Comparison Set variable is assigned the following set of pigs {<pig1, 60kg>, <pig2, 30kg>, <pig3, 60kg>}, *big-POS pig* denotes a function characterizing a set with two members (the pigs of 60kg). This means that the hypothesis in (13) is not applicable to DEN-omission with *stora* ('big') since part of the condition ($|[[NP]]^{c',w'}| \leq 1$ ***for all c'***, *w'*) clearly does not hold for *stora N*. In view of this, I weaken the current hypothesis, removing the requirement that the condition should hold for any Context. From now on it is enough that it holds *for all Worlds with respect to the actual Context*.

(18) "Δ NP" is acceptable with respect to a pair c, w if and only if
$|[[NP]]^{c,w}| = 1\ \&\ |[[NP]]^{c,w'}| \leq 1$ for all w' for which $[[NP]]^{c,w'}$ is defined.

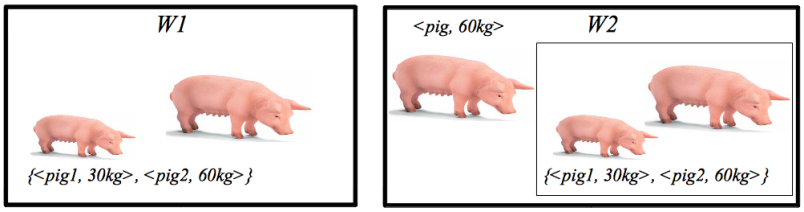
Still, as it stands now, it is not entirely clear that *big-POS pig* is this sort of a predicate. What if the properties of the members of the Comparison Set could be different in different Worlds to the effect that the Standard of Comparison and, consequently, the cardinality of the extension of the predicate, differs in different Worlds? Some constraints are needed in order to make sure that (18) captures Context-sensitive positive forms. The mention of the definedness of $[[NP]]^{c,w'}$ in (18) already points to those constraints.

4.2 Fixing Comparison Parameters

The idea I defend in this section is that predicates such as *big-POS pig* comply with the condition in (18) because if the Context provides a Comparison Set such that *big-POS pig* denotes a function characterizing a singleton in the actual World, this holds across all Worlds. I propose that this follows from a number of conditions on POS which I now discuss one by one.

Consider the following situation, where the pig outside of the inner square in World 2 is not a member of the Comparison Set.

(2)



Given the semantics for POS we have, *big-POS pig* in World 1 denotes a function characterizing a singleton, whereas in World 2 it denotes a function characterizing a set with two members, since both pigs of 60kg will satisfy the function in (17). This means that even if *big-POS pig* denotes uniquely in the actual World, it is not guaranteed to do so in all other Worlds. This means that (18) does not capture the pattern, but the situation in 2 also seems counterintuitive: why would we apply an expression to something that wasn't taken into account when establishing the standard for applying the expression?

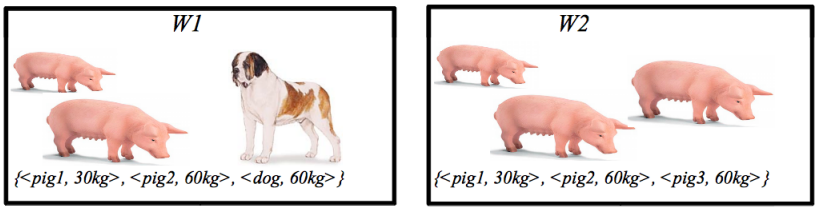
This problem is solved by introducing a presupposition that the function is defined only for those individuals that belong to the Comparison Set.[9]

(19) $[[\text{POS}]] = \lambda C . \lambda R . \lambda\ x : \mathbf{x \in C} . \exists d[R(d)(x) \ \&\ d > f(C)(R)]$.

The effect of this presupposition is that the function denoted by POS, once its C and R argument slots have been filled, is a partial one whose domain equals the Comparison Set.

Let us consider another scenario: a Comparison Set in World 1 in 3 contains two pigs and a dog. Given this Comparison Set, *big-POS pig* denotes uniquely. Imagine then World 2 where the member that is a dog in World 1 is a pig. The expression *big-POS pig* does not denote uniquely in this case: there are two pigs of the same size of 60kg.

(3)



Unless it is required that all members of the Comparison Set be pigs (i.e., satisfy the nominal predicate) in all Worlds, it is impossible to make sure that if the extension of *big pig* is a singleton in the actual World, it is also a singleton in all possible Worlds. Therefore I introduce a definedness condition, already employed in the case of *-est*, that all the members of the Comparison Set have property R.

(20) $[[\text{POS}]] = \lambda C . \lambda R : \mathbf{\forall y \in C\ \exists d[R(d)(y)]} . \lambda\ x : x \in C . \exists d[R(d)(x) \ \&\ d > f(C)(R)]$

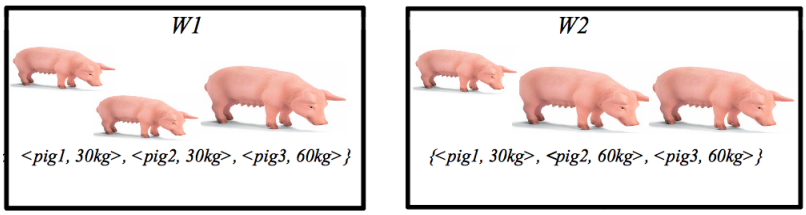
This condition restricts the domain of the Comparison Set argument of the POS-function, which is now defined only for those Comparison Sets whose members satisfy R. In the case at hand the restriction is to pigs whose size equals or exceeds d. Once again, this condition is not an arbitrary one but rather corresponds to our intuitions about meaningful comparisons.

[9]This parallels what is done in Schwarz (2010) for the case of overt domain restrictors of POS such as *for a 3-year old*.

For the current account is has an important effect of helping to make explicit how the function denoted by *big-POS pig* can satisfy the condition in (18), namely, characterize a singleton in all possible Worlds if it does so in the actual World with respect to the actual Context.

Finally, let us look at a scenario where the weight of a pig is different in World 1 than in World 2 (evaluated with respect to the same Context).

(4)



The cardinality of the extension of *big-POS pig* is 1 in World 1 and 2 in World 2, an unwelcome result given the hypothesis in (18) and that intuitively the sets in World 1 and World 2 are *different* Comparison Sets, which goes against the assumption that the Comparison Set is supposed to be provided by the Context.

Therefore I propose a new condition on the definedness of the POS-function, namely, that the measures of the members of the Comparison Set on the relevant scale be fixed. This requirement makes sense if one thinks of a Comparison Set as a set of ordered pairs where the first member denotes an individual, and the second member corresponds to the measure of that individual on the relevant scale (e.g. <pig,30kg>). On this view we can modify the condition on the second argument of POS, requiring that the individual from each pair be related to the degree corresponding to its measure on the scale, and that it must not be related to any degree that exceeds the degree in question.

(21) $[[\text{POS}]] = \lambda C\,.\,\lambda R$ **:** $\forall$**<x,d>**$\in$**C[R(d)(x) &** $\forall$**d′**$\geq$**d[**$\neg$**R(d′)(x)]]** $.\ \lambda\ x : \exists d[<x,d>\in C]\ .\ \exists d[R(d)(x)\ \&\ d > f(C)(R)]$

To sum up, I argued that *big-POS pig* is able to satisfy the condition in (18) given an appropriate Context because of the three constraints on the semantics of POS: 1) individuals that satisfy the predicate must be chosen only from the members of the Comparison Set, all of which must 2) satisfy the predicate (e.g. no dogs among pigs) and 3) have their measures on the relevant scale fixed.

4.3 Testing Predictions

The discussion above was meant to make explicit that the condition on DEN-omission is stronger than that on the use of DEN in that the property denoted by the "Δ NP" predicate must hold of a unique individual *for all Worlds* if it does so in the actual World. This view on the condition on DEN-omission captures the difference in patterning between Context-sensitive and Context-insensitive adjectives because it allows us to identify a particular kind of uniqueness associated with Context-sensitive adjectives, assuming their semantics involves an indexical element in the Kaplan-Stalnaker sense, namely the Comparison Set.

Except for capturing the difference in patterning between Context-sensitive and Context-

insensitive modifiers, how can we be sure that this is the right characterization and that the appeal to the uniqueness as guaranteed relative to a Context for all Worlds is indeed needed?

My characterization of the pattern makes a concrete prediction, and the prediction is borne out. I show below that simply the presence of *stora* ('big') in the nominal expression does not license DEN-omission unless the uniqueness is guaranteed across Worlds given a suitable Context. Consider the following example.

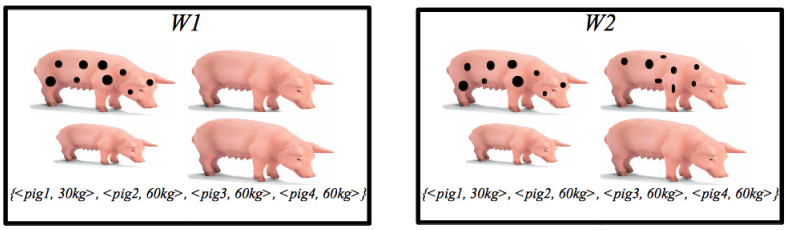
[***Circumstances***: Peter has four pigs on his hobby farm. The three bigger pigs are of the same size, but only one of them has spots on its back. He he is showing the pigs to his friend Sven and says,]

(22) Jag ska ta **den stora gris-en med fläckar** till en tävling.
I will take DEN big pig-EN with spots to a contest
'I will take the big pig with spots to a contest.'

In (22) the nominal predicate of interest is *[[stora grisen] med fläckar]* ('big pig with spots'), where brackets indicate the assumed (and the only one under the circumstances specified) constituent structure. Given that the Context provides a Comparison Set that consists of three bigger pigs of the same size and a smaller one, and given that there is just one pig with spots in this Comparison Set, the extension of the whole nominal expression in the World of Evaluation is a singleton. Therefore DEN can be used.

Let us see if the condition on DEN-omission is satisfied, namely whether the extension of the predicate is a singleton across all Worlds with respect to the given Context. Consider World 2 in 5, where two big pigs have spots and the extension of our predicate involves two individuals. This means that the cardinality of the extension of the predicate differs depending on the World. The hypothesis in (18) rules out DEN-omission in this case.

(5)



This prediction is rather strikingly confirmed:

(23) Jag ska ta *(**den**) **stora gris-en med fläckar** till en tävling.
I will take *(DEN) big pig-EN with spots to a contest
'I will take the big pig with spots to a contest.'

Despite the presence of the *stora* ('big'), DEN-omission is not licensed, as predicted by the current account on which DEN-omission is made possible not by the mere presence of a particular modifier, but rather by the predicate's extension being a singleton with respect to the given Context for all Worlds.

So far the discussion focused on the adjective *stora* ('big'), but the account is of course

supposed to be extendable onto other Context-sensitive adjectives. Indeed, adjectives such as *korta* ('short'), *gamla* ('old'), *nya* ('new'), *lilla* ('small') can also license DEN-omission.

5. Conclusions

The aim of this paper was to give a semantic characterization of the Swedish pattern of DEN-omission. Given that DEN-omission is never obligatory but sometimes impossible, it was argued that the requirement on DEN-omission should be *stronger* than the requirement on the use of DEN. Based on the case of superlatives, I started out with an overly strong requirement of uniqueness in all Worlds and Contexts, which had to be modified in the face of licensers such as *stora* ('big'). I argued that *stora* ('big') could satisfy the weaker condition that the extension of the NP contain at most one individual in all Worlds *if it contains just one individual in the actual World*. Crucially, such a condition can be satisfied only by Context-sensitive positive modifiers, whose POS-morpheme introduces Context information in the form of a Comparison Set. Specifically, I have argued that the semantics of the POS-function, which takes the Comparison Set as one of its arguments, is such that the number of individuals singled out as big by *big-POS pig* is the same in all possible Worlds where the function is defined as it is in the actual World. As sub-case of this is the situation where the number of individuals singled out as pig pigs equals 1, in which case DEN-omission is licensed.

Rather unexpectedly, this discussion has led me to results that go beyond what was needed for the task at hand. First, the presupposition introduced by POS that all individuals satisfying the description be members of the Comparison Set results in the extension of the NP involving exactly the same individuals in all Worlds: Context-given Comparison Set is the same for all Worlds. Second, additional presuppositions of POS require that those individuals all have the property described by the noun and the same size they have in the actual World. As a result, the extensions of predicates involving only Context-sensitive modifiers *are identical in all possible Worlds*:

(24) For any c and for any w and w′ such that $[[\text{big-POS pig}]]^{c,w}$ and $[[\text{big-POS pig}]]^{c,w'}$ are defined, $[[\text{big-POS pig}]]^{c,w} = [[\text{big-POS pig}]]^{c,w'}$

This means that such predicates behave as rigid designators, akin to proper names. I leave to further research testing the validity of this conclusion.

I have not dealt with DEN-omission licensing modifiers such as *förra* ('previous'), *nästa* ('next'), *norra* ('Northern'), *västra* ('Western'), *östra* ('Eastern'), *södra* ('Southern'), *högra* ('right'), *vänstra* ('left') and some others. At least the first two can be seen as types of ordinals. It is an interesting task to investigate how the semantics of cardinal directions modifiers is related to uniqueness.

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