"Disagreeing" pronominal reference and gender in Swedish*

Abstract: Swedish allows the use of a pronoun, such as *det* (it.neuter) 'it' below, which seems to disagree with its antecedent in formal gender:

(i) Bo har köpt [en dansk cykel]_i. Det_i vill jag också ha. Bo has bought [a.common Danish bicycle]_i it.neuter want I too have 'Bo has bought a Danish bicycle. I would like to have one like that too.'

This paper examines the properties of alleged "disagreement", illustrated in (i), as well as in topic doubling. In order to explain the observed phenomenon, the feature set-up of the four non-plural 3rd person pronouns is examined. It is argued that Swedish has two instances of the pronouns *det* (it.neut) 'it' and *den* (it.common) 'it', one referential pronoun (R-pronoun) and one syntactic pronoun (S-pronoun). S-pronouns link to linguistic entities, whereas R-pronouns link to discourse entities. It is also argued that *det* (it.neuter) 'it' in (i) is an R-pronoun which lacks a number feature, hence no true disagreement is at hand. A unified account is presented as to what type of meanings the use of an S-pronoun and an R-pronoun may give rise to.

The relation between the formal and the semantic gender systems in Swedish is discussed, and a four-way semantic gender system is proposed, where each gender corresponds to a third person non-plural pronoun. It is furthermore proposed that formal gender features are not syntactic, but features that are added post-syntactically, in a morphological module. Their function is to make visible the presence or absence of other features, in particular number, which otherwise would lack a phonological exponent.

Keywords: formal gender, semantic gender, pronouns, disagreement, anaphoric pronouns, deictic pronouns, topic doubling, cross-sentential reference

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1 Introduction

The main function of pronouns in human language is to identify and track discourse referents sentence internally and across clausal boundaries – a pronoun and its antecedent noun phrase have the same reference in the world of discourse. For instance, in an authentic utterance, such as (1) below, *the little girl* and *she* refer to the same person.

(1) [The little girl]_i was happy. She_i had just won the swimming race.

The interpretation of pronouns works the same way in Swedish as in English and in many other languages, but in Swedish it is possible to use a pronoun that appears to disagree with its antecedent, in formal gender as well as in number. Swedish has two formal genders on nouns: common gender and neuter. The noun phrase *en dansk cykel* 'a Danish bicycle' in (2a and b) is a common gender noun phrase, since *cykel* 'bicycle' is a common gender noun, *den* is a common gender pronoun, whereas *det* is neuter. Nevertheless, both (2a) and (2b) are well formed.

- (2) a Bo har köpt [en dansk cykel]_i. Den_i vill jag också ha. *Bo has bought [a Danish bicycle]_i it.common want I too have* 'Bo has bought a Danish bicycle. I would like to have that one too.'
 - b Bo har köpt [en dansk cykel]_i. Det_i vill jag också ha. *Bo has bought [a Danish bicycle]_i it.neuter want I too have* 'Bo has bought a Danish bicycle. I would like to have one like that too.'

In Swedish, Topic doubling occurs when a sentence initial noun phrase is doubled by a pronoun and is a phenomenon that seems to be closely related to cross-sentential reference. In the unmarked case, the pronoun and its antecedent agree, for example in formal gender, as shown in (3a); however, a "disagreeing" pronoun is also possible, as illustrated in (3b):¹

¹ The phrase *den danska cykeln* 'the Danish bicycle' in (2a) is a definite noun phrase, whereas *en dansk cykel* 'a Danish bicycle' in (3b) is indefinite. The reason why [?] *En dansk cykel, den vill jag också ha* is not equally well formed is not crucial to the points I make in this paper. To me it seems as though the two segments, *Den danska cykeln* and *den* are more closely related to each other than *En dansk cykel* and *den*. Whether this is actually true, and – in that case – how it should be formalized is out of the scope of this paper.

- (3) a [Den danska cykeln]_i, den_i vill jag också the.common Danish bicycle.common.def it.common want I too ha.

 have

 'The Danish bicycle, I want to have that one too.'
 - b [En dansk cykel]_{i,} det_i vill jag också ha. a.common Danish bicycle it.neuter want I too have 'A Danish bicle, I want to have one too.'

The purpose of this article is threefold: The first goal is to provide an explanation of the use of "disagreeing" pronouns in cross-sentential reference and in topic doubling, as illustrated in (2b) and (3b). In order to explain these facts, we must consider the properties of the 3rd person pronoun system in Swedish in detail. The second goal of this paper is therefore to make a detailed study of the 3rd person non-plural pronoun system in Swedish: *han* 'he', *hon* 'she', *den* (it.common) 'it', and *det* (it.neuter) 'it'. We examine which features the pronouns express and how reference is established by way of these features. In order to be able to explain "disagreement", the role of formal and semantic gender has to be taken into consideration; thus, the third purpose is to explain the formal and semantic gender systems in Swedish and how they interact.

The outline of the paper is as follows: In section 2, I present some background on different pronoun types and how reference between a discourse antecedent and a pronoun is established in different ways. In section 3, the distinctions presented in section 2 are developed and applied to the 3rd person Swedish pronouns *han* 'he', *hon* 'she,' *den* (it.common) 'it', and *det* (it.neuter) 'it'. Section 4 contains a close study of the "disagreement" constructions illustrated in (2b) and (3b) above, and in section 5 I discuss formal and semantic gender, primarily from the point of view of Swedish, although the description might be valid for other languages. Section 6 contains a summary and a conclusion.

2 Background

In an influential study from 1983, Bosch makes a distinction between referentially-functioning pronouns (RPs) and syntactically functioning ones (SPs), terms that I will borrow, although I will use the abbreviations R-pronouns and S-pronouns. According to Bosch, R-pronouns differ from S-pronouns in not referring to linguistic antecedents; these pronouns refer directly to referents in

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the world of discourse. Bosch describes an S-pronoun as in crucial ways equivalent to agreement, and it refers back to a linguistic expression with the same feature set as the pronoun. In the typical case, the S-pronoun refers back to a preceding noun phrase (which of course in turn may refer to an entity in the world of discourse). A diagnostic, by which Bosch in a later paper, (Bosch 1986), singles out S-pronouns from R-pronouns, is a commutation test; a referential antecedent for an S-pronoun should be replaceable by a non-referential antecedent such as *nobody*.² In short, the idea is that *he* in (4b) cannot be an R-pronoun since it refers back to an expression, *nobody*, that has no reference. This means that *he* is an S-pronoun. The pronoun *he* in (4a), on the other hand, is an S-pronoun.

- (4) a Fred said he was sick.
 - b Nobody said he was sick.

Bosch assumes that R-pronouns come in two versions: they are either deictic, in which case reference goes directly to a conceptual representation in the discourse, or anaphoric, in which case reference goes to a conceptual representation made available by the linguistic context. Consider (5):

(5) Nobody was tired. But they left (anyway).

They in (5) cannot refer back to the linguistic expression *nobody* since *they* is a plural pronoun, whereas *nobody* is singular (or at least not plural); the pronoun *they* refers to "the contextually understood set of people over which it [i.e. the quantifier *nobody*] quantifies". Since *they* in (5) cannot be an S-pronoun, it must be an R-pronoun. *Nobody* in (5) is clearly non-referential, but, as Bosch (1986:74) points out, *nobody* makes the antecedent available.

As we proceed we shall see that the distinction between S-pronouns and R-pronouns is of importance for a proper understanding of the Swedish pronominal system. However, it will also be evident that we achieve a better understanding of the function of pronouns if we decompose the notions S-pronouns and R-pronouns into features: referentially-functioning features – R-features – and syntactically functioning ones – S-features. By means of R-

² The examples in (4) are from Bosch (1986, 66).

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features an R-link is established between the pronoun and the relevant discourse antecedent. An S-link is established by way of S-features.

Tasmowski & Verluyten (1985) (see also Tasmowski-De Rijck & Verluyten 1982), hencefort T&V, reject Bosch's idea that the main distinction between pronominal elements should be made between R-pronouns and S-pronouns. They suggest instead that the main dividing line is between deictic pronouns on the one hand and non-deictic (or anaphoric) ones on the other. For deictic pronouns a linguistic antecedent is not available. For anaphoric pronouns a full interpretation requires a linguistic antecedent.

Following Bosch, Cornish (1986) assumes that the main distinction is between R-pronouns and S-pronouns. However, Cornish prefers the term antecedent-trigger rather than antecedent when describing the element to which an R-pronoun refers.

One important difference between T&V's model on the one hand and Bosch/Cornish's on the other is that Bosch/Cornish assume that text (including spoken language) is but one input for the discourse representation (the "antecedent" or "antecedent-trigger") and that an anaphoric pronoun may also refer to a non-linguistic, conceptual representation, an antecedent that is "evoked" by the linguistic context.

One important point in Cornish (1986) is that he introduces a new way of viewing the relation between R-pronouns and the element to which this pronoun refers. T&V refer to this relation in terms of "control"; the antecedent controls the pronoun. Cornish suggests that the set-up of available pronouns "provides the speaker with a subtle means of imposing, *a posteriori*, a particular referential perspective upon a referent which has already been entered into the discourse model" (p. 251). Cornish goes so far as to suggest that "it is the [R-]pronoun /.../ which 'controls' or determines the antecedent". Consequently, according to Cornish the reverse order of control holds between an S-pronoun (Cornish uses the term "strict anaphor") and the noun phrase to which it refers; a pronoun of this type has "semantic-logical properties and acts upon its governing predicate expression, the result of which then determines a controller, following which the controller's agreement features are transferred to the anaphor" (p. 257).

³ See also Bosch (1986) for a similar conclusion.

It should be pointed out that the term "control" in this framework differs from the way it is used elsewhere in present-day syntactic theory. In this paper, the term "control" will be used to refer to the matching or "sameness" of features: The assumption that an S-pronoun is controlled by its antecedent means that a noun/NP requires that the corresponding pronoun does not carry conflicting features; for example, if the noun phrase antecedent carries the features common gender and plural, an S-pronoun cannot be neuter and singular. The assumption that an R-pronoun controls its antecedent means that the features of the anaphoric pronoun do not correspond to any morphosyntactic features of an antecedent, but that the features carried by the pronoun evoke the notion of a referent of a particular kind.

3 Third person pronouns in Swedish – R-pronouns or S-pronouns?

In this section we take a closer look at the third person pronouns in Swedish, beginning with *den* (it.common) 'it' and *det* (it.neuter) 'it', used as S-pronouns in 3.1, and continue with *han* 'he' and '*hon* "she' in 3.2. The subject of 3.3 is the linking procedure, i.e. the way features and meaning components are linked across sentence boundaries. In 3.4 deictic pronouns are discussed and compared to an instance of *det*, (it.neuter) 'it', which I argue is an R-pronoun. In this section, the meaning of the feature number is highlighted. In 3.5, S-features and contrastive stress are discussed. 3.6 is a summary.

3.1 Den (it.common) 'it' and det (it.neuter) 'it', used as S-pronouns

As a first step it seems clear that the distinction between S-pronouns and R-pronouns is relevant for Swedish (although, as we shall see below, the situation is rather intricate). Consider first 3rd person pronouns in the singular. There are two pronouns, which seem to be clearly syntactic, or, rather, which may be used as S-pronouns: *den* (it.common) 'it' and *det* (it.neuter) 'it'. Crucially, *den* and *det*, used in this way, "agree" in formal gender (neuter or common gender) and number with a noun (phrase) in the preceding discourse:^{4,5}

⁴ The "nobody test" that Bosch (1983) uses (cf. (4) above) seems not to be as easily applicable to Swedish, since the common gender *ingen* 'nobody' is +HUMAN, and the neuter *inget* 'nothing' is -HUMAN.

- (6) a Jag klappade en tiger. Den var randig.

 / patted a.common tiger. it.common was striped.common.

 'I patted a tiger. It was striped.'
 - b *Jag klappade en tiger. Det var randig-t.

 // patted a.common tiger. it.neuter was striped-neuter.
 - c Jag klappade ett lejon. Det var gul-t.

 / patted a.neuter lion. it.neuter was yellow.neuter

 'I patted a lion. It was yellow.'
 - d *?Jag klappade ett lejon. Den var gul.

 // patted a.neuter lion. it.common was yellow.common

We may conclude that the formal gender, i.e. common gender on *tiger* and neuter on *lejon*, as well as number, link the noun phrase *en tiger* and *den* in (6a), as well as *ett lejon* and *det* in (6c) – the antecedents *en tiger/ett lejon* control the pronouns *den* and *det*, according to the definition given in section 2; the pronouns *den* (it.common) 'it' and *det* (it.neuter) 'it' in (6a and c) refer back to the linguistic expressions *en tiger* (a.common tiger) 'a tiger' and *ett lejon*, (a.neuter lion) 'a lion' respectively. We have no reason to assume that the formal gender specifications on *den* (it.common) 'it' and *det* (it.neuter) 'it' in (6a and c) are semantically meaningful *per se*, at least not to any higher degree than what holds for formal gender on nouns. Although there is a fairly strong tendency for nouns denoting inanimate and abstract entities to be neuter, it is not possible to predict the formal gender of a noun on the basis of its meaning. The second of the line of the properties of the neuter of the properties of the propertie

(i) Jag klappade en tiger. Det var stor-t.

/ patted a.common tiger. it.neuter was great-neuter

'I patted a tiger. It was great.'

In cases such as (i), *det* is no longer an S-pronoun, but an R-pronoun. This use of *det* will be discussed in detail below.

⁵ Note that sentences corresponding to (6b) could be well formed too if *det* refers to the event of patting a tiger:

⁶ According to the standard view noun phrases such as *en tiger* and *ett lejon* are DPs (see Abney 1987). However, some of the noun phrases that will be discussed in this paper are simple NPs and some probably larger than DPs I will refer to them by the common denomination noun phrase or NP.

⁷ It might very well be the case that semantic rules are operative in the assignment of lexical gender to nouns (see e.g. Corbett 1991, Fraser & Corbett 2000), but these rules are in that case

When it comes to the number feature it seems safe to conclude that both *den* (it.common) 'it' and *det* (it.neuter) 'it' carry a number feature. The reason is that *den* (it.common) 'it' and *det* (it.neuter) 'it' cannot refer to a plural antecedent: Had for example *det* (it.neuter) 'it' been devoid of a number feature (which I will argue below is the case for a homonymous instance of *det* (it.neuter) 'it'), we would have expected that *det* (it.neuter) 'it' could refer back to a noun phrase in the plural, such as *två lejon* 'two lions' in (7b). This is not the case:⁸

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(7) a
          Jag
                klappade
                                tigrar.
                                         *Den var stor.
                           två
                patted
                           two tigers.
                                         it.common was big.common
                klappade
                                lejon.
     b
          Jag
                           två
                                         *Det
                                                 var
                                                       stor-t.
                patted
                           two lions.
                                         it.neuter was big-neuter
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To conclude this subsection: *Den* (it.common) 'it' and *det* (it.neuter) 'it' can be used as S-pronouns in Swedish.

3.2 Han 'he' and hon 'she' - R-pronoun candidates

In cases when the discourse antecedents are conceived of as ANIMATE⁹ the pronouns *han* 'he' and *hon* 'she' are normally chosen:¹⁰

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    (8) a Jag träffade en man. Han var lång.
        'I met a man. He was tall.'
    b Jag träffade en dam. Hon var lång.
        'I met a woman. She was tall.'
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At a first glance it might seem plausible that *han* 'he' and *hon* 'she' are S-pronouns, just like *den* (it.common) 'it' and *det* (it.neuter) 'it', as shown in 3.1. The reason would be that *han* and *hon* are traditionally assumed to be common gender pronouns. However, at a closer examination this seems to be the wrong conclusion – *han* 'he' and *hon* 'she' appear to lack formal gender specifications.

quite vague, full of exceptions and sometimes contradictory. In my view it is not reasonable to view lexical gender on nouns, i.e. common gender and neuter, as a meaningful category.

⁸ As pointed out in footnote 6, (7b) is fine if *det* (it.neuter) 'it' refers to the event of patting the lions. This use of *det* (it.neuter) 'it' will be discussed in detail below.

⁹ I will use the term ANIMATE as synonymous to HUMAN.

¹⁰ Throughout the paper semantic features will be given in capitals.

Consider first (9) below, which shows that concord in formal gender between *den/det* and their corresponding antecedent noun phrases is required.¹¹

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klappade
(9) a Jag
                       en
                                  tiger. *Det
                                               var
                                                     stor-t.
            patted
                       a.common tiger.
                                          it.neuter was big-neuter
    b Jag
            klappade
                       ett
                               lejon. *Den
                                               var
                                                     stor.
            patted
                       a.neuter lion. it.common was big.common
```

No concord in formal gender is required if the discourse antecedents are ANIMATE neuter nouns, for example *statsrådet* 'the member of the cabinet' in (10a) and *biträdet* 'the clerk' in (10b):

- (10) a Jag träffade statsrådet. Han/hon var en konstig typ.

 / met minister.neuter.def. he/she was a strange type

 'I met the minister. He/she was a strange fellow.'
 - b Jag talade med biträdet. Han/hon var en konstig typ. I talked to clerk.neuter.def. he/she was a strange type. 'I talked to the clerk. He/she was a strange fellow.'

The examples in (10) indicate that the pronouns *han* 'he' and *hon* 'she' lack formal gender – they can refer back to noun phrases with either formal gender specification. If *han* 'he' and *hon* 'she' would have a formal gender feature, presumably a common gender feature (which is traditionally assumed), we would expect (10a) and (10b) to be ungrammatical. Since this is not the case I will assume in what follows that *han* he' and *hon* 'she' are unmarked for formal gender – they are neither neuter nor common gender pronouns. Further evidence that this is correct comes from antitopicalization data. ¹² Consider (11) and (12):

(11)a Den har gått sönder, bussjävel-n/
it.common has gone broken, bus.devil-common.def/
*busshelvete-t.
*bus.hell-neuter.def
'It's broken, the damned bus.'

¹² For the notion of antitopicalization, see e.g. Lambrecht (1981) and Herring (1994). The Swedish term for antitopicalization is *svansdubblering* 'tail reduplication' or *final dubblering* 'final doubling'. See Teleman & al. (1999), part 4, §10-11.

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¹¹ As expected, (9a) is fine if *det* is interpreted as referring back to the event of patting the tiger (cf. footnote 5).

- b Det har gått sönder, *bussjävel-n/busshelvete-t. *it.neuter has gone broken, *bus.devil-common.def/bus.hell-neuter.def* 'It's broken, the damned bus.'
- (12)a Han försvann med pengarna, det svin-et/

 he disappeared with money-the, that.neuter swine-neuter.def/
 den idiot-en.

 that.common idiot-common.def

 'He disappeared with the money, that bastard.'
 - b Hon försvann med pengarna, det svin-et/
 she disappeared with money.the, that.neuter swine.neuter.def/
 den idiot-en.
 that.common idiot-common.def
 'She disappeared with the money, that bastard.'

(11) shows that the pronouns *den* (it.common) 'it' and *det* (it.neuter) 'it' agree with the antitopicalized elements in formal gender. (12) shows that this does not hold for *han* and *hon*; these pronouns may refer both to neuter and common gender antitopic noun phrases. The conclusion I make is that *han* 'he' and *hon* 'she' lack formal gender.

So far I have shown that the pronouns *han* 'he' and *hon* 'she' lack a formal gender feature. Without further discussion I also assume that these pronouns are morphosyntactically marked for the features FEMININE and MASCULINE, respectively. It would be quite natural to assume also that common nouns too could be marked for semantic features such as MASCULINE/FEMININE, and also ANIMATE, COUNTABLE etc. If this is the case, then han 'he' and hon 'she' could be construed as S-pronouns in spite of their lack of a formal gender feature – the linking would in such cases be between the natural gender feature of the pronoun (e.g. MASCULINE/FEMININE) and the corresponding feature on the antecedent noun phrase, for example between kvinnan_{FEMININE} 'the woman' in one clause and hon_{FEMININE} 'she' in the next. I argue that this is not the case; common nouns in modern Swedish seem to be morphosyntactically unmarked for semantic features. There is no morphological evidence, and, in particular, no type of agreement on common nouns that expresses the features MASCULINE/FEMININE. The sole evidence that could indicate the presence of a natural gender feature on common nouns would have to be the choice of anaphoric pronoun, which, as we shall see below, does not provide enough evidence. In particular, it would work only for a small portion of the nouns, and

an alleged violation, which would happen when a speaker would choose an "incorrect" anaphoric pronoun, does not give rise to ungrammaticality but a pragmatically odd sentence. 13,14 The most obvious argument that common nouns carry a semantic gender feature comes from the meaning of nouns such as man 'man' and kvinna 'woman', nouns which of course denote males and females, respectively, as well as nouns such as *stol* 'chair' or *bok* 'book', which normally denote inanimates, and hence could be thought of as morphosyntactically marked -ANIMATE or INAMATE. Nouns like *stol* 'chair' and *bok* 'book' denote individual entities, which means that it is not unreasonable to assume that they are also morphologically marked as COUNTABLE. It is true, of course, that nouns have a typical or prototypical meaning - some nouns more clearly than others – but, in order to capture the whole body of nouns as well as all different kinds of possible uses of these nouns, it is more reasonable to formalize meaning by assuming that lexemes – nouns in this case – are more or less inclined or apt to carry a particular meaning. 15 For instance, it is well known that a noun such as hund 'dog' is typically used as a countable; however it can be used as an uncountable too:

(13) Ni fick mycket hund för pengarna. you got much dog for money.the 'You got quite a lot of dog for your money.'

The possibility of using a prototypical countable noun as an uncountable without thereby inducing ungrammaticality indicates that nouns do not carry features such as +COUNTABLE or -COUNTABLE as a part of their lexical specification; they are only *typically* used as countables or uncountables, at least in Swedish. A statement saying that *hund* 'dog' is a countable noun is thus an

¹³ There is one piece of evidence that common nouns may carry a semantic feature, namely the use of -e as weak adjectival inflection for attributive nouns: *den lille prinsen* (the little.MASC prince). However, according to Teleman (1999, part 2, 227ff), this type of inflection is optional, secondly can be used also for sex-neutral expressions. Adjectival agreement on -a can be used for referents of both sexes.

A consequence of this conclusion is that Hockett's famous definition of gender does not hold: "Genders are classes of nouns reflected in the behavior of associated words" (Hockett 1958, 231). However, the very idea that an R-pronoun controls its antecedent, as proposed by Bosch (see above), in particular the idea that the preceding text may trigger an antecedent – not that it determines the choice of a particular pronoun – runs counter to Hockett's definition. ¹⁵ See e.g. Halliday (1973), Rommetveit (1974), and Allwood (2003) for a discussion on the notion of meaning potential.

assessment of how this word is commonly used, whereas saying that it is a common gender noun, or a Declension 2 noun is a fact about the lexical entry. To put it bluntly, to use the noun *hund* 'dog as an uncountable is probably a bit unusual, maybe even creative, but grammatical, whereas providing it with a Declension 1 plural affix, *hundor, or treating it as a neuter noun, *hundet (dog.neuter.def) is ungrammatical; it violates lexicogrammatical rules. To conclude: nouns in present-day Swedish are not morphologically marked as countables or uncountables.

Now consider another context:

- (14) a Såg ni hunden? Den var söt. saw you dog.common.def? it.common was cute 'Did you see the dog? It was cute.'
 - b Såg ni hunden? Han var söt. saw you dog.common.def? he was cute 'Did you see the dog? It was cute.'

When reference is made to a dog, the choice between *den* (it.common) 'it' and han 'he' (or hon 'she') as an anaphoric pronoun depends on the speakers knowledge of the referent in question (i.e. if he or she knows whether the dog is a female or male dog) and/or his or her attitude towards dogs in general, i.e. whether the speaker likes to think of dogs as mainly human-like or mainly "thing"-like. The word hund 'dog' as such does not carry features such as MASCULINE, FEMININE or INANIMATE; the choice of pronoun depends on the speaker's choice of view-point. The different possibilities are present as potentials in the word, and the choice of pronoun is a question of how a speaker chooses to "download" a certain discourse entity in a suitable cognitive category in an actual speech situation: Does the speaker see the dog in question as inanimate or animate, and in the latter case, as a female or male dog? In the 19th century the word *läkare* 'physician', was always pronominalized by the pronoun han 'he', not hon 'she', due to the simple fact that all doctors were male. This situation changed during the 20th century; nowadays about 50 % of all new physicians in Sweden are woman, hence referred to by the pronoun she 'hon'. The cases under discussion are good illustrations of Cornish's point (see above): The set-up of available pronouns in a language "provides the speaker with a subtle means of imposing, a posteriori, a particular referential perspective upon a referent which has already been entered into the discourse model" (Cornish 1986, 251). We could make Cornish's formulation even sharper: The set-up of available pronouns in a language *forces* the speaker to impose a referential perspective upon a discourse referent.

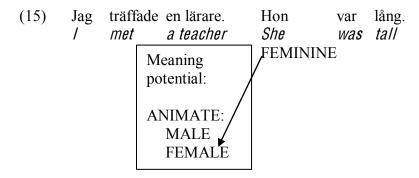
In my view, the most reasonable conclusion is that nouns in present-day Swedish have no *morphosyntactic* categorization in terms of features such as MASCULINE/FEMININE, ANIMATE/INANIMATE, BOUNDED/UNBOUNDED or the like. Many nouns display a more or less strong tendency to be used for entities belonging to a certain conceptual category, for instance *dam* 'lady' and *kvinna* 'woman', *man* 'man' and *pojke* 'boy', but this too can be captured by a theory of potential meanings; such words have a much stronger tendency towards being used as + ANIMATE and +FEMALE/+MALE, as compared to nouns such as *skinksmörgås* 'ham sandwich' or *hund* 'dog'; in principle though they behave alike.

Before concluding the discussion on the feature set-up of common nouns and pronouns, we need to consider the option that a noun such as hund 'dog' is +BOUNDED, and that this feature is overridden by another feature, -BOUNDED in contexts such as (13). The main reason against such a view is that it introduces more machinery than needed to explain the observed facts. The idea that common nouns lack morphosyntactic features such as MASCULINE and FEMININE is less complex than the idea that such features are present but overridden. It should be stressed though, that the conclusion above holds for Modern Swedish. In earlier stages of the language, we may perhaps assume that the suffixes -inna, as in kejsar-inna (emperor-ess) 'empress', or -ska, as in sömmer-ska (taylor-SKA) 'female tailor' carried the feature FEMININE, and kejs-are 'emperor' the corresponding suffix -are, in as morphosyntactically marked MASCULINE. Since language change proceeds in a gradual manner, remainders of this old system may still be present in the mental lexicons and grammars of speakers of modern Swedish. However, the fact that "female" derivational suffixes have become increasingly rare, and that words such as *sjuksköterska* 'nurse', with the suffix *-ska* (cf. *sömmerska* above), may refer both to male and female nurses indicate that common nouns in Modern Swedish lack a semantic morphosyntactic marking on words. ¹⁶ This is what I will assume in the rest of this paper.

To conclude this subsection: Common nouns in Modern Swedish do not have any grammatically encoded semantic features. There might be a more or less strong tendency for certain nouns to denote males, females, animates and bounded elements etc., but this is a question related to typical use, not morphosyntactic features inherent to lexemes.

3.3 Linking

Let us now take a closer look at the role of formal gender features in the linking of a pronoun to its antecedent. I concluded above that common nouns in Swedish do not carry morphosyntactic semantic specifications such as ANIMATE, INANIMATE or the like. Hence, the relation between the pronouns han 'he' and hon 'she' and their respective discourse antecedents cannot be formalized in terms of agreement in formal or semantic gender (taking agreement to refer strictly to concord in morphosyntactic features). Instead, we have to assume that another type of link is established between the morphosyntactic feature of the pronoun, for instance MASCULINE or FEMININE, and a segment within the potential meaning of the noun. From the point of view of language processing, the pronoun is an instruction to the listener to search in the discourse for a prominent referent that is or can be thought of as corresponding to the features in question. The linking procedure is illustrated in (9):¹⁷



¹⁶ For a detailed discussion on derivational suffixes such as *-inna* and *-ska* in Swedish and German, see Jobin (2004).

¹⁷ Note that "Meaning potential" refers to speaker's knowledge about the common meaning of a noun. ANIMATE is a superordinate category, and MALE/FEMALE subordinate categories. The "Meaning potential box" is a very rough sketch of the meaning potential, and it could of course be elaborated in great detail.

Since *lärare* 'teacher' in contemporary Swedish could denote both men and women both the features MALE and FEMALE are salient components of the meaning potential of this noun (when it comes to *lärare* 'teacher', I assume that both components are equally prominent). What (15) shows is that the feature FEMININE on the pronoun and the segment FEMALE of the meaning potential of the noun enter into a referential relation, not a relation that, on a par with formal gender or number, uses the morphosyntactic features of the pronoun as its vehicle.¹⁸ I will refer to this type of linking as *referential linking*, or *R-linking*. As illustrated in (15), R-linking will be illustrated by an arrow. The direction of the arrow is from the pronoun to the proceeding noun phrase, which illustrates Cornish's point that R-pronouns control their antecedents (see section 2). R-linking normally goes between a feature on a pronoun and a preceding noun phrase (or pronoun), but in some cases R-linking links one noun phrase to another (cf.(16a)) or "backwards", i.e. when a noun phrase refers back to a pronoun (cf. (16b)):¹⁹

- (16) a Jag träffade [mitt ex]_i på bussen igår. [Den idioten]_i hade / met my ex on bus.the yesterday. That idiot.the had klippt håret. cut hair.the 'I met my ex on the bus yesterday. That idiot had got a hair-cut.'
 - b Mannen kysste henne_i. [Den kvinnan]_i visste hur man ska man-the kissed her. that.common woman knew how one should kyssas!

 kiss

 'The man kissed her. That woman knew how to kiss!'

In what follows, I focus on the linking between (the features of) a pronoun and a noun phrase in a preceding clause, leaving examples such as those in (16) aside. Syntactic linking, or S-linking, is defined as the linking between a particular syntactic feature on an anaphoric S-pronoun and an identical feature of a noun phrase in a preceding clause. S-linking thus relies on the identity of features. R-linking, on the other hand, is the imposition or evocation of a segment within the potential meaning of a noun phrase. In S-linking, the antecedent controls the

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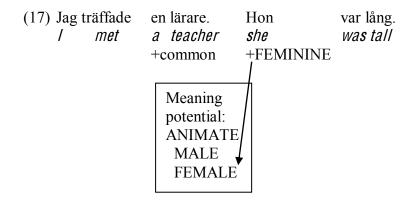
¹⁸ Throughout the paper the terms FEMALE and MALE will be used to refer to the semantics of meaning potentials, whereas FEMININE and MASCULINE will be used as terms for morphosyntactic features.

¹⁹ For clause-internal binding of pronouns and noun phrases, see e.g. Reinhart (1983).

pronoun in the sense that a feature on a pronoun relies on a feature on a nominal antecedent. If we wish to talk about agreement holding across sentences, Slinking would be a case of agreement.

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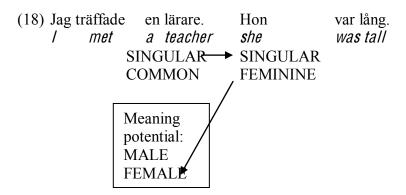
It seems as though not all features of a pronoun and its antecedent have to be linked – features may be left "dangling". Recall the idea that the pronouns *han* 'he' and *hon* 'she' lack a formal gender feature – they are neither neuter nor common gender pronouns. This means that the feature common gender on the antecedent, *lärare* in (15), is left unlinked. (17) below is a slightly extended version of (15):



The assumption that an R-link is established between the feature FEMININE on the pronoun *hon* and the potential meaning FEMALE of the noun phrase en *lärare* in (17) does not necessarily mean that the pronoun *hon* 'she' is an Rpronoun. What we have not yet considered is the role of number. Both en lärare 'a teacher' and *hon* 'she' are singular nominals. It should not be controversial to assume that number is a morphosyntactic feature, which means that an S-link can be established between the number feature of hon 'she' and the corresponding feature of its antecedent en lärare 'a teacher'. Note the direction of the arrow in (15) and (17): When it comes to the morphosyntactic feature number, the antecedent controls the anaphor in the sense discussed above, namely that the feature value of the antecedent determines the choice of When it comes to the feature FEMININE/FEMALE, morphosyntactic features FEMININE on the noun controls the meaning potential FEMALE on the NP en lärare. Recall that no morphosyntactic feature FEMININE is present on the noun *lärare* 'teacher'; this element of meaning is evoked from or maybe even superimposed upon the noun *lärare*.²⁰

²⁰ It should be pointed out that the notion of control does not have anything to do with psychological control, i.e. a speaker's possibility to choose between pronouns. In an S-

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The conclusion is that the categories S-pronoun and R-pronoun are not fine-grained enough to describe the Swedish third person pronouns. If we decompose han 'he' and hon 'she', we find that these pronouns may participate in R-linking with an antecedent noun phrase – by means of the features MASCULINE/FEMININE – and in S-linking – by means of the number feature. In other words, the number feature identifies the linguistic antecedent, the noun phrase en lärare, and the R-feature provides a particular referential perspective on this discourse antecedent, and, more specifically, information about the sex of the referent. The feature FEMININE on the pronoun hon 'she' in (18) thus specifies the semantic gender of this referent – it is a woman.

We need to consider the possibility that the pronouns *den* (it.common) 'it' and *det* (it.neuter) 'it' have a "negative" semantic feature too, -ANIMATE, but for the time being I will assume that this is not the case; this question will be discussed separately below.

In section 3.1, we saw that the pronoun *det* (it.neuter) 'it' can be used as an S-pronoun, but this seems not to be the only possibility; *det* (it.neuter) 'it' has other pronominal uses too. Consider the example in (19):

(19) Mannen och kvinnan läste manuskriptet.

man.common.def and woman.common.def read manuscript.neuter.def.

Det var tråkig-t.

it.neuter was boring-neuter

'The man and the woman read the manuscript. It was boring.'

The pronoun *det* (it.neuter) 'it' in (19) could of course refer to *manuskriptet* (manuscript.neuter.def) 'the manuscript', in such cases we would have an

relation the pronoun carries the same feature, with the same feature value, as its antecedent; the antecedent thereby controls the pronoun. In an R-relation the pronoun controls the antecedent in the sense that the features of the pronoun determine the semantics of the antecedent.

instance of S-linking between *manuskriptet* and *det* (both *manuskriptet* and *det* are NEUTER and SINGULAR) – *det* (it.neuter) 'it' would in that case be an S-pronoun of the type described in 3.1. According to a different reading, the pronoun *det* (it.neuter) 'it' would refer to the specific event described by the sentence *Mannen och kvinnan läste manuskriptet* 'The man and the woman read the manuscript'. In this case no S-linking would take place, simply because there is no feature on the clause to which the neuter feature of *det* (it.neuter) 'it' could link. Although it is possible to assume that subordinate clauses, in particular *that*-clauses, have a formal gender feature (see e.g. Josefsson 2009 for a suggestion), it is quite unlikely to assume that main clauses carry this feature. Likewise, we have no evidence that main clauses carry a number feature, neither singular nor plural.²¹ The conclusion is that no S-linking could take place between *det* (it.neuter) 'it' and its discourse antecedent in (19), according to the second reading.

Now consider (20):

(20) Yasmine har feber och Sven hostar. Det är förskräcklig-t! *Yasmine has fever and Sven coughs. it.neuter is terrible-neuter* 'Yasmine has a fever and Sven coughs. It's terrible!'

²¹ A *that*-clause as subject triggers agreement in the neuter on a predicative adjective, which indicates that the clause is neuter:

(i) Att vi får anslaget är knappast trolig-t. that we get grant.the is hardly probable-neut 'It's hardly probable that we'll get the grant.'

In Josefsson (2006) I have argued that countability and number are interrelated in such a way that arguments denoting events and substances lack a number feature. Also clause-anticipating *det* (it.neuter) 'it' lacks a number feature – only NPs denoting countable entities have a number feature. This is why subjects consisting of conjoined clauses or NPs denoting substances resist plural agreement on a predicative adjective:

- (ii) Att Bo sjunger och att Lisa spelar är trevlig-t/*trevlig-a. that Bo sings and that Lisa plays is nice-neut/*nice-pl
 'It is nice that Bo sings and that Lisa plays.'
- (iii) Grädde och mjölk är gul-t/*gul-a. cream and milk is yellow-neut/*yellow-pl
 'Cream and milk is yellow.'

See Josefsson (1999, 2006, 2009) for an account of the neuter agreement on the predicative adjective in (i)-(iii) and related issues.

Det (it.neuter) 'it' in (20) refers – or rather could refer – both to Yasmine's having a fever and Sven's coughing, two states of affair that are expressed in different clauses. The pronoun det (it.neuter) 'it' is clearly anaphoric. Since the two events are described in two main clauses, it is even more unreasonable to assume that the discourse antecedent for det (it.neuter) 'it' would be a word or a feature of a word in the discourse. The most reasonable assumption is that no Slinking at all takes place in (20) and that det (it.neuter) 'it' in these cases is an unambiguous R-pronoun. The preceding context enables the interpretation of the pronoun, but the actual referent has to be retrieved, or may be evoked or created, on the basis of material in the discourse. The referent in question could be thought of as a reified event; that is, an event dressed up as a thing. In my view, the proper way of formulating this is to say that the R-pronoun det (it.neuter) 'it' corresponds to a discourse antecedent that is motivated by a segment of clause or a particular part of the text; crucially det (it.neuter) 'it' in this use does not refer to linguistic entities, such as VPs, IPs or CPs.

The conclusion so far is that *den* (it.common) 'it' and *det* (it.neuter) 'it' are Spronouns when they refer to preceding noun phrases; *han* 'he' and *hon* 'she' seem to be intermediate categories, with features relating to both Spronouns and R-pronouns and they may participate in Splinking by way of their number feature and R-linking by way of a semantic gender feature. For the sake of exposition, it is probably instructive to think of them as two homonymous instances of *det*.

Traditionally, the R-pronoun *det* (it.neuter) 'it' in (20) above is assumed to be a neuter, singular pronoun. In what follows, I will argue that *det*, when used as an R-pronoun, lacks a number feature, and thus can be considered deficient. This becomes clear if we compare the anaphoric R-pronoun *det* (it.neuter) 'it' to its deictic counterpart. This will be the topic of section 3.4.

3.4 Deictic pronouns and the number feature – a comparison

The purpose of this subsection is to provide an account for the feature content and the use of the deictic 3^{rd} person pronouns in Swedish. I argue here that the pronouns han 'he', hon 'she' and den (it.common) 'it' have a number feature, specified as singular, which semantically correlates to the feature BOUNDED, and that the pronoun det (it.neuter) 'it' – both as a deictic and an anaphoric R-

pronoun – lacks such a number feature. This, in turn, means that the use of the R-pronoun *det* (it.neuter) 'it' does not impose any BOUNDED ENTITY reading onto its discourse antecedent. The properties of deictic pronouns are important for the sake of comparison; as we shall see anaphoric R-pronouns seem to have the same properties as deictic R-pronouns in this sense. We thus arrive at a better understanding of the properties of "disagreeing" anaphoric pronouns if we compare them to deictic pronouns.

Consider first the difference in semantics between deictic *den* (it.common) 'it' and *det* (it.neuter) 'it' in (21):

```
(21) a [A person stands in front of a desk full of exotic fruit, nuts etc.]
     Seller, with a strange, probably edible "thing" in his hand:
        - Nå?
        Well
        'Well?'
     Buyer:

Jag tar den.

        I take it.common
        'I'll take it.'
     b [A and B standing in front of the freshly painted boat]:
        – Vad tycks?
        what think.pass
        'What do you think?'
     B:
        – Det var snyggt!
        it.neut was beautiful.neut
        'It was nice.'
```

The natural choice in (21a) is the pronoun *den* (it.common) 'it', even though *det* (it.neuter) 'it' is a possible choice too. As is evident from the contextual description, there is no linguistic antecedent available, (although there is no way we can actually prove though that the speaker does not have a particular noun in mind when using the pronoun *den* (it.common) 'it'.) If *den* (it.common) 'it' is chosen, reference is made to a thing-like entity, i.e. an entity that has spatial boundaries. If the seller were to hold more than one "strange edible thing" in his/her hand, the pronoun *den* (it.common) 'it' could not be used; instead we would have to switch to the plural *dem* 'them': "Jag tar dem" 'I take them'. If the buyer would choose to use the pronoun *det* (it.neuter) 'it' in (21a), this would be fine also, regardless what number of items the seller holds in his/her hand.

Josefsson (2006) assumes that the use of *det* (it.neuter) 'it' in examples such as (21b) is motivated by the assumption that reference goes to an activity 'to paint' or a state, 'the result of the painting'. Josefsson (2006) claims that *den* (it.common) 'it' and *det* (it.neuter) 'it' are linked to their respective discourse representations by virtue of their morphosyntactic features, in particular number: *den* (it.common) 'it' has the feature number, whereas *det* (it.neuter) 'it' lacks this feature. According to the same description, the semantic interpretation of the feature number relates to boundedness. Thus, by choosing the pronoun *den* (it.common) 'it' the feature BOUNDED is imposed onto the intended discourse antecedent; by choosing *det* (it.neuter) 'it' no boundaries are imposed. For this reason, *det* (it.neuter) 'it' could be used when reference is made to a group of elements since *det* (it.neuter) 'it' could refer to the whole assembly or mass.

The claims about deictic *den* (it.common) 'it' and *det* (it.neuter) 'it' rely on two assumptions that need to be argued for independently: First of all, the idea that not all nominals (e.g. nominal extended projections) necessarily carry the feature number, although this feature is available in the language, and secondly that the feature number has the interpretation BOUNDED. I will start out by arguing that number is not obligatory on nominals in Swedish, and, after that, elaborate on the idea that number corresponds to the semantic interpretation BOUNDED.

The idea that (deictic) *det* (it.neuter) 'it' would lack a number feature is inspired by Grimshaw (1990), who claims that so-called "complex event nouns" lack a number feature. ²² Grimshaw's arguments can be carried over to Swedish; the nominalization *mål-ning* (paint-ING) 'painting' can have both the event reading 'the action of painting' and the "thing" reading, namely, 'the picture'. However, if a plural suffix is added, only the thing reading is available: *mål-ning-ar* (paint-ING-PL) 'the pictures' – the event reading is incompatible with plural. ²³ The idea that nouns do not always have a full set-up of functional projections relies on Bobajlik & Thrainsson (1998), who claim that that the

²² Grimshaw (1990, 59) argues that there is a difference between *complex event nouns* – which lack a number feature, but have an argument structure – and *simple event nouns* which allow pluralization but lack argument structure. See Grimshaw (1990, chapter 3) for more discussion.

²³ An event noun such as *målande* (paint.ANDE) 'painting' can have a determiner, which is homophonous to the numeral 'one': *ett målande*. I assume that *ett* is a D^o element, not an instance of Num^o.

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inventory of functional projections is open to parametric variation. One of the main points in Bobajlik & Thrainsson's article is that the inventory of functional projections in the extended projection of the verb may vary cross-linguistically. The idea that I propose here concerns the nominal extended projection and my suggestion is that the number of functional projections may vary also within a language. A proposal along the same lines is made in Vangsnes (2001), who suggests that grammatical number is encoded in the functional head Num, and that the Num head is absent when a noun appears as a mass noun. Similarly, Kamiya (2001), who bases her analysis on Japanese, suggests that the basic reading of a noun is that of substance (i.e. UNBOUNDEDNESS), and that the feature that yields a BOUNDED reading is hosted in a functional projection, and hence is added in the course of the syntactic derivation. The question of the semantics of the number feature is discussed in Borer (2005), who suggests that the count/mass distinction is hosted in a functional projection that she calls a DivP. According to Borer, number marking is hosted in DivP. Finally, Josefsson (2006) argues that nouns denoting substances, such as *mjölk* 'milk', *grädde* 'cream', and *senap* 'mustard', in the unmarked case, lack a number feature in the syntax, an assumption that is supported by the fact that conjoining two noun phrases such as vin 'wine' and vatten 'water' does not trigger plural agreement:²⁴

(22) Vin och vatten är genomskinlig-t/*genomskinlig-a. wine and water is transparent-neuter/*transparent-plural

Note also that the subjects of (23) can be doubled by a non-plural *det*:

(23) Vin och vatten, det är genomskinlig-t. Wine and water, it.neuter is transparent-neuter

Josefsson (2006) argues that nouns can be used as substances/uncountables generally, and in such cases they lack a number feature. Consider (24):

(24) a Ni fick mycket hund för pengarna. you got much dog for money.the You got quite a lot dog for your money.'

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The conjoining of two common gender noun phrases such as *grädde* 'cream' and *mjölk* 'milk' does not trigger agreement in the common gender, but in the neuter. The reason for this is discussed in Josefsson ((2006, 2009).

b Senap är gul-t. mustard is yellow.neuter 'Mustard is yellow.'

As we have seen, there is ample of evidence in the literature that number can be an optional category, not only in the sense that languages may lack this morphological category, but also that number may be optional in nominals/nominal expressions in languages that do have this category.

The next question is concerned with the meaning of the morphosyntactic feature number. I proposed above that the semantic correlate to number is BOUNDED (see also Josefsson 2006, 2009). The intuition behind this conclusion is that we need to conceive of an object as bounded in order to refer to it by using *den* (it.common) 'it'. By using the pronoun *det* (it.neuter) 'it', as in (21b), no boundaries are assumed. To put it differently, by using the deictic pronoun den (it.common) 'it', we make reference to ONE object where the spatial boundaries define the object as a singleton element. By using a deictic det (it.neuter) 'it' no such reference is made. As a consequence, det (it.neuter) 'it' can be used for reference to discourse entities of many different types, for instance, when a speaker wants to refrain from assuming or imposing spatial boundaries. This also means that *det* (it.neuter) 'it' can be used to convey deictic reference to things, events, states, substances of many different kinds. These entities may well have boundaries 'in the real world', but the linguistic expression does not encode such boundaries. As a consequence of the proposed analysis, the noun *målningen* 'the picture' has a different feature set-up than *målningen* 'the event of painting'; only in the object reading does the noun has the feature +Number. In principle it is possible to add a number feature also to substance nouns, such as vin 'wine' and vatten 'water', but in such cases the pragmatics may give rise to special interpretations such as 'a portion of x' or 'a brand of x'.

There is no agreement in the literature as to the fact that the morhosyntactic feature number should correspond to the morphosyntactic feature BOUNDED. One counterargument is found in Delsing (1993), who discusses certain "uncountable" word forms in the lexicon, for instance *höns* 'chickens' *mygg* 'midge', and *bräder* 'boards'. Delsing also argues that certain nouns, such as *morot* 'carrot' and *jordgubbe* 'strawberry', have a special uncountable form in the lexicon, which is sometimes identical to the singular form, and sometimes to

the plural form, which implies that the dimension BOUNDED –UNBOUNDED is independent from the feature number. If this is true, there is no correspondence between the morphosyntactic category number and the semantic meaning of boundedness. If we consider a quantifier such as *mycket* 'much', it can take either form as its complement: *mycket morötter* (much carrot.pl) but *mycket potatis* (much potato.sing). Delsing assumes that there is basically no general difference between expression with *mycket* 'much' + a noun in the singular and *mycket* 'much' + a noun in the plural. Consider (25).

- (25) a Vi köpte mycket morötter. we bought much carrot.pl 'We bought a lot of carrots.'
 - b Vi köpte mycket potatis. we bought much potatoe.sing 'We bought a lot of potatoes.'

If Delsing is correct in his assumption, then the plural morpheme on *morötter* 'carrots' in (25a) has no "plural" meaning; it is simply a default uncountable form of this particular noun. I will argue that Delsing's conclusion does not hold and that number feature does have meaning; the absence vs. presence of the number feature corresponds to the concept of boundaries.

First of all, the special uncountable of collective forms that are discussed in Delsing (1993), for instance *höns* 'chickens' and *mygg* 'midge', and *bräder* 'boards' are probably best thought as different lexemes as compared to *höna* 'chicken' (with the plural form *hönor*), *mygga* 'mosquito' (with the plural form *myggor*), and *bräda/brädor* (board/board.pl). The fact that *höns* is more substance-like than *höna/hönor* (chicken/chickens) is no more strange than the fact that Swedish has one word for *björk* for 'birch tree' and another, a derived word, *björke*, for 'clump of birch trees' (*Illustrerad svensk ordbok*). Special "uncountable word forms" do thus not constitute any problem to the proposed analysis.

Secondly, the fact that a plural form for some nouns is used in "uncountable" contexts, whereas a singular form is used in other contexts is probably due to pragmatics or idiosyncratic behavior of words; it is not a statement about morphosyntactic features inherent to lexical items. As will be shown below we get a particular reading from the quantifier *mycket* 'much' (which according to

Delsing 1993, 190, is subcategorized for uncountables) + plural, a reading that is different from *mycket* + a non-plural form. Sometimes the difference in meaning is subtle; in other cases it is more obvious. The picture gets clearer if we compare the quantifier *mycket* 'much' to another quantifier, *många* 'many'.

A plural form, such as *bilar* 'cars', which is traditionally thought of as a countable noun, may without problem be combined with the quantifier *mycket* 'much' or *många* 'many' (26a and b). *Mycket* 'much' may combine with the non-plural *bil* 'car' too:

- (26) a Det var mycket bilar i stan igår. it was much cars in town yesterday. 'There were a lot of cars in town yesterday.'
 - b Det var många bilar i stan igår. *it was many cars in town yesterday* 'There were a lot of cars in town yesterday.'
 - c Ni fick mycket bil för pengarna. you got much car for money.the 'You got a lot a car for your money.'

The example in (26a) has a collective or uncountable reading, whereas (26b) has more of a countable flavor. As expected, (26c) has a substance reading, where the pragmatics of *mycket bil* (much car) is either 'good quality', 'many horse powers' or 'many kilos of car'.

Also, a traditionally uncountable noun such as *morot* 'carrot' can be combined both with *mycket* 'much' and with *många* 'many', as shown in (27):

- (27) a Det var mycket morot i soppan. *it was much carrot in soup.the* 'There was a lot of carrot in the soup.'
 - b Det var mycket morötter i soppan. it was much carrot.pl in soup.the 'There was much carrot in the soup.'
 - c Det var många morötter i soppan. it was many carrot.pl in soup.the 'There were many carrots in the soup.'

(27a) and (27b) differ in meaning in an interesting way: *morot* in (27a) denotes a substance, whereas *morotter* in (27b) denotes a non-homogeneous substance, what Jörgensen & Svensson (1986) call an *aggregated substance*, i.e. a mass

made up of smaller segments or parts. (In fact, this is a reading that could apply to (27a) too, but this example could also refer to carrot as a substance; however, morot 'carrot' in (27a) could also mean 'carrot flavor' or 'carrot substance'.) In order to obtain a deeper understanding of the examples, let us consider the "meaning" of plural. The common sense idea of the meaning of the feature plural is probably 'more than one item'. Another way of viewing plural would be to think of it as a construal of a set consisting of parts. The plural form blommor 'flowers' is thus a set of flowers, which is undefined as to its size. The set itself can be lexicalized by a nominal expression, for instance, bukett 'bunch': en bukett blommor 'a bunch of flowers'. The plural pronoun Vi 'we' denotes a set consisting of the speaker + other individuals. The parts of this set can be lexicalized as well, by a noun in the plural, for example lingvister 'linguists': vi lingvister 'we linguists'. Some nouns resist plural because the construal of a set becomes pragmatically odd, for instance #gräddar 'creams' and #mjölkar 'milks', entities that do not naturally fall in parts or combine into sets. When it comes to "lexical" plural such as byxor 'pants', there are two possible interpretations: the parts could be the legs, and the set the whole piece of cloth. In the latter case, the set/whole could be lexicalized for example by ett par 'a pair': ett par byxor (a pair pants) 'a pair of pants'. The other option is that the set consists of a number of pieces of cloth and the parts the individual pieces of cloth.

Let us now turn to nouns such as *carrots*, *strawberries* etc. I have argued that plural introduces the notion of a set consisting of parts. Without a quantifier the set is undefined as to size, weight etc. A quantifier may specify the set: *ett kilo* 'a kilo' in *ett kilo morötter* (a kilo carrots) 'a kilo of carrots' or *en ask* (a box) in *en ask jordgubbar* (a box strawberries) 'a box of strawberries'. The quantifier *mycket* 'much' refers to the size of the set, whereas the quantifier *många* 'many' refers to the number of members of the set. The quantifier *mycket* 'much' can thus be assumed to refer to a quantity without implying any boundaries on the set. This is in fact why *mycket* 'much' normally combines with substance nouns: *mycket smör* 'a lot of butter', *mycket kärlek* 'much love', whereas *många* 'many' combines with nouns denoting entities that are more readily thought of as countables. When the quantifier *mycket* 'mycket' is combined with a noun in the plural, we get a "combined" reading, the whole, the "set" conveyed by *mycket* 'much', is combined with the notion of parts, i.e. an AGGREGATED

SUBSTANCE reading, for instance *mycket morötter* 'much carrots' and *mycket bilar* 'much cars'.

A consequence is that the quantifier mycket 'much' cannot be used as a diagnostic for "the lexical uncountable form", since mycket 'much' imposes an element of meaning, which I have specified as lack or absence of boundaries. Whether the combination mycket 'much' + a plural form of a particular noun is conceived of as "the normal case", hence presumably specified in the mental lexicon as such, is more a question of frequency in language use, as well as a question as to what extent the concept, denoted by the plural, can be thought of as consisting of parts. For substances such as *grädde* 'cream', *smör* 'butter, and *mjöl* 'flour', the plural form would induce a kind or portion reading as a possible option.²⁵ Conversely, a noun such as *pengar* (litt. coin.pl) 'money' is usually combined with the quantifiers *lite* 'little' or *mycket* 'much', probably because it is normally not the number of pieces/bills that is of importance but the value that they represent. However, also *många pengar* 'many coins' is a possible expression (used by children, for instance) but the meaning is simply 'many coins'. An expression such as ett kilo morot (one kilo carrot) may sound a bit odd in isolation, but it is fine and fully interpretable in a context where morot 'carrot' has a substance reading, for example 'carrot purée'. It is also possible to use when the aggregation form of the carrots is irrelevant.

The conclusion is that the morphosyntactic feature plural does have meaning, namely that of 'parts of an implied set'. The question is then what the "meaning" is of the category singular: Given the just mentioned meaning of plural, an immediate consequence would be that singular would mean 'part' — without the notion of a set. However, the notion of part is meaningless without the notion of a set, so this cannot be the correct conclusion. We shall therefore look in another direction for an answer. What makes a part a part of a set is that it is distinguishable from other elements that make up the set, and a prerequisite

²⁵ Note that there is no plural on the head noun in the portion or serving reading of substance nouns: $tv\mathring{a}$ $\ddot{o}l/^*\ddot{o}ler$, (two beer/*beers), $tv\mathring{a}$ $t\acute{e}/^*t\acute{e}er$ (two $tea/^*teas$). Within the proposed framework this would presumably be because it is the servings that make up the implied set, hence it is the servings that can be pluralized. A consequence of this analysis is that the alleged "head nouns" ($\ddot{o}l$ 'beer' or $t\acute{e}$ 'tea') are not truly heads in constructions in question; instead we have to assume the presence of a null classifier or quantifier corresponding to the portions: $tv\mathring{a}$ [PORTIONER] kaffe (two [PORTIONS] coffee) 'two portions of coffee'. These "classifiers" are the true heads of the noun phrases. For more discussion on the head noun in expressions of this kind, see Delsing (1993, chapter 6).

for this is that it has boundaries. For this reason, I propose that the meaning of singular is the feature BOUNDED. The morphosyntactic feature singular is usually not marked morphologically on nouns, but the feature is visible on e.g. determiners such as en/ett 'a' or the numerals en/ett 'one'. Since the feature plural is visible as inflection on nouns, it seems reasonable to assume that the feature singular may be present on nouns too, as a zero inflectional element. One instance where the absence vs. presence of number (visible on determiners) yields a more obvious difference in interpretation is given in (30) below:

```
(28) a Det var god glass.

it was good.common ice cream

'The ice cream was good.'
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b Det var en god glass.

it was a.common good.common ice-cream

'The ice cream was good.'

The difference in meaning between (28a) and (28b) is that *en god glass* in (28b) has a kind reading, whereas the determinerless *god glass* in (28a) has a plain substance reading. The idea is that a kind, as in (28b,) is a bounded entity – maybe not in the real world, but in the world of discourse. Therefore, by using the quantifier *en* in (28a) the speaker imposes boundaries. The reading that arises from the absence of number seems to be related to the lexicosemantic features of the concept. For a noun such as *hund* 'dog', the omission of *en* in (29) below renders the example semantically ill formed, probably since the concept *snäll* 'kind' presupposes an individual reading of *hund* 'dog'.

(29) Det var [#](en) snäll hund. it was #(a.common) nice.common dog. It was #(a) nice dog.

As already shown above, for a concept such *målning* (paint.ING) 'painting' the article *en* disambiguates the EVENT reading from the THING reading:

- (30) a Det var snygg målning. (event reading) it was good.common painting.
 'The painting was nice.'
 - b Det var en snygg målning. (thing reading) it was a.common good.common painting 'It was a good picture.'

The conclusion is that the morphological feature number indeed has a meaning: +Number can have the value +singular, which corresponds to BOUNDARIES, whereas +Number, +plural corresponds to PARTS of a SET. A noun phrase can be devoid of the number feature, and in such cases I simply assume that the NumP is absent. In cases where an UNBOUNDED quantifier, such as *mycket* 'much' takes scope over a +number, plural NP, as in *mycket morötter* (much carrots), an AGGREGATED SUBSTANCE reading is obtained. For nouns, the feature +Number, +singular is not visible on the noun itself, but e.g. on determiners. In section 5, I elaborate on the idea that a similar state of affair holds for the R-pronouns *den* (it.common) 'it' and *det* (it.neuter) 'it' – *den* (it.common) 'it' has a number feature, but *det* (it.neuter) 'it' lacks this feature. The number feature does not have a separate exponent, but the presence vs. absence of number is signaled by an auxiliary feature, namely formal gender.

3.5 R-features, S-features and contrastive stress

We shall now return to anaphoric pronouns. A somewhat peculiar observation is that R-features, but not S-features can be the source of contrastive focus. Consider (31):

- (31) a Mannen och kvinnan satt framför TVn. HON var blond. *man.the and woman.the sat in-front.of TV.the. SHE was blond* 'The man and the woman sat in front of the TV. SHE was blond.'
 - b Tigern och lejonet satt i ett hägn. DEN tiger.common.def and lion.neuter.def sat in a cage. IT.common var farlig was dangerous.common
 'The tiger and the lion sat in a cage. IT was dangerous.common
 - c Tigern och lejonet satt i en bur. DET tiger.common.def and lion.neuter.common sat in a cage. IT.neuter var farlig-t.

 was dangerout-neut

 'The tiger and the lion sat in a cage. IT was dangerous-neut

The reference for *HON* in (31a) is unambiguous – the pronoun refers to *kvinnan* 'the woman'. From the fact that *DEN* in (31b) is marked for common gender one could expect that the pronoun would make reference only to the common gender noun phrase *en tiger* 'a tiger', but according to my intuition this is not the case; the pronoun *DEN* in (31b) can refer either to the tiger or to the lion.

Likewise, *DET* (it.neuter) 'it' in (31c) has to refer to the situation, a tiger and a lion being together in a cage, not to the neuter *lejonet* 'the lion'. Bosch (1988, 225), referring to Corbett (1991, 246), notices a similar effect for German:

(32) Wenn du die Mutter von dem Bolzen lösen willst, muss fem.def nut resolve want. if VOU from masc.def screw must du *IHN festhalten und *SIE nach rechts drehen. pull. vou *HIM hold and *HER right to

Neither the masculine gender of *der Boltzen* 'the bolt' nor the feminine gender of die Mutter 'the nut' corresponds to the semantic genders MALE and FEMALE. The conclusion that Bosch and Corbett draw is that the semantics is more important than the lexical ("formal") gender when it comes to personal pronouns: Corbett concludes that "there are interesting cases where a clash with the potential semantic content of the pronoun is sufficient to make a sentence unacceptable" (Corbett 1991, 246). ²⁶ In view of (31b and c), the problem with (32) does not seem to be a "clash with the potential semantic content" as Corbett suggests. Instead, it seems as though S-features alone do not suffice to serve as a vehicle for contrastive stress; contrastive stress requires R-features. This is why (31a) is fine. In my view, the restriction in question is due to the way reference works: Per definition S-pronouns make reference to a preceding linguistic element, normally a noun phrase, (by picking up on its formal gender). Contrastive focus, on the other hand, operates on discourse entities, and requires a presupposed set in the world of discourse, to which the contrasted element is compared. Direct access to the presupposed set seems to be unavailable for the pronoun IHN in (32), since reference has to go by way of the noun phrase, i.e. via S-linking to *dem Bolzen* in the preceding clause.

If contrastive stress requires R-features, we predict that number cannot be used for contrastive stress either. (The underlying idea would be that number is an S-feature.)

(33) Kungen och alla prinsarna promenerade i parken. DE var hungriga king.def and all prince.pl.def walked in park.def. THEY were hungry 'The kings and all the princes walked in the park. THEY were hungry.

The plural *DE* 'THEY' in (33) does not unambiguously refer back to the plural noun phrase *alla prinsarna* 'all the princes'. This shows that number is an S-

²⁶ See also Bosch (1988, 225).

feature. The only way in which (33) would be well formed and have an unambiguous reference is a context where DE 'they' gets a deictic reference.

3.5 Summary and conclusion

The main points of section 3 are that *den* (it.common) 'it' and *det* (it.neuter) 'it' may be used as syntactic pronouns, S-pronouns, which refer back to the linguistic expression, usually a noun phrase, in context. The formal gender and number features are the "vehicles" by which S-pronouns refer. The pronouns *han* 'he' and *hon* 'she' establish S-links by means of number and R-links by means of semantic gender (MASCULINE/FEMININE) to their discourse referents. *Den* and *det* (it.neuter) 'it' are (or rather, may be used as) true R-pronouns, which establish only R-links to their antecedents.

What confuses the picture is that *den* (it.common) 'it' and *det* (it.neuter) 'it' can be used both as S-pronouns and R-pronouns. The state of affair is probably not accidental – neuter as a formal gender on nouns is typically associated with features such as non-animacy, mass reading, and unboundedness. From a theoretical point of view, however, it is appropriate at this point to view the two instances of *det* (it.neuter) 'it' as homonyms. If we were to make an analysis in terms of Distributed Morphology, we would probably be able to formulate rules of insertion for the lexical item *det*, which would provide a unified account of all instances of pronominal *det*, including the use of *det* (the.neuter) 'the' as a determiner. However, to formulate such a unified account is beyond the scope of this paper.

4 "Disagreeing" pronouns

One of the main points in the previous section was that *det* (it.neuter) 'it' as an R-pronoun does not link to any morphosyntactic feature in the preceding context, neither a formal gender feature nor a number feature. What the pronoun does is to evoke or to impose an element of meaning – a discourse gestalt – present in the discourse or possible to construe on the basis of the context. In this section, I develop this idea further and show how different cases of apparent disagreement across sentential boundaries and in topic doubling constructions can be given a unified explanation. In 4.1, I discuss cross-sentential pronominal "disagreement", and in 4.2 "disagreement" in topic doubling constructions.

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4.1 Pronominal reference across clausal boundaries

An example of cross-sentential pronominal reference is given in (34):

(34) Bo har köpt en dansk cykel. Det Bo has bought a.common.sing Danish.common.sing bicycle. it.neuter vill jag ocksåha. want I too have 'Bo has bought a Danish bicycle. I would like to have that kind of bicycle too.'

It is clear that *det* (it.neuter) 'it' in the second sentence and *en dansk cykel* in the first sentence in (34) are linked. However, the two nominal expressions differ in their formal gender specifications: *Cykel* 'bicycle' is a common gender noun (the common gender shows on the indefinite article, as well as on the adjective); *det* (it.neuter) 'it' is neuter. The question is how this "disagreement" in features can be accounted for.

First of all, *det* (it.neuter) 'it' could be exchanged for the common gender pronoun *den* (it.common) 'it':

(35) Bo har köpt en dansk cykel.

Bo has bought a.common.sing Danish.common.sing bicycle.

Den vill jag också ha.

it.common.sing want I too have

'Bo has bought a Danish bicycle. I would like to have that bicycle too.'

The difference in meaning between (34) and (35) is that *den* (it.common) 'it' in (35) has specific reference, i.e. refers to a TOKEN, the same individual bicycle as *en dansk cykel*, whereas the pronoun *det* (it.neuter) 'it' in (34) refers to a TYPE of bicycle, *en dansk cykel* 'a Danish bicycle'.²⁷ I have argued above that the pronoun *den* (it.common) 'it' in (35) is an S-pronoun, which means that it refers back to the linguistic expression *en dansk cykel* by virtue of an S-link being established using formal gender (common gender) and number. Hence, by way of this noun phrase the pronoun *den* (it.common) 'it' refers to a referent in the world of discourse.²⁸

²⁷ Teleman & al, (1999 part 2, 288) observe that *det* (it.neuter) 'it' may have a TYPE interpretation in sentences such as (34). See also Borthen (2003), who shows that this holds for Norwegian too.

²⁸ As a matter of fact also *den* in (35) could have a TYPE meaning, This reading is marginal, though. This is not important for the points I make in this paper; what is crucial for me is that *det* (it.neuter) cannot have a TOKEN or INDIVIDUAL meaning.

It is clear that the TYPE meaning is often evoked when a "disagreeing" *det* (it.neuter) 'it' is used as an anaphoric pronoun, but this is not the only possibility. Teleman & al (1999, part 2, 38) point out that the choice between *det* (it.neuter) 'it' and another anaphoric pronoun may convey other meanings as well. For instance, the noun *rosenrabatt* 'rose bed' is a common gender noun. Nevertheless both (36a) and (36b) are appropriate answers to the question *Vad tycker du om min nya rosenrabatt?* 'What do you think about my new rose bed?'.

- (36) a Den blev snygg! it.common became nice.common
 - b Det blev snygg-t! it.neuter became nice-neuter.

The difference in meaning between (36a) and (36b) is subtle, but in my view the pronoun *den* (it.common) 'it' in (36a) conveys an INDIVIDUAL perspective on the rose bed, whereas *det* (it.neuter) 'it' in (36b) makes reference to the rose bed in a more HOLISTIC perspective: the arrangement of roses, the whole setting, the result etc. It is possible that the description of the difference in meaning between (36a) and (36b) could be made more precise, but what is crucial is that the difference between (36a) and (36b) could NOT be described in terms of TYPE vs. TOKEN. Hence, we may conclude that the TYPE vs. TOKEN distinction does not capture the whole difference between sentences with "disagreeing" *det* (it.neuter) 'it' and an "agreeing" anaphoric pronoun.

Now consider (37), which provides two possible answers to the question *Vem är mannen där borta?* 'Who is the man over there?':

- (37) a Han är min bror. he is my brother
 - b Det är min bror. it.neuter is my brother

The choice of *han* 'he' in (37a) conveys a clear INDIVIDUAL perspective on the discourse referent 'the man over there'. The pronoun *det* (it.neuter) in (37b) seems to convey a quite different perspective, namely 'the man over there' as a topic of the conversation, 'the entity that is spoken about'. This again shows us that the difference between *det* (it.neuter) on the one hand and other pronouns,

hon 'she', han 'he' den (it.common) cannot be captured solely by applying a TYPE – TOKEN distinction. The examples in this subsection illustrate well Cornish's idea that the preceding linguistic context can be viewed as a provider of possible meanings for pronouns; the pronoun itself "provides the speaker with a subtle means of imposing, a posteriori, a particular referential perspective upon a referent which has already been entered into the discourse model" (Cornish 1986, 251).

If *det* (it.neuter) 'it' in (34) is an R-pronoun, we may safely conclude that there is no true disagreement between *en dansk cykel* and *det* (it.neuter) 'it' (34) – the pronoun does not refer back to the noun phrase but to a discourse element that is made available by this noun phrase.

4.2 Topic doubling with det and other pronouns

Pronominal doubling is a common phenomenon in Swedish. Doubling where a clause initial noun phrase is doubled by a pronoun, here referred to as topic doubling, seems to have many properties in common with pronominal linking across sentence boundaries as discussed in 4.1 above. Example (38) below should therefore be compared to (34) above:

(38) En dansk cykel, det vill jag också ha. a.common.sing Danish.common bicycle, it.neuter want 1 too have 'A Danish bicycle, I too would like to have one like that.'

It is possible that *en dansk cykel* 'a Danish bicycle' and *det* (it.neuter) 'it' in (38) belong to different clausal domains, but for my purpose here a more detailed structure of the topic doubling construction is not relevant. Now consider (39):

- (39) a Mormors äppelkaka, det är läcker-t. grandma's apple cake, it.neuter is delicious-neuter
 - b Mormors äppelkaka, den är läcker. grandma's apple cake, it.common is delicious-common

The head noun *äppelkaka* 'apple cake' is a common gender noun. The whole sequence *mormors äppelkaka*, *det*, in (39a) has a PROPOSITION reading 'to eat grandma's apple cake', whereas *mormors äppelkaka + den* in (39b) makes

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reference to the INDIVIDUAL cake.²⁹ Again we find that the use of a "disagreeing" det (it.neuter) 'it' does not always convey a TYPE reading.

Now consider doubling with *han* 'he' and *det* (it.neuter) 'it', respectively, in (40) below:

- (40) a Rektorn, han är min högsta chef. vice-chancellor, he is my most.superordinate boss
 - b Rektorn, det är min högsta chef. vice-chancellor, it is my most.superordinate boss

The choice of the pronoun *han* in (40a) implies that the intended reference is the vice-chancellor as an INDIVIDUAL, whereas *det* (it.neuter) 'it' in (40b) refers to the vice chancellor's FUNCTION as a holder of an office.

Once more, we find that doubling with the "disagreeing" pronoun *det* (it.neuter) 'it' does not yield a particular reading *per se*; the exact interpretation depends on which lexemes are used, which other pronouns are possible, and the context in a broader sense. However, what seems to be clear is that the use of *han* 'he', *hon* 'she', and *den* (it.common) 'it' yields an INDIVIDUAL perspective. The use of *det* (it.neuter) as a doubling pronoun provides a different perspective. The most straightforward analysis therefore seems to be that the contrasts in meaning that arises between an "agreeing pronoun" and *det*, i.e. between a pronoun that may participate in an S-link (be way of the number feature), and *det*, which only establishes an R-link, is best stated in terms of privative opposition: *det* (it.neuter) 'it' evokes a different meaning than would have been evoked by an agreeing pronoun. Exactly which viewpoint that *det* (it.neuter) 'it' conveys depends on the context.

The proposed analysis does not imply that a speaker has to compare a number of possible sentences in order to calculate the meaning of a sentence with a doubling *det* (it.neuter) 'it'. In order to explain the reading of (40b) let us consider the meaning of a non-doubled variant: *Rektorn är min högsta chef* 'The vice-chancellor is my most superordinate boss'. The noun phrase *rektorn* 'the vice-chancellor' here encompasses the meaning of the vice-chancellor either in

²⁹Josefsson (2006, 2009) discusses the \ddot{A} rter \ddot{a} r gott-construction (Peas-is-good.neut-construction) which is akin to the construction discussed in this paper, the main point being that the subject of this type of sentence is clausal. This analysis could presumably be carried over to doubling with det (it.neuter) 'it' as exemplified in (39a).

his/her FUNCTION as holder of an office or as him/her as an INDIVIDUAL – both "viewpoints" or aspects of meaning are equally prominent. The choice of han/hon promotes the INDIVIDUAL perspective and demotes at the same time the FUNCTION perspective. The reverse holds if det (it.neuter) 'it' is chosen. What the R-pronoun det (it.neuter) 'it' does is to evoke another viewpoint than do the other pronouns. Exactly what "another" means seems to be a question that is related both to the core meaning of the noun and to the context. For a noun such as rektor 'vice-chancellor', the perspective 'holder of an office' is salient; for other nouns other perspectives seems to be possible. Consider (41) for a different example:

- (41) a Solen, den är vår närmsta stjärna. sun.common.def, it.common is our closest star
 - b Solen, det är vår närmsta stjärna. sun.neuter.def, it.neuter is our closest star

The pronoun *den* (it.common) 'it' in (41a) is an S-pronoun and it refers back to the INDIVIDUAL entity by way of the NP *solen* 'the sun. The use of *det* (it.neuter) 'it' in (41b) implies that the intended meaning is NOT that of an INDIVIDUAL entity, but the sun in "some other role". In this case, the natural interpretation would be the sun in its role as a celestial body, since this is another prominent aspect of meaning associated with the lexeme *sol* 'sun'.

The proposed analysis sheds more light on a construction that Josefsson (1999, 2006, 2009) terms *pronominal appositions*. In this construction, an unstressed pronoun precedes a definite noun phrase. An example is given in (42):

(42) Han rektorn är min högsta chef. he vice-chancellor.common.def is my highest boss

The use of a pronominal pronoun in this construction seems to plays a role in the discourse; in Swedish it appears to grant the DP that it precedes the status of a topic. Another function is that it seems to disambiguate the referential perspective in the same direction as described above for topic doubling. In (42), the INDIVIDUAL viewpoint of the vice-chancellor is evoked, whereas a different perspective is taken in (40b). Examples such as (43), where the head noun *rektorn* 'the vice-chancellor' is preceded as well as followed by a doubling

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pronoun, are fine, but they are mainly associated to spoken style (which is probably the case for doubling more generally):

(43) Han rektorn, han är min högsta chef. he vice-chancellor.common.def, he is my highest boss

As expected, it is not grammatical to have both a prenominal apposition, such as *han* 'he' or *hon* 'she', and a doubling *det* (it.neuter) 'it'.

(44) ?*Han rektorn, det är min högsta chef.

he vice-chancellor.common.det it.neuter is my highest boss

The reason why (44) is not well formed is probably that it simultaneously conveys two different, and conflicting, referential perspectives: *han* as a prenominal doubler conveys an INDIVIDUAL perspective whereas *det* (it.neuter) 'it' promotes a conflicting NOT INDIVIDUAL referential perspective.

I have proposed that meaning conveyed by "disagreeing" det (it.neuter) 'it' as a topic doubler arises due to a speaker NOT choosing to refer to a discourse antecedent by an agreeing pronoun. In particular, if the pronoun det (it.neuter) 'it' is chosen in a position where han 'he' or hon 'she' would be possible alternatives, the listener has to construe a discourse antecedent – or at least a referential perspective – that is NOT that one that would have been conveyed by han or hon. Whereas han 'he' and hon 'she' are specified as MASCULINE and FEMININE, and, by virtue of the number feature, BOUNDED in space, the antecedent referred to by det (it.neuter) 'it' is neither of this, and hence, as a consequence construed as not MASCULINE and not FEMININE, and not BOUNDED, but something different. By the choice of "disagreeing" det (it.neuter) 'it', which presumably lacks a number feature, the speaker does not make the statement that the entity to which he/she refers is unbounded as such, but that the referential perspective taken is that of an unbounded element.

So far we have only considered doubling of nominals. Before concluding this section we shall take a brief look at topic doubling of a different kind: doubling of VPs. Consider (45):³⁰

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³⁰ Example (45c) is well formed with a comma, indicating a prosodic break before *bullar*.

- (45) a Springer, det gör han. runs, it.neuter does he 'Runs, that's what he is doing.'
 - b Bakar, det gör han. bakes it.neuter does be 'Bakes, that's what he does.'
 - c *Bakar, det gör han bullar. bakes, it.neuter does he buns

Examples (45 and b) show that not only noun phrases can be doubled by *det*. Example (45c) indicates that it is not the verb *per se* that is doubled, but the VP, which in (45b) presumably consists of verb + a phonologically null representation of the object. Example (45c) is ungrammatical also without a doubling *det* (it.neuter) 'it' probably because of improper movement of a verbal head into a specifier position. In (45a and b) none of the other 3rd person pronouns, *han* 'he', *hon*, 'she', and *den* (it.common) 'it', could be used as topic doublers. This means that a particular referential perspective of the type argued for above does not arise. What doubling in (45a and b) conveys is just the general pragmatics of topic doubling: the establishing of the noun phrase as topic.

To conclude section 4: Evidence from cross-sentential pronominal reference and topic doubling supports the claim that a "disagreeing" *det* (it.neuter) 'it' does not have any semantics of its own, but contributes to the meaning of a sentence by standing in contrast to other, more specified pronouns – provided a more specified pronoun could have been used. By using a "disagreeing" *det* (it.neuter) 'it' cross-sententially or as a doubling element a speaker picks a referential perspective that is different from the perspective that would have been conveyed by an "agreeing" pronoun. As a consequence, the use of "disagreeing" *det* (it.neuter) 'it' in the contexts discussed in this paper is not a case of disagreement. The antecedent for this type of *det* (it.neuter) 'it' is an antecedent that is not a linguistic entity, but a discourse element.

In this case I will assume that the noun phrase *bullar* 'buns' is right dislocated.

⁽i) Bakar det gör han, bullar. bakes it does he, buns 'He does indeed bake, buns.'

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5 What is gender, where is gender?

The proposed analysis raises the question of what gender really is and what role it plays in the syntax. This is the topic of this section.

The first type of gender, formal gender, is a feature that is first and foremost associated with nouns. By convention, a noun in Swedish is marked either for neuter or common gender (even though some nouns seem to have a double marking). In terms of structure, we may assume, as a first attempt, that the formal gender feature is checked in a functional projection, a GenP, located in the functional sequence of the noun, presumably above the NumP but below the DP level.³¹ From the point of view of the lexicon, formal gender may be viewed as a means of dividing the group of common nouns into two categories. From a textual point of view, formal gender enables the tracking or coindexation of discourse elements across sentence boundaries as well as clause-internally – S-linking. One question remains, however, what formal gender is from a syntactic perspective. I return to this question after a brief discussion on the nature of semantic gender.

First of all, it is misleading to compare formal gender to semantic gender as though they were two parallel categories. Formal gender is a value of a feature; in Swedish it is binary: neuter or common gender; semantic gender involves several feature dimensions. Semantic gender can be viewed from three viewpoints: from the point of view of feature content, the lexicon, and meaning. Let us consider these three dimensions in turn.

From the point of view of features, semantic gender is a bundle of features: natural gender or sexus, formal gender and number. The bundle consists of two features or just one. When it comes to natural gender two values are possible in present-day Swedish: MASCULINE and FEMININE; for number only singular is relevant in this paper (since the topic of this paper is third person pronouns in the non-plural). However, the absence of a number feature is also a possibility. (Recall that the feature number was assumed to be missing for the R-pronoun det (it.neuter) 'it'). When it comes to formal gender, there is a choice between neuter and common gender (for den/det). For present-day Swedish four combinations seems to be available:

³¹ See e.g. Ritter (1991) and Picallo (1991) for a proposal along those lines.

(46) Morphological feature bundles of 3rd person pronouns
MASCULINE and NUMBER, singular
FEMININE and NUMBER, singular
NUMBER, singular and COMMON
NEUTER

From the point of view of the lexicon, each one of these feature bundles corresponds to a lexical item, a pronoun:

han

(47) Lexical items, 3rd person pronouns
MASCULINE and NUMBER, singular

FEMININE and NUMBER, singular hon

NUMBER, singular and COMMON den

NEUTER det

The wording "corresponds to" does not mean that the pronouns represent specific syntactic nodes carrying these features, only that these are the features expressed by the lexical items in question.³²

From the point of view of meaning only three of the genders seem to carry any meaning, meaning taken to refer to the schematic meanings inherent in their feature makeup. *Han* 'he' carries the meaning MASCULINE, BOUNDED (the latter by virtue of the number specification), *hon* 'she' FEMININE, BOUNDED, and *den* (it.common) 'it' BOUNDED. The pronoun *det* (it.neuter) 'it' lacks inherent meaning. It is reasonable that each of the four pronouns represents a cognitive category, a "category of thought"; hence it might be more appropriate to talk about *han*-gender, *hon*-gender, *den*-gender, and *det*-gender in Swedish, provided we keep in mind that *den*-gender and *det*-gender refers to the R-pronouns *den* and *det*, not the S-pronouns *den* and *det*.

A richer meaning may arise when the pronouns in question are used in actual contexts. Crucially, this richer meaning is not inherent in the pronouns themselves, but derived contextually. For instance, I have argued that *den* (it.common) 'it' does not carry the meaning -ANIMATE, but that such a reading

³² The lexical item *det* seems to be specified only for the feature NEUTER, but it can be inserted in terminal nodes with the feature specification NEUTER, SINGULAR, following the Subset Principle of Halle (1997).

may arise from the fact that the speaker does NOT choose to use the ANIMATE pronouns *han* or *hon* in a certain context. The effect could be ascribed the Gricean Informativeness maxim: We take for granted that speakers are maximally informative, i.e. that the choice of wording is meaningful, and also that a "non-choice" or avoidance of using a pronoun is meaningful too. Consider (48) below:

- (48) a Rektorn, den vill jag inte ta i med tång. vice-chancellor.common.def it.common want I not take in with tongs 'The vice-chancellor, I wouldn't touch him with a ten foot pole.'
 - b Statsrådet, den vill jag inte ta i med tång. *minister.neuter.def, it.common want l not take in with tongs* 'The minister, I wouldn't touch him with a ten foot pole.

The derogatory flavor of *den* (it.common) 'it' in (48a and b) may be derived from the fact that the pronouns *han* and *hon* would have been possible (and natural!) choices.³³ Note that the pronoun *den* (it.common) 'it' can be used also when the antecedent is a neuter noun phrase, as illustrated in (48b). In practice, the pronouns *han/hon* – *den* – *det* represent a scale; *han/hon* 'he/she' are used for humans only (and human-like animals), *den* (it.common) 'it' may be used for humans, but also for other "bounded elements", whereas *det* (it.neuter) 'it' is not used for humans. Since *han/hon* 'he'/'she' could be chosen in (48), the use of *den* (it.common) 'it' (48) is derogatory. However, to use *det* (it.neuter) 'it' instead of *den* (it.common) 'it' is even worse.

In other cases, the use of den (it.common) 'it' for animates is clearly not derogatory or degrading: 34 , 35

- (49) a Vill studenten läsa engelska så går Då det bra. student.common.def read English Then wants so goes it aood. anmäla sig måste genast. it.common register refl immediately 'If the student wants to study English it's fine. In that case he or she has to register immediately.'
 - b (Karin) log mot flickan med selen. Det var en (Karin) smiled to girl.common.def with harness. It.neuterwas a

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³³ The rest of the clause conveys a derogatory flavor.

³⁴ (49b) is from Teleman & al. (1999, part 2, 281).

³⁵ See also Tegnér (1962,140–141).

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liten skrutt. Den kan väl inte vara mer än tre månader? *small one. It.common can surely not be more than three months?* 'Karin smiled to the girl with the baby harness. – Surely it can't be more than three months?'

By using the pronoun *den* (it.common) 'it' in (49a and b), the speaker fully adheres to the Gricean Maxim of Informativeness; having no knowledge of the natural gender of the referent (the student and the baby), he or she is as informative as possible, given the situation. Instead of *den* (it.common) 'it' the speaker could have chosen a periphrastic expression, *han eller hon* 'he or she' or similar. However, this would be a choice is a matter of style – maybe depending on the age of the speaker – it seems as though young people are less reluctant to use *den* (it.common) 'it' when referring to humans. In any case, it is not a grammatical issue.³⁶

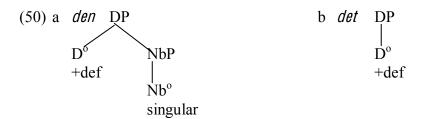
The role of formal gender in the distribution of R-pronouns in the syntax has not been clarified so far in this paper. As a first attempt I assumed above that formal gender is hosted in a functional projection, a GenP. However, the question is if this really is a necessary conclusion. It is evident that there is a difference in meaning between the R-pronouns den (it.common) 'it' and det (it.neuter) 'it', (cf. (34) and (35) above), but the question is if this is a difference in meaning that could be ascribed the difference in formal gender. I have argued above that the difference in meaning between the R-pronouns *den* (it.common) 'it' and *det* (it.neuter) 'it' relates to BOUNDARIES, more specifically, that *den* (it.common) 'it' is BOUNDED, and that this is due to the presence of the feature number, singular, a feature that is absent in det. From the point of view of feature content, the difference in meaning between the R-pronouns den (it.common) 'it' and *det* (it.neuter) 'it' thus seems possible to derive entirely from the number feature. The question is then: why do we have a difference in formal gender too? Before answering this question we shall take a short look at the phonological exponent of the number feature on nouns.

In Josefsson (1997, 1998), have argued that the non-head of compounds such as $b\mathring{a}t$ 'boat' in $b\mathring{a}t + hus$ (boat+house) 'boat house', bil 'car' in bil + tak (car + roof) 'car roof', and dag 'day' in dag + bok (day + book) 'diary' are bare roots

³⁶ Whether a speaker prefers to use den (it.common) instead of han eller hon 'he or she' or similar seems to be related to age. The use of den for animates whose sex is unknown appears to be more common and accepted by younger people.

without a number feature (or any other feature). The overt phonological form of the roots, båt 'boat', bil 'car', and dag 'day', is thus identical to the singular form of corresponding nouns: min båt 'my boat', min bil 'my, and min dag 'my day'. The plural forms of these nouns are *båt-ar* (boat.pl) 'boats', *bil-ar* (car.pl) 'cars', and *dag-ar* (day-pl) 'days'. As we see here, the plural feature has often an overt phonological exponent, whereas the phonological exponent of singular is -Ø. In other words, for nouns there is no overt difference between the exponent of number, singular, and no number feature at all. The same principle seems to hold for the pronominal system; the difference in meaning between the Rpronouns den (it.common) 'it' and det (it.neuter) 'it' could be ascribed the presence vs. absence of number, but this difference does not have any phonological exponent since the feature singular has no overt phonological representation. This conclusion might provide a clue as to the role of formal gender within the pronominal system, in particular, for the R-pronouns den (it.common) 'it' and *det* (it.neuter) 'it'. Formal gender does not have any meaning but it renders visible the difference between number, singular and no number feature at all. Consequently, formal gender within the pronominal system is an "auxiliary" feature that makes the distinction between singular and the absence of a number feature visible and hence possible to parse.

The idea that formal gender is an auxiliary feature raises the question whether formal gender is part of the syntax proper at all. If we want to retain the idea that the syntax does not operate with more functional projections than necessary (Bobaljik & Thrainsson 1998), together with the idea that functional categories carry meaning (Pesetsky & Torrego 2007), we can simply discard the idea that formal gender is a part of the syntax, which, in turn, means that there is no GenP. Instead we may assume that formal gender is inserted postsyntactically, in the morphological module, before lexical insertion takes place. The syntactic structure corresponding to the R-pronouns *den* (it.common) 'it' and *det* (it.neuter) 'it' would thus be as shown in (50a and b) below:



If we assume that the neuter and common gender features are inserted postsyntactically maybe as dissociated morphemes (cf. Embick 1997), we arrive at the model for suppletion of features specified in (51). Note that (51) refers to an operation in the morphological module:

If formal gender is not a feature of the narrow syntax for pronominals, we expect that it might not be a feature of the narrow syntax of common nouns either. Since formal gender is spelled out on articles, determiners of different kinds and on attributive adjectives we may assume that it is inserted in the terminal nodes of the extended projection of the noun, and spelled out on relevant heads, depending on the language-particular spell-out rules:

- (52) a en röd bil a.common red.common car 'a red car'
 - b den röda bilen

 def.common red.def car.common.def

 'the red car'
 - c ett rött hus

 a.neuter red.neuter house
 'a red house'
 - d det röda huset

 def.neuter red.def house,neuter.def

 'the red house'

The assumption that formal gender is a phonological feature does not mean that the feature in question is meaningless in a functional sense; it simply means that it is a feature that is related to parsing. It is fully possible that formal gender exhibited in agreement within the noun phrase, as illustrated above, can be fully explained in terms of parsing.

If formal gender is a phonological feature, it must be different from the rest of the phonological information inherent in the root of a noun. Consider a common gender noun such as *katt* 'cat'. Ignoring tone, the phonological matrix for *katt* is /kat/. The inflected forms for the lexeme are shown in (53) below:

(53) singular, indefinite Singular, definite Plural, indefinite Plural, definite katt 'cat' katten 'the cat' katter 'cats' katterna 'the cats' /kater/ /katerna/

As (53) shows, the formal gender feature, i.e. common gender, is expressed only on the form *katten* 'the cat'. Considering nouns, it seems as though formal gender is primarily related to the exposition of definiteness. Formal gender thus seems to be involved in the spell-out of different categories, but we would need a more precise examination of different nominal expressions if we want to describe the whole picture.

The main conclusion in this section is that formal gender is not a syntactic feature, but a feature that is inserted postsyntactically in the morphological module. If this is on the right track, it raises a host of new questions concerning the nature of postsyntactic insertion into different types of determiners and adjectival modifiers, as well as the interplay between formal and semantic gender in a cross-linguistic and diachronic perspective, issues that cannot be addressed in this paper.

6 Conclusion and discussion

In section 1, I proposed three goals of this paper: to explain the use of "disagreeing" pronouns, to make a detailed study of the 3rd person non-plural pronoun system in Swedish: *han* 'he', *hon* 'she', *den* (it.common) 'it', and *det* (it.neuter) 'it', and to explain the formal and semantic gender systems in Swedish and how they interact.

"Disagreeing" pronouns turned out not to be disagreeing; a "disagreeing" det (it.neuter) 'it' refers back to a non-linguistic entity, a discourse entity; hence disagreement does not arise. In such cases, the preceding text provides material for the retrieval of an antecedent, but no linguistic antecedent is present. A "disagreeing" det (it.neuter) 'it', used in cross-sentential reference or as a topic doubler, does not have any inherent meaning, as opposed to han 'he' and hon 'she'. The actual meaning of this pronoun when used in a context where other pronouns could have been used is explained in terms of privative opposition: the meaning is different from the meaning that would arise if another pronoun, such as han 'he', hon 'she' or den (it.common) 'it' were to be used. A "disagreeing"

det (it.neuter) 'it' allows a speaker to take a different referential perspective with respect to a referent than what had been the case if another pronoun had been chosen. The nature of this referential perspective is to a certain extent dependent on the meaning structure of the head noun of the referent: what aspects of meaning are available and prominent.

I have proposed here that there are two non-plural S-pronouns in Swedish, i.e. syntactic 3rd person non-plural pronouns: *den* (it.common) 'it' and *det* (it.neuter) 'it'. These pronouns are strictly anaphoric, since they refer back to a linguistic entity, in the usual case a noun phrase, where the head noun is a common gender or neuter noun in the singular. The pronouns den (it.common) 'it' and det (it.neuter) 'it' can also be used as R-pronouns, in which case they refer to a discourse entity. As an R-pronoun det (it.neuter) 'it' is deficient and has no number feature. The pronouns *han* 'he', *hon* 'she', and *den* (it.common) 'it' can participate in R-linking by virtue of the number feature, which means that they make reference to a linguistic entity in the discourse. The features MASCULINE for *han* 'he' and FEMININE for *hon* 'she' are simultaneously imposed on the discourse referent that is identified via the noun phrase to which the number feature links. For example, in a sequence such as Läraren sjöng. Hon var glad. 'The teacher sang. She was happy', the number feature of hon 'she' links to the NP *läraren* 'the teacher', which in turn identifies the discourse referent of *hon* as being the same as the entity to which *läraren* refers. The feature FEMININE adds information about the natural gender of this referent. The pronoun *den* (it.common) 'it' can be used as a pure R-pronoun, for example, when it is used deictically: *Titta på den!* 'Look at it!'.

Swedish has two gender dimensions: formal gender and semantic gender. Formal gender is a feature, neuter or common gender, that is also associated primarily with nouns. The semantic genders, on the other hand are four, and the best way to describe this gender system is to refer to them as *han*-gender, *hon*-gender, *den*-gender, and *det*-gender. Semantic gender is a gender dimension that is associated with pronouns, and by choosing one of these pronouns a speaker imposes a certain referential perspective upon a referent that has already entered the discourse, either deictically or textually. The pronoun *den* (it.common) 'it' does not carry the feature INANIMATE, but to use this pronoun in a context where *han* 'he' or *hon* 'she' would have been possible choices, the referential perspective INANIMATE is conveyed. In a similar way, the use of *det*

(it.neuter) 'it' in a context where some of the other pronouns could have been chosen implies that the speaker discards the meanings that would have been conveyed by *han* 'he', *hon* 'she', or *den* (it.common) 'it'.

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