

Norwegian Bare Singulars

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Til Ingar og Isak

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Acknowledgements

(a fairy tale)

Once upon a time there was a girl who had done nothing but study her entire life, and now she needed a job. She was of little use in practical matters, poor thing, so she sent an application to The Norwegian Council of Research, a wealthy troll with three heads (named Business, Politics, and Science), which was said to have mercy on academics.

The troll read her application and said: "If you can write a story within three years, we will pay you with gold and honour for those three years. But mind you! When the three years have passed, your story will be judged by three wise wizards. Their eyes are of the finest emeralds; however much you see, they have seen more. Their minds are of the clearest crystal; whatever thoughts you think, they have thought more clearly. And their tongues are of the purest gold; whatever you tell them, their reply will be more articulate. If your story pleases these three wizards, we will require nothing more from you. But if your story does not please them, then you shall be thrown into a black hole of regrets, where you will stay until you have written a better story, or paid us back every penny we gave you - with tears. We are not cruel, though, dear! You will have a magic fairy to help you with your story. His name is professor Lars Hellan. He can do magic to stories!"

The girl, who paid more attention to the gold than to the black hole, accepted the deal, and went happily home.

The first day of the first year, the girl wrote the title of her story. She was very pleased with it, and couldn't help spending the rest of the year admiring it, dreaming about how nice the story would be when it was finished.

The first day of the second year, the girl had a son. She was very pleased with him, and couldn't help spending the rest of the year admiring him, dreaming about how nice he would be when he grew up.

The first day of the third year, the girl and her husband bought a house to restore. She was very pleased with it, and she was just about to start admiring it when the magic fairy gently, gently tapped her left shoulder. And she realized she was in trouble.

"I can't do this!" she cried. "There is too much left to write, and too little time!" Eight cheerful fellows heard her cry. Their names were Jostein, Jørn, Anne, Petter, Snefrid, Siri, Arne Kjell, and Heidi. They pitied her, and said: "Come and have lunch with us every day at noon. We will cheer you up and tell you what to do!" And so she did.

The girl wrote her story. Whenever she needed a break, the eight cheerful fellows accompanied her. Whenever her story took an unfortunate direction, the magic fairy whispered her a better solution, so gently that the girl herself thought she had just changed her mind for no particular reason. And whenever she felt down, the mere sight of her husband and son made her happy again.

After months of writing, day and night, the story was almost finished. The girl looked at it, and sighed: "It is not good enough! I will be thrown into the black hole of regrets!" Six clever people heard what she said. Their names were Jeanette Gundel, Bodil Aurstad, Thorstein Fretheim, Petter Haugereid, Dorothee Beermann, and Jostein Ven. They pitied her, and said: "We will read your story and help you improve it!" And so they did. They all read parts of what the girl had written, and like the magic fairy, they cautiously enriched the story with their knowledge and wisdom. The girl was very grateful.

When the last day of the third year arose, and the girl was supposed to deliver her story, she hesitated. "I don't want to deliver it!" she exclaimed. "It should be much better!" She squeezed the story to her chest, and continued to work on it for yet three long months, always with the magic fairy by her side. The work seemed to be never-ending, and probably would have been, if not protests had started to emerge: The eight cheerful fellows booed, the crowd of the clever six sighed, and her son and husband simply cried in despair. The girl could always stand the booing and the sighs, but the cries from her dearest ones - which she could hear all the way to the university - almost torn her heart to pieces. So one morning she delivered her story.

Whether the girl was thrown into the black hole of regrets or not, is not known until this very day. But the story says that, regardless of that, both the girl and her good helpers lived happily ever after. And so did the troll and the three wise wizards.¹

Trondheim, April 2003.

¹ As for the second version of this thesis, many thanks to the three wise wizards Ann Copestake, Gregory Carlson, and Thorstein Fretheim, for their thorough and insightful comments.

Abbreviations

Glosses:

AFF	affix
COMM	common (masculine or feminine)
DEF	definite (suffix on adjectives)
DEFSUFF	definite (suffix on nouns)
FEM	feminine (inflected)
(FEM)	feminine (inherent)
INDEF	indefinite
MASC	masculine (inflected)
(MASC)	masculine (inherent)
NEUT	neuter (inflected)
(NEUT)	neuter (inherent)
PL	plural
PASS	passive
PAST	past tense
PRES	present tense
REFL	reflexive
SG	singular

Abbreviated references to sources for naturally occurring data:

LLB	Lucky Luke: <i>Banditienes dronning - Calamity Jane</i> . Album 4.
LLD	Lucky Luke: <i>Daisy Town</i> . Album 43.
HM	Henning Mankell (2001): <i>Vindens sønn</i> .
NOD	Naturally occurring data (spoken).
FL	Formal letter.

1 Introduction

1.1 Main question and goal

The main question to be answered in this thesis is under what conditions *bare singulars* are acceptable in Norwegian. Although every native speaker of Norwegian masters the art of determining (unconsciously) when bare singulars can occur, it has turned out to be an amazingly complicated task to explicitly state the sufficient and necessary conditions for appropriate use of these phrases in Norwegian. This thesis is an attempt to reach that goal.

1.2 Definition of bare singulars

Bare singulars are in this thesis defined (informally) as in (1). The motivation for this definition will be presented below.

- (1) A *bare singular* is a nominal constituent that is countable, singular, and indefinite, and that doesn't have a phonetically realized determiner.

One example of a Norwegian bare singular is given in (2) below. As will be the convention in this thesis, the bare singular is underlined.

- (2) Han hadde billett.
he had ticket
'He had a ticket.' [HM, 183]

Some of the phrases occurring in Norwegian that come closest to bare singulars semantically, are singular nominal phrases that are initiated by the indefinite article. For short,

we name these phrases *a-expressions*.² The indefinite article present in an *a-expression* is realized as either *en*, *ei*, or *et* in Norwegian, depending on the inherent grammatical gender of the noun with which the article co-occurs.³ This is illustrated in (3). However, unless it is necessary or useful for certain purposes, nouns and determiners (as well as adjectives and pronouns) are not glossed with their grammatical gender in this thesis.

- (3) a. en katt
a-COMM cat(MASC)
b. ei bru
a-FEM bridge(FEM)
c. et hus
a-NEUT house(NEUT)

Bare singulars can be distinguished from *bare plurals* (indefinite plural nominals without overt determiners) morphologically, since number (i.e. plurality) is marked by inflection on most nouns in Norwegian. This is shown in (4).

- (4) a. en gutt - (to) gutter
a boy - (two) boys
b. ei bru - (to) bruer
a bridge - (two) bridges
c. et hus - (to) hus
a house - (two) houses

In this thesis, only nouns that have a different form for singular and plural will be used as illustrations of bare singulars, unless explicitly mentioned.

That bare singulars are really singular, and not only underspecified for number, is not only suggested by their singular form, but also by the fact that any adjective that occurs inside a bare singular has to have singular form. This is illustrated in (5) below.

² This term is also used by e.g. Kallulli (1999). The letter *a* in this term refers to the English indefinite article.

³ *En*, *ei*, and *et* are the realizations of the indefinite article in the Norwegian writing norm named *bokmål*. In the second writing norm for Norwegian, *nynorsk*, the indefinite article is realized as *ein*, *ei*, and *eit*. Unless otherwise stated, *bokmål* is used in this thesis. In *bokmål*, the form *en* is usually used with both masculine and feminine nouns.

- (5) a. stor bil
 big-SG car
 'a big car.'
- b. store biler
 big-PL cars
- c. *store bil⁴
 big-PL car

As for the mass/count distinction that the definition of bare singulars in (1) is based on, I assume with Pelletier and Schubert (1989) that a count expression denotes a discrete, well-delineated group of entities, whereas a mass expression typically denotes "stuff", and therefore denotes without making it explicit how its denotation is to be individuated into objects. This nature of mass denotation gives rise to the test of *cumulative reference*: Any sum of parts which are M is also M (Quine, 1960), and *distributed reference*: Any part of something which is M is also M (Cheng, 1973). Objects that can be referred to in accordance with these tests are masses and are said to be referred to by mass expressions. According to these tests, expressions like *dirty water*, *snow*, and *sand* are examples of mass expressions. This is so, since, if you add amounts of dirty water to dirty water, amounts of snow to snow, or amounts of sand to sand, you still have dirty water, snow, and sand, respectively. And if you divide these respective masses into smaller portions, each smaller portion is the same kind of stuff as that which it was a part of. This does not hold for chairs in the same straightforward way, on the other hand; so *chair* is a typical count noun.

But notice that the cumulative and distributed reference tests allow for different conclusions w.r.t. the mass/count status of a noun relative to how one chooses to conceptualize an object. Apple, for instance, if looked upon as foodstuff will be judged as a mass, whereas apples viewed as individual fruits will be judged as countable objects. Consequently, the mass/count status of the noun *apple* is not a constant value. In fact, almost all (if not all) nouns that occur as mass expressions can also occur as count expressions, and likewise (but more seldom) the other way around. That a noun which is usually used as a count expression can also be used as a mass expression if the sentential predicate is of the right kind, is illustrated below.

⁴ It is only under the interpretation that the adjective is plural that this phrase is totally unacceptable. The adjective in (5c) can also be interpreted as a singular, definite one, in which case the whole phrase can be interpreted as a vocative, for instance. On that interpretation, the phrase is acceptable.

- (6) a. Ola kjøpte to hatter.
 Ola bought two hats
 'Ola bought two hats.'
- b. :-)Det lå hatt utover hele gulvet.
 it lay hat over whole floor-DEFSUFF
 'There was hat all over the floor.'

(6a) represents the count interpretation of *hat*, since two discrete tokens are singled out. As for (6b), since the predicate *be all over the floor* cannot possibly apply to one intact hat, the mass interpretation *the material from which hats are made* is chosen. We get a humorous effect in (6b), though, which indicates that something "unconventional" is going on. However, this phenomenon clearly still occurs in natural language. What is crucial to pinpoint here is that when (1) defines bare singulars as countable, this means that bare singulars are countable *on their particular occurrence*. That is, a bare singular is a phrase with a count *interpretation*. The alleged lexical mass/count specification for the noun (if there exists such a specification), is not crucial, even though it is usually in accordance with the particular interpretation. The indefinite expression in (6b), for instance, is not a bare singular the way the definition of bare singulars in (1) is supposed to be understood; it is a mass expression. In this thesis, phrases that are labelled *bare singulars* will (usually) have a clear count interpretation in the sense just outlined. This is important, since Norwegian indefinite mass expressions typically appear without determiners.

Also the specification of bare singulars as indefinite in (1) requires a comment. *Indefinite* here means both morphosyntactically *and* semantically indefinite. To take the morphosyntactic aspect first, definiteness is usually marked with a suffix on the noun in Norwegian, possibly (but not necessarily) in combination with a separate determiner preceding the noun. On the other hand, as shown in (7) below, there is no special affix for indefiniteness. Indefiniteness is represented merely by the root form of the noun, but the noun is usually preceded by a separate indefinite determiner preceding the noun. The indefinite/definite paradigm is illustrated in (7).

- (7) a. en katt - katten
 a cat - cat-DEFSUFF
 'a cat' - 'the cat'

- b. ei bru - brua
a bridge - bridge-DEFSUFF
'a bridge' - 'the bridge'
- c. et hus - huset
a house - house-DEFSUFF
'a house' - 'the house'

A noun that constitutes, or is the head of, a bare singular has the same form as a noun that occurs as the head of an a-expression. In other words, bare singulars are morphologically indefinite.

In Norwegian, some determinerless singular nominal phrases that appear to be indefinite from a morphological point of view are semantically definite in the sense that the (token)⁵ discourse referent that is introduced by the phrase is expected to be uniquely identifiable to the hearer (in the sense of Gundel et al., 1993). This is illustrated in (8) below.

- (8) a. Kelner, kan jeg få menyen?
waiter, can I have menu-DEFSUFF
'Waiter, can I have the menu?'
- b. Rektor var rasende.
headmaster was furious
'Our headmaster was furious.'
- c. Mor sto ute i hagen.
mother stood out in garden-DEFSUFF
'My mother was standing in the garden.'
- d. Beste skihopper vant.
best-DEF ski-jumper won
'The best ski jumper won.'⁶

These determinerless phrases are all used to refer to an individual that the hearer is supposed to uniquely identify, which means that they are semantically definite. Consequently, these

⁵ See chapter 2 for an explication of the distinction between token discourse referents and type discourse referents.

⁶ The possibility of having a non-suffixed noun heading a nominal with a definite interpretation is not generally accessible in Norwegian. On the contrary, these kinds of examples are quite rare. For a discussion of examples like the one in (8d), see Borthen (1998).

phrases are not bare singulars according to the definition in (1). That they are in fact definite can also be shown morphologically, even though the definite suffix is not present on the nouns in (8). In Norwegian, adjectives are marked for definiteness. That is, adjectives that co-occur with indefinite determiners, like the indefinite article, have an indefinite (or so-called *strong*) form, whereas adjectives that co-occur with definite determiners, like the definite article, have a definite (or so-called *weak*) form, as shown in (9).

- (9) a. en stor gutt
 a big boy
 b. den store gutten
 the big-DEF boy-DEFSUFF

Notably, the adjective in the bare phrase in (8d) is definite, which signals definiteness of the phrase as such, and if we insert adjectives in the remaining bare phrases in (8), they all get the definite form, as shown in (10) below.

- (10) a. Snille kelner, kan jeg få menyen?
 kind-DEF waiter, can I have menu-DEFSUFF
 'Kind waiter, can I have the menu?'
 b. Gamle rektor var rasende.
 old-DEF headmaster was furious
 'Our old headmaster was furious.'
 c. Vesle mor sto ute i hagen.
 little-DEF mother stood out in garden
 'My little mother was outside in the garden.'
 d. Beste skihopper vant.
 best-DEF ski-jumper won
 'The best ski jumper won.'

There should in other words be no doubt that the bare nominal phrases in (8) are semantically definite in spite of their indefinite form, and that they therefore fall outside the set of bare singulars as defined in (1).

In the examples in (11)-(14) below, the distribution pattern of Norwegian bare singulars is compared to that of a-expressions, bare mass expressions, bare plurals, and bare definite nominal phrases.

- (11) a. Ola er forelsket i et esel. *a-expression*
 Ola is in-love in a donkey
 'Ola is in love with a donkey.'
 b. */??Ola er forelsket i esel.
 Ola is in-love in donkey
- (12) a. Ola liker ikke vann. *bare mass expression*
 Ola likes not water
 'Ola doesn't like water.'
 b. */??Ola liker ikke datamaskin.
 Ola likes not computer
- (13) a. Ola syns at jenter er rare. *bare plural*
 Ola thinks that girls are strange
 'Ola thinks that girls are strange.'
 b. *Ola syns at jente er rar.
 Ola thinks that girl is strange
- (14) a. Jeg lover at beste elev skal få en premie. *bare definite*
 I promise that best-DEF student will get a prize
 'I promise that the best student will get a prize.'
 b. *Jeg lover at elev skal få en premie.
 I promise that student will get a prize

Although there is not a perfect parallel between all the pairs in (11)-(14), the parallel is clear enough to indicate that Norwegian bare singulars, as defined in (1), behave differently from the minimally distinct phrases in (11-14a) above. The category *bare singular*, as presently defined, is therefore motivated not only from a structural and semantic perspective, but also partly from a distributional one. Obviously, (some) Norwegian bare singulars behave

differently from a-expressions, bare mass expressions, bare plurals and bare definite nominal phrases.

1.3 Limitations w.r.t. empirical domain

Before we start the main discussion, let us first look at one reservation with respect to what possible contexts are assumed for the data that are being presented in the main parts of this thesis. Consider the examples in (15).

- (15) a. Lege ga pasient dødelig overdose. (newspaper heading)
doctor gave patient deadly overdose
'Doctor gave patient fatal overdose.'
- b. Sykkel ønskes kjøpt. (advertisement heading/sale's poster)
bike want-PRES.PASS bought
'Bike wanted.'
- c. Kvinne vasker gutt. (title of picture)
woman washes boy
'Woman washing boy.'

These examples are perfectly fine if they occur as newspaper headings, advertisement headings/sale's posters, or as titles of pictures. But as part of a normal conversation where they are not used metalinguistically (referring to headings or titles), they are ill-formed. What these examples have in common is that they have a 'telegraphic' flavour to them, and they all have to occur in a context, or a genre, that requires or prefers short, usually one-sentential, utterances. If we assume with e.g. Swales (1990) that a genre is a class of communicative events that have some shared set of communicative purposes and constraints on content, positioning and form, then newspaper headings, advertisement headings, sale's posters, and titles of pictures might all be seen as genres, and can be contrasted with each other as well as with genres like e.g. informal chatting, short-stories, and e-mails. What seems to be the generalization, then, is that in genres that require or prefer short, or telegraphic, utterances, the conventions on form allow for bare singulars that are otherwise not acceptable in Norwegian.

For ease of discussion, bare singular-promoting genres like these will be excluded when we discuss the acceptability of bare singulars in what follows. Thus, unless otherwise stated,

when a sentence with a bare singular is regarded as unacceptable in this thesis, bare singular-promoting genres as described above are not taken into account, and it might be that the sentence would have been acceptable in such a genre.

1.4 Methodological issues

Like many linguistic studies, this study has acceptability judgments as its main empirical source. This choice has been made first of all because acceptability judgments give access not only to common acceptable sentences that illustrate the phenomenon that is being studied, but also to negative data, data that rarely occur in a corpus, and minimal pairs.⁷ The acceptability judgments are mainly the author's own judgments, as well as judgments made by a random set of people in the author's surroundings. As a supplementary source of data, examples of Norwegian bare singulars have been collected, against which hypotheses have been tested. This thesis is, however, not intended to be a corpus study.⁸

1.5 Notation conventions

A particular challenge in the study of Norwegian bare singulars is that acceptability judgments are often highly context-dependent and a matter of degree. Thus, a specification of what notation conventions I use for marking (degrees of) acceptability seems appropriate. I use the acceptability marker * when I want to signal that a sentence containing a bare singular is unacceptable regardless of linguistic and nonlinguistic context. I use the notation */?? when I want to signal that an occurrence of a bare singular in a sentence will presumably never be judged as acceptable no matter what context it occurs in; not because this is ruled out in principle, but because it is impossible to find an appropriate context. I use the notation ?? when a sentence with a bare singular is hardly seen as acceptable, but may be (more or less) acceptable in certain contexts. I use the notation ? when a sentence is not perfectly good, but

⁷ See Schütze (1996) for more arguments in favor of using acceptability judgments in linguistic studies

⁸ The corpus that has been collected consist of more than 400 naturally occurring examples of bare singulars in Norwegian, collected from a novel, a formal letter, some magazines, e-mail correspondence, and natural conversations. These naturally occurring examples are listed in an appendix at the end of this thesis, so that further research on the topic can take advantage of it. The corpus is not presented systematically in this thesis, though.

simultaneously not unacceptable. When no sign is placed in front of a sentence, this sentence is easily regarded as acceptable, but in certain (less obvious) contexts, it may be unacceptable. I use the marker # when a sentence or text fragment is pragmatically infelicitous in a context that is explicitly specified, but can easily be seen as acceptable in other contexts. And finally, a smiling face :-)) means that a sentence sounds funny, or like an innovation, but is not strictly illformed.

1.6 An outline of the thesis

This thesis consists of two main parts. The first part, which is descriptively oriented, includes chapters 2-10. In these chapters I aim at presenting the data as theory-neutral as possible, and I propose an informal analysis of the phenomenon at focus. The second part of the thesis, which is formally oriented, includes chapters 11-13. In these chapters, I present the formal linguistic framework I adopt, namely Head-driven Phrase Structure Grammar (HPSG), I discuss to what degree it is possible to model the informal analysis proposed in chapters 1-10 in the HPSG framework, and what modifications of the framework are desirable for a satisfactory formal analysis of Norwegian bare singulars. Finally, chapter 14 gives a brief summary of the thesis.

In chapter 2, we start out with an overview over several semantic properties of Norwegian bare singulars. That is, Norwegian bare singulars are investigated with respect to semantic notions such as scope, referentiality, partitivity, genericity, strength, antecedenthood, referential givenness (cognitive status), topicality, and required descriptive content. An important distinction is being made in this chapter between the *type-level* and *token-level* of reference. Singular indefinite nominal phrases are argued to introduce both a token discourse referent and a type discourse referent into the discourse, however with more or less focus on one or the other. Whereas a-expressions signal a relative profiling of the token discourse referent, bare singulars signal a relative profiling of the type discourse referent. The type-emphasizing effect of bare singulars is argued to explain most of their semantic peculiarities. Finally, I show that bare plurals and bare mass expressions have many of the same semantic properties as bare singulars. I therefore argue that lack of an otherwise available indefinite determiner always signals type-emphasis of an indefinite nominal. I furthermore argue that the denotation of a *singular* indefinite nominal stands in some contrast with type-emphasis, whereas the denotation of bare plurals and bare mass expressions harmonize well with type-

emphasis, which is in accordance with the fact that bare plurals and bare mass expressions have a wider use than bare singulars.

Chapter 3 attempts at presenting the most important syntactic properties of Norwegian bare singulars, both ones that hold at the noun phrase level, and ones that hold at the sentential level. The conclusion of this chapter is that Norwegian bare singulars (in principle) have all expected syntactic properties of Norwegian nominal phrases, except that they have a more restricted use, regardless of syntactic position. Thus, (unless one assumes abstract syntactic structures that there is not much direct evidence for) there seems to be no single syntactic position, structure, or configuration in Norwegian, that either generally accepts or rejects bare singulars.

Chapter 4 reports on prior descriptions and analyses of Norwegian bare singulars and similar phenomena in some other languages. Even though insightful generalizations have been made for these kinds of phenomena, I conclude that there does not exist any comprehensive account of when bare singulars can occur in Norwegian among the reported works, nor any account of bare singulars (or other "reduced" nominals) for other languages that is directly and fully applicable to Norwegian. The investigations of this chapter also show that there is not a one-to-one mapping between the use of bare singulars in Norwegian and bare singulars (and similar nominals) in Albanian, Hungarian, West Greenlandic, Brazilian Portuguese, Swedish, and Danish, but that there are striking commonalities.

In chapter 5, I argue that type-emphasis alone cannot explain the distribution pattern of Norwegian bare singulars, since there are cases where bare singulars are expected to be acceptable based on their semantics, but where they in fact are not. What I propose, then, is that bare singulars are not generally licensed in nominal positions in Norwegian, but that there exists a set of 'schemes', or 'constructions', that do license them. These constructions are all *motivated* by the semantics of bare singulars (i.e. their type-emphasis), but not fully predicted by it.

In chapters 6 through 9, I propose four constructions that license Norwegian bare singulars; the 'conventional situation type'-construction, the 'profiled have-relation'-construction, the 'comparison of types'-construction, and the 'covert infinitival clause'-construction. Each of these constructions impose their own peculiar linguistic properties on the bare singulars that they license. This explains why there are many patterns that seem general for Norwegian bare singulars (observed in chapters 2, 3, and 4), but which turn out to not hold overall: The observed tendencies hold for occurrences of bare singulars licensed within *one* construction, but not necessarily in the others.

In chapter 10, I give a brief summary of the first 9 chapters, as well as bringing up some additional issues. I briefly discuss to what degree my proposed linguistic notions have sufficient predictive force, whether or not the use of bare singulars in Norwegian can be seen as a grammatical phenomenon, and what predictions my analysis makes cross-linguistically.

Chapter 11 is devoted to the formal framework that I take as the point of departure for my formal analysis, namely Head-driven Phrase Structure Grammar (HPSG). A basic introduction is given, aimed at readers not previously familiar with HPSG.

In chapter 12, I present a formal analysis of the NP-internal properties of Norwegian bare singulars, utilizing the typed feature structure formalism of HPSG. Most attention is given to the representation of the semantics of bare singulars, since I take their semantics to be the driving force of their syntactic behavior. Aiming for a way of distinguishing bare singulars from a-expressions semantically, I propose a systematic way of picking out semantic classes of nominals within HPSG. Most crucially, I introduce a semantic object (i.e. a feature value) into the grammar that includes the discourse referent (i.e. index) of a nominal sign, as well as a set of semantic properties associated with this discourse referent. This allows for distinguishing between type-emphasizing and token-emphasizing indefinites, and predicts many of the semantic properties assigned to bare singulars in chapter 2. More generally, it provides the basis for declaring a number of different semantic categories, including the distinction between *weak* and *strong* nominals, for instance.

Chapter 13 sketches a formal approach to how Norwegian bare singulars enter sentences. That is, I discuss what formal interpretation might be assigned to the four constructions proposed in chapters 6-9. It turns out that the four constructions seem to be most fruitfully formalized as three completely different kinds of grammatical phenomena, each representing more or less serious challenges to the standard HPSG framework.

In chapter 14 I present a brief summary of the thesis.

2 Some semantic properties

2.1 The type- and token-level of reference

Before we start to discuss the semantics of Norwegian bare singulars, let us briefly look at a distinction that will become crucial in what follows, namely the distinction between the type- and token-level of reference.

Let us assume with Landman (1986) that a discourse referent is an abstract entity about which we talk, and supply this assumption with the view that an entity that can be referred to with a pronoun (or some other pro-form) is a discourse referent (see e.g. Karttunen, 1976). Let us furthermore take the generous stand (resemblant of that of Dahl and Hellmann, 1995) that an antecedent is an expression that functions as the base for the interpretation of some other expression (i.e. the anaphor), and that an anaphor is an expression whose interpretation is (partly) dependent on the interpretation of some other expression (i.e. the antecedent).

With these definitions in mind, let us first consider the text fragment in (1).⁹

- (1) Kari fikk *en fin sykkel*. *Den* var blå.
Kari got a nice bike(MASC). *it*-MASC was blue
'Kari got a nice bike. It was blue.'

According to the definitions above, the indefinite expression *en fin sykkel* ('a nice bike') introduces a discourse referent to which the anaphoric pronoun *den* ('it'-MASC) refers. Notably, this discourse referent is viewed as a *token* by the reader, i.e. as an individual or an instance of a bike. Let us call this discourse referent a *token discourse referent*.

Discourse referents can also be entities of other types than tokens, however. Consider the text fragment in (2).

- (2) Kari fikk *en fin sykkel*. *Dét* fikk Ola òg.
Kari got a nice bike(MASC). *that*-NEUT got Ola too

⁹ In this thesis, antecedents and anaphors are italicized, not coindexed.

'Kari got a nice bike. That Ola got too.'

The last sentence in (2) means that Ola got the same type of thing as Kari, namely a nice bike, but most likely not the same bike as the one Kari got. In other words, the text fragment in (2) expresses the same truth-conditions as those expressed in (3) below, but the text fragment in (2) is more coherent.

- (3) Kari fikk en fin sykkel. ?En fin sykkel fikk Ola òg.
Kari got a nice bike(MASC). a nice bike(MASC) got Ola too
'Kari got a nice bike. A nice bike Ola got too.'

It is not unreasonable to claim that the type of thing *nice bike* is one of several discourse referents referred to in (2). For one thing, it is an abstract entity that is being talked about in (2). And secondly, it is referred to by the pronoun *dét* ('that'-NEUT). Let us call this discourse referent a *type discourse referent*.¹⁰

The pronoun *dét* ('that'-NEUT) in (2) refers to the same type of thing as the indefinite phrase *en fin sykkel* ('a nice bike') in the previous sentence. Since the pronoun doesn't carry much (if any) descriptive content in and by itself, whereas it is still clear for the reader that Ola got a bike, and not some other type of thing, the only reasonable assumption is that *dét* ('that'-NEUT) achieves this aspect of meaning through the interpretation of *en fin sykkel* ('a nice bike'). This means that the expression *en fin sykkel* ('a bike') functions as the antecedent of *dét* ('that'-NEUT) in (2).¹¹

¹⁰ A *type discourse referent* must not be confused with a *kind* in the sense of Carlson (1977).

¹¹ One may speculate whether it is the noun *sykkel* ('bike'), and not the whole phrase *en fin sykkel* ('a nice bike'), that functions as the antecedent of *dét* ('that'-NEUT) in (2). However, as argued in Borthen (1999), the type anaphor *dét* is not like the anaphor *en* ('one') in that it substitutes for nouns (as demonstrated by Partee, 1972). This is shown in i) below.

- i) a. Kari fikk en blå sykkel. Jeg fikk en rød en.
Kari got a blue bike. I got a red one
b. *Jeg fikk (en) rød dét.
I got (a) red that
c. Kari fikk en blå sykkel. Dét fikk jeg og, #men den var rød.
Kari got a blue bike. That got I too, #but it was red.

As illustrated in ia), *en* ('one') may be preceded by a determiner and an adjective, which means that with respect to NP-internal structure, *en* ('one') behaves just like a noun. The type anaphor *det* ('that'-NEUT) on the other hand, can never be preceded by either adjectives or determiners. This is illustrated in ib). Furthermore, whereas there is no contradiction in the statement made in ia), ic) is clearly a contradiction, as the type anaphor *det* is interpreted as referring to a blue bike. Again, this suggests that the type anaphor *det* ('that'-NEUT) does not merely have a noun as its antecedent, but a nominal phrase.

In other words, (1) and (2) show that one and the same indefinite phrase can function as the antecedent both of an anaphoric pronoun referring to a token discourse referent (i.e. a *token anaphor*) and of an anaphoric pronoun referring to a type discourse referent (i.e. a *type anaphor*). The most straight-forward way to account for this is to assume that indefinite nominal phrases introduce not only a token discourse referent into the discourse, as commonly assumed, but also a type discourse referent.¹² This follows naturally not only from the data above, but also from the twofold nature of nominal expressions; they usually have a descriptive content that designates a *type* of thing, and they are often used to refer to particular instances of types of things, i.e. *tokens*.

This acknowledgement of a type-level of reference as well as a token-level of reference will turn out to be useful both as a descriptive tool and for accounting for the semantics of Norwegian bare singulars.

2.2 Existential interpretations and scope behavior

Norwegian bare singulars can have an existential reading, which, just as for a-expressions, entails the existence of at least one referent. However, this existential reading is restricted. For instance, as illustrated in (4) below, Norwegian bare singulars differ from corresponding a-expressions in that they can never take wide scope on their existential interpretation. Interestingly, it is quite hard to find minimal pairs where one gets a clear contrast in scope behavior between a-expressions and corresponding bare singulars, for in most cases where bare singulars are acceptable in Norwegian, a corresponding a-expression gets narrow scope as well. (4) gives an example where we can see at least some contrast.

- (4) a. Alle barna prøvde en jakke.
all children-DEFSUFF tried a jacket
‘All the children tried on a jacket.’
- b. Alle barna prøvde jakke.
all children-DEFSUFF tried jacket
‘All the children tried on some jacket or other.’

¹² There are also less direct ways of accounting for the fact that the indefinite in (1) and (2) can function as the antecedent of either a token pronoun or a type anaphor, namely in terms of inferrables (Prince, 1981). We will return to this issue, and why I assume it is not a satisfactory account, in section 10.5.

c. $\exists x(\text{jacket}(x) \ \& \ \forall y(\text{child}(y) \rightarrow \text{tried-on}(y,x)))$

d. $\forall y(\text{child}(y) \rightarrow \exists x(\text{jacket}(x) \ \& \ \text{tried-on}(y,x)))$

(4a) has one reading which says that every child tried on some jacket or other, possibly different jackets, as given in (4d). But (4a) also has a reading which says that there was one jacket such that all the children tried it on, which is the reading represented in (4c). Notably, this last reading is lacking in (4b), which shows that the bare singular in (4b) (or the existential quantifier it introduces) in contrast to the a-expression in (4a), is unable to take wide scope over the universal quantifier. In general, Norwegian bare singulars with an existential interpretation are unable to take scope over any scope-interacting quantifier or operator.¹³

2.3 Referentiality

As in Fodor and Sag (1982), scope ambiguity is here meant as a strictly formal relation. That is, on the wide scope reading of the indefinite in (4a) above, all that this reading implies is that there exists at least one jacket that all the children tried. Whether or not the speaker has a particular jacket in mind, to which he intends to refer, I regard as a separate parameter; i.e. as the distinction between a *referential* and *nonreferential* reading. Let us tentatively define referentiality the way Fodor and Sag (1982) define this notion. On this account, a noun phrase is referential if and only if the speaker is acquainted with the referent and by using the noun phrase has an "internal pointer" to the referent, intending to make a statement about this particular individual. Thus, the subject phrase in (7a) below is most likely referential, whereas the subject phrase in (7b) is most likely nonreferential.¹⁴

(7) a. A man just proposed to me in the orangery (though I'm much too embarrassed to tell you who it was).

b. A man is in the women's bathroom (but I haven't dared to go in there to see who it is).

¹³ As for the possibility of assuming that bare singulars with an existential interpretation can take wide scope on the type-level, scope of noun phrases is only defined on the token-level, so we will simply discard the idea to begin with.

¹⁴ Fodor and Sag's referential noun phrases are closely connected both to Donnellan's (1966) referential definite noun phrases, and to Chastain's (1975) indefinite noun phrases with a referential use.

Fodor and Sag list a whole range of factors that increase the availability of a referential understanding of an indefinite noun phrase, some of which are illustrated in (8) below.

- (8) a. Someone cheated on the final exam.
b. A friend of mine cheated on the final exam.
c. A student that Betty used to know in Arkansas cheated on the final exam.
d. A certain student in my syntax class cheated on the final exam.
e. A girl I knew from high-school, she cheated on the final exam and got caught.
f. A student in the syntax class who has a Ph.D. in astrophysics cheated on the final exam.
g. A student in the syntax class, who has a Ph.D. in astrophysics, cheated on the final exam.

(8a) through (8g) illustrate that the more descriptive content in the subject phrase, the more likely we are to assume that the speaker is intending to refer to a specific individual. Furthermore, adjectives such as *certain*, left-dislocations, and restrictive or non-restrictive relative clauses tend to support a referential interpretation of a nominal phrase.

Now, let's turn to bare singulars and see whether they can be referential in this sense. Consider the Norwegian examples in (10).

- (10) a. Jeg ønsker meg en svart sykkel.
I want REFL a black bike
'I want a black bike.'
b. Jeg ønsker meg svart sykkel.
I want REFL black bike
'I want some black bike or other.'

(10a) can either mean that the speaker wants some black bike or other, in which case the indefinite phrase *en svart sykkel* ('a black bike') is nonreferential, or it can mean that there is a particular black bike that the speaker has in mind and wants, in which case the phrase is referential. (10b), with a bare singular, can only have the former reading, which means that it cannot be referential.

In (10a), the referential reading might be claimed to be due to a wide scope reading of the indefinite noun phrase relative to the intensional operator introduced by the verb *ønske seg*

('want'), so the unavailability of a referential reading of the bare singular in (10b) might just as well be due to it being unable to take wide scope.

(11) below is a more clear case, then, in the sense that there is no scope ambiguity involved here.

(11) a. Jeg hadde på meg en gul skjorte.

I had on me a yellow shirt

'I wore a yellow shirt.'

b. Jeg hadde på meg gul skjorte.

I had on me yellow shirt

'I wore a yellow shirt.'

In both (11a) and (11b) the speaker wore exactly one shirt and she knows which shirt she wore. Still, I will claim that there is a difference between the two examples that has to do with referentiality as it is defined above. Importantly, knowing which entity is involved in some relation does not *entail* referentiality in our sense; the speaker must in addition *intend* to refer to exactly this referent. What distinguishes (11a) from (11b) is that in (11a) (even though this is not the preferred reading) the speaker may have an “internal pointer” to the shirt, stating that she wore this particular shirt, whereas in (11b) the speaker is not allowed to have such an internal pointer to the referent. What is stated in (11b) is only that the speaker wore a yellow shirt. Thus, the bare singular designating the yellow shirt is unambiguously nonreferential.¹⁵

The intuitions concerning (11) are admittedly quite subtle, but (12) and (13) provide support for the reported intuitions. First, consider (12).

(12) a. Jeg hadde på meg en viss gul skjorte i går.

I had on me a certain yellow shirt in yesterday

'I wore a certain yellow shirt yesterday.'

b. *Jeg hadde på meg viss gul skjorte i går.

¹⁵ There exist many more clear cases of referential a-expressions in Norwegian than the one given in (11a). One example is given in (i) below.

(i) En venn av meg døde på fredag.
a friend of mine died on Friday

The reason why the minimal pair in (11) does not provide such a clear difference between the reading of the a-expression and the reading of the bare singular, is that bare singulars tend to be acceptable only in positions that favor a nonreferential reading of an indefinite phrase. Thus, in minimally distinct sentences that accept both bare singulars and a-expressions as arguments, an a-expression tends to favor a nonreferential reading, as illustrated in (11).

I had on me certain yellow shirt in yesterday

In (12a) and (12b) the indefinite phrases contain a so-called *specificity adjective* (see Hintikka, 1986), i.e. an adjective that signals a referential reading of the phrase it is part of. Whereas (12a), with an a-expression, is perfectly fine when the specificity adjective is present, (12b), with a bare singular, is not. Also the Norwegian specificity adjectives *bestemt* ('certain') and *spesifikk* ('specific') are banned from being part of bare singulars.

Likewise, if we have an indefinite nominal phrase with descriptive content that makes it overwhelmingly likely that the speaker intends a referential reading, this phrase is well-formed only if it contains an indefinite article. This is illustrated in (13).

- (13) a. I går hadde jeg på meg en gul skjorte som Ola har hatt i mange år.
in yesterday had I on me a yellow shirt that Ola has had in many years
'Yesterday, I wore a yellow shirt that has belonged to Ola for many years.'
- b. */??I går hadde jeg på meg gul skjorte som Ola har hatt i mange år.
in yesterday had I on me yellow shirt that Ola has had in many years

Thus, it seems that we can safely conclude that Norwegian bare singulars cannot be referential in the sense that the speaker has a specific referent in mind as she utters the nominal phrase.

So far, the referent the speaker has in mind on a referential reading has been an individual instance far down in a taxonomy hierarchy. However, there is also another sense in which a phrase might be seen as referential, namely in the sense illustrated in (14).

- (14) a. I am looking for a certain book, namely "Semantic Structures".
b. I want a certain bike, namely the new DBS off-road.
c. I saw a cat, namely the Siberian tiger, when I went to the zoo last time.

The specific referent the speaker has in mind in this case is not an individual book, bike, or cat, but a *kind* of book, bike, and cat, respectively. Also in this sense, Norwegian bare singulars are unable to be referential.

In Fodor and Sag's sense, referentiality is a relation between the speaker and some referent at the time of utterance. However, as shown in Enç (1991), as far as the use of specificity

adjectives is concerned, these are not only used with referential phrases in this sense (a similar point is made in Hellan 1980). Consider the examples in (16).¹⁶

- (16) a. I don't know which one it is, but John obviously has a certain bike in mind.
b. Every man loves a certain woman, namely his mother.
c. I understand that you are after a certain answer, but I can't see which one.
d. I may have a certain car in mind next month.

The truth-conditions for (16a), for instance, do not say that there is a particular bike in the world that the speaker can identify and that John has in mind. The truth-conditions just say that there exists at least one bike that John has specifically in mind and wants. In the examples in (16a-c) it is not the speaker, but either a participant mentioned in the utterance or present in the immediate context, who has something specific in mind. And in (16d) the speaker does not have a certain participant in mind at the moment of utterance. In other words, specificity adjectives just state that there is a specificity relation between a referent and some participant at some time, but who this participant is and at what time the relation holds, has to be induced from the linguistic and non-linguistic context. Notably, Norwegian bare singulars are incompatible with this kind of specificity relation, just as they are with the notion of referentiality in Fodor and Sag's sense.

2.4 Partitivity

A partitive phrase is one that denotes an individual that is part of a set of entities that is evoked in the discourse. (17) below thus illustrates that Norwegian bare singulars can never have a partitive reading.

- (17) a. Det var igjen mange sykler etter salget, så jeg ga én sykkel til Kari.
it was left many bikes after sale-DEFSUFF, so I gave one bike to Kari
'There were many bikes left after the sale, so I gave one of the bikes to Kari.'
b. ??Det var igjen mange sykler etter salget, så jeg ga sykkel til Kari.
it was left many bikes after sale-DEFSUFF, so I gave bike to Kari

¹⁶ (16b) is taken from Enç (1991), whereas (16a) is inspired by examples given in Hellan (1980).

‘There were many bikes left after the sale, so I gave Kari a bike (any bike).’

Under the preferred reading of (17a), *en sykkel* (‘a bike’) means *one of the remaining bikes from the sale*. The a-expression in (17a) thus has a partitive reading. (17b), on the other hand, can only be used to say that the speaker gave Kari some bike or other. Notice that (17b) is incoherent (signaled by "??"). This is so because the nonpartitive interpretation of the bare singular is incompatible with the connective *så* (‘so’), that signals a causal connection between the two sentences it connects.¹⁷ If the bike given to Kari is one of the remaining bikes from the sale, as in (17a), then the causal connection is clear (having to do with availability of bikes). If the bike is not one of the remaining bikes, on the other hand, as in (17b), the causal connection is missing, which leads to a pragmatic anomaly. Thus, (17b) illustrates that bare singulars can't have a partitive reading even in contexts that clearly favor it.¹⁸

2.5 Genericity

There are many different senses of genericity (see an overview in chapter 1 of Carlson and Pelletier, 1995), some of which have gotten more attention than others in the literature. But let us start out with the view of genericity presented in Carlson (1989), namely that "Notionally, a generic sentence is one expressing a regularity, as opposed to an instance from which one infers a regularity. For example, the generalization "The sun rises in the east" expresses a regularity, while "The sun rose this morning in the east" expresses an instance from which, along with other such instances, one infers a regularity." (Carlson, 1989:167). A bare singular with a generic interpretation is (in the most broad sense of this notion) one that is part of a generic sentence in the sense just outlined.

In many cases, and in particular in sentences with stage-level predicates (in the sense of Carlson, 1977), Norwegian bare singular cannot have a generic interpretation. This tendency is illustrated in (18).

¹⁷ The second sentence in (17b) is perfectly well-formed in isolation or in some other context.

¹⁸ In Borthen (1999, 2001) the indefinite article is assumed to be able to achieve a partitive reading in Norwegian. However, as the observant reader will have noticed, the determiner in (17a) is accented, the reason being that this accented form is clearly preferred to the unaccented one in this context. Traditionally, accented versions of *en/ei/et* are *not* taken to be versions of the indefinite article, but cardinality words. Thus, a partitive reading of the Norwegian indefinite article is only marginal, if it exists at all.

- (18) a. En katt har myk pels.
 a cat has soft fur
 'A cat has soft fur.'
- b. */??Katt har myk pels.
 cat has soft fur
- c. En bil er laget av metall.
 a car is made from metal
 'A car is made from metal.'
- d. */??Bil er laget av metall.
 car is made from metal
- e. Ola misliker jenter.
 Ola dislikes girls
 'Ola dislikes girls.'
- f. */??Ola misliker jente.
 Ola dislikes girl

(18a) has a generic reading which says that all or most cats have soft fur. Let us call this the *quasi-universal* generic reading. If we insert a bare singular as the subject of the individual-level predicate in (18a), as illustrated in (18b), the result is an illformed sentence. The same happens in (18cd). As shown in (18ef), bare singulars are also banned from having a quasi-universal reading when they occur as the object of verbs like *love*, *like*, and *admire* (Kallulli 1996, 1999). Building on data like this, Kallulli (1996, 1999) and Borthen (1999) claim that Norwegian bare singulars can never be generic (meaning quasi-universal).

However, the following examples with generic bare singulars are well-formed.

- (19) a. Bil er et kjøretøy.
 car is a vehicle
 'A car is a vehicle.'
- b. Datamaskin er et nyttig hjelpemiddel.
 computer is a useful tool
 'A computer is a useful tool.'

(19a) does not mean that there exists a car that is a vehicle, nor does (19b) mean that there exists a computer that is a useful tool. Rather, the sentences mean something like: "Any car is

a vehicle" and "Any computer is a useful tool", which intuitively seems to be the quasi-universal generic interpretation illustrated in (18) above.¹⁹

Furthermore, in generic statements such as those below, Norwegian bare singulars are perfect:

- (20) a. Småbarn spiser med skje.
small-children eat with spoon
'Small children eat with a spoon.'
- b. Kari kjører (alltid) bil til jobben.
Kari drives (always) car to job-DEFSUFF
'Kari always drives a car to work.'
- c. Man bør bruke jakke om vinteren.
one should use jacket in winter-DEFSUFF
'One should use a jacket in winter.'

These sentences are not interpreted as stating something about all or most spoons, cars, or jackets, which means that the bare singulars in (20) are not quasi-universal. The bare singulars are generic in the sense that they are part of sentences that express regularities rather than referring to particular events.

In other words, Norwegian bare singulars can be generic. However, in generic statements of the type discussed in Carlson (1977), where the nominal in question gets a quasi-universal generic interpretation, Norwegian bare singulars are either out or highly exceptional, depending on how one interprets the examples in (19).

2.6 Comparatives

As noticed in Eide (1996), Norwegian bare singulars are unable to occur as the second argument in a comparison construction. Consider the examples in (21).

- (21) a. Ola løper som en klovn.
Ola runs like/as a clown

¹⁹ The exact interpretation of sentences like those in (19) will be proposed in chapter 8, section 8.4.

- (i) ‘Ola is running like a clown.’
 - (ii) #’Ola is running as a clown.’
- b. Ola jobber som klovn.
- Ola works like/as clown
- (i) #’Ola is working like a clown.’
 - (ii) ‘Ola is working as a clown.’

The Norwegian particle *som* can either function as a comparative particle (and have the meaning of English *like*), or it can function as a predicative particle (and have the meaning of English *as*) (see Eide, 1996). Notably, (21a), with an a-expression, is fine only if *som* is understood as a comparative particle, whereas (21b), with a bare singular, is absolutely out on this reading and requires the predicative reading of *som*.

Also with the verb *være* ('be') we see that Norwegian bare singulars cannot instantiate the second argument of a comparison relation. This is illustrated in (22).

- (22) a. Du er en engel!
 you are an angel
 ‘You are (like) an angel!’
- b. Ola er en gris!
 Ola is a pig
 ‘Ola is (like) a pig!’

There are (at least) two interpretations of the sentences in (22). One is that the subject referent is an angel or a pig for real,²⁰ which we can call a figurative reading, whereas the other interpretation is that the subject referent *behaves like* an angel or a pig, in which case we have a metaphorical interpretation. Whereas Norwegian bare singulars occur frequently after the verb *være* ('be') (see chapter 6), they are absolutely unacceptable on the metaphorical interpretations in (22). If we assume that a metaphorical interpretation of the postverbal nominal entails that the verb introduces a comparison relation (which is not unreasonable since the comparative particle *lik* ('like') in fact can be inserted in these sentences), the unacceptability of bare singulars in such sentences fits nicely with the pattern observed above with respect to *som* ('as'/'like').

²⁰ 'For real' here includes cases where the subject referent is an angel or a pig in a play or at a carnival, for instance.

There is a close relation between comparison constructions and generic statements. Consider the following data.

- (23') a. Per løper som en klovn.
Per runs like a clown
'Per runs like a clown.'
- b. Per løper slik som en klovn løper.
Per runs such like a clown runs
'Per runs such as a clown runs.'
- c. En klovn løper rart.
a clown runs strangely
'A clown runs strangely.'

It is not unreasonable to claim that *en klovn* ('a clown') in (23'a) has a generic interpretation just like the subject in (23'c). Thus, I assume that whatever the reason might be for why bare singulars never (or almost never) have the quasi-universal generic reading, it is the same reason that excludes bare singulars in comparative constructions.

2.7 The weak/strong distinction

Milsark (1977) divides noun phrases into the two classes *weak* and *strong*, based on whether or not they can function as the semantic subject (but syntactic object) of existential sentences. Weak noun phrases are those that can occur as the postcopular noun phrase in existential sentences such as those in (23) below, strong noun phrases are those that cannot.²¹

- (23) a. There is a wolf at the door.
b. *There is the wolf at the door.
c. There were seven persons cycling along the creek.
d. *There were John and Mary cycling along the creek.

²¹ Certain marked uses of existential sentences are excluded as tests, such as the "list reading":

(i) A: What do we have to do today, Peter?

B: Well, there's the body we need to remove, there's the wolf at the door, and there's the cleaning of the kitchen.

- e. There was an article mentioned.
- f. *There was Frank's article mentioned.
- g. *There was one of the articles mentioned.
- h. *There was everyone in the room.

Some weak and strong noun phrases are listed in (24) below:

(24)

WEAK:

- a N (a dog)
- sm N (some dogs)²²
- mny N (many dogs)
- number determiner N (three dogs)
- bare plurals (existential reading)
(there are dogs barking outside)
- mass nouns (existential reading)
(there is coffee on the table)

STRONG:

- Proper names (Fido)
- definite determiner N (the dog)
- pronouns (he)
- universal: all/every/each N (all dogs)
- most N (most dogs)
- a N (one of the dogs/a particular dog²³)
- some N (some of the dogs)
- many N (many of the dogs)
- a few N (a few of the dogs)
- number determiner N (three of the dogs)
- bare plurals (quasi-universal reading)
(dogs are nice)
- mass expressions (quasi-universal reading)
(coffee is good)

Notice that all the determiners (including the zero plural determiner and the zero mass determiner) that can be weak can also be strong. A strong reading of the noun phrases to the left in (24) is obtained when we have a reading which could be paraphrased with a construction that signals partitivity. For instance, *some N* is strong when we can paraphrase it with *some of the Ns*.

²² There is a tendency for determiners like *some* and *many* to be realized without accent when they are meant to have the weak reading; thus the deleted vowels.

²³ Milsark is a bit vague as for whether a phrase on the form *a N* can be strong if it is not partitive, but for instance de Hoop (1992) regards referential, nonpartitive noun phrases as strong.

Milsark's distinction between weak and strong noun phrases was motivated by the desire to avoid the (somewhat misleading) notion 'definiteness effect' in describing the pattern observed in (23), and by the desire to *explain* why weak noun phrases, but not strong ones, are accepted in existential sentences.²⁴ But the weak/strong distinction has been claimed to be linguistically relevant for a number of linguistic phenomena thereafter (see e.g. Enç 1991, Diesing 1992, and de Hoop 1992), including Norwegian bare singulars (see e.g. Borthen, 1998, and Kallulli 1999).

Since Norwegian bare singulars can never be either partitive or referential, we can safely conclude that they are unambiguously weak on their existential reading. As expected, they are (in principle) acceptable in existential sentences:

- (25) Det er sykkel i garasjen.
 there is bike in garage
 'There is a bike in the garage.'

However, Norwegian bare singulars can also be strong, since bare singulars are sometimes generic, and generic phrases are defined as strong.

2.8 Antecedenthood

2.8.1 Antecedents of token-anaphors in extensional contexts

Consider the well-formed text fragments in (26).

- (26) a. Ola har fått ny hund. Den kom i går.
 Ola has got *new dog*(MASC). *It*-MASC arrived yesterday
 'Ola has got *a new dog*. *It* arrived yesterday.'
- b. Petter kjøpte seg kjole i går. Vil du se den?
 Petter bought himself *dress*(MASC) yesterday. will you see *it*(MASC)?
 'Peter bought a *dress* yesterday. Do you want to see *it*?'

²⁴ Milsark assumes that weak and strong noun phrases correspond to cardinal and quantificational expressions, respectively, and that *there be* is interpreted as an expression of existential quantification. Assuming that double quantification of the same set leads to ungrammaticality, Milsark claims to explain why strong noun phrases are prohibited in existential sentences.

- c. Kari har *bil*, men hun bruker *den* aldri.
 Kari has *car*(*MASC*), but she uses *it*-*MASC* never
 'Kari has *a car*, but she never uses *it*.'
- d. *Sykebil* er på vei. *Den* dro for fem minutter siden.
Ambulance(*MASC*) is on way. *It*-*MASC* left for five minutes ago
 'An ambulance is on its way. *It* left five minutes ago.'

The personal pronouns in (26) are token-anaphors and they refer to the same token discourse referents as the bare singulars introduce. For instance, in (26a) the dog that came yesterday is the same dog that Ola got. In other words, the pronouns in (26) get their interpretation by way of the interpretation of the bare singulars that precede them, which means that the bare singulars in (26) function as antecedents of token-anaphors.

There is a change of focus in between the antecedent and the anaphor, though. Whereas the antecedent intuitively signals a focus on the type of thing involved, the anaphor signals a focus on the particular token involved.

This change of aspect from a type of thing to a token that we get when bare singulars are antecedents of token pronouns, suggests that bare singulars are not perfect antecedents for token anaphors. And as a matter of fact, this is the case. Even though the text fragments in (26) must be considered coherent, bare singulars are generally poorer antecedent candidates for personal pronouns than corresponding a-expressions. This is illustrated in (27)-(30).

- (27) a. Per ble angrepet av *en bjørn* i helga. *Den* bet ham i foten.
 Per was attacked by *a bear* in weekend-DEF. *it* bit him in foot-DEF
 'Per was attacked by *a bear* this weekend. *It* bit his foot.'
- a. Per ble angrepet av *bjørn* i helga. (?)*Den* bet ham i foten.
 Per was attacked by *bear* in weekend-DEF. (?)*it* bit him in foot-DEF
 'Per was attacked by *a bear* this weekend. *It* bit his foot.'
- (28) a. Kari ankom flyplassen i *en drosje*. *Den* var grønn.
 Kari arrived airport-DEF in *a cab*. *it* was green
 'Kari arrived the airport in *a cab*. *It* was green.'
- b. Kari ankom flyplassen i *drosje*. ?*Den* var grønn.
 Kari arrived airport-DEF in *cab*. ?*it* was green
 'Kari arrived the airport in *a cab*. *It* was green.'

- (29) a. Kari kjørte *en bil* til hytta forrige fredag. *Den* står der fortsatt.
 Kari drove *a car* to cottage-the last Friday. *it* stands there still
 'Kari drove *a car* to the cottage last Friday. *It* is still there.'
- b. Kari kjørte *bil* til hytta forrige fredag. ??*Den* står der fortsatt.
 Kari drove car to cottage-DEF last Friday. *it* stands there still
 'Kari went to the cottage by *car* last Friday. *It* is still there.'
- (30) a. Kari sparket *en fotball*. *Den* var blå.
 Kari kicked *a football*. *it* was blue
 'Kari kicked *a football*. *It* was blue.'
- b. Kari sparket *fotball*. #*Den* var blå.
 Kari kicked *football*. #*it* was blue
 'Kari was playing soccer. *It* was blue.'

Even though only (30b) is really bad of the text fragments above, there is a (more or less substantial) difference in coherence between the a-versions and the b-versions of the text fragments in (27)-(30). Thus, we can conclude that other things being equal, a bare singular (in an extensional context) is a poorer antecedent candidate for a token pronoun than what a corresponding a-expression is.

There are a number of different factors that influence whether an antecedent-anaphor relation is felicitous or not, such as whether or not a discourse referent is introduced (see e.g. Karttunen, 1976), syntactic position (see Centering Theory, e.g. Grosz, Joshi, and Weinstein, 1995) and relevance (see e.g. Gundel, 1995, and Wilson 1992). It is beyond the scope of this thesis to go into all these factors in order to predict exactly when Norwegian bare singulars can occur as antecedents of token pronouns. But it seems both intuitively likely, and in accordance with the data above, that due to the Norwegian bare singulars' relative lack of suitability for being antecedents of token pronouns, it is only in the more optimal cases for antecedenthood (exemplified by the text fragments in (27), for instance) that these phrases can function as antecedents of token pronouns. Said differently, the possibility for a Norwegian bare singular to appear as an antecedent of a token pronoun is affected by the same factors as those that affect a-expressions, but since bare singulars are poorer antecedent candidates than a-expressions (other things being equal), they sometimes don't survive as felicitous antecedents in surroundings where an a-expression would survive.

2.8.2 Antecedents of token-anaphors in intensional contexts

In (27)-(30) the bare singulars occur in extensional contexts. That is, in contexts that entail the existence of what the bare singular denotes. If a bare singular occurs in an intensional context, that is, in a context that does not entail the existence of what the bare singular denotes, the acceptability of it as an antecedent will depend crucially on the nature of the sentence containing the anaphor. Consider the difference between (31b) and (32b), for instance.

- (31) a. Jeg ønsker meg *en sykkel* til jul. *Den* er blå.
I want REFL *a bike* to Christmas. *it* is blue
'I want *a bike* for Christmas. *It* is blue.'
- b. Jeg ønsker meg *sykkel* til jul. ??*Den* er blå.
I want REFL *bike* to Christmas. ??*it* is blue
'I want *a bike* for Christmas. *It* is blue.'
- (32) a. Jeg ønsker meg *en sykkel* til jul. *Den* skal være blå.
I want REFL *a bike* for Christmas. *it* shall be blue
'I want *a bike* for Christmas. *It* must be blue.'
- b. Jeg ønsker meg *sykkel* til jul. *Den* skal være blå.
I want REFL *bike* to Christmas. *it* shall be blue
'I want *a bike* for Christmas. *It* must be blue.'

The first sentence in the two text fragments in (31) establishes an intensional context because of the propositional attitude-verb *want*. The indefinite NP is therefore opaque (Quine, 1960). There is no entailment of existence of bikes, and the bike the speaker wants is possibly just a hypothetical one. The second sentence creates an extensional context, though, since there is no intensional element in this sentence. This sentence entails the existence of at least one bike and it is used to refer to a particular bike in the world (or more correctly, to a discourse referent which is assumed to correspond to a particular bike in the world). As we can see in (31b), a bare singular doesn't function well as an antecedent here, whereas an a-expression does.

This fact follows directly from the claim that Partee (1972) (building on Karttunen 1969) makes on these kinds of anaphoric relations, namely that in intensional contexts only referential indefinites can function as antecedents for subsequent pronouns that occur in extensional contexts. Since Norwegian bare singulars can never have a referential reading, it follows that they cannot be antecedents of personal (token) pronouns that are in extensional contexts if they themselves occur in an intensional context.

Things become different when one has a sequence of two sentences that are both in (different) intensional contexts, as in (32). Here, the modal verb *shall* creates an intensional context in the second sentence. The acceptability of a bare singular antecedent in this example follows from the generalization that Partee makes for this kind of case. She says that an intensional context introduces a set of possible states of affairs, and that an indefinite nonreferential noun phrase in such a context can function as an antecedent for a subsequent pronoun if and only if the part of the text that contains the anaphoric pronoun presents or presupposes the actualization of the possible states of affairs evoked in the previous intensional sentence. The (imagined) fulfillment of the possible states of affairs includes a unique discourse referent responsible for making the hypothetical world actual, and the anaphoric pronoun refers to this discourse referent. In other words, in this case the pronoun doesn't get its interpretation through strict coreference with its antecedent; the antecedent just specifies what kind of thing is involved. From this it follows naturally that the bare singular in (32b) can function as a perfectly felicitous antecedent for the subsequent personal pronoun even though it is unambiguously nonreferential.

2.8.3 *Antecedents of the type anaphor 'det'*

So far we have only looked at cases where bare singulars are antecedents of token pronouns, that is, personal pronouns that refer to tokens. In Norwegian, these pronouns have to agree with respect to natural and possibly also grammatical gender with their antecedent.²⁵ But there are also other kinds of pronouns, among others one that I call *the type anaphor 'det'* ('it'/'that'-NEUT). This is a pronoun that has neuter form regardless of the natural and grammatical gender of its antecedent.

²⁵ The personal pronouns *han* ('he') and *hun* ('she') reflect the natural gender of their antecedent and are not sensitive to grammatical gender. The pronouns *den* ('it'-COMM) and *det* ('it'-NEUT) reflect natural gender in the sense that they refer to inanimates, but they also have to agree in grammatical gender with their antecedent.

The name *type anaphor* reflects the fact that the anaphoric relation that is involved is at the type level rather than the token level. Recall from examples (2) and (3) at the beginning of this chapter that the type anaphor functions like an indefinite nominal phrase in the sense that it introduces a new token discourse referent into the discourse. On the other hand, unlike *a*-expressions, it doesn't introduce a new nominal predicate itself; this meaning aspect it retrieves from its antecedent. That is, the *type* of thing referred to is specified through its antecedent. The type anaphor is either realized as a demonstrative pronoun (when it has word accent), corresponding to English *that*, or as a personal pronoun (when it does not have word accent), corresponding to English *it*. It typically occurs as a topicalized demonstrative pronoun in a sentence that is structurally and semantically symmetrical with the sentence that contains its antecedent, or closely semantically related with it. Some examples where we have bare singular antecedents of the type anaphor *det* are given in (33).

- (33) a. Ola har (*en*) fin bil. *Dét* har Kari også.
 Ola has (*a*) nice car(MASC). *that-NEUT* has Kari too
 'Ola has a nice car. *That* Kari has too.'
- b. Jeg har tatt med (*en*) kniv i tilfelle vi skulle få bruk for *dét*.
 I have taken with (*a*) knife(MASC) in case we should get use for *that-NEUT*
 'I have brought a knife in case we might be in need of that.'
- c. Per ønsker seg (*en*) ny båt, men *dét* får han nok aldri.
 Per wants REFL (*a*) new boat(MASC), *that-NEUT* gets he probably never
 'Per wants a new boat, but he probably will never get that.'
- d. Kari gikk i (*en*) dypt utringet kjole. *Dét* ville jeg aldri ha hatt på meg.
 Kari went in (*a*) deeply cut dress(MASC). *That-NEUT* would I never have had on me
 'Kari wore a dress with a low cut. *That* I would never have worn.'
- e. Moren hennes er lærer, så *dét* vil hun også bli.
 mother-DEFSUFF hers is teacher, so *that* will she too be
 'Her mother is a teacher, so *that* she too wants to become.'
- f. Sykkel er kult, og *det* er et nyttig framkomstmiddel.
 bike(MASC) is cool-NEUT, and *it-NEUT* is a useful conveyance
 'It is cool to use a bike, and it is a useful conveyance.'

As we see here, the type anaphor *det* can have either a-expressions or bare singulars as antecedents. However, the type anaphor cannot always take an a-expression as its antecedent, as shown in (34ac).

- (34) a. Ola elsker *en jente*. **Det* elsker Petter også.
 Ola loves *a girl*(MASC). *that*-NEUT loves Petter too
 'Ola loves *a girl*. *That* Petter loves too.'
- b. *Jente elsker Petter også.
 girl loves Petter too
- c. Kari gikk til *en kiosk*. **Det* gikk Mari til også.
 Kari went to *a kiosk*(MASC). *that*-NEUT went Mary to too
 'Kari went to *a kiosk*. *That* Mary went to too.'
- d. *Kiosk gikk Mari til også
 kiosk went Mary to too

Since we have seen that the type anaphor is capable of taking a-expressions as antecedents, the impossibility of using the type-anaphors in (34) cannot be due to the antecedents in (34). Rather, what is the pattern is that a type anaphor can be used only if it occupies a position which in principle could have been occupied by a bare singular. As shown in (34bd), bare singulars are prohibited in the positions that the type anaphors in (34ac) occupy. In other words, these data suggest that the type anaphor *det* shares important properties with bare singulars in Norwegian. More precisely, I will claim that it is simply the pronominal correspondence of bare singulars.²⁶

2.9 Cognitive status

It is by now a well-established fact about language that different forms of referring expressions provide processing signals that assist the addressee in restricting the set of possible interpretations of the expression. That is, the form of a referring expression provides

²⁶ As shown in fn. 12 earlier, the type anaphor *det* resembles the pronoun *en* ('one'), since both these pronouns are indefinite. However, *en* ('one') is not restricted to occur in positions that in principle could have been occupied by bare indefinites. Furthermore, whereas *det* never can have a partitive or referential interpretation, *en* can.

information about where in the hearer's memory store a representation of the expression's discourse referent is expected to be found.

Gundel, Hedberg, and Zacharski (1993), propose that there are six cognitive statuses, or attention states, that nominal forms may be associated with. This is represented in the Givenness Hierarchy in (35), here with some associated English forms.

(35) The Givenness Hierarchy

In focus	->	Activated	->	Familiar	->	Uniquely Identifiable	->	Referential	->	Type identifiable
<i>it</i>		<i>that, this,</i>		<i>that N</i>		<i>the N</i>		<i>indefinite</i>		<i>a N</i>
		<i>this N</i>						<i>this N</i>		

Each form encodes (and is therefore located under) the minimum attention state that the discourse referent must have in the hearer in order for the form to be used appropriately. This signaled cognitive status functions as a processing signal which the hearer exploits in the search for the intended interpretation of the expression.

The effect of different nominal forms is illustrated in (36).

- (36) a. I couldn't sleep last night. A dog (next door) kept me awake. (type identifiable)
 b. I couldn't sleep last night. This dog (next door) kept me awake. (referential)
 c. I couldn't sleep last night. The dog (next door) kept me awake. (uniquely identifiable)
 d. I couldn't sleep last night. That dog (next door) barked. (familiar)
 e. I couldn't sleep last night. That kept me awake. (activated)
 f. I couldn't sleep last night. It kept me awake. (in focus)

The form *a dog* in (36a) is appropriate only if the associated discourse referent has the status *type identifiable*, which means that the hearer is able to identify the type of thing referred to. As for *this dog* in (36b), this form encodes that the associated discourse referent at least has the status *referential*, which means not only type identifiability, but also that the hearer is supposed to associate a representation of the discourse referent by the time the sentence is processed. The expression *the dog (next door)*, in (36c), on the other hand, signals that the associated discourse referent is at least *uniquely identifiable*. This means either that the hearer is familiar with the dog already, or that the descriptive content in the phrase is so rich that the hearer can create a unique representation of the discourse referent based on this description alone. The form *that dog (next door)* in (36d) signals the more restrictive cognitive status

familiar, which means that the hearer already has a representation of the associated discourse referent in memory. *That*, in (36e), on the other hand, encodes the cognitive status *activated*, which means that the discourse referent has recently been mentioned or retrieved from extra-linguistic context, which entails that the hearer has a representation of the associated discourse referent in short-term memory. And finally, the personal pronoun *it* in (36f) signals the most restrictive cognitive status, namely *in focus*, which means that the discourse referent is currently in the center of attention.

As indicated by the arrows in (37), the higher cognitive statuses entail the lower ones. So, if something is in focus, it is also activated, familiar, uniquely identifiable, referential, and type identifiable, for instance. This means that there is not a one-to-one correspondence between forms and actual cognitive statuses of discourse referents. Each form signals the *minimum* attention state that the discourse referent is expected to have, but there is nothing in the Givenness Hierarchy itself that restricts a form to be used if a higher cognitive status than required one is obtained. For instance, it is predicted that the definite article can be used even if the associated discourse referent is in focus of attention, since being in focus entails being uniquely identifiable, which is what the definite article requires. The fact that some expressions are typically not used when a higher status than the required one is fulfilled, is assumed to be due to conversational implicatures associated with the different forms. For instance, a demonstrative pronoun in English implicates that the referent is typically not in focus, and the indefinite article implicates that the referent is not uniquely identifiable.

Without going into more details of the theory proposed by Gundel et al., I think it is safe to claim that Norwegian bare singulars do not differ from a-expressions with respect to the minimal attention state that the token discourse referent is supposed to have. That is, the token discourse referent of a bare singular and an a-expression signal the minimum cognitive status *type identifiable* in Gundel et al.'s terms.²⁷ In (37) below, for instance, neither the a-expression,

²⁷ It seems plausible that there is a difference between bare singulars and a-expressions w.r.t how likely they are to be used if a higher cognitive status than the minimally required one holds for the associated discourse referent. In Gundel et al.'s framework this will correspond to a difference in associated implicatures. I will, however, not go into a discussion about a possible analysis in these terms. There are two reasons for this. One is that Gundel et al.'s term *referential* is more weak than the one of Fodor and Sag (1982), for instance, since there is no requirement that the speaker is acquainted with the referent of a referential expression. This means, as far as I can see, that many bare singulars are referential in Gundel et al.'s terms. Using Fodor and Sag's more restrictive notion gives more predictive force, since it correctly excludes the use of many bare singulars in cases where Gundel et al.'s notion does not. Secondly, as the Givenness Hierarchy is set up, all definite nominals are referential, whereas there are linguistic evidence in Norwegian that suggest that we need something like a referentiality distinction also for definite nominals (see Borthen, 1998). I will therefore propose to take the status *referential* out of the hierarchy of cognitive statuses in (35) and rather introduce it (or a similar notion) into the grammar as a cross-classifying parameter (see chapter 12, sections 12.3 and 12.4).

nor the bare singular, introduces a token discourse referent that needs to have a higher attention state than type identifiable.

- (37) a. Skal jeg hente dyne til deg?
shall I fetch quilt to you
'Shall I get you a quilt?' [NOD, 14]
- b. Skal jeg hente en dyne til deg?
shall I fetch a quilt to you
'Shall I get you a quilt?'

So much for the cognitive status of the token discourse referent associated with a bare singular. Now, what about the type discourse referent? In Gundel et al.'s Givenness Hierarchy each form is associated with just one attention state, probably reflecting the assumption that each form is associated with just one discourse referent, i.e. what we have called the token discourse referent. If we assume that a noun phrase can introduce a type discourse referent as well as a token discourse referent, then it is in principle possible that these two discourse referents (introduced by the very same referring expression) can have different attention states. Indeed, even though the attention state for an indefinite's token discourse referent is just type identifiable, the attention state for its type discourse referent will be at least familiar. Why familiar? Well, as long as the hearer knows the meaning of some noun, this predicate (or its corresponding type discourse referent) is represented in long-term memory as a familiar type of thing. In other words, indefinite noun phrases signal the attention state familiar for their type discourse referent, whereas they signal the attention state type identifiable for their token discourse referent.

One piece of evidence that it is useful, or even necessary, to assign cognitive status to type discourse referents as well as token discourse referents of referring expressions comes from the Norwegian type anaphor *det*. As shown in examples (2) and (3) at the beginning of this chapter, as well as in (33) above, the Norwegian type anaphor *det* introduces a possibly brand new token discourse referent (i.e. one that only needs to be type identifiable), whereas its type discourse referent must be at least activated in the previous discourse. If we want to predict this, it is not sufficient to say that this pronoun (or, this form) is associated with just one cognitive status. More evidence for assigning a separate cognitive status to type discourse referents will be given in section 10 below.

To sum up, I propose that nominal forms are associated with possibly more than one discourse referent, and that each of these discourse referents is conventionally associated with a certain minimal cognitive status, as in Gundel et al. (1993). I do not see this as being in contradiction with the original Givenness Hierarchy, but a plausible development of it. As for Norwegian bare singulars and signaled cognitive status, the conclusion is that they, just like *a*-expressions, signal the attention state *type identifiable* for their token discourse referent and *familiar* for their type discourse referent.

2.10 Topicality

2.10.1 Sentence topics

It has often been claimed that discourse referents that function as topics in a sentence or a discourse need to have a relatively high cognitive status in the hearer. For instance, Gundel (1988) claim that the topic referent has to be at least familiar.²⁸ This assumption can explain the data in (38) and (39).

- (38) a. *Den bilen, den* har jeg sett før.
that car-DEFSUFF.MASC, it-MASC have I seen before
'That car, I have seen *it* before.'
- b. *Den kjolen, den* trenger du ikke.
that dress-DEFSUFF.MASC, it-MASC need you not
'That dress, you don't need *it*.'
- (39) a. **En bil, den* har jeg sett før.
a car(MASC), it-MASC have I seen before
'A car, I have seen *it* before.'
- b. **En kjole, den* trenger du ikke.

²⁸ Other views on the relation between topics and referential givenness have also been proposed. For instance, Reinhart (1981) claims that topics only need to be referential. Whether we take Gundel's claim as our point of departure, or Reinhart's, the prediction is the same regarding left-dislocation of bare singulars: If topics are assumed to correspond to token discourse referents, bare singulars are not expected to be topic expressions, since they are neither familiar, nor referential, on the token-level. Whether Gundel or Reinhart (or someone else) is right, is therefore not an issue in this section.

a dress, it-MASC need you not

'A dress, you don't need it.'

Whereas the demonstrative noun phrases in (38) signal that the token discourse referent they introduce is familiar to the hearer, the indefinite noun phrases in (39) don't. It is therefore as expected that the examples in (38) are well-formed whereas those in (40) are not.

Since it was argued in section 2.9 above that the token discourse referent introduced by a Norwegian bare singular only has to be type identifiable, one might be led to think that Norwegian bare singulars can't be topic expressions. However, as illustrated in (40) below, this is not the case.

(40) a. *Bil*, *dét* har jeg sett før.

car(MASC), that-NEUT I have seen before

'A car, that I have seen before.'

b. *Kjole*, *dét* trenger du ikke.

dress(MASC), that-NEUT need you not

'A dress, that you don't need.'

In (40), the bare singulars are left-dislocated, which is assumed to be a prime case of topicalization (see e.g. Vallduví, 1990). Notice, however, that the duplicating pronoun in (40a) and (40b) is the type-anaphor *det* ('it'/'that'-NEUT), and that the topics in these sentences are interpreted as the *types of things* denoted by the bare singulars, not some tokens. In other words, the topics in (40) are the type discourse referents introduced by the bare singulars. Since type discourse referents are always familiar or more (as argued in section 2.9 above), the examples in (40) are in fact not counter examples to the generalization that sentence topics have to be at least familiar.

If we try to use token pronouns in the sentences in (40), then we get a token-interpretation of the topic expression, and the examples become illformed. This is illustrated in (41).

(41) a. **Bil*, *den* har jeg sett før.

car(MASC), it-MASC have I seen before

'A car, I have seen *it* (i.e. the car) before.'

b. **Kjole*, *den* trenger du ikke.

dress(MASC), it-MASC need you not

'A dress, you don't need *it* (i.e. the dress).'

Since Norwegian bare singulars are not likely to introduce token discourse referents that are familiar (i.e. they just have to be type identifiable), whereas topics ought to be, it is as expected that the examples in (41) are illformed.

Finally, we see in (42) that also a-expressions can be topicalized if they co-occur with the type anaphor. Although acceptable, these sentences are slightly less natural than the corresponding sentences with bare singulars, though.

- (42) a. (?)*En bil, dét har jeg sett før.*
car(MASC), that-NEUT I have seen before
'A car, that I have seen before.'
- b. (?)*En kjole, dét trenger du ikke.*
dress(MASC), that-NEUT need you not
'A dress, that you don't need.'

To sum up, a Norwegian bare singular can occur as the topic expression of a sentence, however, only if the topic is taken to be the type of thing it introduces, not the token. This fact is predicted if we assume that indefinite nominals introduce both a token discourse referent and a type discourse referent, where the type discourse referent is signaled to have the minimum attention state familiar, whereas the token discourse referent only signals the minimum attention state type identifiable.

2.10.2 Discourse topics

So far, we have only looked at examples with bare singulars as sentence topics. An interesting question is whether they can be discourse topics as well, meaning the concern of a series of utterances constituting a discourse (see Siewierska, 1991), and whether they can be anaphoric. Consider the conversation in (43).

- (43) A: Jeg trenger bil. Har noen bil?
I need car. have somebody car
'I need a car. Does anybody have a car.?'

- B: Jeg har bil.
 I have car
 'I have a car.'
- C: Dét har jeg og.
 that have I too
 'I have that as well.'

I will claim that the bare singular in (43B) refers to the discourse's topic just as much as the proper name *Mari* does in B's utterance in (44) below.

- (44) A: Jeg ser etter Mari. Har noen sett Mari?
 I look after Mari. have somebody seen Mari
 'I am looking for Mary. Has anybody seen Mary?'
- B: Jeg har sett Mari.
 I have seen Mari
 'I have seen Mary.'
- C: Jeg har også sett henne.
 I have too seen her
 'I have also seen her.'

Assuming that a discourse topic is that which a text fragment is about, *Mari* is the discourse topic of (44). In other words, by the parallel to (43), bare singulars can represent discourse topics, but this is possible only on the type level, not on the token level.

As for whether the bare singulars in (43) are anaphoric, either on the token level or the type level, I will claim that they are not, since the interpretation of them is not dependent on the interpretation of some antecedent.

2.11 Lexical restrictions

In the discussion on bare singulars and referentiality in section 2.4, we saw that Norwegian bare singulars are not acceptable if they have so much descriptive content that a referential reading is either preferred or entailed. However, also the opposite situation disfavors bare

singulars; that is, bare singulars tend to be unacceptable if they have too little descriptive content. This is illustrated in (45c).

- (45) a. Det ligger kniv på bordet.
there lies knife on table-DEF
'There is a knife on the table.'
- b. Det ligger en ting/en dings/en greie/et objekt på bordet.
there lies a thing/an object on table-DEF
'There is a thing/an object on the table.'
- c. */??Det ligger ting/dings/greie/objekt på bordet.
there lies thing/object on table-DEF

The examples in (45c) become more acceptable if it is contextually given what is meant by *ting*, *dings*, *greie*, and *objekt* ('thing'/'object'), or if one has a context in which the distinction between e.g. things and non-things is a relevant and prominent parameter. However, the examples are still pretty bad. Thus, it is a clear tendency that Norwegian bare singulars need a certain amount of descriptive content.

2.12 Summing up: Norwegian bare singulars are type-emphasizing

(46) gives a summary of the most important observations made in this chapter.

(46) *Norwegian bare singulars:*

- a. can never take wide scope when they have an existential interpretation,
- b. can never be referential (in the sense of Fodor and Sag, 1982),
- c. can never be partitive (meaning *one of the Ns*),
- d. can be generic, but can never (or almost never) have a quasi-universal generic interpretation,
- e. can never occur as the second argument in a comparison construction,
- f. can function as antecedents of token pronouns, but are poorer antecedent candidates than corresponding a-expressions in extensional contexts,
- g. are perfect antecedents for token-pronouns that are in intensional contexts if the bare singular is also in an intensional context,

- h. are perfect antecedents for the type anaphor *dét*, but so are a-expressions,
- i. can be topic expressions (referring either to sentence topics or discourse topics) if the topic is taken to be a type of thing and not a token, and
- j. cannot have too little descriptive content (i.e. denote entities of a too general category).

Even though we are structurally within this thesis' empirical part, I choose to anticipate the analytical part by presenting a notion that I believe explains much of the data that has been presented above. I do this to the best of the reader's understanding, since the data are too numerous to be repeated in the analytical part and also too complex to be kept in mind for tens of pages until an analysis is eventually suggested.

So - an intuitive explanation for most of the facts in (46) (i.e. all except (46de)) is that Norwegian bare singulars, in contrast to a-expressions, are *type-emphasizing*, as defined in (47).

- (47) a. Singular indefinite nominal phrases introduce both a token discourse referent and a type discourse referent into the discourse, however with more or less focus on one or the other.
- b. A phrase that is *token-emphasizing* presents its token discourse referent as more discourse salient than what a *type-emphasizing* phrase does. A phrase that is *type-emphasizing* presents its type discourse referent as more discourse salient than what a *token-emphasizing* phrase does.
- c. In Norwegian, other things being equal, a-expressions are token-emphasizing whereas bare singulars are type-emphasizing.

Type-emphasis can be compared to the notion of *profiling* (see e.g. Goldberg, 1995). If some linguistic object denotes a set or a structure rather than an atomic unity, there is always the possibility that some part of the set or structure is more emphasized, or profiled, than others. Two linguistic expressions may denote exactly the same structure, however with a different profile; with emphasis on different aspects of the denoted structure. Correspondingly, I assume that bare singulars and a-expressions denote both a token (an index) and a type of thing (a predicate), but with different emphasis: A-expressions profile the token, whereas bare singulars profile the type.

Let us now go through the observations in (46) and see if and how they can be related to the generalizations in (47).

First, the fact that Norwegian bare singulars can't take wide scope on their existential reading, be referential, or be partitive (on the token-level) can intuitively be directly attributed to their type-emphasis. To give a singular noun phrase with an existential interpretation wide scope over other quantifiers or operators in a sentence means to hold onto one discourse referent through different scenarios. Thus, the referent's status as a token is pinpointed, which is in conflict with the type-emphasis that Norwegian bare singulars signal. Likewise, a referential reading of a nominal phrase means (in the sense that we are using the term) that the speaker is "pointing" to a particular referent while using the phrase, thus emphasizing the corresponding discourse referent's status as a particular token, which is just the opposite of what bare singulars signal. Finally, the banning of partitive bare singulars can be attributed to the fact that the referent of a partitive noun phrase is linked by way of a subset relation to a contextually given set of entities. This is incompatible with the use of a bare singular, since bare singulars are type-emphasizing, and focusing on something as a type of thing implies that the only subset relation relevant for this thing is the one to the set of all things of the same type.

Also the facts concerning the interaction of bare singulars with anaphors can be attributed to the type-emphasis of bare singulars. Personal pronouns require that their discourse referent (or one of their discourse referents) is presently in focus of attention, whereas demonstrative pronouns require that their discourse referent (or one of them) is activated (see Gundel et al. 1993). From this it is expected that if an anaphoric personal pronoun is used to refer to a token, which means that this token has to be in focus of attention, then - other things being equal - it will prefer an a-expression as its antecedent rather than a bare singular, since a-expressions present their token discourse referent as more discourse salient (and thus more in focus) than bare singulars. On the other hand, since bare singulars are only type *emphasizing*, not token *excluding*, the token is still available, which means that bare singulars are not banned from being antecedents of personal token pronouns. They are just less likely to occur as antecedents of token pronouns than corresponding a-expressions, and thus more sensitive to factors that count against antecedenthood than what is the case for corresponding a-expressions.²⁹

²⁹ As mentioned earlier, the fact that bare singulars can be antecedents of token pronouns does not *prove* that they introduce a token discourse referent, since the anaphor-antecedent relation in principle could have been accounted for in terms of an inferrable (Prince, 1981). More arguments for assuming that bare singulars do

As for why opaque bare singulars are perfect antecedents for personal token pronouns that occur in intensional contexts, this has to do with what the anaphoric pronoun refers to in these cases (see section 2.8.2 above). In this constellation, the anaphoric pronoun does not refer to some token introduced by its antecedent, but to a discourse referent responsible for making the hypothetical world introduced by the antecedent sentence actual. In other words, the antecedent is not coreferential on the token-level with the anaphor; it only specifies what type of thing is involved. Given this, and the statements in (47), it is just as expected that Norwegian bare singulars, as well as a-expressions, can be perfect antecedents of token pronouns in these cases.

The hypothesis that Norwegian bare singulars are type-emphasizing also corresponds nicely with the observation that these nominals are perfect antecedents of the kind-anaphor *det*. This pronoun requires that its type discourse referent is at least activated. A bare singular antecedent clearly fulfills this requirement. It is also as expected that a-expressions can occur as antecedents of the demonstrative type anaphor as well, since they, too, introduce (and therefore activate) a type discourse referent.

The alert reader may have noticed that Norwegian bare singulars are less likely to be antecedents of token pronouns than a-expressions are to be antecedents of type pronouns. If bare singulars and type anaphors focus on the type discourse referent, whereas a-expressions and token anaphors focus on the token discourse referent, then why do we then get this asymmetry? The reason is that the type-anaphor almost always is accented, which means that it functions as a demonstrative pronoun.³⁰ Demonstrative pronouns only require their discourse referent to be activated, and the activation of a type discourse referent holds equally well for bare singulars and a-expressions. A personal token pronoun, on the other hand, requires that the token referent be in current focus of attention. Now, that does *not* hold equally well for bare singulars and a-expressions, since bare singulars focus on the type-referent rather than the token-referent. Thus the observed asymmetry.

In section 10 we saw that bare singulars can be topic expressions, but only on the type-level, never on the token-level. The fact that bare singulars can't be topics on the token-level can be attributed to them being indefinite and therefore signaling the cognitive status type

introduce a token discourse referent will be given in the following chapters, and discussed in chapter 10, section 10.5, for instance.

³⁰ That accented pronouns in Norwegian function as demonstrative pronouns in the sense that they only signal activation (and not the status in focus) is argued for in e.g. Borthen et al. 1997, and Fretheim et al. 1997.

identifiable, whereas topics tend to be at least familiar.³¹ The fact that they can be topic expressions if the topic is taken to be a type of thing pinpoints the fact that cognitive statuses, like familiar, for example, should be attributed to discourse referents at different levels, i.e. both to token discourse referents and to type discourse referents.

We have also seen that Norwegian bare singulars must have a certain amount of descriptive content. This can easily be accounted for by (47). One can't focus on something as interesting first of all as a type of thing if this type of thing is too general to be contrasted with other types of things. Or at least, it is less likely that something is interesting as a type of thing if it is of a very general type.

There are two points in (46) that can hardly be directly connected to (47), namely the last part of (46d): *Norwegian bare singulars can never (or almost never) have a quasi-universal generic interpretation*, and (46e): *Norwegian bare singulars can never occur as the second argument in a comparison construction*. Even though a formal connection between quasi-universal generic interpretations and type-emphasis can be postulated, there is no common-sense semantic explanation why type-emphasis as defined in (47) and quasi-universal generic interpretations should clash, as far as I see. First of all, also a quasi-universal reading abstracts away from the token-level. Secondly, it is reasonable to assume that also bare mass expressions and bare plurals are type-emphasizing (see the next section); mass expressions don't explicate how their denotation is to be individuated into tokens at all, whereas bare plurals leave it open how many tokens are involved. Since these phrases (indeed) are still capable of having a quasi-universal generic interpretation, I take it as an indication that the tendency for Norwegian bare singulars to not be quasi-universal should not be directly connected to type-emphasis.

To shortly sum up, then, I have argued in this chapter that Norwegian bare singulars are type-emphasizing as defined in (47), and that this explains a number of semantic properties that they have, namely those listed in (46), with the exception in (46de).

³¹ The required degree of familiarity for topicalized expressions is not generally agreed upon. Reinhart (1981), for instance, claim that topic expressions only need to be referential.

2.13 Appendix: Bare plurals and bare mass expressions

It is not only bare singulars that are type-emphasizing. In fact, I assume that absence of an otherwise available indefinite article signals type-emphasis for all indefinite nominals, hence called *bare indefinites*. This means that also bare plurals and bare mass expressions are type-emphasizing. The denotation of a singular indefinite nominal stands in some contrast with type-emphasis, since there is exactly one individual involved, which means that the speaker may want to focus on this token. The (intuitive) denotation of bare plurals and bare mass expressions, on the other hand, harmonize well with type-emphasis. Bare plurals leave it unspecified how many individuals are involved (which means that the speaker does not seem to have an intension to refer to a specific set of tokens), whereas bare mass expressions leave it unspecified how the denotation is supposed to be individuated into tokens at all (which, again, gives the impression that the speaker is most interested in the type of thing involved, not in individual tokens or portions). I assume that it is this inherent compatibility with type-emphasis that makes bare plurals and bare mass expressions generally more available in Norwegian than what bare singulars are.

As expected from the assumption that all bare indefinites are type-emphasizing, also bare plurals and bare mass expressions are unambiguously nonreferential, nonpartitive, and never take wide scope when they are interpreted existentially. They can furthermore function as antecedents of anaphors, but not quite as coherently as when a determiner is present, they signal the cognitive status *type identifiable* on the token-level and *familiar* on the type-level, and they can be topicalized only if the topic is taken to be a type of thing. These facts are hastily illustrated below.

- (49) a. Alle barna luktet på noen blomster.
all children-DEFSUFF smelled on some flowers
'All the children smelled some flowers.'
- b. Alle barna luktet på blomster.
all children smelled on flowers
'All the children smelled flowers.'

Whereas (49a) has two scope interpretations, one where there are some flowers that all the children smelled, and one where all the children smelled some flowers or other, (49b) has

only the interpretation where all the children smelled some flowers or other. The same pattern for English bare plurals has been noted by Carlson (1977).

In (50) below, we see that bare plurals, just like bare singulars, cannot be referential.

- (50) a. Kari ønsker seg noen spesifikke bøker til jul.
Kari wants REFL some specific books to Christmas
'Kari wants some books for Christmas.'
- b. *Kari ønsker seg spesifikke bøker til jul.
Kari wants REFL specific books to Christmas
Intended interpretation: 'Kari wants some specific books for Christmas.'

Whereas (50b) is actually grammatical, it cannot have the meaning that (50a) has, namely that there are some specific books that Kari wants for Christmas. Thus, the bare plural in (50b) cannot be referential.

In (51) below, bare plurals are examined with respect to partitivity.

- (51) a. Det var igjen mange sykler etter salget, så Ola ga noen sykler til Kari.
there were left many bikes after sale-DEFSUFF, so Ola gave some bikes to Kari
'There were many bikes left from the sale, so Ola gave some bikes to Kari.'
- b. Det var igjen mange sykler etter salget, så Ola ga sykler til Kari.
there were left many bikes after sale-DEFSUFF, so Ola gave bikes to Kari
'There were many bikes left from the sale, so Ola gave bikes to Kari. '

Whereas the phrase *noen sykler* ('some bikes') in (51a) is likely to be interpreted as "some of the bikes left from the sale", the bare plural in (51b) cannot have this interpretation, which shows that it cannot have a partitive interpretation.

Like Norwegian bare singulars, Norwegian bare plurals can antecede token pronouns, as shown in (52).

- (52) a. Kari plukket *noen blomster*. De var røde.
Kari picked some flowers. they were red
'Kari picked some flowers. They were red.'
- b. Kari plukket *blomster*. De var røde.
Kari picked flowers. they were red

'Kari picked some flowers. They were red.'

Both (52a) and (52b) are coherent, but I will claim (52a) is slightly more coherent than (52b).

Bare plurals also behave exactly like bare singulars in intensional context, in that they are not good antecedent candidates for token pronouns in extensional contexts, but are perfect antecedents of token pronouns in intensional contexts. This is illustrated below:

- (53) a. Kari ønsker seg *noen plastikkdyr* til jul. *De* er grønne./*De* skal være grønne.
Kari wants REFL some plastic-animals to Christmas. They are green./They shall be green
'Kari wants *some plastic animals* for Christmas. *They* are/shall be green.'
- b. Kari ønsker seg *plastikkdyr* til jul. *?(?)De* er grønne./*De* skal være grønne.
Kari wants REFL plastic-animals to Christmas. *?(?)They* are green./They shall be green
'Kari wants *plastic animals* for Christmas. *?(?)They* are green. *They* shall be green.'

Like a-expressions and bare singulars, also bare plurals can antecede the kind-anaphor *det*, now licensing a plural indefinite interpretation.

- (54) a. Kari ønsket seg *plastikkdyr*, men *det* fikk hun ikke.
Kari wanted REFL plastic-animals, but that-NEUT got she not
'Kari wanted plastic animals, but that she didn't get/ she didn't get any.'
- b. Kari ønsket seg *noen plastikkdyr*, ?men *det* fikk hun ikke.
Kari wanted REFL some plastic-animals, but that-NEUT got she not
'Kari wanted some plastic animals, but that she didn't get/ she didn't get any.'

Notably, the type anaphor has the same number interpretation as its antecedent. That is, when the type anaphor has a singular nominal as its antecedent, it is interpreted as introducing a singular entity into the discourse, whereas when it has a plural nominal as its antecedent, it is interpreted as introducing a set of individuals into the discourse.

There is furthermore no difference between bare singulars and bare plurals with respect to the cognitive status that the token discourse referent and the type discourse referent are assumed to have. As expected from these facts, existential bare plurals can be left-dislocated,

but only if the topic is taken to be the type of thing introduced by the bare plural. This is illustrated in (55).³²

(55) a. **Bøker, de* ønsker jeg meg.

books, they want I REFL

'Books, they I want.'

b. *Bøker, det* ønsker jeg meg.

books, it-NEUT want I REFL

'Books, that I want.'

The semantic properties assigned to bare plurals also hold for bare mass expressions as well as for bare singulars, which supports the assumption that bare indefinites are type-emphasizing. As for the differences in distribution between bare indefinites, I assume that this has to do with their kind of denotation, and whether it harmonizes with type-emphasis or not. If it does not, as in the case of bare singulars (see arguments above), special requirements to linguistic and nonlinguistic context have to support the type-emphasizing reading. If it does, there are not that many restrictions on the linguistic and non-linguistic context.

In this thesis, we will mainly be concerned with bare singulars.

³² On their existential interpretation, bare plurals need to co-occur with the type anaphor *det* to be acceptable as left-dislocated constituents (as shown in (55)). On their generic interpretation, on the other hand, they co-occur with the plural token-anaphor *de* ('they'), but can still be left-dislocated:

(i) *Katter, de/*det* har lang hale.

cats, they/*it-NEUT have long tail

'Cats, they have a long tail.'

3 Some syntactic properties

3.1 Noun phrase-internal structure

(1) shows that Norwegian bare singulars have the same expansion possibilities as other nominal phrases in Norwegian. That is, they can be modified by adjectives, prepositional phrases, restrictive relative clauses, nonrestrictive relative clauses, and infinitival clauses, and they can be coordinated.

- (1) a. Ola ønsker seg bil.
Ola wants REFL car
- b. Ola ønsker seg stor, fin bil.
Ola wants REFL big, nice car
'Ola wants a big, nice car.'
- c. Ola ønsker seg bil med aircondition.
Ola wants REFL car with air-condition
'Ola wants a car with air condition.'
- d. Ola ønsker seg bil som han kan kjøre med på vinterføre.
Ola wants REFL car that he can drive with on winter-weather-conditions
'Ola wants a car that he can use on icy roads.'
- e. Ola ønsker seg bil, som han egentlig ikke trenger.
Ola wants REFL car, which he really not needs
'Ola wants a car, which he really doesn't need.'
- f. ?Ola ønsker seg bil å leke med.
Ola wants REFL car to play with
'Ola wants a car to play with.'
- g. Ola ønsker seg bil, buss og båt.
Ola wants REFL car, bus and boat
'Ola wants a car, a bus, and a boat.'

This does not mean that bare singulars can freely be modified and coordinated, though (see chapter 6).

3.2 Distribution in different syntactic positions

3.2.1 Subjects

Norwegian bare singulars only rarely occur as subjects, and if they do, they don't occur as prototypical subjects (i.e. as agents). Some wellformed as well as some illformed examples that illustrate this are given in (2).

- (2) a. Buss er et naturvennlig kjøretøy.
bus is a nature-friendly vehicle
'A bus is a non-polluting vehicle.' [NOD, 52]
- b. Rullebrett er kult.
skate-board is cool
E.g. 'To use a skate board is cool.'
- c. Billett er allerede bestilt.
ticket is already ordered
'A ticket has already been ordered.'
- e. Sykebil er på vei.
ambulance is on way
'An ambulance is on its way.'
- f. Traktor ble tatt i bruk her til lands først etter krigen.
tractor was taken in use here in country first after war-DEFSUFF
'Tractors were used in this country only after the war.'
- g. [...] selv om ny traktor står på ønskelista.
even if new tractor stands on wishing-list
'[...] even though a new tractor is on my list of wants.' [NOD, 4]
- h. *Sykkel veltet.
bike overturned
- i. *Jeger drepte bjørnen.
hunter killed bear-DEFSUFF
- j. *Tigger ga Ola pengene.
beggar gave Ola money-DEFSUFF
- k. *Esel forelsket seg i Ola.
donkey fell-in-love-with REFL in Ola

3.2.2 *Objects*

Bare singulars quite often occur as objects in Norwegian. This includes direct and indirect objects of verbs, objects of prepositions, the semantic subject in existential sentences, and the semantic subject of a secondary predication. However, Norwegian bare singulars are also often unacceptable as objects. This is illustrated in (2).

- (2) a. Jeg kan lese bok, jeg.
I can read book, I
'As for me, I can read a book.' [NOD, 49]
- b. Da hadde han sikkert vært i telefonkiosk og ringt.
then had he surely been in telephone-box and called
'At that point, he had probably been calling from a phone box.' [NOD, 19]
- c. [...] men blir møtt av en vaktmann med pistol.
but are met by a guard with gun
'[...] but are met by a guard with a gun.' [NOD, 36]
- d. Han anbefalte rullestol.
he recommended wheel-chair
E.g. 'He recommended that I use a wheel chair.'
- e. Det er kult med bil.
it is cool with car
E.g. 'It is cool to drive a car.'
- f. Der er det flatt tak.
there is it flat roof
'The roof there is flat.' [NOD, 38]
- h. De gjorde bil dyrt.
they made car expensive
E.g. 'They made it expensive to own a car.'
- h. Har du bil klar?
have you car ready
'Do you have a car ready?' [NOD, 50]
- i. Hun ble undersøkt av lege.

she was examined by doctor

'She was examined by a doctor.'

j. (?)Jeg har aldri gitt undulat akupunkturbehandling før.

I have never given canary-bird acupuncture-treatment before

'I have never given a canary bird acupuncture treatment before.'

k. ??/*Per slo jente.

Per hit girl

l. ??/*Ulven drepte okse.

wolf-DEFSUFF killed bull

m. ??/*Krukka står på hylle.

pot-DEFSUFF stands on shelf

n. ??/*Ola gikk til butikk.

Ola went to store

o. ??/*Hun vasket sykkel ren.

she washed bike clean

p. ??/*Hun ga sykkel en vask.

she gave bike a wash

3.2.3 *Predicatives*

Norwegian bare singulars are frequent in predicative position, i.e. after the copular verb *være* ('be') and other verbs and particles that have a relatively impoverished semantic content. But also in this position there are restrictions, as illustrated in (3).

(3) a. Han er jo prest.

he is but priest

'But, he is a priest.' [HM, 200]

b. Hva skal jeg gjøre for å bli dame?

what shall I do for to become lady

'What shall I do to become a lady?' [LLB, 29]

c. [...] slik han hadde sett den som barn.

as he had seen it as child

'[...] as he had seen it as a child.' [HM, 55]

- d. Som kvinne har Mona mange fortrinn.
 as woman has Mona many advantages
 'As a woman Mona has many advantages.'
- e. Er du ikke kandidat, du, Averell? [LLD, 23]
 are you not candidate, you, Averell
 'Are you not a candidate, Averell?'
- f. Hun ble valgt til leder.
 she was elected to leader
 'She was elected leader.'
- g. ??Per er dum mann.
 Per is stupid man
- h. ??Mona er fregnete ballettdanserinne.
 Mona is freckled ballerina
- i. ??Dette huset er sykehus.
 this house-DEFSUFF is hospital
- j. */??Kari er person.
 Kari is person
- k. */??Ola er snilling.
 Ola is kind-person
- l. */??Jo er kjernekar.
 Jo is splendid-chap

In other words, Norwegian bare singulars seem to be realized in all basic syntactic positions, but are also subject to restrictions in all these positions.

3.3 Word order and syntactic alternations

(5) shows that Norwegian bare singulars don't need to be adjacent to the matrix verb that they co-occur with, since adverbs or other adverbial phrases may intervene.

- (5) a. Vi har ikke vanlig badekar engang.
 we have not ordinary bath-tub even
 'We don't even have an ordinary bath tub.' [NOD, 10]

- b. Det er i dag ny løypetrasé.
 there is in day new track
 'There is a new track today.' [NOD, 7]
- c. Mona strikker antageligvis genser.
 Mona knits presumably sweater
 'Mona is presumably knitting a sweater.'

As illustrated in (6)-(12) below, the acceptability of bare singulars (usually) remains unchanged when they are manipulated by syntactic alternations like nominalization ((6) and (7)), passivization ((8)), topicalization ((9)), raising ((10)), question formation with subject-verb inversion ((11)), and subject-object alternations for arguments of presentational verbs ((12)).

- (6) a. Han bygger båt.
 he builds boat
 'He is building a boat.'
- b. Bygging av båt er en tidkrevende prosess.
 building of boat is a time-consuming process
 'Building a boat is a time consuming process.'
- (7) a. Han eier bil.
 he owns car
 'He owns a car.'
- b. Som eier av bil må du regne med store utgifter.
 as owner of car must you regard with big expenses
 'As a car owner you can expect big expenses.'
- (8) a. Han bestilte billett.
 he ordered ticket
 'He ordered a ticket.'
- b. Billett ble bestilt i forrige uke.
 ticket was ordered in last week
 'A ticket was ordered last week.'

- (9) a. Jeg tok med dyne.
 I took with quilt
 'I brought a quilt.'
- b. Dyne tok jeg med.
 quilt took I with
 'A quilt I brought.'
- (10) a. Det er kjekt å ha bil.
 it is handy to have car
 'It is handy to have a car.'
- b. Bil er kjekt å ha.
 car is handy to have
 'A car is handy to have.'
- (11) a. Jeg trenger bil sånn en gang iblant.
 I need car so one time in now-and-then
 'I need a car now and then.'
- b. Trenger du bil sånn en gang iblant?
 need you car so one time now-and-then
 'Do you need a car now and then?' [NOD, 15]
- (12) a. Sykebil er underveis.
 ambulance is under-way
 'An ambulance is on its way.'
- b. Det er sykebil underveis.
 it is ambulance under-way
 'There is an ambulance on its way.'

This shows that there is no need for adjacency between a bare singular and its selecting predicate. But more importantly, this suggests that the distribution pattern of Norwegian bare

singulars is not primarily syntactically driven. If it were, we would expect more effects from changing the syntactic position and linguistic context of bare singulars.³³

3.4 Agreement

Attributive adjectives that are part of bare singulars always have to agree with the noun with respect to number and gender (as well as definiteness). This is illustrated in (14).

- (14) a. Per har fin bil.
Per has nice-COMM.SG car(MASC)
'Per has a nice car.'
- b. *Per har fint/fine bil.
Per has nice-NEUT.SG/nice-PL car(MASC)
- c. Per har fint hus.
Per has nice-NEUT.SG house(NEUT)
- d. *Per har fin/fine hus.³⁴
Per has nice-COMM.SG/nice-PL house(MASC)

In Norwegian, also predicative (i.e. non-attributive) adjectives co-vary in form with some dependent expression. That is, they have to agree in gender and number with their semantic subject. As for agreement between bare singulars and predicative adjectives, there are very few cases where bare singulars occur as subjects of predicative adjectives to begin with (mainly because they seldom occur as subjects, and because it is not the right kind of subject when it is being stated of by a predicative adjective). In the few cases that do exist where a bare singular functions as the semantic subject of a predicative adjective, there are two possibilities regarding the adjective's form. One possibility is that the adjective has neuter form regardless of the grammatical gender of the bare singular, as in (15) below. This has been pointed out by e.g. Faarlund (1977) and Hellan (1986).

³³ Whereas Norwegian bare singulars behave exactly like corresponding indefinites with the indefinite article when it comes to nominalization, topicalization, object raising, and question formation, they only rarely occur as the subject of passive or ergative verbs. What the conditions are for occurrence in subject position will be discussed in chapters 6-9

³⁴ It is the singular interpretation of *hus* 'house' that is intended here, not the plural one.

- (15) Bil er kjekt/*kjekk å ha.
car(MASC) is handy-NEUT/*handy-COMM to have
'A car is handy to have.'

In (16), we have a corresponding sentence, except that we have a definite subject instead of a bare singular. In this case, there has to be agreement between the predicative adjective and the subject.

- (16) Bilen min er kjekk/*kjekt å ha.
car-DEF mine is handy-MASC/*handy-NEUT to have
'My car is handy to have.'

But there are also cases where bare singulars exhibit a 'normal' agreement behavior with predicative adjectives. This is illustrated in (18) and (19) below.

- (18) a. Har du hus stående klart?
have you house(NEUT) standing ready-NEUT
'Do you have a house ready?'
b. Har du bil klar?
have you car(MASC) ready-COMM
'Do you have a car ready?' [NOD, 50]
- (19) a. ??Gjorde du duk ren/*rent da jeg kom?
did you cloth clean-MASC/clean-NEUT when I came
'Were you making a cloth clean when I came?'
b. ??Å gjøre kniv sløv/*sløvt er ikke noe vanskelig.
to make knife sharp-MASC/sharp-NEUT is not something difficult
'To make a knife sharp is not difficult.'

None of the examples in (19) are very natural. However, what is above doubt is that non-agreement leads to really ungrammatical sentences.

3.5 Summary

(20) summarises the main observations that we have done in this chapter.

- (20) a. Norwegian bare singulars can occur in all basic syntactic positions available for nominal phrases in Norwegian, but not "freely" in any of these positions.
- b. Norwegian bare singulars can be modified and coordinated.
- c. Adverbs can freely intervene between Norwegian bare singulars and their co-occurring verbal predicates.
- e. Norwegian bare singulars are usually not affected by syntactic alternations like nominalization, passivization, topicalization, raising, question formation with subject-verb inversion, and subject-object alternations for arguments of presentational verbs.
- f. An attributive adjective that is part of a bare singular always has to agree with the head noun (w.r.t. number, grammatical gender, and definiteness).
- g. Predicative adjectives that are in an agreement constellation with a bare singular either have to agree with the bare singular, or has neuter form regardless of the gender of the bare singular.

In other words, Norwegian bare singulars seem to have all the expected syntactic properties of indefinite nominal phrases, except that they have a more restrictive distribution and a bit different agreement properties than (most) other nominal phrases. Unless abstract syntactic levels are assumed, there seems to be no single syntactic position that unambiguously rules out or unambiguously licenses bare singulars, even though there exist some strong tendencies.

4 Prior research

4.1 Introduction

Compared to the extensive attention that nominal phrases have gotten in the linguistic literature, the list of attested works on bare singulars is surprisingly short, however with some excellent exceptions, as we will see in this chapter. Whereas bare plurals and bare mass expressions have been widely discussed, as well as bare nominals in articleless languages like Chinese, bare singulars in languages that have articles is a much neglected topic (see Carlson, 1999, for a detailed overview of literature on determinerless nominals).

In this chapter, I will limit myself to primarily be concerned with research on bare singulars, either in Norwegian or in languages that do have the indefinite article. One exception I will make, however, is that I will look at noun incorporation in West Greenlandic, since there are striking commonalities between the use of bare singulars in Norwegian and incorporated nouns in West Greenlandic.

4.2 Prior research on the distribution pattern of Norwegian bare singulars

4.2.1 *Argumenthood and the NP/DP distinction*

As noted in chapter 3, Norwegian bare singulars occur frequently in predicative position; that is, after verbs or particles that are semantically (relatively) empty and that are not assumed to assign thematic roles. Some examples of this kind are given in (1).

- (1) a. Per er lærer.
Per is teacher
'Per is a teacher.'
- b. Hun mislyktes som mor.
she failed as mother
'She failed as a mother.'

On the other hand, Norwegian bare singulars are often unacceptable in subject and object position, as illustrated in (2).

- (2) a. *Jente slo Ola.
girl hit Ola
'A girl hit Ola.'
- b. */??Ola slo jente.
Ola hit girl
'Ola hit a girl.'

Drawing on data like this, Longobardi (1994) suggests that all arguments in Romance and Germanic languages must have a determiner, and thus be determiner phrases (DPs).³⁵ Assuming that bare plurals and bare mass expressions have zero determiners, whereas bare singulars don't have a determiner at all, Longobardi predicts that the former, but not the latter, can occur in typical argument positions. Longobardi furthermore claims that the determiner is the location for referentiality, which predicts that bare singulars are nonreferential.

According to this generalization, Norwegian bare singulars are predicted to occur in predicative position, as in (1), and it is as expected that they are unacceptable in (2). The problem is how to account for the fact that examples such as those in (3) are wellformed.

- (3) a. Vi får ta med paraply.
we get take with umbrella
'We should bring an umbrella.' [NOD, 13]
- b. De ble enige om å bruke tankbil.
they became agreed about to use tank-car
'They agreed to use a tank truck.' [NOD, 30]

The bare singulars in (3) have most of the expected properties of nominal arguments in Norwegian: 1) The bare singular (or some other nominal phrase in the same position) is obligatory, 2) the bare singular can't be followed or preceded by another argument-like noun phrase, 3) the bare singular intuitively seems to be selected by the verb semantically, 4) there is

³⁵ Also Chierchia (1998), for instance, predicts that bare singulars can only occur as arguments in Germanic languages such as Norwegian.

an infinite set of possible bare singulars that can occur in the given position in each example, and 5) the bare singular can take part in all the syntactic alternations that one would expect for an indefinite nominal argument of the verb in question (see chapter 3, section 3.3). All this suggests that the bare singulars in (3) are arguments of the verbs that they co-occur with, contrary to what Longobardi predicts.

Another fact that reduces the validity of Longobardi's generalization is that not all Norwegian non-arguments can be realized as bare singulars. Given the commonly held assumption that the copular verb *være* ('be') does not introduce an argument (see e.g. Nordgård and Åfarli, 1990), (4ab) illustrates this.

- (4) a. */??Kari er person.
 Kari is person
 'Kari is a person.'
 b. */??Per er kjernekar.
 Per is splendid-chap
 'Per is a splendid chap.'

In other words, being a non-argument is neither a necessary, nor a sufficient property of Norwegian bare singulars. This conclusion presupposes a certain definition of the term *argument*, and may not hold for other definitions of the term. However, Longobardi (1994) does not provide a definition of *argument* that independently labels all Norwegian bare singulars as non-arguments (he doesn't explicitly state what an argument is at all), and until we have such a definition, Longobardi's analysis does not make the desired predictions. As the use of bare singulars varies across Romance and Germanic languages, it would anyway be a possible unfortunate consequence of Longobardi's approach that the notion of argumenthood is not constant across languages.

4.2.2 *The weak/strong distinction*

Kallulli (1996, 1999) proposes a common analysis for Norwegian and Albanian bare singulars. She bases her analysis on three basic assumptions: 1) Bare singulars are noun phrases (NPs), not determiner phrases (DPs) (cf. Hellan 1986), and as such, assuming that NPs contain no slot for a determiner, and following Longobardi's generalization, they have to be non-arguments.

They are therefore predicted to occur in predicative position, for instance. 2) Unlike subjects and datives, that are always arguments, direct objects can be either arguments or predicates at LF (cf. Rapoport 1995). In other words, bare singulars can occur as direct objects, but not as subjects or indirect objects, according to Kallulli. 3) The determiner (D) is the locus for specificity and individual-denotation (type $\langle\langle e,t\rangle,t\rangle$ and e) (cf. Abney 1987). This means that bare singulars, which don't have a D position, have to be nonspecific (weak) and property-denoting (of type $\langle e,t\rangle$). As an effect of their property-denotation, bare singulars have to be semantically incorporated by their verb and therefore never get wide scope (cf. van Geenhoven 1996, Cohen & Ertshik-Shir 1997). Kallulli also points out that Norwegian (and Albanian) bare singulars are particularly likely to occur as direct objects of verbs such as *have*, *give*, and *buy*.

On this analysis, bare singular subjects and indirect objects are not supposed to occur in Norwegian, but as illustrated in chapter 3, section 3.2, for instance, they do.³⁶ As for the weakness restriction, Kallulli is right that Norwegian bare singulars are unambiguously weak, but only if we add the modification that this is true only on their existential reading. As we saw in chapter 2, Norwegian bare singulars can be generic in certain cases, which means that they are strong. The main disadvantage with Kallulli's analysis is that it has a quite limited predictive force, since it focuses only on strength and scope. As shown in (5) below, even though (some sense of) weakness and narrow scope are necessary properties of most Norwegian bare singulars, a-expressions that are weak and exhibit narrow scope cannot always be substituted with bare singulars.

- (5) a. Ola satt i */??(en) bil i nærheten da bomben eksploderte.
 Ola sat in (a) car in neighborhood-DEFSUFF when bomb-DEFSUFF exploded
 'Ola sat in a car nearby when the bomb exploded.'
- b. En gang ødela Per nesten */??(en) stol fordi han var så tung.
 one time destroyed Per almost (a) chair because he was so heavy
 'Once, Per almost destroyed a chair because he was so heavy.'

If we have a-expressions in (5), the sentences are perfectly well-formed and the indefinites favor a weak reading: (5a) most likely means that Ola sat in some car or other nearby when the

³⁶ Kallulli acknowledges one construction with bare singular subjects, namely the one discussed in chapter 9. But how this exception relates to the general rule that excludes bare singular subjects, is not made explicit.

bomb exploded, and (5b) most likely means that some chair or other was almost destroyed by Per's weight once. In spite of these preferred weak readings of the a-expressions in (5), the sentences are illformed with bare singulars. Since there is furthermore no need for wide scope readings of indefinites in the given positions in (5), this means that there must be some constraints on Norwegian bare singulars in addition to the weakness-constraint and the narrow scope constraint that Kallulli proposes. What these constraints are, is left open in Kallulli's work.

Kallulli furthermore gives no account for the restrictions on predicative bare singulars that we saw in chapter 3, section 3.2.3, and whether these restrictions are connected to restrictions on bare singulars in other syntactic positions. She also does not mention the fact that verbs such as *have*, *give*, and *buy* can take bare singular objects only on some readings. (6a) below, for instance, is an acceptable answer to what the speaker gave Kari as a birthday present, but as a description of the event that the speaker handed a book over to Kari, it is unacceptable. As shown in (6bc), the acceptability of a bare singular object of these kinds of verbs can be affected by the presence of a reflexive, for instance, which neither Kallulli, nor anyone else so far, have explained.

- (6) a. Jeg ga Kari bok.
 I gave Kari book
 'I gave Kari a book.'
- b. */??Jeg har funnet kopp.
 I have found cup
- c. Jeg har funnet meg kopp.
 I have found REFL cup
 'I have found myself a cup.'

And finally, Kallulli claims that Norwegian and Albanian bare singulars never can occur in existential sentences, and never can be the logical subject of a secondary predication. Even though I agree with Kallulli that these are strong tendencies, they are not as strict as Kallulli claim. This is shown in (7).

- (7) a. */?? Det er mann i hagen.
 there comes man in garden-DEFSUFF
 'There is a man in the garden.'

- b. Det er sykkel i garasjen.
 there is bike in garage-DEFSUFF
 'There is a bike in the garage.'
- c. *Kari kjøpte sykkel ny.
 Kari bought bike new
 'Kari bought a bike new.'
- d. Har du bil klar?
 have you car ready
 'Do you have a car ready?'

To sum up Kallulli's work on Norwegian bare singulars, her analysis gives very clear predictions. However, all her predictions, except the narrow scope behavior of bare singulars, seem to be too strong. Thus, if we want to account for the *full* distribution pattern of Norwegian bare singulars, Kallulli's analysis is not fully satisfactory.

4.2.3 *Mass expressions or part of idioms*

Delsing (1993) gives an analysis of Swedish bare singulars. This analysis is relevant for Norwegian, since Swedish and Norwegian are closely related languages, and since Delsing's work in fact is intended to be on Scandinavian in general.

Delsing adopts Longobardi's view and claims that Swedish bare singulars can never be arguments because they don't have a determiner, whereas bare mass expressions and bare plurals can be arguments because they have a zero determiner. In some problematic cases where bare singulars seem to be arguments in Swedish, Delsing gets around the problem by claiming that either they are actually used as mass expressions (in which case they have a zero determiner and therefore are allowed in argument positions), or else they are part of lexicalized idiomatic expressions.

The former explanation is used to account for the wellformedness of the Swedish verb-object combinations in (7), for instance.

- (7) a. åka tunnelbana
 drive underground
 'take the underground'

- b. röka pipa
 smoke pipe
 'pipe-smoke'

Delsing's main argument for stating that the bare phrases in (7) are mass terms, is that they appear to be capable of being modified by expressions that are known to enforce a mass interpretation. This is illustrated by the Swedish examples in (8).

- (8) a. Jag har åkt en hel del tunnelbana.
 I have driven a whole lot underground
 'I have taken the underground a whole lot.'
- b. Han har rökt mycket pipa.
 he has smoked much pipe
 'He has "pipe-smoked" a lot.'

Since *en hel del* ('a whole lot') and *mycket* ('much') are known as mass quantifiers, Delsing concludes that what appear to be bare singulars in (7) and (8) are really mass terms and therefore are allowed in argument position because they have a zero determiner. However, as pointed out by Faarlund et al. (1997), and as becomes obvious from the English translations of (8) (that Delsing leaves out!), the quantifying elements in (7) do not modify the nominals, but the verb phrases that the nominals are part of in (8). We can see this in two ways. (Although the facts are the same for Swedish, I now turn to corresponding Norwegian examples, since that is what is most relevant in the given context). For one thing, in isolation, the nouns in (8) cannot co-occur with mass quantifiers:

- (9) Mye/en hel del vann/aske/*T-bane/*pipe
 much/a whole lot water/ash/underground/pipe

This suggests that the quantifying elements in (8) are not part of the nominal phrases that Delsing claims they are part of. Secondly, the quantifying elements in (8) can be moved away from the nominal-modifying position and into the canonical position for adverbials, without a change in meaning, which again suggests that the quantifying elements don't modify the nominals. This is illustrated in (10).

- (10) a. Jeg har kjørt T-bane en hel del.
 I have driven underground a whole lot
 'I have taken the underground a whole lot.'
- b. Han har røkt pipe mye.
 he has smoked pipe much
 'He has "pipe-smoked" a lot.'

Thus, the main argument that Delsing presents in favor of assuming that the bare phrases in (7) are mass expressions, and therefore can occur as arguments, fails. Since the phrases in (7) have no other properties of mass expressions either, neither semantic, nor syntactic ones, it seems rather hopeless to assume that they, or any other similar bare singulars in typical argument positions in either Swedish or Norwegian, are really mass expressions. Delsing presents no independent property of these phrases that should justify that they are mass expressions and not bare singulars.

The other explanation that Delsing suggests in cases where apparent arguments are realized as bare singulars in Swedish, is that the bare singular is part of a lexicalized idiomatic expression. It is obvious that there exist several lexicalized expressions and idioms with bare singulars in Norwegian as well as in Swedish. But clearly, this can't be the way to treat all bare singulars in Norwegian that occur in argument positions. Consider the examples in (11), for instance.

- (11) a. Trenger du bil sånn en gang iblant?
 need you car approximately one time among
 'Do you need a car now and then?' [NOD, 15]
- b. Billett/sykkel/datamaskin/ ... er allerede bestilt.
 ticket/bike/computer/ ... is already ordered
 A ticket/a bike/a computer ... is already ordered.'

The list of bare singulars that can occur in the postverbal position in (11a), and in the subject position in (11b), is infinite, and an infinite set can't be listed in the lexicon. Thus, in the strict sense, bare singulars in Norwegian can't merely be licensed through a list of expressions in the lexicon.

To sum up, Delsing's proposals for how to account for apparent counter-examples to the generalization that (Germanic and Romance) bare singulars never can occur as arguments, are

not convincing. Thus, his analysis cannot be applied successfully to Norwegian bare singulars either. Like Longobardi and Kallulli, he also fails to predict why bare singulars are not always acceptable in predicative position, and several facts concerning linguistic contexts that either promote or disfavor bare singulars.

4.2.4 *Semantic roles*

In Borthen (1998) I argue that only a certain set of semantic roles can be realized as bare singulars in Norwegian, and that this, together with a restriction against strong bare singulars, determines when these phrases can occur. Some examples that give the impression that semantic roles are crucial for the distribution of bare singulars in Norwegian are given in (12) and (13) below.

(12) a. Jeg kjørte en bil til verkstedet.

I drove a car to garage-DEFSUFF

'I drove a car to the garage.'

b. Jeg kjørte bil til verkstedet.

I drove car to garage-DEFSUFF

'I went to the garage by car.'

(13) a. Jeg så en orm i en frakk.

I saw a snake in a coat

'I saw a snake inside a coat./I saw a snake wearing a coat.'

b. Jeg så en orm i frakk.

I saw a snake in coat

'I saw a snake wearing a coat.'

As can be seen from the English translations of the two pairs of sentences in (12) and (13), the presence vs. absence of the indefinite article sometimes leads to a crucial difference in meaning. Whereas the car is presented as an instrument used for driving in (12b), it is an affected object in (12a). And whereas the coat is necessarily something that the snake wears in (13b), it is most likely to be the location for the snake in (13a). In other words, bare singulars seem to only be

capable of expressing certain meanings. A plausible hypothesis based on the data in (12) and (13) is that they only realize certain semantic roles.

Notice furthermore that Norwegian bare singulars tend to not realize highly affected objects,³⁷ and whenever a bare singular occurs as a subject, this subject is special in that it does not have the semantic role *agent*. This is illustrated in (13') and (14).

(13') a. */??Jeg ødelegger datamaskin.

I destroy computer

b. */??Jeg knuste kopp.

I broke cup

c. */??Jeg satte kopp på bordet.

I put cup on table-DEFSUFF

d. */??Jeg flyttet bilde.

I moved picture.

(14) a. Bil er et kjøretøy.

car is a vehicle

'A car is a vehicle.'

b. Buss er greit.

bus is ok

E.g.: 'To take the bus is OK.'

c. Søppeldunk mangler.

garbage-can lacks

'There is no garbage can.'

d. Sykebil er på vei.

ambulance is on way

'An ambulance is on its way.'

e. Billett er bestilt.

ticket is ordered-PASS

'A ticket has been ordered.'

³⁷ Diesing (1991) observes that verbs of destruction strongly favor a strong reading of indefinite objects in English and German. Obviously, Norwegian behaves pretty much like English and German in this respect.

From these and other data, the conclusion is drawn that bare singulars can never realize the semantic roles agent/actor, theme, patient, experiencer, beneficiary, goal, location, and source, whereas certain other semantic roles, such as instrument, can be realized as bare singulars as long as they have a weak reading.

But this generalization is both too restrictive and not restrictive enough. Consider the pairs in (15), (16), (17), and (18).³⁸

(15) a. Det er kanin i buret ditt.

it is rabbit in cage-DEF yours

'There is a rabbit in your cage.'

b. *Kanin er i buret ditt.

rabbit is in cage-DEFSUFF yours

(16) a. Per baker kake.

Per bakes cake

'Per is baking a cake.'

b. */??Kake blir bakt (av Per).

cake be-PRES bake-PASS (by Per)

(17) a. Han ble bitt av hoggorm.

he was bitten by snake

'He was bitten by a snake.'

b. *Hoggorm bet Per.

snake bit Per

(18) a. Jeg tok bildet med telelinse.

I took picture-DEFSUFF with tele-photo-lense

'I took the picture with a tele-photo lens.'

b. */??Per gikk bort til Kari og slo henne i hodet med telelinse.

Per went over to Kari and hit her in head-DEF with tele-photo-lense

³⁸ The illformed sentences in (15)-(18) would have been well-formed with a-expressions.

For one thing, (17a) shows that agents are not excluded as bare singulars after all. Secondly, it is exactly the same semantic role that is realized in the a- and the b-sentences in (15)-(18); still there is a clear difference in acceptability. (18b), for instance, gives an example where a bare singular has an appropriate semantic role (i.e. instrument) and is in a position that prefers a weak interpretation; but still the sentence is illformed. Thus, semantic roles and weakness can't explain the full distribution pattern of Norwegian bare singulars, especially not since it was shown in chapter 2 that Norwegian bare singulars are in fact not unambiguously weak.

Like Kallulli, Delsing, and Longobardi, also Borthen (1998) refrains from stating the conditions for when Norwegian predicative bare singulars are acceptable, and how the distribution pattern of predicative bare singulars is related to the distribution pattern of bare singulars in other syntactic positions. The data in (6) is also not accounted for, and the claim that bare singulars are always weak is too strong. A final objection that applies to Borthen, but not to the three previous works, is that the analysis is entirely informal, and therefore hard to judge w.r.t. predictive force.

4.2.5 *The descriptive linguistic tradition*

The Norwegian descriptive linguistic tradition represents an important part of the existing research on Norwegian bare singulars.³⁹ Among the descriptive works that account for bare singulars in Norwegian, let me mention Falk and Torp (1900), Western (1921), Berulfsen (1967), Næs (1972), MacDonald (1997), Faarlund et al. (1997), and Golden et al. (1998).

4.2.5.1 *Predicative bare singulars*

One tendency within the descriptive tradition is that it is bare singulars in predicative position, like those in (21), that get the most attention, reflecting the assumption that it is in this position that bare singulars are most common in Norwegian.

³⁹ It is really an approximation to classify linguistic works as either 'descriptive' or 'generative', since these notions are not dichotomous (the way I interpret them). What I intend to refer to with these notions is a relative difference in the level of abstraction at which the linguistic generalizations are made. It has commonly been argued that 'descriptive linguistics' is inferior to 'generative linguistics' because it fails to make precise predictions and to *explain* linguistic data. But on the other hand, (it is my impression that) descriptively oriented linguistic works tend to take into account a wider range of data, which is a plus as I see it. Thus, the term 'descriptive' is by no means intended to be used here in a patronizing way; on the contrary.

- (21) a. En gang skulle jeg bli lege.
 one time should I become doctor
 'Once I was supposed to become a doctor.' [HM, 48]
- b. Jeg hadde anlegg som muldyrdriver.
 I had talent as mule-driver
 'I was a talented mule driver.' [LLB, 8]

Norwegian bare singulars are not accepted freely in this position, though, as noted in chapter 3, section 3.2.3, and illustrated in (22) below.

- (22) a. */??Per er person.
 Per is person
 'Per is a person.'
- b. */??Han er kjernekar.
 he is splendid-chap
 'He is a splendid chap.'

Differently from the generative works on bare singulars mentioned so far, all the descriptively aimed works propose restrictions on when bare singulars can be used in predicative position. The generalizations that are being made differ slightly from each other, but basically, the accounts can be divided into two groups, the first one represented by Faarlund et al. (1997).

The substance in Faarlund et al.'s account is the following: One function of predicative nominal phrases is the *including* function, where the subject referent is assigned a more or less permanent and objective function as a member of a category, named by the predicative phrase. These predicative nominals typically refer to properties of human beings, such as work, nationality, religion, political affiliation, ideology and so on, and they are usually realized as bare singulars. Another function of predicative nominal phrases is the *characterizing* function, where the subject referent is given more situation bound or subjective characteristics, in which case the predicative nominal will usually be realized as an a-expression.

Faarlund et al.'s generalization covers a wide range of examples, but when we study specific examples in detail, it quickly runs into problems. It is for instance not clear, based on

the difference between an including and characterizing function, why (23a) and (24a) are (more or less) unacceptable, whereas (23b) and (24b) are fine.

- (23) a. ??Per er liten gutt.
Per is little boy
'Per is a little boy.'
- b. Som liten gutt lekte Per mye.
as little boy played Per much
'As a little boy Per played a lot.'
- (24) a. */??Denne planten er blomst.
this plant-DEF is flower
- b. Det er brann.
it is fire
'There is a fire.'

The difference in acceptability between (23a) and (23b) is not accounted for by Faarlund et al., since they do not predict that the predicative particle *som* ('as') is different from the verb *være* ('be') in such a way that it affects the distinction between an *including* and *characterizing* function. As for (24a), the illformedness of this sentence is unexpected, since, intuitively, the bare singular there has an including function, assigning the subject referent a more or less permanent and objective function as a member of a category. And finally, assuming that the postverbal bare singular in (24b) is predicative, Faarlund et al. do not predict that it is wellformed, since there is no contentful subject to be assigned any properties at all.

Western (1921) constitutes group two regarding generalizations about Norwegian predicative bare singulars within descriptive works. He offers a stronger generalization than what Faarlund et al. do, by stating that a predicative bare singular can occur if and only if it describes position, nationality or religious affiliation. But this generalization is far too strong, as illustrated by (23b) and (24b), for instance, and clearly inferior to Faarlund et al.'s account, which has much more predictive force. Extending the list of kinds of properties that can be realized as predicative bare singulars won't help either, since (23) makes it clear that the acceptability of Norwegian predicative bare singulars does not only depend on the denotation of the bare singular.

4.2.5.2 *Non-predicative bare singulars*

As for bare singulars in non-predicative positions, let us again take Faarlund et al. (1997) as an illustration of the kind of accounts that are given within the descriptive tradition, since this work is the most comprehensive one that I have found. Faarlund et al. state that Norwegian bare singulars normally do not occur as subjects or indirect objects, as illustrated by the illformed examples in (25).⁴⁰

- (25) a. *Snømann smelta.
snow-man melted
- b. *Vi ga snømann ein stor svart hatt.
we gave snow-man a big black hat

On the other hand, they list a lot of cases where Norwegian bare singulars occur as direct objects, either as objects of verbs or of prepositions. Among others, they present the naturally occurring examples in (26).⁴¹

- (26) a. Ola har fått ny sykkel.
Ola has got new bike
'Ola has got a new bike.'
- b. Vi hadde menighetssøster i Åfjord den gang.
we had district-nurse in Åfjord that time
'We had a district nurse in Åfjord at that time.'
- c. Hun ble så glad fordi noen ville lage snømann til henne.
she became so happy because someone would make snow-man to her
'She became so happy because someone wanted to make her a snow man.'
- d. Dottera skifter tak i hankane på sinkbaljen.
daughter-DEFSUFF shifts grip in handles on zink-tub-DEFSUFF
'The daughter changes her grip of the zinc tub's handles.'

⁴⁰ The sentences in (25) would have been perfectly well-formed with a-expressions instead of bare singulars.

⁴¹ Some of the examples that Faarlund et al. give are left out here because I regard the relevant phrases as mass expressions or bare definite expressions.

- e. To år seinare hadde dei hus på byanlegget.
two years later had they house on city-construction-DEFSUFF
'Two years later they had a house on the city construction.'
- f. Men papir fra folkeskolen hadde hun ikke fått.
but paper from primary-school-DEFSUFF had she not got
'But a paper of qualification from primary school she didn't get.'
- g. Jeg håper han har bedre hue enn mora si.
I hope he has better head than mother-DEFSUFF REFL
'I hope he has better brains than his mother.'

In some cases bare singular objects are also out, and Faarlund et al. offer the following example to illustrate this.

- (27) *Vi såg snømann.
we saw snow-man

According to Faarlund et al., most Norwegian bare singulars in non-predicative positions have a semantic role, but no 'referential function', and they must have 'a generic meaning'.⁴² In some cases, the verb phrase that the bare singular is part of has a habitual or generic interpretation, they point out. The difference between bare singulars used in verb phrases that refer to habitual or generic situations, and a-expressions that are used in verb phrases that refer to an individual situation, is illustrated by the following examples (that are otherwise left uncommented).

- (28) a. De skriver stil hver uke. - Vi må skrive en stil før fredag.
they write essay every week we must write an essay before Friday
'They write an essay every week.' 'We must write an essay before Friday.'
- b. De deler rom. - De deler et rom på 40 kvm.
they share room they share a room of 40 square meters
'They are room mates.' 'They share a room of 40 square meters.'
- c. Vi har hund. - Vi har en hund som har fått valper.

⁴² The notions 'referential function' and 'generic meaning' are not defined as they occur in Faarlund et al.'s book. I will return to this later.

we have dog		we have a dog who has got puppies
'We are dog-owners.'		'We have a dog who has got puppies.'
d. Hun trenger <u>lege</u> .	-	Hun trenger en lege som kan se etter henne.
she needs doctor		she needs a doctor who can look after her
'She has to go to the doctor.'		'She needs a doctor who can look after her.'

Faarlund et al. mention several cases of bare singular objects. First of all, they point out that bare singular objects occur particularly often with verbs with meanings like *have* and *get*, in which case bare singulars ought to have a kind of 'existence-interpretation'.⁴³ The following examples are offered.

- (29) a. Han fikk lov.
he got permission
'He was allowed to.'
- b. Per fikk sykkel til jul.
Per got bike to Christmas
'Per got a bike for Christmas.'
- c. Vi har ikke bil.
we have not car
'We don't have a car.'
- d. Han har (høy) feber.
he has (high) fever
'He has a (high) fever.'
- e. De har kjøpt seg (nytt) hus.
they have bought themselves (new) house
'They have bought a new house.'
- f. Vi har tatt opp lån.
we have taken up loan
'We have taken out a loan.'
- g. Jeg har bestilt time.
I have ordered hour
'I have ordered a consultation.'

⁴³ The term 'existence interpretation' is not defined in Faarlund et al.'s book. I will return to this later.

According to Faarlund et al., such combinations of verbs and bare singulars constitute a more close grammatical relationship than combinations of verbs and full nominal phrases, since the acceptability of the bare singulars is dependent on the exact position they are in (i.e. in object position and not in, e.g., subject position).⁴⁴ They furthermore point out that many combinations of verbs and bare singular objects constitute a semantic unit. This is illustrated by the combinations of verbs and bare singulars in (30).

- (30) a. gi beskjed
give message
'inform'
- b. kjøre bil
drive car
'drive a car'
- c. bygge hus
build house
'build a house'
- d. gå tur
go trip
'go for a walk'
- e. vaske guly
wash floor
'wash a floor'
- f. legge kabal
lay solitaire
'play solitaire'
- g. sparke ball
kick ball
'play soccer'
- h. skrive brev
write letter

⁴⁴ As we saw in chapter 3, this claim is not quite correct, since bare singulars may take part in different types of syntactic alternations.

- 'write a letter'
- i. spille piano
play piano
'play the piano'
- j. avlegge besøk
pay visit
'visit'
- k. finne sted
find place
'happen'
- l. få lov
get permission
'be admitted'
- m. få sjokk
get shock
'get a shock'
- n. få/ha feber
get/have fever
'get/have a fever'
- o. holde mun
hold mouth
'shut up'
- p. holde selskap
hold party
'have a party'
- q. inngå ekteskap
enter-into marriage
'marry'
- r. slå alarm
hit alarm
'alarm'
- s. slå følge
hit company
'accompany'

- t. ta eksamen
take exam
'take an exam'
- u. ta buss
take bus
'take the bus'
- v. ta hevn
take revenge
'take revenge'

Faarlund et al. also provide many examples of bare singulars that follow prepositions, as illustrated in (31).

- (31) a. Jeg venter på drosje.
I wait on taxi
'I am waiting for a taxi.'
- b. Har nokon tenkt på dirigent?
has someone thought on conductor
'Has someone thought about a conductor?'
- c. Du må sørgje for rom.
you must provide for room
'You must provide a room.'
- d. Hun håper på jobb.
she hopes on job
'She hopes for a job.'
- e. Kari går i kjole.
Kari walks in dress
'Kari is wearing a dress.'
- f. Vi har reist på ferie.
we have traveled on holiday
'We have gone for a holiday.'
- g. Han kom i dress.
he came in suit
'He wore a suit.'

- h. Vi gikk på kino.
 we went on cinema
 'We went to the cinema.'
- i. Båten ligger ved kai.
 boat-DEF lies by quay
 'The boat is lying alongside the quay.'
- j. Han skriver bare på maskin.
 he writes only on machine
 'He only writes on a type writer.'
- k. Hun reiste med fly.
 she traveled with plane
 'she went by plane'
- l. Vi har flere typer spisebord på lager.
 we have several types dining-tables on storage-room
 'We have several types of dining tables in the storage room.'

Even though bare singular objects tend to refer to things (differently from predicative bare singulars), they can refer to persons in some rare cases, as illustrated by the following examples that Faarlund et al. provide:

- (32) a. til lege
 to doctor
 'to the doctor'
- b. til frisør
 to hair-dresser
 'to the hair dresser'

Bare singulars furthermore often occur in idiomatic constellations as well as in sayings and frozen forms that are left-overs from Old Norse, as illustrated in (33).⁴⁵

- (33) a. Frende er frende verst.
 friend is friend worst

⁴⁵ In Old Norse, there was no indefinite article as we know it today.

'A friend is worst to his friend.'

- b. Morgenstund har gull i munn.
morning-time has gold in mouth
'Morning is wonderful.'

The last observation made by Faarlund et al. that I will mention here, is that, sometimes, the presence of an adjective is needed for a bare singular to be acceptable. This is illustrated in (34).

- (34) a. Tvert imot kunne han tilbringe halvttimevis der inne bak låst dør
crosswise against could he spend half-hours-wise there in behind locked door
'On the contrary, he could spend half hours in there behind a locked door.'
- b. *Tvert imot kunne han tilbringe halvttimevis der inne bak dør
crosswise against could he spend half-hours-wise there in behind door

These data constitute an interesting puzzle, since often enough, the presence of an adjective rules out an otherwise acceptable bare singular (see the minimal pairs (24), (25), and (26) in chapter 6 later). No possible explanation for these data is suggested by Faarlund et al., though.

4.2.5.3 *Summing up Faarlund et al.'s account*

To sum up, Faarlund et al.'s account makes a sharp distinction between bare singulars in predicative position and others, since the generalization that states when predicative bare singulars can occur is completely different from the generalizations they make for the nonpredicative ones.

The main problem with the generalization they offer for predicative bare singulars is that it is too weak and vague to have satisfactory predictive power. All we can conclude from it is that a predicative bare singular will *tend* to be acceptable if it has an including function, *unacceptable* if it has a characterizing function, and nothing is said about the few exceptional cases that presumably exist. Furthermore, the key notion *category* is not defined, which means that the predictive force is not optimal. Finally, even if the generalization is interpreted as generously as possible, (23) and (24) that we looked at earlier, probably show that it is empirically insufficient.

As for their account of Norwegian bare singulars in other syntactic positions, it consists mainly of lists of positive examples of acceptable bare singulars, as well as some generalizations. The problem with these generalizations, too, is that they are relatively weak and vague. The terms *referential function*, *generic meaning*, *habitual reading*, *semantic unit*, and *existential reading* are not defined, for instance, although these are important notions. It is furthermore often unclear what status the generalizations have; i.e. whether they merely describe some particular examples, or are meant as sufficient and/or necessary conditions for Norwegian bare singulars. It is for instance not clear if any combination of a verb and a bare singular that form a semantic unit is acceptable, whether the verbs *have* and *get* (and similar ones) always allow for bare singulars (as long as these have a 'generic', 'non-referential' use), and whether a preposition that once allows for a bare singular complement, always does. Thus, there is nothing in Faarlund et al.'s account that predicts that (34a') below is fine, whereas (34b') is not, for instance:

- (34') a. Per går med hatt.
 Per walks with hat
 'Per wears/is wearing a hat.'
- b. */??Per går med gris.
 Per walks with pig
 'Per walks with a pig.'

Finally, nothing is said about when bare singulars can occur as subjects or as indirect objects. Thus, even though Faarlund et al. (1997) contribute a considerable amount of relevant data concerning Norwegian bare singulars, and point out many interesting tendencies regarding their distribution pattern, they do not fully predict when Norwegian bare singulars can occur.

4.2.5.4 *Some additional points*

Finally, let me mention some interesting points about Norwegian bare singulars made by some other works that belong to the descriptive tradition. One generalization that is made particularly clear in Western (1921), and that is less explicitly stated in Faarlund et al., is that bare singulars are often used if a predicate (i.e. verb or preposition) and a bare singular together refer to a situation or state that is very common. Clearly, many of the verb-noun

combinations with bare singulars are of this type, although not all. Most of the other descriptive works also characterize bare singulars semantically. For instance, Falk and Torp (1900) and Western (1921) use the term *individuating*, stating that whereas a-expressions are individuating or generalizing (have a universal reading), bare singulars are unable to have these readings. MacDonald (1998) states that when the indefinite article is present, the tendency is that one is talking about one particular individual, whereas when the article is lacking, the interest is more general, towards the phenomenon, the type, the situation, or the action. Just like the semantic descriptions in Faarlund et al. (1997) these generalizations suffer from the fact that the crucial notions are not defined.

4.3 Prior research on agreement properties of Norwegian bare singulars

Faarlund (1977) focuses on what he calls "a curious case of gender disagreement" in Norwegian (or more generally, in Scandinavian). Whereas Norwegian predicative adjectives usually have to agree in number and gender with their semantic subject, as illustrated in (35a), bare singulars, as well as bare plurals and bare mass expressions (and in some cases a-expressions), can occur as subjects of predicative adjectives that have neuter form regardless of the gender and number of the subject phrase. This is illustrated in (35b).

- (35) a. *Bilen er dyr/*dyrt.*
 car-DEFSUFF.MASC is expensive-COMM/*expensive-NEUT
 'The car is expensive.'
- b. *Drosje er dyrt.*
 taxi(MASC) is expensive-NEUT
 E.g. 'To take a taxi is expensive.'

Faarlund notices that it is a limited class of adjectives that can occur in the neuter form with a non-neuter subject, as in (35b). Adjectives expressing notions like colour and size, for instance, cannot take a bare singular masculine or feminine subject if they have neuter form, as illustrated in (36).

- (36) **Drosje er grønt.*
 taxi(MASC) is green-NEUT

The adjectives that pattern with (35b) are adjectives that can take an infinitive clause as their subject (in which case the adjective has to have neuter form) whereas those adjectives that pattern with (36), cannot. Thus, Faarlund concludes that the neuter form in (35) results from a stage in the derivation of the sentence in which the subject is an infinitive clause and therefore gives rise to neuter form on the adjective. This conclusion is in accordance with how sentences such as (35b) are paraphrased (see the English translation). Notably, (35b) does not have the same meaning as (37) below.

- (37) En drosje er dyr.
a taxi(MASC) is expensive-MASC
'A taxi is expensive.'

Faarlund also directs attention to examples like (38), and assumes that also these kinds of examples result from an underlying embedded infinitive clause.

- (38) Det er dyrt med drosje.
it is expensive with taxi
E.g. 'It is expensive to take a taxi.'

Hellan (1986) argues against Faarlund's explanation for why the adjective in (35b) has neuter form, building on (among other things) the data in (39).

- (39) Bil er kjekt å ha.
car(MASC) is handy-NEUT to have
'A car is handy to have.'

Since the supposed 'hidden clause' in Faarlund's analysis is explicitly spelled out in (39), it is unlikely that the bare singular somehow represents an infinitive clause, licensing the neuter form on the adjective. Instead, Hellan proposes that determiners are the head of nominal phrases and the location for agreement features. Thus, the lack of a determiner is what causes the lack of agreement in (35) and (39), according to Hellan, not a hidden infinitive clause.

Whereas the problem with Faarlund's proposal is that it cannot explain all cases of disagreement involving bare singulars (i.e. (39)), the problem with Hellan's proposal is that

Norwegian bare singulars sometimes have to agree with a predicative adjective, as shown in chapter 3, section 3.4. Even though such data are not impossible to accommodate within Hellan's analysis, they are not straight-forwardly accounted for, and Hellan does not mention such data. His analysis furthermore offers no explanation for why bare singulars in examples like (35b) are interpreted the way they are.

4.4 Prior research on reduced indefinites in some other languages

4.4.1 Danish bare singulars

Asudeh and Mikkelsen (2000) give an account of a phenomenon that they label "syntactic noun incorporation" in Danish, building on work by Nedergaard Thomsen (1991, 1995), and Mikkelsen (1999). This incorporation process licenses bare indefinites, including bare singulars. Asudeh and Mikkelsen point out that Danish bare singulars are unambiguously weak in the sense of Milsark (1977), that they never take wide scope, that bare singular direct objects need to be part of verb phrases that describe *institutionalized* actions, and that the verb has to be deaccented when it combines with a bare singular object. That an action is *institutionalized* means that it is conventionally associated with a certain structure or set of activities, according to Asudeh and Mikkelsen. For instance, there are presumably more conventionally associated activities connected to buying a house than buying a pen, which is in accordance with the fact that in Danish, the action of buying a house can be expressed with a sentence that contains a bare singular referring to the house, whereas the action of buying a pen cannot.

Asudeh and Mikkelsen encode their analysis in the HPSG framework. They propose a lexical rule that applies to transitive verbs and derives new verbs that take a bare indefinite complement as long as this argument is part of an institutionalized action and the verb is deaccented. Bare indefinites are furthermore assigned the attribute value *lite* (in the sense of Abeillé and Godard, 1998), which entails that they cannot be modified by relative clauses, and they are marked as nonspecific and predicative.⁴⁶

What Asudeh and Mikkelsen describe as institutionalized actions, such as buying a house, are often referred to by strings containing bare singulars also in Norwegian. This is illustrated in (39), for instance (we will see more examples of this type in chapter 6).

⁴⁶ We will return to the more technical aspects of Mikkelsen and Asudeh's analysis in section 13.2.2.

- (39) Han driver butikk.
he runs store
'He is running a store.' [NOD, 43]

But although Asudeh and Mikkelsen's analysis of syntactic noun incorporation in Danish might be sufficient to account for when Danish bare singulars can occur, it is not directly applicable to the full set of Norwegian data. The Danish counterpart to the Norwegian example in (40) below, for instance, is unacceptable (Mikkelsen, p.c.), according to the analysis because the verb phrase does not describe an institutionalized activity.

- (40) Jeg har grønn penn.
I have green pen
'I have a green pen.'

Since the state expressed by the verb phrase in (40) is presumably not more institutionalized in the Norwegian society than in the Danish society, there must be some linguistic differences between the two languages with respect to bare singulars. Furthermore, it is not only objects of transitive activity verbs that can be bare singulars in Norwegian. As shown in chapter 3, subjects, indirect objects, objects of prepositions, and predicatives can all be instantiated by bare singulars in Norwegian.⁴⁷

Another reason why Asudeh's and Mikkelsen's analysis of Danish bare singulars is not directly applicable to the Norwegian data, is the requirement that a bare singular can occur only together with a deaccented verb. It is true also in Norwegian that in many sentences with bare singulars, the main verb tends to be deaccented whereas the bare singular carries a word accent. And in some cases, deaccenting of the verb is necessary to license the bare singular (we will return to this in chapter 6). However, as noted by Fretheim (1997), this is not obligatory. This is illustrated in (41). (41abc) are all possible phonological realizations of the Norwegian sentence *Jeg bestilte bok*.⁴⁸

⁴⁷ Whether predicative bare singulars are intended to be covered by Asudeh and Mikkelsen's account or not, depends on how they intend the type *trans-v-lxm* to be interpreted. This is not clear, but since no examples of predicative bare singulars are given, I assume that they do not intend to account for predicative bare singulars.

⁴⁸ The notation in (41) is due to Fretheim (1991, 1992, and others). See chapter 6, section 6.5.5 for more details.

- (41) a. (((jeg bestilte ('BOK)))
 I ordered book
 'I ordered a book
 b. (((jeg be('stilte)('BOK)))
 c. (((jeg be('STILTE)('BOK)))

In (41b) and (41c) the verb is accented, so only (41a) follows the generalization that Asudeh and Mikkelsen propose for Danish.

Finally, whereas Danish bare singulars according to Asudeh and Mikkelsen can never be modified by a relative clause (since they have the attribute value *lite*), Norwegian bare singulars can, as illustrated previously in chapter 3, section 3.1.

To sum up, Mikkelsen and Asudeh's analysis is not applicable to all Norwegian bare singulars, but the generalization that the denotation of Danish bare singulars are part of *institutionalized* activities intuitively seems to hold for many occurrences of Norwegian bare singulars as well.

4.4.2 Hungarian bare singulars

Kiefer (1994) discusses 'bare noun + verb' sequences in Hungarian. He points out that there are several classes of Hungarian bare singulars, but he focuses only on the phenomenon where a bare singular object noun with accusative case is *incorporated* by a transitive verb. Some examples are given in (42).

- (42) a. Jancsi házat épít.
 Johnny house-acc build
 'Johnny is engaged in house-building.'
 b. Pisti levelet ír.
 Steve letter-acc write
 'Steve is engaged in letter-writing.'
 c. Éva újságot olvas.
 Eva newspaper-acc read
 'Eve is engaged in newspaper reading.'

By incorporation, Kiefer means a syntactic process whereby a free complement (typically an argument of the verb) is adjoined to the verb (syntactically and/or semantically, not morphologically) resulting in a complex verbal structure. The incorporation turns a transitive verb into an intransitive verbal structure: the object argument gets 'internalized' and becomes part of the complex meaning, in Kiefer's words. From a semantic point of view, the object noun and the verb constitute a semantic unity. In Hungarian, like in other languages that allow for noun incorporation, it is typically ritual, characteristic, or institutionalized activities that can be referred to by use of noun incorporation. Kiefer cites Mithun (1984) to make his point clear: "Compounding is done for some reason. Some entity, quality, or activity is recognized sufficiently often to be considered nameworthy in its own right. [...] If you ask where my brother is, I might reply, *He is out berry-picking* or *He is off mountain-climbing*, but probably not *He is out ladder-climbing*, even if he is in fact climbing a ladder. [...] Ladder-climbing is not an institutionalized activity" (Mithun, 1984: 848).

One restriction on noun incorporation in Hungarian, according to Kiefer, is that it is only imperfective verbs that denote activities that can incorporate an object. Perfective verbs or verbs with a perfective reading are unable to incorporate, and so are stative verbs and verbs that denote instantaneous events.

Noun incorporation in Hungarian has several properties that suggest that this is a lexical phenomenon, Kiefer argues. For one thing, just like compounds, the 'bare noun + verb' construction forms one single phonological unit from the point of stress assignment, since the verb does not carry stress. When the indefinite article is present in the nominal, the verb has to carry stress.

Secondly, Hungarian 'bare noun + verb' sequences can easily get lexicalized. There also seems to be a connection between incorporated structures and compounds. 'Bare noun + verb' sequences like *write letter* and *read newspaper* seem to be the input to word formation rules yielding the compounds *letter writing* and *newspaper reading*. In general, whenever a compound of this type is possible, one also finds a corresponding complex (i.e. incorporating) verb in Hungarian.

Thirdly, an incorporated bare noun in Hungarian is nonreferential and nonmodifiable and cannot serve as the antecedent of a pronoun. Furthermore, in contradistinction to indefinite nouns that are not incorporated, an incorporated bare object noun may refer to any number of entities in the given universe of discourse, Kiefer argues, providing the example in (43).

(43) Anna egész nap levelet írt.

Ann whole day letter-acc write-past

'Ann was letter-writing the whole day.'

Whereas an indefinite nominal with the indefinite article in the position of the bare singular in (43) would refer to one single letter, the bare singular in (43) can denote either one or several letters.

However, even though Hungarian incorporated bare nouns have many properties that suggest that this is a lexical phenomenon, from a syntactic point of view 'bare noun + verb' sequences in Hungarian behave exactly like other phrasal constituents, since they can easily be manipulated by means of syntactic rules. For instance, when a bare noun co-occurs with a focused constituent in a sentence, the focused constituent occupies the position immediately preceding the verb, in which case the bare noun can occupy any other position in the sentence.

In sum, this means that neither a purely lexical, nor a purely syntactic, account is satisfactory for this phenomenon. Kiefer concludes that a minimal requirement is that the lexical account provides means for the appropriate projection of the bare noun-plus-verb sequence into the syntax.

According to Kiefer, a bare noun + verb sequence is idiomatic if there is no corresponding 'free' construction, or if its meaning cannot be derived from the corresponding 'free' construction. Such cases must be listed in the lexicon as separate entries with all the necessary semantic and syntactic information. Transparent cases can be accounted for by means of a lexical rule, which Kiefer states as (44a). If projected into the syntax, complex verbs must be turned into V'-s. This is accounted for by the principle in (44b).

- (44) a. Any imperfective transitive activity verb can incorporate its object yielding the structure $[[N^0] [V^0]]V^0$ for any N for which V is subcategorized.
- b. Syntactically any $[[N^0] [V^0]]V^0$ should be considered as $[[N^0] [V^0]]V'$

The way I interpret this is that there is a lexical rule that takes a noun and a verb into a verb. However, once this verb leaves the lexicon and projects into the syntax, this verb becomes a saturated structure (i.e. a V'), which means that this verb has already combined with its direct object or is intransitive and therefore cannot combine with a new direct object.

As for the semantic interpretation of incorporated structures, Kiefer wants to represent the intuition that the incorporated noun modifies the meaning of the base verb. In other words, that the relation between the incorporated noun and the base verb is a kind of modifier-head relation.

Kiefer finds that the functor approach in (45b) comes closer to this notion than the argument approach in (45a), although he admits that the details of the semantic representation in (45b) are far from being clear. In (45a) the bare noun is represented as an argument (y), whereas in (45b) it is represented as a functor (F).

- (45) a. $\lambda x \lambda y (V(x,y))$
 b. $\lambda x F(V(x))$

The semantic representation in (45b) has to be supplemented by a conceptual constraint which accounts for what was referred to above as 'institutionalization'. Institutionalization is a complex conceptual structure based on everyday knowledge which constrains incorporation, Kiefer points out.

Interestingly, the well-formed and illformed examples that Kiefer provides for Hungarian bare singulars fit the Norwegian pattern almost perfectly. The most obvious discrepancy between the Hungarian data that Kiefer presents and the Norwegian data is found in the set of well-formed Hungarian lexicalized expressions. Not surprisingly, only few of these are found in Norwegian as well. On the other hand, Kiefer mentions that Hungarian cannot express the event of watching a movie with a 'bare noun + verb' sequence, whereas the corresponding structure is perfectly fine in Norwegian:

- (46) Ja, i kveld skulle vi sett film hele kvelden.
 yes, in night should we seen movie whole evening-DEFSUFF
 'Yes. Tonight, we should have been watching movies all night.' [NOD, 21]

This indicates that there may be at least one construction with bare singulars in Hungarian, namely the one that Kiefer calls a case of noun incorporation, that has a (more or less direct) correspondence in Norwegian. On the other hand, there are clearly many examples of Norwegian bare singulars that do not fit into the pattern Kiefer describes. For instance, Norwegian bare singulars do sometimes combine with perfective verbs (see (47a) below and more examples in chapters 6-9), and bare singulars as arguments of stative verbs are not only possible, but in fact common in Norwegian (see (47b) and more examples in chapters 6-9).

- (47) a. Kari har kjøpt seg ny kjole.
 Kari has bought REFL new dress

'Kari has bought a new dress.'

b. Du er jo bare jente.

you are just just girl

'You are just a girl.' [LLB, 6]

Norwegian bare singulars can also contain modifying adjectives (as shown in section 3.1, for instance), and they can function as antecedents (as shown in section 2.8)). Now, as Kiefer explicitly states at the beginning of his article that he is only going to look at *one* of several cases of bare indefinites in Hungarian, it is yet to see how similar the phenomena are in the two languages.

4.4.3 *West Greenlandic incorporated nouns*

Van Geenhoven (1996) discusses morphological noun incorporation in West Greenlandic. The phenomenon is illustrated in (48).

(48) a. Kaage-lior-p-u-t.

cake-make-IND-[-tr]-3PL

'They made cake/a cake/cakes.'

b. Juuna allagar-si-v-u-q.

Juuna-ABS letter-get-IND-[-tr]-3SG

'Juuna got a letter/letters.'

Differently from the syntactic phenomenon that Kiefer (1994) calls noun incorporation, and from Norwegian bare singulars, this phenomenon involves a morphological incorporation of the noun into the sequence of verbal affixes. Still, quite strikingly, the well-formed examples with noun incorporation in Greenlandic that van Geenhoven mentions tend to be realized as structures with bare singulars in Norwegian, whereas the illformed examples she mentions tend to be illformed as structures with bare singulars in Norwegian as well. Like Norwegian bare singulars, also Greenlandic incorporated nouns can be modified by adjectives (occurring as separate words) and they can serve as antecedents of pronouns.

Van Geenhoven argues that incorporated nouns in Greenlandic are *predicative*,⁴⁹ which means that they only introduce a predicate and no variable (and no quantifier either). They therefore have to combine with verbs that introduce a quantifier and a variable for this predicate (much in the sense of Carlson, 1977). These verbs are incorporating verbs. The lexical semantics of the non-incorporating predicate *to eat* and its incorporating counterpart, are given in (49ab), respectively.

- (49) a. $\lambda w_s \lambda y_e \lambda x_c [\text{eat}_w(x,y)]$
 b. $\lambda P_{\langle s, \langle e, t \rangle \rangle} \lambda w_s \lambda x_c E y [\text{eat}_w(x,y) \wedge P_w(y)]$

The absorption in (49b), that van Geenhoven calls Semantic Incorporation, can be understood as giving rise to a "part-of-the-predicate" reading. Incorporated nouns restrict the internal argument's variable of the verbal predicate even though this variable has been bound already. They neither modify the predicate itself, as in the case of modification of the type $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$, nor do they introduce an object variable.

Given the syntactic properties of predicate logic and the operations that determine scope within this formalism, the fact that the verb in (49b) introduces the quantifier and variable for the nominal predicate means that the incorporated noun always will have narrow scope. Since it has no variable, it cannot be linked to the discourse, and therefore cannot get a partitive interpretation either. Van Geenhoven furthermore assumes that not only incorporated nouns, but all narrow scope indefinites (at least in West Greenlandic and West Germanic) are semantically incorporated by a verb.

Van Geenhoven does not provide an exhaustive list of those verbal affixes that combine with a noun stem to build up an incorporating configuration in West Greenlandic, but she mentions the ones used most often by her informants. Those are: *make, eat, drink, buy, sell, get, have, lose, seek*, and *be*. She also mentions existential sentences. As will be seen in chapters 6-9, these verbs also occur frequently with bare singular objects in Norwegian.

Even though noun incorporating structures in West Greenlandic typically can be translated into structures with bare singulars in Norwegian, there are also data that show that there is not a one-to-one mapping between noun incorporation in West Greenlandic and the use of bare singulars in Norwegian. For instance, partitive phrases can be incorporated in West

⁴⁹ Notice that van Geenhoven uses the term *predicative* differently from what I do. Whereas I use this term to refer to the complement of a verb that (possibly) does not assign a theta-role (in particular the copular verb), van Geenhoven uses it to refer to all weak noun phrases.

Greenlandic, whereas Norwegian bare singulars can never be partitive. And whereas bare singulars can occur as subjects in Norwegian, it is impossible to incorporate a subject in West Greenlandic, according to van Geenhoven.

What I see as the most problematic aspect of van Geenhoven's analysis, if we try to apply a counterpart of it to Norwegian bare singulars, is that she assumes one and the same semantic interpretation for all weak indefinites; i.e. for both non-incorporated nominals and for incorporated ones. Thus, if we simply apply van Geenhoven's semantic analysis of incorporated Greenlandic nominals to Norwegian bare singulars, we don't predict the fact that bare singulars cannot occur whenever weak indefinites can occur (see e.g. (5) above), and I am interested in accounting for that fact.

4.4.4 *Bare singulars in Brazilian Portuguese*

Schmitt and Munn (1999) argue that bare singulars in Brazilian Portuguese are determiner phrases (DPs) with empty determiners and no number. Some examples of Brazilian Portuguese bare singulars are given in (50).

- (50) a. Criança é inteligente.
child is intelligent
'Children are intelligent.'
- b. Chegou criança.
arrived-3sg child
'A child/children arrived.'
- c. Ele comprou computador.
he bought computer
'He bought a computer/computers.'

Bare plurals and bare singulars can have existential as well as generic interpretations in Brazilian Portuguese, depending on the predicate that they combine with. They can furthermore not take wide scope over a quantifier or intensional verb, and they are not restricted to "canonical" types, i.e. well-established kinds such as animal species or common artifacts, like definite generics are. In object positions, both bare plurals and bare singulars have the same

distribution. In subject position, bare singulars are slightly more restricted on their existential reading, though. They are not very acceptable in the subject position of strongly episodic sentences, whereas bare plurals are perfect in such sentences. One type of context that makes a bare singular subject of a strongly episodic sentence acceptable, is when the sentence describes one of a number of different situations given in a list, as in (51) below.

(51) a. Mulher esteve discutindo política.

woman was discussing politics

'Woman was discussing politics, man was discussing soccer, etc.'

b. Homem chegou tarde.

man arrived late

'Man arrived late, woman left, ...'

Other factors that can license a bare singular in subject position of episodic sentences are negation, and adverbs such as *sempre* ('always').

Schmitt and Munn argue that although Brazilian Portuguese bare singulars are syntactically singular, they are semantically unspecified for number. One argument for this is that on their generic interpretation, bare singulars cannot function as antecedents of singular anaphora with existential readings, whereas bare plurals can function as antecedents of plural anaphora with existential readings. In contexts where a bare singular has an existential interpretation, it can antecede either a singular or a plural pronoun, as shown in (52b).

(52) a. Maria detesta *coelho* porque *eles*/**ele* roubou suas cenouras.

Maria hates rabbit because they/*it stole her carrots.

b. Tem *criança* na sala. E *ela* está/ *elas* estão ouvindo.

There is child in the room. And she is/ they are listening.

Another argument that Schmitt and Munn take in favor of assuming that Brazilian Portuguese bare singulars are unspecified for number is that when they occur as direct objects of accomplishment verbs, they do not make the event telic.⁵⁰ Furthermore, just like bare plurals, bare singulars do not license the binominal *each*, that is claimed to require a cardinal indefinite, according to Safir and Stowell (1988).

⁵⁰ The same holds for Norwegian.

(53) a. Os países da UE mandaram um delegado cada.

The EU countries sent a delegate each.

b. Os países da UE mandaram delegado *cada.

The EU countries sent delegate each

Schmitt and Munn argue against treating restrictions on bare singulars in any deep semantic sense, as Chierchia (1998) does.⁵¹ Instead, they argue with Dalay 1992 that the locus of cross-linguistic variation lies in the interaction between the determiner system and the morpho-syntax of Number. They propose that the difference between Brazilian Portuguese and English, for instance, is that English does not allow number to be omitted from the D/Num/N extended projection.

The intuitions regarding referentiality, scope, and telicity for bare singulars are the same for Norwegian and Brazilian Portuguese, according to the data that Schmitt and Munn present. As for differences, it is obviously the case that bare singulars have a wider range of uses in Brazilian Portuguese than they have in Norwegian. For instance, many of the examples with generic bare singulars in Brazilian Portuguese do not have counterparts with bare singulars in Norwegian. Furthermore, the possibility for bare singulars to have a plural interpretation (as in (50bc) and the possibility for a bare singular to antecede a plural anaphor (as in (52b)) is at least more restricted in Norwegian. Even though we will see examples in chapter 6, section 6.5.4, that Norwegian bare singulars have a bleached number interpretation in some cases, the Norwegian correspondences of (50bc) do not have a plural interpretation any more than what a-expressions have, and the Norwegian correspondence of (52b) is infelicitous on the plural interpretation of the anaphor.

⁵¹ Chierchia (1998) claims that noun phrases (NPs) (and not only determiner phrases (DPs)) can function as arguments. He proposes a classification of languages according to what their NPs can denote, though; either names of kinds, or predicates, or both. This semantic parameter puts restrictions on the use of NPs, since NPs that denote kinds are of type $\langle e \rangle$, and therefore free to appear in argument positions, whereas NPs that denote predicates are of type $\langle e, t \rangle$, and cannot. He makes use of type-shifting in order to resolve type mismatches between function and argument. Crucially, the semantics of the type-lifting used to license an (otherwise) predicative NP in argument position, demands that the NP be either plural or a mass term, which rules out bare singulars (for the most part) in languages whose NPs are predicates (such as Germanic and Romance languages).

4.5 Summary and conclusions

4.5.1 *No fully satisfactory account*

To sum up this chapter in the most general fashion, there does not seem to exist any comprehensive account of when bare singulars can occur in Norwegian, nor does there exist any account of bare singulars (or related phenomena such as noun incorporation) for other languages that is directly and fully applicable to Norwegian, as far as I am aware. As for the generative tradition that is concerned with Norwegian (or Germanic languages) directly (i.e. Longobardi 1994, Chierchia 1998, Kallulli 1999, Borthen 1998, and Delsing 1993), these works first of all suffer from a failure to cover even a reasonable part of the Norwegian data. For the descriptive tradition (represented by Faarlund et al. 1997), the main problem is that the generalizations that are being made are informal and too vague to have sufficient predictive force. This objection also holds against Borthen 1998. Works on bare singulars (and related phenomena) in other languages (e.g. Asudeh and Mikkelsen 2000, Kiefer 1990, van Geenhoven 1996, and Schmitt and Munn 1999) have turned out not to be directly applicable to Norwegian, among other things because the distribution pattern for Norwegian bare singulars differs from the distribution pattern of bare singulars (or incorporated nouns) in the respective languages.

4.5.2 *Summary of data observations made for Norwegian bare singulars*

Even though several attempted generalizations made about Norwegian bare singulars have been proven to be too strong in this chapter, these generalizations indeed correlate with strong *tendencies* that are important to notice and to finally give an account for. (54) repeats the most important data observations made for Norwegian bare singulars in this chapter.

- (54) a. Norwegian bare singulars often occur in predicative position and tend to not occur as subjects and indirect objects.
- b. Norwegian bare singulars are weak when they are interpreted existentially, and take narrow scope.
- c. The acceptability of a Norwegian bare singular is not only dependent on what verb it combines with, but on what particular meaning the verb expresses on a certain use.

- d. There are numerous idiomatic expressions containing bare singulars in Norwegian.
- e. Norwegian bare singulars tend to realize only certain semantic roles (the lower ones on a semantic role hierarchy).
- f. Norwegian predicative bare singulars typically have an including rather than a descriptive function.
- g. Norwegian predicative bare singulars typically denote human categories (whereas non-predicative ones do not).
- h. Certain combinations of predicates and bare singulars in Norwegian constitute semantic units and/or represent common activities/states.
- i. Norwegian bare singulars occur particularly often with verbs with meanings like *have* and *get*.
- j. Sometimes, the presence of an adjective is necessary for a bare singular to be acceptable.
- k. There is something about the semantics of bare singulars that makes scholars describe them as e.g. generic, non-referential, non-individuated and focused on type.
- l. Some Norwegian bare singulars have an 'infinitive clause'-reading.
- m. Some Norwegian bare singulars do not agree with a predicative adjective, whereas others do.
- n. The verb that combines with a Norwegian bare singular is often (but not always), unaccented.
- o. Norwegian bare singulars sometimes have a bleached number interpretation.

Some of these observations have already been accounted for in chapter 2. For instance, it was argued in chapter 2 that Norwegian bare singulars are type-emphasizing and that this explains the fact that they are never referential, never partitive, and never take wide scope. It also follows from this that bare singulars with an existential interpretation are always weak.

I will also connect some of the other points in (54) to the assumption that Norwegian bare singulars are type-emphasizing and therefore signal an increased focus on the type of thing involved compared to corresponding a-expressions. For one thing, cross-linguistically, subjects are often strong (i.e. either referential, partitive, or generic, see e.g. Reuland 1988) and in Norwegian this tendency is particularly clear. Since Norwegian bare singulars can never be either referential or partitive, and only rarely generic, this rules out bare singular subjects in many cases, and is therefore one possible explanation for point (54a) above (though probably not the only one). Since also indirect objects tend to be referential (see e.g.

Goldberg, 1995), the same kind of argument can be used to (at least partly) explain the tendency that Norwegian bare singulars rarely occur in indirect object position.

Also the tendency for Norwegian bare singulars to realize only certain semantic roles can be connected to type-emphasis. One thing that is striking about the semantic roles that Norwegian bare singulars tend to realize, is that they are typically less important as tokens than what other semantic roles are. For instance, it is seldom relevant to ask: *What type of thing/individual hit you?*, in which case the entity that is presupposed to hit the hearer has the semantic role agent, or *What type of thing did you destroy?*, in which case the entity that is presupposed to be hit has the semantic role theme. On the other hand, it makes perfect sense to ask: *With what type of thing did you open that door?* in which case the entity that is presupposed to be used in the opening of the door has the semantic role instrument. Semantic roles are quite vague notions and the correlation between them and the use of Norwegian bare singulars is not consistent, as argued in section 4.1.4 above. However, it is at least intuitively reasonable that type-emphasizing phrases tend to realize roles rather far down in a semantic role hierarchy than high up. It follows from this that agents and highly affected objects, for instance, will tend to not be realized as bare singulars.

The remaining observations in (54) will be kept in mind as we proceed in the thesis.

4.5.3 Commonalities between reduced indefinites in different languages

This chapter has shown that there is not a one-to-one mapping between the use of bare singulars in Norwegian and bare singulars and incorporated nominals (i.e. *reduced nominals*) in languages such as Albanian,⁵² Hungarian, West Greenlandic, Brazilian Portuguese, Swedish, and Danish. Still, the commonalities are striking. Common to all the reduced nominals we have looked at, is the impossibility for a referential reading, and for wide scope interpretations. It is also a striking fact that the copular verb *be* and verbs like *have*, *get*, *want*, *seek*, and *buy* allow for reduced nominals particularly easily. And in several languages, reduced nominals are accepted if the bare singular and its selecting predicate together denote a common or institutionalized action or state.

⁵² We haven't seen any Albanian data here, but Kallulli (1999) gives a unitary analysis of Norwegian and Albanian bare singulars.

4.5.4 *Recurring topics and notions in the previous literature*

There are some topics and some notions that are recurring in the discussion on bare singulars and other reduced nominals. The most important ones are listed in (55).

- (55) a. Syntactic structure of the bare singular (DP vs. NP vs. N vs. DP with lack of NumP)
b. Semantics of the bare singular (nonreferential vs. weak vs. nonindividuated vs. unspecified for number)
c. Syntactic position of the bare singular (only predicative vs. only direct objects, vs. only predicative and direct objects vs. only predicative and direct objects and objects of prepositions vs. any syntactic position except subject vs. any syntactic position)
d. Properties of the selecting predicate (syntactic category (V vs. P, for instance)], imperfective, unaccented, incorporating, a certain semantic class)
e. Semantic relation with the selecting predicate (argument vs. predicate modifier vs. incorporated predicate)
f. Pragmatic constraints on the combination of the bare singular and the selecting predicate (institutionalization, common situation type)
g. Relation between predicates that select for "full" nominals and predicates that select for bare singulars (lexical entries vs. lexical rules)

These points reflect the fact that bare singulars are of a certain syntactic category ((55a)) that has a certain semantics ((55b)). They occur in certain syntactic environments ((55c)) and stand in a certain semantic relationship with some other constituent ((55e)). This constituent may be subject to certain restrictions ((55d)), and there may be pragmatic constraints on the semantic relationship between the denotation of the selecting predicate and the denotation of the bare singular ((55f)). Even though we have already seen presentations of the different works on reduced nominals, it might be useful to briefly recapitulate the essential proposals with respect to each of the points listed in (55).

As for the syntactic structure of a bare singular, Longobardi (1994), Chierchia (1998), Kallulli (1997), and Asudeh and Mikkelsen (2000) assume that bare singulars are NPs as opposed to DPs), Delsing (1993) assumes that most bare singulars are NPs, whereas some (that I define as bare singulars) are mass terms and therefore DPs, Kiefer (1994) assumes that

the class of Hungarian bare singulars that he focuses on are N's, whereas Schmitt and Munn (1999) assume that Brazilian Portuguese bare singulars are DPs with empty determiners and no Num (number) projection. Faarlund et al. (1997) name Norwegian bare singulars *bare nouns*, which seems to suggest that they regard them as words rather than phrases, whereas Borthen (1998) doesn't make an assumption about syntactic category at all.

As for the semantics of these syntactic constituents, Longobardi (1994) and Delsing (1993) assume that the determiner (D) position is the domain for referentiality, which means that bare singulars are nonreferential, whereas Kallulli (1999) (like van Geenhoven, 1996) assumes that NPs, and therefore bare singulars, are property-denoting and weak, which means that they are nonreferential, nonpartitive, and nongeneric, and always take narrow scope. Asudeh and Mikkelsen (2000) postulate that bare singulars (or, more generally bare indefinites) are nonspecific and of the type *lite*, which means that they cannot be modified by relative clauses. Kiefer (1994) assumes that Hungarian bare singulars are predicate modifiers and therefore never can be referential, nor function as antecedents, whereas Schmitt and Munn (1999) argue that Brazilian Portuguese bare singulars are unspecified for number in addition to being unambiguously nonreferential and always taking narrow scope. Faarlund et al. (1997) claim that Norwegian bare singulars do not have a referential function, whereas Falk and Torp (1900) and Western (1921) claim that they are nonindividuated. This claim is also made in Borthen (1998), in addition to the assumption that Norwegian bare singulars are unambiguously weak and always take narrow scope.

As for the possible and impossible syntactic positions for bare singulars, the distinction between predicative and non-predicative position is the crucial notion in Longobardi's (1994) account, since Romance and Germanic bare singulars are only supposed to occur in predicative position. Kallulli (1997) expands the set of possible syntactic positions for bare singulars suggested by Longobardi, claiming that they can either occur in predicative position or in direct object position. Faarlund et al. (1997), as well as the rest of the Norwegian descriptive linguistic tradition, point out that Norwegian bare singulars frequently occupy the position following a preposition just as well as the direct object position and the predicative position, whereas Borthen (1998) points out that Norwegian bare singulars occur in subject position and in indirect object position as well. As for reduced nominals in other languages than Norwegian, Kiefer (1994) is only concerned with direct objects. Asudeh and Mikkelsen (2000) are not explicit on whether predicative bare singulars are covered by their analysis, or only direct objects, but most likely the latter holds. Van Geenhoven (1996) does not regard the traditional predicative/non-predicative distinction (exemplified by the difference between

the verbs *be* and *have*) as relevant at all, whereas incorporated subjects are claimed to be unacceptable in West Greenlandic. Finally, Schmitt and Munn (1999) seem to claim that Brazilian bare singulars can occur in all syntactic positions that are expected for nominal phrases.

For those who assume that the bare singular is selected by some predicate, different properties of this predicate are mentioned as relevant. For instance, Kiefer (1994) claims that perfectiveness plays a role (only nonperfective verbs allow for incorporation of a bare singular in Hungarian), and Asudeh and Mikkelsen (2000), as well as Kiefer (1994), claim that the verb that selects a bare singular has to be unaccented. In Borthen (1998), it is claimed that verbs such as *have*, *need*, *want*, and *get* belong to a semantic class of verbs relevant for the selection of bare singulars in Norwegian. And van Geenhoven (1996) assumes a class of semantically incorporating verbs.

A fifth important topic in the previous literature is what semantic relation the bare singular stands in with respect to the predicate it co-occurs with. Longobardi (1994), Delsing (1993), Kiefer (1994), van Geenhoven (1996), and Kallulli (1999) all assume that bare singulars, or incorporated nouns, are not semantic arguments in the common sense. Van Geenhoven and Kallulli connect this to an assumption that bare singulars are predicates only and incorporated by the verb, whereas Kiefer (1994) assumes that bare singulars are predicate modifiers (i.e. functors). Asudeh and Mikkelsen (2000), Borthen (1998), and Schmitt and Munn (1999) seem to assume that bare singulars are arguments.

Some authors are concerned with additional restrictions on the selection of a bare singular by some predicate. Asudeh and Mikkelsen (2000), Kiefer (1994), and van Geenhoven (1996), point out that there are pragmatic restriction on the meaning that a bare singular and a verb constitutes, since the activity denoted has to be an institutionalized one. The same seems to hold for at least some bare singulars in Norwegian, according to e.g. Western (1921) and Faarlund et al. (1997).

Finally, the different approaches differ with respect to how they view the relation between predicates that select for "full" nominals and predicates that select for bare singulars. Longobardi (1994), Delsing (1993), and Kallulli (1997) presumably assume separate lexical entries for DP-selecting and NP-selecting predicates, and no relation between these classes of verbs is proposed. Van Geenhoven (1996), Asudeh and Mikkelsen (2000), and Kiefer (1994), on the other hand, all suggest lexical rules to account for the connection between verbs that take "full" nominal complements and those that allow for bare singular complements. Finally, Schmitt and Munn (1999) do not seem to assume that predicates differ lexically with respect

to what kind of nominal arguments they can take at all. Rather, they seem to assume that the distribution of bare singulars can be accounted for based on their semantic properties alone.

In sum, we definitely need to determine the status of Norwegian bare singulars with respect to the points listed in (55). As we see from the summary above, we are by no means tied up to a particular analysis w.r.t. any of the points in (55) due to general agreement upon the topic.

5 Hypothesis

5.1 Type-emphasis not enough

In chapter 2 we offered an explanation for many facts regarding the semantic interpretation of Norwegian bare singulars, based on the notion of type-emphasis, repeated in (1) below.

- (1) a. Singular indefinite nominal phrases introduce both a token discourse referent and a type discourse referent into the discourse, however with more or less focus on one or the other.
- b. A phrase that is *token-emphasizing* presents its token discourse referent as more discourse salient than what a *type-emphasizing* phrase does. A phrase that is *type-emphasizing* presents its type discourse referent as more discourse salient than what a *token-emphasizing* phrase does.
- c. In Norwegian, other things being equal, a-expressions are token-emphasizing whereas bare singulars are type-emphasizing.

As already mentioned in chapter 2, type-emphasis can be compared to the notion of *profiling* (see e.g. Goldberg, 1995). A-expressions and bare singulars both denote a structure that includes a token discourse referent as well as a type discourse referent, but with different profiles: a-expressions profile the token discourse referent, whereas bare singulars profile the type discourse referent.

But is type-emphasis all there is to Norwegian bare singulars? That is, can we predict, simply from this semantic notion, when bare singulars can occur in Norwegian? I will claim we cannot. Even though we have touched onto data that indicate this, let us for the sake of clarity go through two arguments that show that this is not merely a context-dependent semantic phenomenon in the sense that the speaker can freely choose to use a bare singular whenever he wants to signal a focus on the type of thing involved and this is compatible with the given context.⁵³

⁵³ This kind of approach is proposed in Borthen (2000).

An analysis along the lines just sketched don't give us the desired predictions. For instance, it is not clear why the examples in (2), (3), and (4) are not wellformed just based on (1).

(2) A: What kind of animal/ kind of thing do you see?

B: */??Jeg ser katt.

I see cat

Intended meaning: 'I see a cat.'⁵⁴

(3) I destroy different things every day.

*/??I går ødela jeg datamaskin, mens i dag ødela jeg bil.

in yesterday destroyed I computer, whereas in day destroyed I car

Intended meaning: 'I destroy different things every day. Yesterday I destroyed a computer, whereas today I destroyed a car.'

In (2), A's question establishes a context that shows explicitly that A is interested in knowing what type of thing or type of animal B sees. Still, B's answer is unacceptable. In (3), the first sentence makes it clear that the speaker wants to inform the hearer about what kinds of things he destroys. Still, the continuation with a bare singular is unacceptable. This does not mean that there are no cases in which the bare singulars in (2) and (3) can combine with the verbs in question, but on a semantic-pragmatic approach where the only restriction on bare singulars is their type-emphasis, it is not clear why (2) and (3) are not possible.

Maybe even more convincingly, it is not clear why predicative bare singulars are not always acceptable in Norwegian:

(4) a. ??*Per er kjernekar.

Per is splendid-chap

'Per is a splendid chap.'

b. ??*Ola er person.

Ola is person

'Ola is a person.'

c. ??Kari er veldig snill lærer.

⁵⁴ Diesing (1991) claims that experiencer and perception verbs permit only the quantificational (strong) reading of an indefinite object in English and German. Norwegian seems to behave much the same way, as experiencer verbs and verbs of perception only rarely allow for bare singular complements.

Kari is very kind teacher
'Kari is a very kind teacher.'

In predicative position, one clearly focuses on the type of thing. Still, the examples in (4) are illformed.

The second argument against regarding the use of bare singulars in Norwegian as merely a context-dependent semantic phenomenon on line with the use of different types of nominal forms, for instance, is that the acceptability judgments of bare singulars are intuitively different from acceptability judgments regarding most other nominals. For instance, a sentence containing a personal pronoun is usually clearly acceptable and intuitively grammatical on the sentence level even though it is used in a context that makes it unacceptable on the discourse level. (5) is grammatical, but pragmatically infelicitous, if it is not clear who the personal pronoun *han* ('he') refers to, for instance.

(5) Han er søt.
he is cute
'He is cute.'

The grammaticality of (5) regardless of context is traditionally accounted for by assuming that the grammar that generates the sentence in (5) allows for a noun phrase (with certain properties) in the subject position regardless of whether it is an indefinite noun phrase or a pronoun, for instance, and regardless of whether the particular form is pragmatically felicitous or not.

However, with Norwegian bare singulars, things are different. At least as far as intuitions go, the acceptability of a sentence containing a bare singular *is* sensitive to whether or not contextual requirements connected to this particular nominal form are obtained or not. This is illustrated in (6).

(6) a. ??Kari fant kopp.
Kari found cup
b. ??Kari er fregnete ballettdanserinne.
Kari is freckled ballerina
c. ??Kari sang i hengekøye.
Kari sang in hammock

The sentences in (6) are intuitively judged as unacceptable (and *ungrammatical*) in certain contexts, acceptable (and *grammatical*) in other contexts (we will return to this in detail in chapters 6 and 7). In other words, the intuitions people have regarding appropriateness of this particular nominal form (the bare singular) is different from the intuitions people have regarding appropriateness of other nominal forms (e.g. the personal pronoun). Although these facts concerning people's intuitions are not decisive as for how one should analyze these phenomena linguistically, these facts are still something that should be reflected and explained in the analysis that is proposed.

In sum, I will claim that type-emphasis alone (as I have defined it in (1)) cannot explain the distribution pattern of Norwegian bare singulars. One problem with such an approach is that even though bare singulars are always type-emphasizing, they have a more restrictive distribution than this notion alone predicts. Another problem for such an approach is that people's intuitions regarding the acceptability of bare singulars differ from other context-sensitive semantic phenomena. I therefore conclude that the use of bare singulars in Norwegian is *not* a contextually-dependent semantic phenomenon in the sense that they can be used whenever the speaker wants to emphasize the type-aspect of some individual.

5.2 Hypothesis: a set of bare singular-licensing constructions

What I will propose is that Norwegian bare singulars are type-emphasizing, as defined in (1), and that they are not generally licensed in nominal positions in Norwegian. Rather, I assume that there exist at least four schemes, or constructions,⁵⁵ that do license them (explicated in chapters 6-10). These constructions are all *motivated* by the type-emphasizing effect of bare singulars, but not fully predicted by it. The (relative) unacceptability of examples such as (2), (3), and (4), can be predicted by the assumption that there is no scheme in Norwegian that (is likely to) allow for the given combinations of predicates and bare singulars.

⁵⁵ The term *construction* is used for expository means only and has no theoretical significance (at least not at this point).

6 Construction 1

6.1 Rejecting the relevance of the predicative/non-predicative distinction

One parameter that has been regarded as particularly important in the literature on Norwegian bare singulars, is the distinction between predicative and non-predicative position, or between non-arguments and arguments, respectively. This view is particularly clear in Faarlund et al. (1997), and also in Longobardi (1994). On Faarlund et al.'s account, predicative bare singulars ought to have an *including* (as opposed to a *descriptive*) function, whereas completely different generalizations are given for bare singulars in other syntactic positions. On Longobardi's account, predicative bare singulars are assumed to be generated by the grammar, whereas non-predicative bare singulars are assumed to be excluded by the grammar. Longobardi does not account for the restrictions that hold for predicative bare singulars, and my guess is that he assumes that these restrictions do not belong to the core grammar, but to some grammar-external component of the language faculty. What I will argue in this section is that the constraints that restrict bare singulars in predicative position (regarded as a "predicatives only"-matter by Faarlund et al. and as a grammar-external matter by Longobardi) are exactly the same constraints that restrict (many) bare singulars in argument positions (regarded as a "non-predicatives only"-matter by Faarlund et al. and as a grammar-internal matter by Longobardi).⁵⁶

A first suspicion that there might not be a crucial distinction between predicative and non-predicative bare singulars in Norwegian is evoked by the data in (1)-(23).

(1) a. Jeg kan ikke være barnevakt hele dagen.

I can not be baby-sitter whole day-DEFSUFF

⁵⁶ The data that will be presented in this section represents a conservative view on what *predicative position* (or *non-argument position*) means, namely basically the position following the copular verb or copular particles. However, my claim that the predicative/non-predicative distinction is not a basic parameter for the use of Norwegian bare singulars holds for any definition of the predicative/non-predicative distinction, as long as it is assumed that there is one set of constraints that restricts the use of bare singulars in argument positions and another set of constraints (if mentioned at all) that restrict the use of bare singulars in predicative position. What this section does not concern, however, is the question of whether or not bare singulars are predicative in a semantic sense, meaning that they are semantically incorporated and/or unambiguously weak as in van Geenhoven, 1996, and Kallulli 1999, for instance. This question was partly considered in chapter 2, and will be discussed in chapters 12 and 13 as well.

'I cannot babysit the whole day.'

b. Jeg kan ikke sitte barnevakt hele dagen.

I can not sit baby-guard whole day

'I cannot babysit the whole day.' [LLB, 32]

(2) a. Han er hundeeier.

he is dog-owner

'He is a dog owner.'

b. Han har hund.

he has dog

'He is a dog owner/ has a dog.'

(3) a. Hva er det som får en 21-åring til å være bonde?

what is it that gets a 21-year-old to be farmer

'What is it that makes a 21-year-old wanting to be a farmer?

b. 'Hva er det som får en 21-åring til å drive gård [...]?'

what is it that gets a 21-year-old to run farm

'What is it that makes a 21-year-old wanting to run a farm?' [NOD, 3]

(4) a. Hun er bilfører.

she is car-driver

'She is a driver.'

b. Hun kjører bil.

she drives car

'She is a driver/ is driving a car.'

(5) a. Hun er elev.

she is pupil

'She is a pupil/ goes to school.'

b. Hun går på skole.

she goes on school

'She goes to school.'

(6) a. Han er nordmann.

he is Norwegian

‘He is a Norwegian.’

b. Han har norsk statsborgerskap.

he has Norwegian citizenship

‘He has a Norwegian citizenship.’

(7) a. Hun er kontorist.

she is clerk

‘She is a clerk.’

b. Hun jobber på kontor.

she works on office

‘She works in an office.’

(8) a. Han driver butikk.

he runs store

‘He is running a store.’ [NOD 43]

b. Han er butikkeier.

he is store-owner

‘He is a store owner.’

(9) a. Det var storm to ganger.

there was storm two times

‘There was a storm twice.’

b. De hadde storm to ganger.

they had storm two times

‘There was a storm twice.’ [HM, 67]

(10) a. Hun er fotballsparker.

she is soccer-player

‘She is a soccer player.’

b. Hun sparker fotball.

she kicks football

‘She is playing soccer/ is a soccer player.’

- (11) a. Han er spydkaster.
he is javeline-thrower
'He throws the javeline.'
- b. Han kaster spyd.
he throws javeline
'He throws the javeline/ is throwing the javeline.'
- (12) a. Han er doktorgradsstudent.
he is doctor-degree-student
'He is a Ph.D-student.'
- b. Han holder på med doktorgrad.
he is-doing on with doctor-degree
'He is working on a doctoral degree.'
- (13) a. Han er rullestolbruker.
he is wheel-chair-user
'He is a wheel chair user.'
- b. Han bruker rullestol.
he uses wheel chair
'He is using a wheel chair/ is a wheel chair user.'
- (14) a. Hun er rikmannsdatter.
she is rich-man's-daughter
'She is a rich man's daughter.'
- b. Hun har rik far.
she has rich father
'She has a rich father.'
- (15) a. Hun er forfatter.
she is author
'She is an author.'
- b. Hun skriver bok.
she writes book
'She is writing a book.'

- (16) a. Han er far.
 he is father
 'He is a father'
- b. ?Han har unge.
 he has kid
 'He has a kid.'
- (17) a. Hun er fallskjermhopper.
 she is parachute-jumper
 'She is a parachute jumper.'
- b. Hun hopper fallskjerm.
 she jumps parachute
 'She is sky diving/ is a parachute jumper.'
- (18) a. Han er pianist.
 he is piano-player
 'He is a piano player.'
- b. Han spiller piano.
 he plays piano
 'He plays the piano/ is playing the piano/ is a piano player.'
- (19) a. Hun er bellonamedlem.
 she is Bellona-member
 'She is a Bellona member.'
- b. Hun har medlemskap i Bellona.
 she has membership in Bellona
 'She has a membership in Bellona.'
- (20) a. Hun er barnehjemsbarn.
 she is orphan-home-child
 'She is an orphan home child.'
- b. Hun bor på barnehjem.
 she lives in orphan-home

‘She lives in an orphan's home.’

(21) a. Han er hybelboer.

He is efficiency-apartment-liver

‘He is a person who lives in an efficiency apartment.’

b. Han bor på hybel.

he lives on efficiency apartment

‘He lives in an efficiency apartment/ is living in an efficiency apartment.’

(22) a. Han er ansatt.

he is employee

‘He is employed.’

b. Han har jobb.

he has job

‘He has a job.’

(23) a. Hun er lærer.

she is teacher

‘She is a teacher.’

b. Hun har lærerjobb.

she has teacher-job

‘She has a teaching position.’

What we see here is that bare singular objects (of either verbs or prepositions) are just as acceptable as predicative bare singulars as long as they are part of verb phrases that describe the same kind of situation. In other words, as argued in Borthen (2002), it seems that it is not syntactic position, but the meaning of the verb phrase that the bare singular is part of that is crucial for whether these bare singulars are acceptable or not.

It also turns out that the acceptability of predicative and nonpredicative bare singulars depend on the same kinds of linguistic and nonlinguistic contexts. First, consider the examples in (24).

(24) a. Hun er lærer.

she is teacher

'She is a teacher.'

- b. ??Hun er dyktig lærer.
she is competent teacher
'She is a competent teacher.'

- (25) a. Han leser avis.
he reads newspaper
'He is reading a newspaper.'

- b. ??Han leser gammel avis.
he reads old newspaper
'He is reading an old newspaper.'

- (26) a. (?)Jeg har aldri gitt baby grøt før.
I have never given baby porridge before
'I have never given a baby porridge before.'
- b. ??Jeg har aldri gitt skitten baby grøt før.
I have never given dirty baby porridge before
'I have never given a dirty baby porridge before.'

(24)-(26) show that modification sometimes makes a bare singular less acceptable, and that this holds of both predicative and nonpredicative bare singulars.

In (27)-(29) below we see another restriction at work.

- (27) a. Kari er lærer.
Kari is teacher
'Kari is a teacher.'

- b. ??Kari er menneske.
Kari is person
'Kari is a person.'

- (28) a. (?)Jeg har aldri gitt baby grøt før.
I have never given baby
oatmeal before
'I have never given a baby oatmeal before.'

- b. */??Jeg har aldri gitt menneske grøt før.
 I have never given person oatmeal before
 'I have never given a person oatmeal before.'

(29) a. Han bygger hytte.

he builds hut
 'He is building a hut.'

b. */??Han bygger bygning.

he builds building
 'He is building a building.'

Different kinds of bare singulars can occur in the postverbal positions in (27)-(29), but as shown in (27)-(29) bare singulars with too general denotations are disfavored. Again, this holds for both predicative and nonpredicative bare singulars.⁵⁷

Next, take a look at the data in (33)-(35).

(33) a. ??Kari er fregnete ballettdanserinne.

Kari is freckled ballerina
 'Kari is a freckled ballerina.'

b. Det er ikke lett å være fregnete ballettdanserinne i disse dager.

it is not easy to be freckled ballerina in these days
 'It is not easy to be a freckled ballerina these days.'

(34) a. ??Per synger i hengekøye.

Per sings in hammock
 'Per is singing in a hammock.'

b. Det er ikke lett å synge i hengekøye.

it is not easy to sing in hammock
 'It is not easy to sing in a hammock.'

⁵⁷ It was shown in chapter 2, section 2.11, that all bare singulars, regardless of the construction that licenses them, are restricted to have a certain minimum of descriptive content. The reason why I mention the restriction on descriptive content again, is that the construction that licenses the bare singulars in (27)-(29) is even more restrictive on this point than what is generally the case for bare singulars.

- (35) a. ??Per gir baby grøt.
 Per gives baby porridge
 'Per is giving a baby porridge.'
- b. (?)Det er ikke lett å gi baby grøt under slike forhold.
 it is not easy to give baby porridge under such conditions
 'It is not easy to give a baby porridge under such conditions.'

What we see here is that the acceptability of both predicative and non-predicative bare singulars is promoted in generic sentences that generalize over situations, where the bare singular is part of the string that describes the type of situation being generalized over.

Finally, consider the examples in (36) and (37).

- (36) a. ??Denne pinnen er paraply.
 this stick is umbrella
 'This stick is an umbrella.'
- b. Denne pinnen er liksom paraply i denne leken.
 this stick is in-a-way umbrella in this game
 'Let's pretend this stick is an umbrella in this game.'
- c. ??Kari er engel.
 Kari is angel
 'Kari is an angel.'
- d. Kari er engel i dette skuespillet.
 Kari is angel in this play
 'Kari is an angel in this play.'
- (37) a. ??Jeg sov i bagasjerom.⁵⁸
 I slept in luggage-compartment
 'I slept in a luggage compartment.'
- b. Den verste delen av testen var å sove i bagasjerom.
 the worst part-DEFSUFF of test-DEFSUFF was to sleep in luggage-compartment
 'The worst part of the test was to sleep in a luggage compartment.'
- c. ??Per sang i hengekøye.

⁵⁸ This noun has the same form in singular and plural. It is the singular version that is intended in (37a).

Per sang in hammock

'Per sang in a hammock.'

- d. Per opptrådte også denne gangen med å synge i hengekøye.

Per performed also this time by singing in hammock

'Per performed also this time by singing in a hammock.'

(36) and (37) illustrate that the acceptability of predicative and nonpredicative bare singulars is supported in contexts that refer to socially governed activities or states.

To sum up, then, we see that predicative and nonpredicative bare singulars are equally acceptable if they occur in verb phrases that describe the same kind of situation. They are furthermore sensitive to modification in the sense that they tend to disfavor denotations that are too specific, and they also disfavor denotations that are too general. Both predicative and nonpredicative bare singulars are furthermore promoted in generic sentences that generalize over situation types, where the bare singular is part of the string that describes the situation type being generalized over, and they are promoted when they are part of a string that refers to a socially organized situation, like e.g. a game, a play, a test, or a performance.

In other words, the behavior of the predicative and non-predicative bare singulars in (1)-(37) above is remarkably similar - and indeed surprising - if we assume that they are subject to different sets of restrictions, as previously suggested. Let us therefore tentatively assume that they are not.

6.2 The 'conventional situation type'-construction

6.2.1 *The construction definition (first version)*

I propose that both the predicative and non-predicative bare singulars in (1)-(37) have to satisfy the requirements in (40).

(40) *Construction 1: The 'conventional situation type'-construction (FIRST VERSION)*⁵⁹

1. A bare singular can occur in Norwegian if it is part of a string that designates a *conventional situation type*.

⁵⁹ The final version of the construction definition will be given in section 6.9 in this chapter.

2. A *conventional situation type* is a property, state, or activity that occurs frequently or standardly in a given contextual frame (e.g. in the macro social frame) and has particular importance or relevance in this frame as a recurring property-, state-, or activity type.

This construction definition is clearly inspired by e.g. Asudeh and Mikkelsen (2000), Kiefer (1994), Faarlund et al. (1997), and Western (1921), since these authors have pointed out that many bare singulars are part of verb phrases that refer to institutionalized or common events, and/or constitute a semantic unit together with the predicate that selects for them. It is also inspired by the generalization made by Mithun (1984) regarding conditions for certain types of noun incorporation.

6.2.2 *Contextual implications*

The definition of a conventional situation type in (40) is formulated in such a way that a situation type doesn't need to be either clearly conventional or clearly non-conventional; in-between-cases also occur. This means that the linguistic and non-linguistic context will often determine whether a string with a bare singular can be seen as referring to a conventional situation type or not.

One particularly prominent and frequently relevant contextual frame for human communication, is the macro social frame. For Norwegian, this means the Norwegian society. In this frame, human beings are categorized relative to certain properties. Job, political affiliation, and religion, for instance, are all important properties of individuals because the society or community is organized in terms of these properties; rules make reference to them, money is being distributed according to them, and people are listed and kept track of according to them. On the other hand, being or not being - let's say - a splendid chap, a little boy, or a boring woman, for instance, might be of importance to these individuals' friends, but in the macro social frame these properties are irrelevant; no rules refer to them, no money is being distributed according to them, and presumably no lists of splendid chaps, little boys, or boring women exist anywhere in the system.

Macro social relevance need not entail as drastic effects as those described above, though. A macro socially relevant activity, for instance, can be said to belong to a pre-established set of

activities that people standardly fill their lives with in the given society (regardless of whether these activities are "kept track of" or not).

Situations that can be referred to with strings containing bare singulars due to the construction in (40), can be divided into two main groups: 1) Situation types that due to the macro social structure have macro social relevance, and 2) situation types that are standard and relevant in a more local context. Whereas the first group is more or less stable (for speakers of the same language in the same society), the last group is context dependent and thus an important source of productivity for the construction in (40). Since the macro social frame is implicitly a background frame for most communication within a certain language, we expect (40) to license strings that refer to macro socially relevant conventional situation types more easily than conventional situation types that are relevant in more local contexts. As for acceptability judgments, the former examples will presumably appear as being well-formed "without any particular context", whereas the latter examples will either require a special context setting, or else some imaginative force on behalf of the reader or hearer in order to be judged as well-formed.

To take an example, let us assume that I break a cup every day and bake a cake twice a year, and that yesterday, I did both. The former activity occurs more often than the latter and breaking a cup has greater importance and relevance than baking a cake as an isolated event. Still, if someone who doesn't know me asks me what I did last night, I can use a bare singular as part of the string that refers to the baking of the cake, but not to the breaking of the cup. In other words, baking a cake is immediately regarded as a conventional situation type, whereas breaking a cup is not, since baking a cake is one of those standard activity types that deliberately and regularly takes place in a Norwegian household, whereas breaking a cup is an accidental happening that just isn't supposed to take place on a regular basis. However, if someone is aware of the fact that I break a cup every day, and thus accepts that this activity type belongs to the basket of "possible activities of the day", then it may be plausible to mention, among the things performed yesterday, that I broke a cup, and refer to this situation type by using a bare singular in accordance with (40). This illustrates the difference between situation types that are standard and relevant in a larger contextual frame (i.e. in the macro social frame) and those that are standard and relevant only in more local, and thus marginal, contexts.

6.3 Some resolved puzzles

6.3.1 *Explanations for the data in section 6.1*

Let us now look at the data we started out with in section 6.1 above and see if (40) provides reasonable explanations for them.

The first thing we saw in section 6.1 was that predicative and non-predicative bare singulars are equally acceptable in verb phrases that describe equal or similar types of situations. This follows directly from (40): The bare singulars are acceptable because they are part of a string that designates a conventional situation type. Thus, syntactic position is not expected to make a difference as long as the bare singular is part of a string that has the right type of meaning.

Another thing we saw in section 6.1 was that predicative and non-predicative bare singulars often become less acceptable when they are modified by adjectives. A reasonable explanation for this is that modification makes the denotation of a nominal phrase more specific and therefore more situation bound. This will often mean that the situation type that the phrase's denotation is part of becomes less standard or regular, and therefore less probably conventional in the sense given in (40).

The third similarity between predicative and non-predicative bare singulars that we observed in section 6.1 was that these phrases tend to disfavor too general denotations. This can also be attributed to (40). General denotations of bare singulars may make the situation type they are part of so frequent and general that it becomes trivial and therefore quite likely irrelevant in a given frame.

Next, it was shown that the acceptability of predicative and non-predicative bare singulars is promoted in generic sentences that generalize over situation types, where the bare singular's denotation is part of the situation type being generalized over. Also this is in accordance with (40), since it is impossible to express a generalization over a type of situation unless this situation type has occurred more than once, preferably quite frequently or standardly. Since conventional situation types as defined in (40) are also supposed to occur frequently or standardly, generic statements of this type presuppose exactly the kind of context that is needed for a bare singular to be licensed through (40). It is therefore as expected that such generic statements may promote the use of a bare singular.

Finally, we saw that the acceptability of both predicative and non-predicative bare singulars is improved when they occur in sentences that explicitly refer to situations like

plays, games, tests, and performances. This is also something we might expect from (40), since such situations create their own socially governed contextual frame where certain properties, states, and activities occur standardly and with particular relevance. Thus, it is not surprising that a situation type is more likely to be regarded as conventional if it is explicitly presented as a play, game, test, or performance, than if it is not.

In other words, (40) can explain why the wellformed sentences in (1)-(37) are wellformed, and why the relatively illformed examples cannot (that easily) be licensed by (40). In contrast to the previous literature on Norwegian bare singulars, the present approach assumes that the constraints that restrict bare singulars in predicative position licensed by (40) also hold for bare singulars in argument positions.

6.3.2 *Different denotations of predicative and non-predicative bare singulars*

It has been noticed in the previous literature that Norwegian predicative bare singulars tend to denote macro socially relevant properties of human beings, whereas non-predicative ones typically denote things. This claim is also supported by the data we have looked at so far. The question is why this is so.

Predicative bare singulars (typically) co-occur with the copular verb, which is a verb that carries very little semantic content, if anything at all. According to (40), bare singulars ought to be part of a string that denotes a conventional situation type. Given the semantic poverty of the copular verb, this means that the requirement for denotation of a conventional situation type will hold for the bare singular *alone* when the bare singular is predicative. Given that most conventional situation types are macro socially relevant, as well as true of humans (as argued in section 6.2.2 above) it follows that we typically get predicative bare singulars of the type *lærer* ('teacher'), *bilist* ('car driver'), and *hundeeier* ('dog owner'), since these nouns denote human properties with macro social relevance. As for the non-predicative bare singulars, these combine with contentful predicates, and therefore don't need to denote conventional situation types alone. Thus we typically get bare singulars of the type *skole* ('school'), *bil* ('car'), and *hund* ('dog').

Notably, there is nothing in (40) that *rules out* either nonhuman predicative bare singulars or human bare singular arguments. That non-predicative bare singulars can denote human beings is illustrated e.g. in (1b), (14b), and (16b) above. That predicative bare singulars can denote non-human properties is shown in (41) below, for instance.

- (41) a. Den fuglen er nok insektseter.
 that bird-DEFSUFF is probably insect-eater
 'That bird is probably an insect eater.'
- b. Det er kjedelig å være drøvtygger.
 it is boring to be cud-chewer
 'It is boring to be a ruminant.'

6.3.3 *The effect of presuppositional contexts*

Another fact that has not been satisfactorily accounted for earlier is that Norwegian predicative bare singulars that co-occur with the copular particle *som* ('as') tend to be more easily acceptable than comparable examples with bare singulars following the copular verb. This is illustrated in (42).

- (42) a. ??Per er liten gutt.
 Per is little boy
 'Per is a little boy.'
- b. Som liten gutt fikk Per mye juling.
 as little boy got Per much beating
 'As a little boy Per was beaten a lot.'

This fact is surprising given the reasonable assumption that the copular particle *som* ('as') has the same semantics as the copular verb *være* ('be') (see Eide, 1996). Interestingly, (43) below, that has almost the same meaning as (42b) but expresses this meaning by use of the copular verb instead of the copular particle, is also perfectly well-formed.

- (43) Da Per var liten gutt fikk han mye juling.
 when Per was little boy got he much beating
 'When Per was a little boy he was beaten a lot.'

This indicates that it is not the particle *som* ('as') per se that causes the difference in acceptability between (42a) and (42b), but rather the meaning of the *som*-clause and/or the

matrix clause. As pointed out by Eide (1996), *som*-clauses may have a temporal function. Now, looking closer at (42b) and (43), one thing these sentences have in common is that the bare singular occurs in a clause that has a temporal adverbial function. Going back to Frege (1892/1952), and as argued later in e.g. Heinämäki (1972), temporal subordinate clauses are known to *presuppose* their propositional content. That is, the propositional content is taken as an already known premise for what else is expressed in the sentence.

As illustrated in (44) below, Norwegian bare singulars are also promoted in other presuppositional contexts than temporal clauses.

(44) a. ??Jeg traff en jente som er fregnete ballettdanserinne.

I met a girl who is freckled ballerina

'I met a girl who is a freckled ballerina.'

b. ?Jeg traff hun jenta som er fregnete ballettdanserinne.

I met she girl-DEF who is freckled ballerina

'I met that girl who is a freckled ballerina.'

As argued first by Strawson (1950), definite nominal phrases presuppose their descriptive content, whereas indefinite nominal phrases do not. As you can see, the bare singular in (44b), that is part of a definite and thus presuppositional phrase, is more acceptable than the one in (44a), that is part of an indefinite, and thus non-presuppositional phrase.

Generalizing from the data in (42), (43), and (44), I will claim that Norwegian bare singulars that are licensed by (40) are promoted in presuppositional contexts. But what is it about presuppositional contexts that causes this effect?

Levinson (1983) says that it is propositions that may be presupposed, and that if a proposition is presupposed, then the speaker and the hearer are assumed to have some shared knowledge or representation of it at the time of the utterance, because the proposition functions as a background assumption against which the main import of the utterance is to be assessed. If we assume with Levinson that what is presupposed is a proposition in the strict truth-conditional sense, then it is hard to explain the effect that presuppositional contexts have on the use of Norwegian bare singulars, since there is usually no truth-conditional difference between a sentence containing a bare singular and a sentence containing a corresponding *a*-expression.

On the other hand, if we assume that presuppositions not only include propositions in the truth-conditional sense, but are more generally *pieces of information* that function as

background assumptions against which the main import of an utterance is to be assessed, then we can account for the data in (42), (43), and (44). What is presupposed in these examples is not only that Per has been a little boy and that there exists a girl who is a freckled ballerina, but also the motivation for the use of a certain linguistic form. More specifically, the occurrence of a bare singular in a presuppositional context implies that it is already taken as a premise that the given string containing a bare singular denotes a conventional situation type. This may convince the audience that the use of the bare singular is justifiable (regardless of whether the hearer has this knowledge on beforehand or not) and the string containing the bare singular will be conceived of as more acceptable than if it occurred in a non-presuppositional context.

An additional factor that probably also is part of why e.g. (42b) and (43) are better than (42a), is the richer semantic content of these sentences, which supports that being a little boy is a particularly relevant property in the given context. This additional semantic content may also express a generic statement over situation types, which independently promotes the use of a bare singular, as argued in section 6.3.1 above.

Thus, if we go back to the question we started out with in connection with (42), the reason why bare singulars that occur after the copular particle *som* ('as'), are very likely to be acceptable, is partly that the *som*-clause presupposes its content (including the assumption that the use of a bare singular is justifiable), partly that the rest of the sentence provides information that may support this presupposition. Neither of these conditions hold for bare singulars in common copular sentences like (42a).

Notably, a presuppositional context is by no means a sufficient condition for the acceptability of a Norwegian bare singular licensed by (40), but it is a factor that can improve the acceptability of a bare singular that is not too far away from obeying (40).

6.3.4 Possible effects of subjects

Let us now consider some examples that we mentioned in chapter 4 as unsolved problems for the previous literature on Norwegian bare singulars. First, take a look at the examples in (45).

- (45) a. */??Dette dyret er insektseter.
 this animal-DEFSUFF is insect-eater
 b. Dette dyret er en insektseter.

this animal-DEFSUFF is insect-eater

'This animal is an insect eater.'

- c. */??Dette mennesket er kvinne.

this human-being-DEFSUFF is woman

- d. Dette mennesket er en kvinne.

this human-being-DEFSUFF is a woman

'This human being is a woman.'

Faarlund et al. (1997) have problems explaining why the examples in (45) are illformed, since the predicative bare singulars intuitively assign the subjects more or less permanent properties as members of a category, which is exactly what predicative bare singulars are supposed to, according to Faarlund et al.

It is obvious that the predicative bare singulars in (45) themselves are not ruled out. The bare singular in (45a) is perfectly acceptable with another subject in (41a), and the bare singular in (45c) is fine, or at least better, in the examples below.

- (46) a. Som kvinne har Kari krav på egen garderobe.

as woman has Kari right on own wardrobe

'As a woman, Kari has the right to having her own wardrobe.'

- b. ?Kari er kvinne.

Kari is woman

'Kari is a woman.'

I believe the illformedness of the examples in (45) appears because of the relatively poor descriptive content of the subjects, and the more rich descriptive content of the predicative phrases. This points in the direction that these sentences are intended to be identity statements (on the token level, since the subject is referential), rather than sentences referring to conventional situation types. As argued in chapter 2, Norwegian bare singulars can never occur in identity statements on the token-level.

6.3.5 *Why adjectives are sometimes necessary*

In spite of the tendency for bare singulars licensed by (40) to not be modified by adjectives, Faarlund et al. (1997) provide an example where the presence of an adjective is strictly necessary for the bare singular to be acceptable. This example is repeated below.

- (47) a. Tvert imot kunne han tilbringe halvttimevis der inne bak låst dør
crosswise against could he spend half-hours-wise there in behind locked door
'On the contrary, he could spend hours in there behind a locked door.'
- b. *Tvert imot kunne han tilbringe halvttimevis der inne bak dør
crosswise against could he spend half-hours-wise there in behind door

Faarlund et al. offer no explanation for this. But (40) may throw some new light on these data. Closing a door and sitting behind it (i.e., in the room) is part of the common social etiquette, as it is a common and acceptable way of behavior with certain agreed-upon signals. Sitting behind an open door, on the other hand, (and e.g. hiding behind it), is indeed not, as it is obviously an activity mostly appreciated by children and lunatics. In other words, the data in (47) follows from (40), since to sit behind a closed door makes more sense as a conventional situation type than to sit behind a door, be it open or not.

6.3.6 *Why deverbal nominals are particularly acceptable*

A quite striking and seemingly mysterious fact concerning Norwegian bare singulars is that they often combine more naturally with deverbal nominals than with these nominals' verbal correspondences. This is illustrated in (47).

- (47) a. ?Per rengjør sofa.
Per cleans sofa
'Per is cleaning a sofa.'
- b. Rengjøring av sofa medfører store støvmengder.
cleaning of sofa involves huge dust-amounts
'Cleaning a sofa involves huge amounts of dust.'
- c. ?Per triller handlevogn.

Per rolls trolley

'Per is rolling a trolley.'

- d. Trilling av handlevogn er god trim.

rolling of trolley is good exercise

'To roll a trolley is good exercise.'

Fortunately, we are now in the position to offer an explanation for this. Notice that (47bd) are generic statements that generalize over situation types, where the bare singular's denotation is part of the situation type being generalized over. Assuming (as in section 6.3.1 above) that such generic statements presuppose that the type of situation referred to takes place regularly or standardly, which is also a property of conventional situation types, it is not surprising that such statements ring well with the use of a bare singular. As expected, the effect of nominalization disappears as soon as it is not embedded in a generic statement over situation types.

6.4 Syntactic properties

6.4.1 Lack of adjacency

The definition in (40) says that Norwegian bare singulars are licensed if they are part of a *string* (i.e. a continuous string of words) that refers to a conventional situation type. As the alert reader will already have suspected, this claim is a gross approximation. Consider the following examples:

- (48) a. Per jobber neppe i butikk.

Per works hardly in store

'Per hardly works in a store.'

- b. Nudist, det har han bestandig vært.

nudist, that has he always been

'A nudist, he has always been.'

- c. Aker Per på akebrett?

sleds Per on sled

'Is Per sledding?'

- d. Mona er helt sikkert ikke medlem.
Mona is completely sure not member
'Mona is definitely not a member.'

What is the conventional situation type in (48a) and (48d) is not to *hardly* work in a store or to *definitely not* be a member, but to work in a store and to be a member, respectively. And in (48b) and (48c) we want to say that the main verb and the bare singular together denote the conventional situation type even though they do not constitute a continuous string of words. What we probably want to say is something like the following:

(49) *Construction 1: The 'conventional situation type'-construction (SECOND VERSION)*⁶⁰

1. A bare singular can occur in Norwegian if it is selected by a predicate and together with this predicate (and possibly other selected elements) designates a *conventional situation type*.⁶¹
2. A *conventional situation type* is a property, state, or activity that occurs frequently or standardly in a given contextual frame (e.g. in the macro social frame) and has particular importance or relevance in this frame as a recurring property-, state-, or activity type.

The reference to selectional relations instead of strings correctly predicts that a sentential adverb, for instance, may intervene between a predicate and a bare singular licensed by the 'conventional situation type'-construction without affecting the acceptability of the bare singular. More generally, (49) predicts that word order in principle is irrelevant.

6.4.2 *Bare singulars in prepositional phrases*

When a Norwegian bare singular occupies the position following a preposition, also the verb that the prepositional phrase combines with is likely to be interpreted as part of the conventional situation type. For instance, in (50a) below, the conventional situation type is to sleep in a hammock, not just to be in a hammock. In (50b), the conventional situation type is

⁶⁰ The final version of the construction definition will be given in section 6.8 in this chapter.

⁶¹ 'Selected by a predicate' is here used in a very wide sense. For instance, I assume that subjects as well as objects are selected, and that the copular verb selects its postverbal nominal.

to live in an apartment, not just to be in one. And whereas to call from a phone box is a conventional situation type, jumping from one is not, for instance. This is illustrated by the contrast between the wellformed examples in (50abc) and the relatively illformed examples in (50cde).

- (50) a. Per sov i hengekøye.
Per slept in hammock
'Per slept in a hammock.'
- b. Kari bor i leilighet.
Kari lives in apartment
'Kari lives in an apartment.'
- c. Han ringte fra telefonkiosk.
he called from telephone-kiosk
'He called from a phone box.'
- c. ??Per er i hengekøye.
Per is in hammock
- d. ??Kari er i leilighet.
Kari is in apartment
'Kari is in apartment.'
- e. ??/*Han hoppet fra telefonkiosk.
he jumped from telephone-box
'He jumped from a telephone box.'

However, prepositional phrases may denote conventional situation types all by themselves as well, as illustrated in (51) below. Here, the conventional situation types are to be at a birthday party, to be on camp, and there being a fire, respectively.

- (51) a. I bursdagsselskap kan man spise så mye kake som man vil.
in birthday-party can one eat as much cake as one wants
'(When one is) at a birthday party one can eat as much cake as one wants.'
- b. Den første uka i leir var kummerlig for kosovoalbanerne.
the first week in camp was miserable for cosovo-albanians-DEFSUFF
'The first week (when they were) on camp was miserable for the Cosovo Albanians.'

[NOD, 20]

- c. Ved brann må man alltid forlate bygningen.
at fire must one always leave building-DEFSUFF
'When there is a fire, one always has to leave the building.'

The well-formed examples in (51) can be contrasted with the (relatively) unacceptable ones in (52).

- (52) a. ??I telefonkiosk kan man gjøre som man vil.
in telephone-box can one do as one wants
'(When one is) in a telephone box, one can do as one wants.'
b. ??/*Kari spiste kake i bursdagsselskap.
Kari eat cake in birthday-party

A bare singular that occurs inside a prepositional phrase that denotes a conventional situation type all by itself, typically denotes an eventive entity, as illustrated by the contrast in acceptability between the examples in (51) and the one in (52a), for instance. Again, the question is whether or not the predicate that selects the bare singular (i.e. the preposition) and the bare singular together denote a conventional situation type. To be in a phone box is a less conventional situation type than to be at a birthday party. Just as with earlier examples we have looked at, it is expected that generic statements that generalize over situation types will promote the use of bare singulars. This expectation is borne out, as illustrated by the contrast between (51a) (that is generic) and (52b) (that is not generic).

6.4.3 *Bare singulars in existential sentences*

Notice that (49) licenses bare singulars in existential sentences as well:

- (53) a. Det er fest (hos Kari).
it is party (with Kari)
'There is a party (at Kari's).'
b. Det er brann (i naboileiligheten).
it is fire (in neighbor-apartment-DEFSUFF)

'There is a fire (next door).'

- c. Senere blir det liten kuling.

later becomes it little breeze

'Later there will be a strong breeze.' [NOD, 9]

- d. *Det er lærer.

there is teacher

'There is a teacher.'

We will see later (e.g. in chapter 7) that there are other constructions that allow for bare singulars in existential sentences as well. One thing that is special with bare singulars in existential sentences licensed by the 'conventional situation type'-construction in (49) is that there need not be any locative phrase present in the sentence, and if there is one, the conventional situation type does not include this location. The noun in such an existential sentence has to be event-denoting, as illustrated by the contrast between (53abc) and (53d).

6.4.4 *Indirect objects*

When a Norwegian bare singular occurs as an indirect object in accordance with (49), also the direct object has to be interpreted as part of the conventional situation type. In other words, the verb, the indirect object, and the direct object together denote the conventional situation type. This makes sense, since the verb and the indirect object never constitute a meaning corresponding to a reasonable conventional situation type, as far as I can see. Some examples of bare singular indirect objects are given in (54).

- (54) a. ?Har du gitt kalv melk før?

have you given calf milk before

'Have you tried to feed a calf with milk before?'

- b. ?Jeg har aldri gitt undulat akupunkturbehandling før.

I have never given canari acupuncture-treatment before

'I have never given a canari acupuncture treatment before.'

- c. ?Det er ikke lett å gi baby grøt.

it is not easy to give baby porridge

'It is not easy to give a baby porridge.'

Bare singular indirect objects are rare, though, and as signaled by the question marks in (54), they are never perfectly natural. I believe that one reason for this is that the situation type denoted by a ditransitive verb, its direct object, and its indirect object is very complex. Therefore, it is unlikely that it is conventional in the sense of (49). In addition, the token discourse referent of an indirect objects tends to be referential (see e.g. Erteschik-Shir, 1979), which means that bare singulars are unlikely to be indirect objects regardless of the 'conventional situation type'-construction.

6.4.5 *Subjects*

As the 'conventional situation type'-construction is presently stated (and intended to be interpreted) in (49), there is no general restriction against bare singular subjects. All that is stated in (49) is that the bare singular needs to denote a conventional situation type together with a predicate that selects it (and I assume that subjects are selected). But the question of whether (49) should license bare singular subjects needs to be considered with carefulness.

The data in (55) and (56) suggest that bare singular subjects should not be licensed by (49).⁶²

- (55) a. Lammet ble spist av ulv.
lamb-DEFSUFF was eaten by wolf
'The lamb was eaten by a wolf.'
- b. *Ulv spiste lammet.
wolf eat lamb-DEFSUFF

- (56) a. Per leste avis.
Per read newspaper
'Per was reading a newspaper.'
- b. *Avis ble lest av Per.

⁶² Even though the b-sentences in (55) and (56) would have been acceptable with a-expressions instead of bare singulars, the a-sentences of (55) and (56) are preferable to the b-sentences also with a-expressions as subjects. Still, the contrast between the examples in (55) with corresponding sentences with a-expressions is so clear that the illformedness of the sentences in (55b) and (56b) can't merely be due to a tendency in Norwegian for not having an indefinite subject combining with a definite object.

newspaper was read by Per

Since the situation types referred to in the parallel examples in (55) and (56) are presumably the same, whereas the syntactic position of the bare singular is different, these data indicate that the 'conventional situation type'-construction should not license bare singular subjects. We therefore need to revise the construction definition in (49) in order to rule out subjects. This is done in (57), as the term 'complement' is only intended to apply to non-subjects.

(57) *Construction 1: 'The conventional situation type'-construction:*⁶³

1. A bare singular can occur in Norwegian if it is selected as a complement by a predicate and together with this predicate (and possibly other selected elements) designates a *conventional situation type*.
2. A *conventional situation type* is a property, state, or activity that occurs frequently or standardly in a given contextual frame (e.g. in the macro social frame) and has particular importance or relevance in this frame as a recurring property-, state-, or activity type.

6.5 More data

Even though many puzzles have been solved with the construction definition in (49), not all relevant data are accounted for yet. In this section we will see a number of arguments that all suggest that the bare singulars looked at in this chapter in many ways are interpreted as if they constitute a lexicalized unit with the predicate(s) they co-occur with, much like a compound. In other words, bare singulars licensed by the 'conventional situation type'-construction behave almost exactly like Kiefer (1994) and Asudeh and Mikkelsen (2000) have described it for Hungarian and Danish syntactic noun incorporation. At the end of the chapter, I will revise the construction definition according to the new observations.

⁶³ The final version of the construction definition will be given in section 6.9 in this chapter.

6.5.1 Multi-word expressions with bare singulars

As pointed out by e.g. Faarlund et al. (1997), there are numerous idiomatic, or lexicalized, expressions containing bare singulars in Norwegian. That is, bare singulars often occur together with one or more predicate(s), where the meaning and possibly also the syntax of these words as a unit cannot be deduced from the meaning and syntax of the individual words and the way they are put together. Therefore, the combination of these elements (and exactly these) has to be represented lexically, i.e. as a multi-word expression. When bare singulars are part of a multi word lexical entry, the meaning of the word combination is typically a specialized meaning of the corresponding transparent meaning that can be expressed by substituting the bare singular with an a-expression. Some examples of this type are given in (58).

- (58) a. gå i kloster
go in monastery
'become a monk'
- b. kaste diskos
throw discos
'throw the discos'
- c. stå i butikk
stand in store
'work in a store'
- d. vente barn
expect child
'be pregnant'
- e. ligge på kne
lie on knee
'kneel' [HM, 73]

(58a), for instance, does not only mean to go in a monastery; it means to become a monk. Similarly, (58c) does not mean to stand in a store, but to work in a store. Thus, the meaning of the verb-noun or verb-preposition-noun combinations in these examples cannot merely be deduced from the meaning of the predicate(s) and the noun, even though the meaning is clearly

connected to the corresponding transparent meaning that one gets when an a-expression is inserted instead of the bare singular.

In other cases, also the syntax of the verb-noun combination is unexpected in the sense that a corresponding a-expression cannot occur. This is illustrated in (59). Here, we have supposedly intransitive verbs combining with bare singulars. Also in this case the meaning of the complex is related to the meaning of its parts, even though it is not fully derivable from these parts alone.

- (59) a. gå julebukk
go christmas-goat⁶⁴
b. stå brud
stand bride
'be a bride/get married'
c. hoppe tau
jump rope
'skip' [HM, 18]

Adjectives can be inserted in some of the examples in (58) and (59), but only to a very limited degree. The nominals can also be moved (e.g. topicalized) and sentential adverbs can intervene between the verb and the nominal.

In yet other cases, illustrated in (60) below, the meaning of a combination of a verb and a bare singular is only marginally connected to the meaning of the individual parts. Insertion of an adjective or e.g. topicalization of the nominal is impossible, whereas sentential adverbs may intervene between the verb and the bare singular.

- (60) a. ta fatt på
take grasp on
'begin'
b. slå følge
hit company

⁶⁴ 'Go christmas-goat' is a tradition similar to the Halloween tradition, where children (as well as some playful adults) wear costumes and walk from house to house, possibly singing, and possibly getting some candy from their audience. This takes place just after Christmas, and a person participating in this tradition, is a 'Christmas-goat'.

'join'

Common to all the examples in (58)-(60) is that the group of words is conceived of as a semantic unit that just as well could have been expressed by one verb. The group of words also forms a phonological unit (i.e. the verbs strongly tend to be unaccented whereas the accent falls on the noun). This does not hold for corresponding examples where a-expressions are inserted instead of the bare singulars.

6.5.2 *Information structure*

Bare singulars that are licensed by the 'conventional situation type'-construction (and not lexicalized) can (in principle) occur as topic expressions, as well as being part of a sentence's rhematic domain.⁶⁵ However, when their denotation is part of a sentence's rhematic domain, the most natural context that comes to mind is that *all* the elements that designate the conventional situation type are part of the sentence's rhematic domain and not just the bare singular. This point is illustrated in (59), (60), and (61), where the b-sentences are the questions that the a-sentences are the most natural answers to.

- (59) a. Hun ble angrepet av ulv.
she was attacked by wolf
'She was attacked by a wolf.'

b. What happened to Kari?

- (60) a. Hun sov på madrass.
she slept on mattress
'She slept on a mattress.'

b. How did Kari spend the night?

- (61) a. Hun leser avis.
she reads newspaper

⁶⁵ By 'information structure' I mean a division of a sentence's content into what has been called focus versus ground, comment versus topic, or rheme versus theme. See e.g. Vallduví (1990) and Gundel (1999) for a more detailed discussion of related terminological and conceptual issues.

'She is reading a newspaper.'

b. What is Kari doing?

It is not impossible that a bare singular of this type constitutes the sentence's rhematic domain alone, but the contexts suggested in (59b)-(61b) are particularly likely, and more likely than if corresponding a-expressions occupied the positions of the bare singulars. This supports the claim made by e.g. Faarlund et al. (1997) and Western (1921) that (some) bare singulars form a semantic unit together with their selecting predicate.

6.5.3 *Antecedenthood*

We have already seen in chapter 2, section 2.8, that bare singulars in principle are poorer antecedent candidates for token anaphors than what corresponding a-expressions are, whereas they in principle are good antecedent candidates for the type anaphor. Bare singulars licensed by the 'conventional situation type'-construction in (57) are a bit special in that they tend to be less acceptable as antecedents of the type-anaphor than other bare singulars. Their relative lack of suitability for being antecedents of the type anaphor is illustrated in (62).

- (62) a. Ola bygger *hytte*. (?)*Dét* bygger jeg og.
Ola builds cottage. that-NEUT builds I too
'Ola is building a cottage. That I am building as well.'
- b. Kari sov i *hengekøye*. (?)*Dét* sov jeg i og.
Kari slept in hammock. it slept I in too
'Kari slept in a hammock. That I slept in as well.'

The preferred way of expressing the content in the text fragments in (62), is shown in (63).

- (63) a. Ola bygger *hytte*. *Dét* gjør jeg og.
Ola builds cottage. that do I too
'Ola is building a cottage. That I am too.'
- b. Kari sov i *hengekøye*. *Dét* gjorde jeg og.
Kari slept in hammock. that did I too
'Kari slept in a hammock. That I did too.'

Here, the whole verbal complex is referred to by the anaphoric complex expression *gjøre det* ('do that'). Since the anaphor in (62) is only used to refer to aspects of the bare singular, whereas the anaphoric expression in (63) is used to refer to the content of the whole verb phrase, this again points in the direction that these bare singulars and their selecting predicates are most comfortable with a context that suggests that they form a semantic unit.

6.5.4 *Number*

As shown previously in chapter 1, section 1.2, and chapter 3, section 3.4, Norwegian bare singulars are clearly singular from a syntactic point of view. First of all, the noun doesn't have a plural suffix. Secondly, noun phrase internal adjectives always have to have singular inflection. And thirdly, predicative bare singulars require a singular subject.

However, sometimes when Norwegian bare singulars are part of strings that refer to conventional situation types, and there is a possibility for inferring several events of the given situation type, the number specification seems absent or at least bleached in some cases. (64) illustrates this.

- (64) a. Jeg kjørte bil til jobben i dag, selv om jeg måtte kjøre tre stykker for å nå fram.
I drove car to work-DEFSUFF in day, even if I had-to drive three ones for to reach ahead
'I drove to work today, even though I had to drive three cars to get there.'
- b. #Jeg kjørte en bil til jobben i dag, selv om jeg måtte kjøre tre stykker for å nå fram.
I drove a car to work-DEFSUFF in day, even if I had-to drive three ones for to reach ahead
'I drove a car to work today, even though I had to drive three cars to get there.'

Whereas (64b) is conceived of as contradictory with respect to the number of cars, (64a) is not. A similar effect is illustrated in (65).

- (65) a. Per har hatt hund i ti år. Alle har vært svært snille.
Per has had dog in ten years. all have been very kind
'Per has been a dog-owner for ten years. They all have been very kind.'

- b. Per har hatt en hund i ti år. #Alle har vært svært snille.'
Per has had a dog in ten years. all have been very kind
'Per has had a dog for ten years. They all have been very kind.'

Whereas (65b) means that Per had the same dog for ten years, (65a) doesn't necessarily involve just one dog, as the plural nominal *alle* ('all') shows.

In other words, both the data in (64) and (65) seem to suggest that (some) bare singulars can have a plural interpretation, as well as a singular one. Alternatively, one may argue that they are underspecified for number.

Now, compare (64a) with (66) below and notice that bare singulars do not license plural anaphoric *pronouns* (at least not easily).

- (66) Jeg kjørte bil til jobben i dag, #selv om de gikk i stykker.
I drove car to work-DEFSUFF in day, even if they went in pieces
'I drove to work today, even though they broke down.'

This fact suggests that the plural nominal in (64a) is a so-called *inferrable* (see Prince, 1981). Inferrables are nominal expressions whose interpretation is inferred via logical or plausible reasoning from participants not explicitly mentioned in the previous discourse. While pronominal inferrables do occur, they are rare (see e.g. Gundel, Hedberg, and Zacharski, 1993).⁶⁶ If the plural nominal in (64a) is an inferrable, which it seems to be, then it doesn't need to have either a plural or a number underspecified antecedent, since it doesn't need a nominal antecedent at all.

The assumption that the anaphoric nominals in (64a) and (65a) are inferrables is supported by the data in (67) below. These examples show that verbs or nouns that have approximately the same meaning as the combinations of verbs and bare singulars in (64) and (65), also license inferrables.

- (67) a. Jeg bilte til jobben i dag, selv om jeg måtte kjøre tre stykker for å komme dit.
I car-drove to work-DEFSUFF in day, even if I had-to drive three ones for to reach
ahead

⁶⁶ Gundel, Hedberg and Zacharski (1993) argue that referents of inferrables are rarely in current center of attention. Since referents of pronouns must be in the current center of attention to be used felicitously, it follows that inferrables will (typically) not be realized as pronouns.

'I drove to work today, even though I had to drive three of them to get there.'

b. Per har vært hundeeier i ti år, men tre av dem har dødd.

Per has been dog-owner in ten years, but three of them have died

'Per has been a dog owner for ten years, but three of them have died.'

In this case, there is no separate nominal antecedent available at all; still the text fragments are just as coherent as those in (64) and (65). Thus, it is also possible that the anaphors in (64) and (65) do not have nominal antecedents that are coreferential with them.

Notably, (68a) and (68c) below are not as coherent as (68b) and (68d).

(68) a. Jeg bilte til jobben i dag, ?selv om jeg måtte dytte den halve veien.

I drove to work-DEF in day, even if I must push it half way-DEF

'I drove to work today, even though I had to push it half the way.'

b. Jeg kjørte bil til jobben i dag, selv om jeg måtte dytte den halve veien.

I drove car to work-DEF in day, even if I must push it half way-DEF

'I drove a car to work today, even though I had to push it half the way.'

c. Per er hundeeier. ??Den er veldig snill.

Per is dog-owner. it is very kind

'Per is a dog owner. It (i.e. the dog) is very kind.'

d. Per har hund. Den er veldig snill.

Per has dog. it is very kind

'Per has a dog. It is very kind.'

The personal pronoun *den* ('it') cannot be used fully felicitously in (68a) and (68c), presumably because it has no direct nominal antecedent and therefore has to be an inferrable, whereas inferrables are seldom personal pronouns. Apparently, the bare singulars in (68b) and (68d) make the token discourse referent more available for reference by a personal pronoun.

Finally, notice that it is only when it is possible to infer several events of the given situation type that the plural-like interpretation of a bare singular is possible. Furthermore, the possibility for a bare singular to license a plural anaphor is only possible with a restricted set of predicates and bare singulars, all exhibiting a relatively high degree of lexicalization. Thus, the text fragments in (69) below are totally incoherent.

(69) a. Per bygger hytte. #Alle tre blir fine.

Per builds cottage. all three become nice

'Per is building a cottage. All three will be nice.'

- b. Kari strikker genser. #Alle tre blir fine.

Kari knits sweater. all three become nice

'Kari is knitting a sweater. All three of them will be nice.'

This makes Norwegian bare singulars different from bare singulars in Brazilian Portuguese, for instance, that were shown to be underspecified for number (Schmitt and Munn, 1999).

To sum up, the bare singulars in (64a) and (65a) in some sense behave as if they are not separate nominals but part of a (complex) verb, since they, like the verb and the compound in (67) and (68), license a plural anaphor when there is a possibility for inferring more than one event. On the other hand, the bare singulars in (64a) and (65a) license a *singular* anaphoric personal pronoun more easily than the verb and the compound in (68) do, which suggests that they should be regarded as separate nominals after all. Finally, the possibility for bare singulars to license a plural anaphor is only possible with certain (lexicalized) combinations of predicates and bare singulars.

6.5.5 Prosodic pattern

If one compares sentences licensed by (57) with corresponding sentences that contain a-expressions, one difference between the sentences has to do with their prosodic realization. Whereas the main verb is usually accented (i.e. carries word accent) when the object is an a-expression, the main verb is usually *unaccented* when the object is a bare singular. This is illustrated in (70).⁶⁷

(70) a. (((²kari-bygger_{AU}) (²HYTTE_{AU}) IP) IU)

Kari builds COTTAGE

'Kari is building a cottage.'

⁶⁷ The intonation notation in (70) is due to Fretheim (1992, 1991, and others). An AU (accent unit) consists of an accentuated syllable with either word accent 1 (which is a low tone), or word accent 2 (which is a high-to-low tone), followed by a sequence of unaccented syllables. The accent unit is terminated by a phrase accent, i.e. a relative rise in pitch for eastern Norwegian. This phrase accent can be either focal (ending in a high pitch) or non-focal (ending in a less high pitch). A focal phrase accent signals the end of an IP (intonational phrase). The highest phonological level in this model is the IU (intonation unit), which consists of one or more IPs.

b. ??(((²kari_{AU}) (²bygger_{AU}) (²HYTTE_{AU}) IP) IU)⁶⁸

c. (((²kari_{AU})(²bygger-en_{AU})(²HYTTE_{AU}) IP) IU)

Kari builds a COTTAGE

'Kari is building a cottage.'

d. (((²kari-bygger-en_{AU}) (²HYTTE_{AU}) IP) IU)

The difference between (70a) and (70b) is that the main verb *bygger* ('builds') in (70a) does not initiate an AU, and therefore does not have word accent, whereas it does introduce an AU, and therefore does have word accent, in (70b). Apparently, the use of a bare singular in (70a) requires, or prefers, that the main verb is unaccented, just as Asudeh and Mikkelsen (2000) describe it for Danish incorporated nominals and Kiefer (1994) describes it for noun incorporation in Hungarian. With an a-expression, on the other hand, the verb can either be accented or unaccented, but tends to be accented (probably since too many unaccented syllables at the beginning of an IU are difficult to articulate). This is illustrated in (70cd). Notably, the difference between (70c) and (70d) has no information-structural effect.

The prosodic effects of bare singulars seen in (70) resembles that of nouns that are part of compounds. In compounds such as *bilkjøring* ('car-driving'), *hyttebygging* ('cottage-building'), and *hundeeirer* ('dog-owner'), accent falls on the noun stem and not on the verb stem.

It is clearly a tendency that the predicate that selects a bare singular through the construction in (55) has to be unaccented. But as Fretheim (1997) has pointed out, there are several cases where this requirement does not hold. Some are given in (71).

(71) a. ((kari ((²BYGGER_{AU}) IP) ((²HYTTE_{AU}) IP) IU)

Kari builds cottage

'Kari IS [building a COTTAGE].'

b. (((²kari_{AU})(²bygger-visst_{AU})(²HYTTE_{AU})))

Kari builds apparently cottage

'Apparently, Kari is building a cottage.'

c. (((²bygger_{AU})(²kari_{AU})(²HYTTE_{AU}) IP) IU)

builds Kari cottage

'Is Kari building a cottage?'

⁶⁸ (70b) is ok if you are repeating the utterance to someone who doesn't hear well.

As illustrated in (71a) (with polarity focus), focal accent licenses word accent on the main verb, also when the verb takes a bare singular object. Likewise, the presence of an adverb, or word order changes, make accent on the main verb possible, or even preferred.

Another prosodic tendency that can be observed is that predicates that combine with bare singulars in accordance with the 'conventional situation type'-construction in (49) usually contain just one, two, or at most three syllables. If a predicate contains more syllables than two, it is less likely to combine with a bare singular than if it contains three syllables or less. This effect is illustrated in (72ab) below, where we have two verbs that are semantically very close, but that contain a different number of syllables.

- (72) a. Han bygger bilmotor.
he builds car-engine
'He is building a car engine.'
- b. ??Han konstruerer bilmotor.
he constructs car-engine
'He is constructing a car engine.'
- c. Han konstruerer en bilmotor.
he constructs a car-engine
'He is constructing a car engine.'

The sentence in (72b) feels "clumsy" and unnatural, and its meaning is more naturally expressed in (72c). In (72c), where we have an a-expression, the verb carries word accent and the sentence is perfectly fine. The source for this effect of syllable number, is probably the restriction mentioned above, namely that the predicate that selects a bare singular has to be unaccented. In (72b), the sentence probably feels clumsy because of the many unaccented syllables at the beginning of the sentence, which in general is not a preferred pattern. Notably, if we change the sentence in (72b) so that the verb no longer is supposed to be unaccented, a bare singular complement is perfect:

- (73) a. Konstruerer han bilmotor?
constructs he car-engine
'Is he constructing a car engine?'
- b. Han konstruerer ofte bilmotor.
he constructs often car-engine

'He often constructs a car engine.'

6.5.6 *Summary of section 5 (and a revised construction definition)*

In this section we have seen that bare singulars are interpreted in many senses as if they constitute a lexicalized unit with the verb they co-occur with. We have seen five arguments:

- 1) There are strikingly many lexicalized multi word expressions containing bare singulars that fit the 'conventional situation type'-construction. Apparently, combinations of predicates and bare singulars easily get lexicalized.
- 2) The information structure that most easily comes to mind for sentences with bare singulars of this type is one where the bare singular and the predicate that selects it are both part of the sentence's rhematic domain, which suggests that they form a semantic unit. This is clearly something that holds for lexicalized phrases as well.
- 3) Bare singulars licensed by (57) are not as likely to be antecedents for type anaphors as other bare singulars (see chapter 2, section 2.8.3), which again is in accordance with an assumption that the verb and the bare singular form a unit.
- 4) Some bare singulars of this type behave as if they are "part of" verbs (and thus lexicalized), since they allow for a plural interpretation when it is possible to infer several events.
- And 5): As in compounds and lexicalized multi word expressions, the verb that combines with a bare singular licensed by (57) tends to be unaccented.

Another point that should be mentioned is that it is a clear tendency that bare singulars licensed by the 'conventional situation type'-construction are non-subjects and furthermore have semantic roles that come far down on a semantic role hierarchy. Typically, they are instruments, the reference object of a locative prepositional phrase, or a not-very-much-affected theme or patient. Or, they are assumed to not have a semantic role or have a role that does not easily fit into the standard roles (as predicative bare singulars, for instance). As reported by Bresnan (2001), it has been shown that there is a hierarchy among the semantic roles of arguments involved in the creation of idiomatic expressions, where agent, beneficiary, and recipient belong to the leftmost pole of the scale, whereas (e.g.) patient, theme, and location belong to the rightmost pole. Verbs combine to form idioms or lexicalized expressions most easily with arguments from the rightmost end of the scale than from the leftmost end. As a consequence of this, with transitive verbs idioms are typically formed from a verb and its object, not from a verb and its subject. In other words, bare singulars licensed by (57) have similarities with lexicalized and idiomatic expressions with

respect to what semantic roles they realize and with respect to what syntactic functions they can have.

Now, what do these similarities with lexicalized multi word expressions tell us? The use of these bare singulars is highly productive, so we do not want, and in fact cannot, list them in the lexicon. Furthermore, all the above mentioned "lexical" properties of the output of the 'conventional situation type'-construction are just *tendencies* and they don't hold as consistently as for clearly lexicalized multi word expressions. What I will suggest as the solution is that it is an inherent part of the 'conventional situation type'-construction that the combination of words is presented as a *candidate* for being lexicalized, it is presented as denoting a *name-worthy* concept (much in the sense of Dowty, 1977), and therefore simulates lexicalized expressions. It seems plausible that certain properties, states, and activities are so frequent, standard, and/or relevant as recurring situation types that it might be useful to lexicalize them; either because it is desirable to present the given situation type as a semantic unit, or because one wants a handy way of expressing a piece of information that is not so easily expressed in the remaining inventory of the language. One way of doing this in Norwegian, without introducing a brand new lexeme into the language (which has a much greater potential for being misunderstood), is to use a predicate in combination with a bare singular in accordance with the 'conventional situation type'-construction. This is a way of presenting the given combination of words as a candidate for lexicalization, thus allowing for a "unitary" reading of the phrase, and possibly also a specialized or idiosyncratic reading, while at the same time exploiting the resources that the grammar already provides.

Summing up, we end up with the following revised construction definition:

(74) Construction 1: 'The conventional situation type'-construction:⁶⁹

1. A bare singular can occur in Norwegian if it is
 - a) selected as a complement by a predicate and together with this predicate (and possibly other selected elements) designates a *conventional situation type*, and
 - b) can be seen as a reasonable candidate for being part of a *multi word lexical entry* together with this predicate (and possibly other selected elements).
2. A *conventional situation type* is a property, state, or activity that occurs frequently or standardly in a given contextual frame (e.g. in the macro social frame) and has particular importance or relevance in this frame as a recurring property-, state-, or

⁶⁹ The final version of the construction definition will be given in section 6.9 in this chapter.

activity type.

3. A *multi word lexical entry* is a lexical entry that in addition to the lexical item itself specifies one or more words that this item co-occurs with (i.e. selects). The multi word lexical entry constitutes a semantic and phonological unit.

6.6 Subtypes of the 'conventional situation type'-construction?

In this section, we will see groups of predicates that are particularly likely to take bare singulars (of a certain type) as complements (under certain circumstances). There are two main questions connected to these examples. First, are these examples licensed by the 'conventional situation type'-construction at all? And secondly, if they are, what explains their increased productivity and acceptability compared to the more general construction?

6.6.1 Bare singular complements of verbs of creation

Verbs of creation, such as *lage* ('make'), *bake* ('bake'), *strikke* ('knit'), *hekle* ('hackle'), *bygge* ('build'), and *skrive* ('write') combine very easily with Norwegian bare singulars. Some examples are given in (76).

- (76) a. Per og Kari lager garasje.
Per and Kari make garage
'Per and Kari are making a garage.'
- b. Hun baker kake.
she bakes cake
'She is baking a cake.'
- c. Han strikker genser.
he knits sweater
'He is knitting a sweater.'
- d. Kanarifuglen min bygger rede.
canary-bird-DEF mine builds nest
'My canary bird is building a nest.'
- e. Kari maler bilde.

Kari paints picture

'Kari is painting a picture.'

f. ??Hun konstruerer bilmotor.

she constructs car-engine

g. Å konstruere bilmotor er ikke lett.

to construct car-engine is not easy

'To construct a car engine is not easy.'

The situation types referred to in (76) ought to be conventional in the sense of (74). As shown in (76f) and (76g), these kinds of examples are sensitive to syllable number, and promoted by certain types of generic statements. Since these are properties that I have connected to bare singulars licensed by the 'conventional situation type'-construction in (74), I take this as evidence that the examples in (76) are licensed by (74).

6.6.2 Bare singular agents as part of by-phrases in certain passive sentences

Another distinguished group of bare singulars is presented in (77) below.

(77) a. Ola ble bitt av hund.

Ola was bitten by dog

'Ola was bitten by a dog.'

b. Hvert år spises mange sauer av uly.

every year eat-PRES-PASS many sheep by wolf

'Every year, many sheep are eaten by a wolf.'

c. Per ble angrepet av bjørn.

Per was attacked by bear

'Per was attacked by a bear.'

d. Jeg ble undersøkt av lege.

I was examined by doctor

'I was examined by a doctor.'

e. Det elektriske anlegget har blitt sjekket av elektriker.

the electrical system has been checked by electrician

'The electrical system has been checked by an electrician.'

- f. ??Ola ble angrepet av nynasist.
 Ola was attacked by nazi
 'Ola was attacked by a nazi.'
- g. ??/*Gulroten ble spist av esel.
 carrot-DEF was eaten by donkey
- h. Å bli spist av esel er ingen spøk.
 to be eaten by donkey is no joke
 'To be eaten by a donkey is no joke.'
- i. Å bli angrepet av nynasist er ingen spøk.
 to be attacked by nazi is no joke
 'To be attacked by a nazi is no joke.'

In all these passive sentences, an agent is realized as a bare singular inside a prepositional phrase, whereas the affected object is realized as a subject. The kind of situations referred to are all quite plausible as conventional situation types, although the contrast in acceptability between (77c) and (77f) does not reflect the present Norwegian society, but makes sense in a historical perspective (as Norwegians have been aware of the danger of being attacked by bears for centuries). If we assume that the examples are licensed by (74), the unacceptability of (77g) is not surprising, since being eaten by a donkey can hardly be seen as a recurring situation type with particular relevance, especially not in the macro social frame. As shown in (77h), this interpretation can be rescued by a generic sentence of the right kind, though. Thus, again, we seem to be dealing with sentences licensed by the 'conventional situation type'-construction in (74).

6.6.3 Bare singulars as part of PPs that denote conventional locations

A third particularly productive pattern with bare singulars in Norwegian is given in (78).

- (78) a. Jeg sov på madrass.
 I slept on mattress
 'I slept on a mattress.'
- c. Han bor på gård
 he lives on farm

'He lives on a farm.'

- d. Jeg liker best å løpe på bane.

I like best to run on track

'I prefer to run on a track.'

- e. */??Jeg sov ved madrass.

I slept near mattress

Here we see that a prepositional phrase can contain a bare singular if it denotes a conventional place for the verb (or verb phrase) it modifies. The illformedness of (78e) can be explained if we assume that the examples in (78) are licensed by the 'conventional situation type'-construction in (74), since the situation described is indeed *not* conventional.

6.6.4 Summary of section 6.6

In (76)-(78) we have seen some examples of predicates that are particularly likely to combine with (certain) bare singulars (under certain conditions). There are good reasons to assume that these constructions are not unrelated to the 'conventional situation type'-construction, first of all, since denotation of a conventional situation type seems to be a requirement. However, it is a fact that once a bare singular can be seen as part of one of the more narrow classes in (76)-(78), it is more easily regarded as acceptable than if it can not be seen as part of one of these classes, but only as part of the more general construction in (74). Now, assuming that the examples in (76)-(78) come under the 'conventional situation type'-construction, how do we account for their increased degree of acceptability and productivity?

One path of explanation is to assume that there in fact is only one construction, namely (74), and that the increased acceptability of the examples in this section follows from (74), and from the fact that bare singulars are type-emphasizing, on a general basis. As for why bare singulars go particularly well together with verbs of creation, this can reasonably be attributed to the fact that the object of a creation verb is not yet in existence when the creation takes place. This means that it is most likely that the speaker wants to focus on this object first of all as a type of thing and not as a token. This fits well with the use of a bare singular, since bare

singulars are type emphasizing.⁷⁰ We should also notice that the kinds of activities that many verbs of creation denote, are standard activities that we typically fill our lives with, which rings well with the 'conventional situation type'-construction.

The fact that there are many cases with bare singulars as part of prepositional phrases is not surprising either, since this syntactic position is not very discourse salient. That is, the token discourse referent introduced by a nominal that is part of a prepositional phrase is not very likely to be a continuing discourse topic, for instance (see Centering Theory, e.g. Grosz, Joshi, and Weinstein, 1995)

On the other hand, if the increased acceptability of the examples in this section really did follow from (74) and the semantics of bare singulars on a general basis, then it should be possible for a clever linguist to come up with a motivated guess for when bare singulars licensed by (74) are particularly likely to be acceptable, and one that matches the reality. The preference for creation verbs to take bare singular objects seems reasonable, and I won't exclude the possibility that someone might have thought of that possibility without knowing it on beforehand. But the fact that bare singulars are particularly likely to occur in the by-phrase of a passive sentence, realizing the *agent* of a violence act towards a human being, would hardly appear to even the most skilled linguist not previously familiar with the linguistic facts of Norwegian, I believe.⁷¹

I conclude that the 'conventional situation type'-construction has subtypes that happen to be more productive than their more general ancestor. Assuming that people's intuitions regarding grammatical phenomena are sensitive to frequency, examples licensed by such subconstructions will appear to be more acceptable than expected. In order to reflect this in the linguistic account of the phenomenon, we need to operate not only with what Copestake (2001) calls the symbolic grammar, but also with a probabilistic component, assigning different probability values to the general 'conventional situation type'-construction and its different subtypes. Since the increased productivity of these subconstructions cannot be directly connected to either the semantics of bare singulars or the construction definition (as far as I can see at this point), this aspect of the account must be a stipulation. I will have nothing more to say about this phenomenon in this thesis, but I refer the reader to Copestake (2001) and Briscoe and Copestake (1999) for

⁷⁰ Diesing (1991) observes that verbs of creation permit weak readings of indefinite complements in English and German, whereas verbs of e.g. destruction strongly favor a strong reading of indefinite objects. These observations fit nicely with the Norwegian data.

⁷¹ I will of course immediately take this claim back if someone actually makes that guess.

discussions and investigations on probabilistic approaches geared at restricting generative processes.⁷²

6.7 Different kinds of nominals licensed by Construction 1

As the 'conventional situation type'-construction is formulated in (74), it only licenses bare singulars. But should it really be that restrictive? Asudeh and Mikkelsen (2000) and Kiefer (1994) argue that similar constructions also license bare plurals and bare mass expressions in Danish and Hungarian, respectively. In Norwegian, bare mass expressions and bare plurals differ from bare singulars in that they are licensed much more often than what bare singulars are, which makes it hard to prove that they are licensed by the 'conventional situation type'-construction. But one kind of argument that suggests that they should also be licensed by 'the conventional situation type'-construction, is the interpretation and phonological realization of examples such as those in (82):

- (82) a. Kari plukker/dyrker blomster.
Kari picks/grows flowers
b. Kari elsker/ødelegger blomster.
Kari loves/destroys flowers

Whereas the verbs in (82a) are clearly preferred to not carry word accent, the verbs in (82b) are clearly preferred to do so. This corresponds with an intuitively understanding of the sentences in (82a) as referring conventional activity types, whereas the sentences in (82b) are not. These are by no means conclusive evidence that Construction 1 should also license bare plurals and bare mass expressions. But on the other hand, it would be rather surprising if there were a difference between bare singulars and other bare indefinites in this sense, since also bare plurals and bare mass expressions are type emphasizing, unambiguously nonreferential, nonpartitive, and never take wide scope on their existential reading (see section 2.13, chapter 2). Thus, I conclude that 'the conventional situation type'-construction should be specified as

⁷² There probably exist more subtypes of the 'conventional situation type'-construction than what I have proposed in section 6.6, but it would take us too far to try to exhaust the list and to discuss the exact border between the symbolic grammar and the probabilistic component of the present account. As pointed out in Copestake (2001), this border is often difficult to determine.

licensing *bare indefinites*, which includes bare singulars, bare mass expressions, and bare plurals. This is specified in the final construction definition in (83) below.

6.8 Summary and conclusions

Certain properties, states, and activities are so frequent, standard, and/or relevant as recurring situation types that it might be useful to lexicalize them. One way of presenting a property, state, or activity as a name-worthy semantic unit (though not yet lexicalized) in Norwegian, is to refer to it by a predicate that takes a bare indefinite complement in accordance with a scheme that I call the 'conventional situation type'-construction, represented in (83) below.

(83) Construction 1: 'The conventional situation type'-construction (FINAL VERSION):

1. A bare indefinite can occur in Norwegian if it is
 - a) selected as a complement by a predicate and together with this predicate (and possibly other selected elements) designates a *conventional situation type*, and
 - b) can be seen as a reasonable candidate for being part of a *multi word lexical entry* together with this predicate (and possibly other selected elements).
2. A *conventional situation type* is a property, state, or activity that occurs frequently or standardly in a given contextual frame (e.g. in the macro social frame) and has particular importance or relevance in this frame as a recurring property-, state-, or activity type.
3. A *multi word lexical entry* is a lexical entry that in addition to the lexical item itself specifies one or more words that this item co-occurs with (i.e. selects). The multi word lexical entry constitutes a semantic and phonological unit.

Some properties of bare singulars licensed by this construction (that are not explicitly stated in (83)) are summarized in (84) below.

(84) *Bare singulars that are licensed by the 'conventional situation type'-construction:*

- a. are equally acceptable in predicative and non-predicative position as long as they occur in verb phrases with the same meaning,
- b. are particularly likely to be acceptable when they are part of strings that designate socially organized activities,

- c. are sensitive to modification (can contain modifying constituents, but only rarely),
- d. are promoted in generic sentences that generalize over situation types,
- e. don't occur as subjects, but in principle in any other syntactic position (though rarely as indirect objects),
- f. are generally not sensitive to sentential adverbs or word order,
- g. are more likely to be part of a rhematic domain that includes their selecting predicate than to constitute a rhematic domain on their own,
- h. are possible antecedents of type anaphors, but not as likely as other bare singulars, and
- i. occur particularly easily with verbs of creation, in prepositional phrases that denote conventional locations, and in by-phrases in certain passive sentences.

With some modification, I follow Asudeh and Mikkelsen (2000) and Kiefer (1994) in that I assume a pragmatic, or context-dependent, restriction applying to the denotation of the bare singular and the predicate that selects it. That is, (83) licenses bare singulars only if their denotation can be seen as part of a *conventional situation type*. Crucially, (83) predicts that predicative and non-predicative bare singulars licensed by (83) are equally acceptable in verb phrases with the same meaning, since verb phrases with the same meaning denote the same situation type. Thus, there is expected to be little difference in acceptability between the bare singular in *være fallskjermhopper* ('be a parachute-jumper') and the bare singular in *hopper fallskjerm* ('jumps parachute'), for instance. This equal treatment of what has traditionally been called predicative and non-predicative bare singulars, the present proposal shares with the account that van Geenhoven (1996) gives for noun incorporation in West Greenlandic. On the other hand, the present proposal is novel for Norwegian and goes strictly against the commonly held view that the predicative/nonpredicative distinction is crucial for determining when bare singulars can occur in Norwegian (see e.g. Faarlund et al. (1997), Kallulli, (1999), and Longobardi (1994)).

The requirement for denotation of a conventional situation type directly predicts the fact that bare singulars of this type are particularly likely to be acceptable when they are part of strings that designate socially organized activities (since such activities are necessarily conventional); it predicts that these bare singulars are sensitive to modification (since modification makes the denotation of a nominal more specific, thus more situation bound, and consequently most likely part of a less standard or regular type of situation), and it predicts that these bare singulars are promoted in generic sentences that generalize over situation types

(since it is impossible to express a generalization over a type of situation unless this situation type has occurred more than once, preferably quite standardly, which is a property that also conventional situation types are supposed to have).

As for syntax, (83) states directly that bare singular subjects are not licensed, and indirectly it follows that bare singulars in principle can occur in all other syntactic positions. Since the conventional situation type is supposed to be denoted by a combination of elements, and not a string, it follows that word order should (in principle) not affect the acceptability of bare singulars licensed by (83). As for the fact that bare singular indirect objects are rarely licensed, this is not surprising, since the type of situations denoted by a verb phrase consisting of a verb, a direct object, and an indirect object, is very complex, and thus not likely to be conventional. Furthermore, nominals that occur as indirect objects, tend to be referential, whereas bare singulars are never referential.

According to (83), the selection of a bare singular by some predicate needs to be a reasonable candidate for lexicalization, which means that the bare singular and the selecting predicate are read as a phonological and semantic unit. This provides an explanation for why these bare singulars are not very good antecedent candidates for the type anaphor, and why they tend to not constitute a rhematic domain on their own: Both these kinds of constellations signal a different information structure status of the denotation of the bare singular than of the denotation of the predicate, which does not ring that well with a 'semantic unit' interpretation.

Whereas the construction in (83) is general enough to account for the existence of the examples we have looked at in this chapter, I do not see that it predicts the fact that certain classes of examples have a higher degree of (immediate) acceptability than others that seem equally likely to follow from (83). Thus, although leaving the details for further research, I propose that the construction in (83) has more specific subtypes that are assigned a higher productivity value than their more general "ancestor".

In chapter 5, I said that the constructions that allow for bare singulars in Norwegian are all motivated by the semantics of bare singulars. But how is the 'conventional situation type'-construction in (83) connected to type-emphasis? Well, when a property, activity or situation is referred to with a form in accordance with the 'conventional situation type'-construction, it is signaled that the situation should be seen as a semantic unit with particular relevance or importance as a situation type. This means a focus on the situation type as such rather on the situation's individual participants, which is indeed in accordance with backgrounding the discourse salience of a certain token discourse referent possibly involved in the situation type

described. Thus, it makes perfect sense that bare singulars (as well as other bare indefinites) are licensed by the 'conventional situation type'-construction.

7 Construction 2

7.1 Introductory data

7.1.1 *Have-predicates*

Consider the data in (1).

- (1) a. Ola ønsker seg kopp med bilde av Mikke Mus.
Ola wants REFL cup with picture of Mickey Mouse
'Ola wants a cup with a picture of Mickey Mouse.'
- b. De deler ut rosa TV med mintgrønne knapper til alle som trenger det.
they hand out pink TV with mint-green buttons to all who needs it
'They hand out a pink TV with mint green buttons to everyone who needs that.'

These bare singulars are intuitively not licensed by the 'conventional situation type'-construction defined in chapter 6. First of all, the verb phrases they are part of do not denote conventional situation types; the situations referred to in (1) are neither frequent, standard, or particularly important as situation types in any reasonable contextual frame, and definitely not in the macro social frame. One can see a symptom of this in that the bare singulars can be modified freely, and still be acceptable. Furthermore, whereas bare singulars licensed by the 'conventional situation type'-construction are intuitively read as if they constitute a semantic unit with the predicate that selects them (a unit that might be lexicalized), the bare singulars in (1) are not. And thirdly, the acceptability of these examples is not sensitive to the presence of word accent or the number of syllables in the matrix verb any more than what is the case for corresponding examples with a-expressions. In sum, these facts suggest that the sentences in (1) are not licensed by the 'conventional situation type'-construction, but exemplify a second scheme, or construction, that allows for bare singulars in Norwegian.

Ønske seg ('want') and *dele ut* ('hand out') belong to a semantically related group of verbs that co-occur particularly easily, and thus relatively frequently, with bare singulars in Norwegian. This group includes e.g. *ha* ('have'), *ønske seg* ('want REFL'), *ha lyst på* ('have

desire for/'want'), *treng* ('need'), *mangle* ('lack'), *få tak i* ('get hold of'), *finne (seg)* ('find (REFL)'), *finne (fram)* ('find/'get'), *motta* ('receive'), *hente (seg)* ('fetch (REFL)'), *ta med (seg)* ('bring (REFL)'), *ha med (seg)* ('bring (REFL)'), *ta/ha på (seg)* ('wear' (REFL)), *glemme (igjen)* ('forget/'leave'), *skaffe (seg)* ('get hold of (REFL)'), *få (seg)* ('get (REFL)'), *gi* ('give'), *dele ut* ('hand out'), *bestille (seg)* ('order (REFL)'), *låne (seg)* ('borrow (REFL)'), *kjøpe (seg)* ('buy (REFL)'), *leie (seg)* ('rent (REFL)'), *leie inn* ('rent'), *leie ut* ('rent out'), and *tilby* ('offer'). Some examples with bare singulars in combination with these verbs are given in (2).

- (2) a. Han hadde rød ytterfrakk.
 he had red coat
 'He had a red coat.' [HM, 147]
- b. Kari har lyst på prikkete bikini.
 Kari has desire for spotted bikini
 'Kari wants a spotted bikini.'
- c. Vi trenger nytt telt.
 we need new tent
 'We need a new tent.'
- e. Han mangler sovepose og regnfrakk.
 he lacks sleeping-bag and rain-coat
 'He lacks a sleeping bag and a rain coat.'
- f. Jeg har fått tak i penn med gullinnskrift.
 I have got hold in pen with gold-letters
 'I have got hold of a pen with golden letters.'
- g. Per fant (fram) kopp til meg.
 Per found (out) cup to me
 'Per got me a cup.'
- h. Skal jeg hente dyne til deg?
 shall I fetch quilt to you
 'Shall I get you a quilt?' [NOD, 14]
- i. Vi får ta med paraply.
 we should take with umbrella
 'We better bring an umbrella.' [NOD, 13]
- j. [...] hadde han tatt på seg ren skjorte.
 had he taken on REFL clean skirt

- [...] had he put on a clean shirt.' [HM, 110]
- j. Jeg har glemmt (igjen) håndkle.
I have forgotten (again) towel
'I have forgotten to bring a towel.'
- k. Per har skaffet seg sølvfarget datamaskin.
Per has got-hold-of REFL silver-coloured computer
'Per has got hold of a silver coloured computer.'
- m. Det var utrolig hyggelig å få pakke av deg.
it was unbelievably nice to get present by you
'It was very nice to get a present from you.' [NOD, 45]
- n. Bok, det ga jeg til Ola.
book, that gave I to Ola
'A book, that I gave to Ola.'
- o. [...] hadde bestilt tidlig supé.
[...] had ordered early supé
[...] had ordered an early supé.' [HM, 164]
- p. Lånte dere radio av naboene?
borrowed you radio of neighbors-DEF
'Did you borrow a radio from your neighbours?'
- q. Kari kjøpte seg viskelær med grønne prikker.
Kari bought REFL eraser with green dots
'Kari bought an eraser with green dots.'
- r. Vi leide (inn) buss.
we rented in bus
'We rented a bus.'
- s. De leier ut sovepose til dem som ønsker det.
they rent out sleeping-bag to those who want it
'They rent out a sleeping bag to all those who want it.'
- t. Vi kan tilby billig bil med soltak til alle som deltar.
we can offer cheap car with sunroof to everyone who participates
'We can offer a cheap car with a sun roof to everyone who participates.'

As argued in Borthen (1999), one thing the verbs in (1) and (2) intuitively have in common is that they all can be decomposed into a semantic structure that includes a *have-relation* (at least

on some readings), or, in other terms, *introduce* a have-relation. Let us therefore call these verbs *have-predicates*. For instance, to need something means to need to eventually have something, to ask for something means to ask for eventually having something, to lack something means to not have something, to hand something out means to give away something so that someone else eventually has it, to order something means to request something in exchange for money so as to eventually have it, and so on. A first hypothesis for what it is that makes the examples in (1) well-formed with bare singulars is thus that the verbs involved are have-predicates. This hypothesis is in accordance with the observations made by e.g. Faarlund et al. (1997) and Kallulli (1999) that verbs such as *ha* ('have') and *få* ('get') often take bare singular complements in Norwegian.

One set of data that supports the assumption that the verbs in (2) constitute a linguistically relevant verb class, has to do with passivization. Most of the verbs in (2) cannot be passivized. Those that can, usually can't be passivized with the (most common) by-passive, and if they can, the by-phrase should not be expressed. This is illustrated with a few representative verbs in (2') below, now with passive verbs and a-expressions instead of bare singulars.

- (2') a. *En rød ytterfrakk ble hatt (av ham).
 a red coat was had (by him)
- b. *En prikkete bikini ble hatt lyst på (av Kari).
 a dotted bikini was had desire for (by Kari)
- c. *En pakke ble fått av deg (av meg).
 a present was gotten from you (by me)
- d. En kopp ble funnet fram til meg (*av Per).
 a cup was found out to me (*by Per)
 'A cup was found for me (by Per).'
- e. En bok ble gitt til Ola (*av meg).
 a book was given to Ola (*by me)
 'A book was given to Ola (by me).'
- f. En buss ble leid inn (??av oss).
 a bus was rented in (??by us)
 'A bus was rented (by us).'

7.1.2 Profiling

But it is not the case that Norwegian bare singulars are always acceptable when they occur as objects of have-predicates. One thing the examples in (1) and (2) have in common is that the have-relation introduced has to be focused on, or *profiled*.⁷³ This is illustrated in (3).

- (3) a. Kari fikk kopp.
Kari got cup
'Kari got a cup.'
- b. ??/*Kari tok kopp.
Kari took cup
'Kari took a cup.'

Both verbs in (3) introduce a have-relation that holds between Kari and the cup. What distinguishes them is (among other things) that the verb *ta* ('take') intuitively focuses more on the way the cup is achieved than on the final state of possession. With *få* ('get') one can easily imagine contexts where it is the possession part that is profiled. This is for instance the case if (3a) is the answer to what Kari got as her birthday present from her colleagues. Thus, the examples in (3) show that bare singulars are not always licensed by have-predicates, and they suggest that an additional requirement is that the have-relation has to be focused on, or *profiled*.

Even though each verb will have a favored event profile specified in the lexicon (as illustrated by the contrast between (3a) and (3b) above), profiling is also highly context dependent. (3b) above is not regarded as acceptable "out of the blue", and as a mere description of a situation where the speaker grabbed or stole a cup, it is clearly illformed. However, contexts can be created that makes it perfectly acceptable. Let us imagine that the speaker is at a conference, and that the conference participants have been allowed to take one of a set of conference souvenirs with them home, i.e. either a cup, a pen, or an umbrella. The cups, the pens, and the umbrellas are all the same and are placed on a table from which the participants can pick their desired type of souvenir. After she has picked a souvenir, someone asks the speaker what type of souvenir she took, and she answers with (3b): *Jeg tok kopp*. In that context, (3b) is perfectly well-formed. One reason for this is that a type-emphasizing reading of the nominal object is made particularly likely because of the mention of the three types of things

⁷³ I use this term in much the same way as Pustejovsky (1995) uses it.

the conference participants were allowed to choose among. This shows that it is not the particular token that the speaker took, but the type of thing she took, that is relevant. Another important reason why (3b) becomes acceptable in the given context is that the have-relation is profiled; clearly, focus is more towards the final state of possession (*What type of object did she end up possessing?*) than towards the manner of achievement in the given context.

7.1.3 Interpretations of have-predicates, affectedness, and intensionality

A have-relation is a very general type of relation, and the complement that the have-predicate takes will determine the more specific kind of relation that holds between the two participants that are introduced by the predicate. Also when *ha* ('have') (and more generally a have-predicate) takes a bare singular object, the have-relation can be of different kinds. This is illustrated in (4).

- (4) a. Hun har penn.
she has pen
'She has a pen.'
- b. Hun har lue.
she has hat
'She has a hat'
- c. Hun har stor nese.
she has big nose
'She has a big nose.'
- d. Hun har feber.
she has fever
'She has a fever.'
- e. Hun har snill storebror.
she has kind big-brother
'She has a kind big brother.'

In (4a) the most natural interpretation is that the subject referent has a pen available, i.e. for instance in her bag; in (4b), on the other hand, the most natural interpretation is that the subject referent is wearing a hat; in (4c), the only plausible interpretation is that the nose is a part of the

subject referent (so-called inalienable possession); in (4d) the subject referent is possessing a certain state (i.e. a fever state); and in (4e) the subject referent stands in a family relation with the possessed entity. The common determinant of these relations is, as far as I can see, that they involve two arguments that coexist; i.e. they have a common reference point (e.g. the same place). In addition, the relation that holds between these two arguments is slightly asymmetrical, with the possessor having a superior role over the possessed. This superiority may either be in terms of control (as in (4ab)), in terms of the part-whole distinction (as in (4c)), in terms of animacy (as in (4d)), or simply in terms of point of view (as in (4e)).

To sum up, we can say that a *have*-relation is a slightly asymmetrical coexistence relation between two arguments that we name the possessor and the possessed, where the possessor is superior to the possessed rather than the other way around.

Notably, not all meanings of the verb *ha* ('have') allow for a bare singular object even if the *have*-relation is profiled. For instance, imagine a context where some boys are at a farm and are trying to catch animals. In that context, one of the boys may utter (5) below to express the fact that he has caught a rabbit and is holding onto it.

- (5) Jeg har en kanin.
I have a rabbit
'I have a rabbit.'

The focus is clearly towards the possession relation in (5), not the catching. Still, a bare singular can clearly *not* substitute for the a-expression in (5) with the intended meaning given above; that leads to strict ungrammaticality.

What (5) expresses in the given context is that the boy is holding onto the rabbit against its will. Apparently, this meaning cannot be expressed by the use of a bare singular. I assume that the reason for this is that the relation between the boy and the rabbit involves too much affect on the rabbit. As mentioned also in chapter 4, section 4.5.2, affected arguments are unlikely to be realized as bare singulars in Norwegian, the reason being that affected entities are highly relevant as tokens. In other words, a bare singular can occur as the complement of a profiled *have*-predicate only if the degree of affectedness on the bare singular's token discourse referent is low. However, I assume that this is due to type-emphasis as such and that it does not have anything specifically to do with *have*-predicates.

Another factor that affects the acceptability of Norwegian bare singulars, is intensionality. We can see this in that intensional *have*-predicates, such as *ønske seg* ('want') and *treng*

('need'), for instance, combine particularly easily with bare singulars. This is not surprising, since a nonreferential direct object of an intensional verb is not only nonreferential; there is in fact no entailment of existence of the token discourse referent it introduces at all. This means that on the nonreferential reading, an indefinite object of an intensional verb is in fact automatically presented as interesting first of all as a type of thing, not a token, which makes the use of a bare singular particularly suitable with intensional verbs (see section 2.8.2, chapter 2 for a more thorough line of argumentation).⁷⁴

7.1.4 Prepositional have-predicates

Notice that it is not only verbs that can be have-predicates. This is illustrated by the naturally occurring data in (6) and by the minimal pairs in (7).

- (6) a. Hva skulle vi gjort uten do?
 what should we done without toilet
 'What should we have done without a toilet?' [NOD, 11]
- b. Du kan ikke være uten kvinne lenger.
 you can not be without woman anymore
 'You can't be without a woman anymore.' [HM, 93]
- c. [...] et bord med hvit duk.
 a table with white cloth
 '[...] a table with a white cloth.' [HM, 149]
- d. [...] en mann i uniform.
 a man in uniform
 '[...] a man in a uniform.' [HM, 181]

- (7) a. Denne bilen har stor motor.
 this car-DEFSUFF has big motor

⁷⁴ The reason why this effect of intensionality was not noticed in connection with the 'conventional situation type'-construction, is simply that intensional verbs (at least the ones thought of by the author) are not likely to constitute conventional situation types together with their complements. In principle, the effect of intensionality is expected to hold for all bare singulars. Possibly, one can compare the effect of intensionality on bare singular complements of have-predicates with verbs of creation, that were argued to license bare singular complements particularly easily due to the 'conventional situation type'-construction (see section 6.6.1, chapter 6).

'This car has a big motor.'

- b. Dette er en bil med stor motor.

this is a car with big motor

'This is a car with a big motor.'

- c. Jeg fikk et brev som manglet frimerke.

I got a letter that lacked stamp

'I got a letter that didn't have a stamp.'

- d. Jeg fikk et brev uten frimerke.

I got a letter without stamp

'I got a letter without a stamp.'

The prepositions *med* ('with') and *uten* ('without') have meanings that are very close to that of *ha* ('have') and *mangle* ('not have'), respectively, that are prime examples of have-predicates. Thus their acceptability is not surprising, given the generalizations made from the examples in (2). More generally, I expect all prepositions that introduce a have-relation to be able to take bare singular complements.

7.2 The 'profiled have-relation'-construction

Let us tentatively assume that the following construction is what licenses the well-formed examples with bare singulars in (1)-(7) above.

(8) The 'profiled have-relation'-construction (FIRST VERSION):⁷⁵

- 1) A bare singular can occur in Norwegian if it occurs as the complement of a *profiled have-predicate*.
- 2) A *have-predicate* is a word that can be decomposed into a structure that contains a *have-relation*.
- 3) A *have-relation* is an asymmetrical coexistence relation between two arguments, called *the possessor* and *the possessed*, where the possessor is superior to the possessed rather than the other way around.

⁷⁵ The final version will be given in section 7.6.

- 4) A *profiled* have-predicate is a have-predicate whose have-relation is focused on relative to other relations or states this predicate introduces, if any.
- 5) An argument can be *superior* to some other argument in terms of control, part-whole dependency, animacy, or point of view.

7.3 Some resolved puzzles

As we will see below, the construction definition in (8) enables us to explain some puzzling data mentioned in chapter 4, but not previously accounted for.

7.3.1 *The effect of reflexives*

Some have-predicates select for an optional reflexive indirect object that will necessarily be coreferent with the subject. Interestingly, a reflexive of this type increases the probability for a bare singular direct object of a have-predicate to be acceptable. This fact can be suspected from the high frequency of reflexives in (2). It is also illustrated by the minimal pair in (9):

- (9) a. ??Jeg har funnet kopp.
 I have found cup
 'I have found a cup.'
- b. Jeg har funnet meg kopp.
 I have found REFL cup
 'I have found myself a cup.'

Now, why do we get this bare singular-promoting effect of reflexives?

Finne ('find') is a have-predicate, since finding is something that involves a final state of possession in addition to a detection event. In most cases it is the detection part that is profiled for this verb. For instance, let us imagine that, unexpectedly, someone has found a cup during some archeological excavation and wants to express this. In such a situation, it is the detection of the cup that is most important, not the possession relation between the speaker and the cup. As expected, it is not possible to use a bare singular as the object of *finne* ('find') in such a situation. (9a) is for instance not good in that context.

A context that easily comes to mind for (9b), on the other hand, which contains a reflexive indirect object, is that the interlocutors are about to drink coffee and that the speaker wants to inform the hearer that she already has found herself a cup, so that the hearer doesn't need to find one for her. In this context the have-relation is highly relevant, since the possession of a cup is a prerequisite for drinking coffee. The process of finding the cup is of less importance, though. This means that in this context the have-relation introduced by the verb *finne* ('find') is profiled, as required by the 'profiled have-relation'-construction.

(9a) is also well-formed in the context just given for (9b), but the right kind of context is much easier to imagine for (9b) than for (9a), obviously due to the presence of the reflexive pronoun. The fact that a reflexive pronoun may support a 'profiled have-relation'-reading makes sense, for two reasons. First, and most importantly, the reflexive pronoun explicitly expresses the possessor of the have-relation and thus focuses on, or profiles, the final state of possession. Secondly, there is a tendency for indirect objects to have a higher degree of familiarity (of the token discourse referent) than the direct object (see e.g. Goldberg, 1995). This fits nicely with having a direct object signaling the lowest possible degree of familiarity, i.e. a bare singular.

7.3.2 *Restrictions on bare singular instruments*

As noted in Borthen (1999), Norwegian bare singulars often realize the semantic role *instrument*. This is illustrated in (10).

- (10) a. Man kunne presse opp døra uten å bruke nøkkel.
 one could press up door-DEFSUFF without using a key
 'One could open the door without using a key.' [NOD, 42]
- b. Det er best å benytte øks.
 it is best to use ax
 'It is best to use an ax.'
- c. Du kan se dette ved hjelp av lupe.
 you can see this by help of microscope
 'You can see this with a microscope.'

In Borthen (1999), no explanation is offered for why instruments cannot always be realized as bare singulars, as illustrated by the following examples:

- (11) a. ??/*Per gikk bort og slo Kari i hodet med balltre.
 Per went over and hit Kari in head-DEFSUFF with bat
 'Per went up to Kari and hit her in the head with a bat.'
- b. ??/*Kari stanset toget med tømmerstokk.
 Kari stopped train-DEFSUFF with log
 'Kari stopped the train with a log.'

Instruments share many properties with complements of have-predicates. First of all, an instrument is in the possession of the agent, just like the object of a have-predicate is. Secondly, the instrument is not presented as an affected entity. And thirdly, instruments are often complements of have-predicates, such as the preposition *med* ('with'), as illustrated in (10bc). Now, if we assume that the bare singular instruments in (10) are licensed by the 'profiled have-relation'-construction, we do have an explanation for why the examples in (11) are illformed, I think. Notice that the sentences in (10) first of all tell what instrument was used or can be used for some (more or less specified) event, and there is no important competing subevent that might draw attention away from the possession relation between the agent and the instrument. In (11), on the other hand, reference is made to complex event structures that contain subevents that are intuitively much more important, and thus more focused on, than the have-relation between the agent and the instrument. If we assume that the bare singulars in (11) have to be arguments of *profiled* have-predicates (which is a context-sensitive matter), it is as expected that other subevents expressed in the sentence, that draw attention away from the have-relation between the agent and the instrument, may lead to less acceptable sentences.⁷⁶

7.3.3 *The effect of the bare singular's descriptive content*

Compared to the 'conventional situation type'-construction, the 'profiled have-relation'-construction is different in that modification of the nominal is much more free. In general, there are quite few restrictions on the descriptive content of the bare singular itself. However, this does not mean that the descriptive content is never crucial. Consider the following data:

⁷⁶ Some bare singular instruments are also licensed by the 'conventional situation type'-construction. Thus, the unacceptability of the examples in (11) is not only due to lack of consistence with the 'profiled have-relation'-construction, but also with incompatibility with the 'conventional situation type'-construction.

- (12) a. Per går med hatt.
 Per walks with hat
 'Per is walking, wearing a hat.'
- b. Per går med stokk.
 Per walks with stick
 'Per is walking with a stick.'
- c. ??*Per går med gris.⁷⁷
 Per walks with pig
 'Per is walking with a pig.'

Whereas the preposition *med* ('with') can take bare singular complements that denote clothing and instruments, it is unlikely to combine with bare singular complements that denote animates, as illustrated in (12c). But the data in (12) do not constitute a problem for the present analysis. Clothes are in an asymmetrical coexistence relation with a possessor, and clothes are not presented as being affected by this. The same holds for instruments, for reasons presented above. Now, consider (12c). The only reasonable interpretation of this example is that Per is walking, taking a pig along with him. Since the pig is animate it has its own will and is possibly brought along against its will. Thus, it is affected by the walking act, and given that affected objects are not likely to be realized as bare singulars, this explains why (12c) is unacceptable.

7.4 Syntactic properties

7.4.1 Bare singular objects in existential sentences

As noticed by Kallulli (1996, 1999), Norwegian bare singulars in existential sentences are quite restricted. This is illustrated in (12').

- (12') (At the beginning of a discourse)
 a. */??Det kommer mann på veien.

⁷⁷ If one substitutes the noun *gris* ('pig') with *hund* ('dog'), the predicate *gå med* ('walk with') and the bare singular can be seen as denoting a conventional situation type, thus licensing a bare singular due to the 'conventional situation type'-construction.

it comes man on road-DEFSUFF

'There is a man coming up the road.'

b. */??Det er jente i hagen.

it is girl in garden-DEFSUFF

'There is a girl in the garden.'

c. */??Det ligger genser på gulvet i gangen. *Den* er din, ikke sant? [...]

it lies *sweater* on floor-DEFSUFF in corridor-DEFSUFF. *it* is yours, not true

'There is *a sweater* on the floor in the corridor. *It* is yours, isn't it?'

However, as illustrated in (13), (14), (15), and (16) below, bare singulars can occupy the syntactic object position in existential sentences in the right kinds of contexts.

(13) A: Jeg trenger en hammer.

I need a hammer

'I need a hammer.'

B: Det er hammer i verktøykassa.

it is hammer in toolbox-DEFSUFF

'There is a hammer in the toolbox.'

(14) A: Jeg trenger et lite, lett framkomstmiddel.

I need a small, light conveyance

'I need a small light conveyance.'

B: Det står sykkel i garasjen.

it stands bike in garage-DEFSUFF

'There's a bike in the garage.'

(15) (The hearer has wanted a rabbit for a long time, and has even built a rabbit cage even though he knows he is not allowed to have a rabbit. One day his little brother comes running:)

Det er kanin i buret ditt!

it is rabbit in cage-DEFSUFF yours

'There's a rabbit in the cage!' [NOD, 51]

(16) A: Han blør!

he bleeds

'He is bleeding!'

B: Det er lege i Mandal.

it is doctor in Mandal

'There is a doctor in Mandal.'

One thing the examples in (13)-(16) have in common is that they express the availability of some discourse referent that is more relevant as a type of thing than as a token. This type of thing is contextually given, either directly or indirectly.

Admittedly, these examples don't involve have-predicates quite as obviously as the examples in (2), for instance, since neither *være* ('be') nor *stå* ('stand') can be decomposed into a structure that includes a have-relation. However, the sentences in (13)-(16) all express the availability of the denotation of the bare singular, which means that someone either will or may stand in a have-relation with this object. Thus, it is not unreasonable to claim that the verbs (on their particular use) in (13)-(16) introduce a profiled have-relation; they just do it indirectly.

Something that supports this claim is that all the sentences in (13)-(16) can be appropriately paraphrased with a have-predicate for the given contexts. This is shown in (17) below.

- (17) a. Vi har hammer i verktøykassa./ Du finner hammer i verktøykassa.
we have hammer in tool-box-DEFSUFF/ you find hammer in tool-box-DEFSUFF
'We have a hammer in the tool box./ You find a hammer in the tool box.'
- b. Vi har sykkel i garasjen./ Du finner sykkel i garasjen.
we have bike in garage-DEFSUFF/ you find bike in garage-DEFSUFF
'We have a bike in the garage./ You can find a bike in the garage.'
- c. Du har kanin i buret ditt.
you have rabbit in cage-DEFSUFF yours
'You have a rabbit the cage.'
- d. De har lege i Mandal./ Vi kan få tak i lege i Mandal.
they have doctor in Mandal/ we can get hand in doctor in Mandal
'They have a doctor in Mandal./ We can get a doctor in Mandal.'

The relative synonymy between the examples in (17) and those in (13)-(16) supports the hypothesis that the sentences in (13)-(16) do introduce have-relations, and that it is reasonable to assume that they are licensed by the 'profiled have-relation'-construction.

In order to account for the examples in (13)-(16) we have to modify our construction definition in (8) a bit, though, so that a have-predicate isn't a predicate that can necessarily be *decomposed* into a semantic structure that includes a have-relation, but a predicate that *introduces* a have-relation, either explicitly or implicitly. This modification will be done in section 7.4.2 below.

Bare singulars in existential sentences are a bit special in the sense that they are particularly context sensitive compared to other cases where bare singulars combine with have-predicates. In the examples in (13)-(16) we see that the type of thing denoted by the bare singular is always contextually activated, either directly or indirectly. Without such supporting contexts, bare singulars in existential sentences are usually regarded as unacceptable. This calls for an explanation, especially since the syntactic object in an existential sentence is always weak in Norwegian (Vangsnes, 1994), which should make bare singulars particularly suitable in this position.

There are two things that count against bare singulars licensed by the 'profiled have-relation'-construction in existential sentences, as far as I can see. One thing is the fact that the have-relation is not directly denoted by the verb; it is just inferred. A second thing has to do with the discourse structuring effect of existential sentences. It is generally acknowledged that the (token) referent of the syntactic object in an existential sentence tends to be a coming discourse topic and therefore subsequently referred to (see e.g. Siewierska, 1991). This disfavors bare singulars in this position, since bare singulars background their token discourse referent, making it an unlikely topic, and also less likely for subsequent reference than what a corresponding a-expression does.

Thus, after all, it is not surprising that Norwegian bare singulars in existential sentences (licensed by the 'profiled have-relation'-construction) must be quite heavily supported by an appropriate context to be judged acceptable.

7.4.2 *Subjects*

At its present stage, the 'profiled have-relation'-construction is not supposed to license subjects, thus following the many claims made in the literature that Norwegian bare singulars

cannot be subjects, or at least strongly tend to not be subjects (see e.g. Longobardi, 1994, Kallulli, 1999, Faarlund et al., 1997, Borthen, 1999). However, this is not correct, as we will see in this section.

Whereas many have-predicates, such as *ha* ('have'), *ha lyst på* ('desire'), and *mangle* ('lack'), cannot be passivized, those that can, allow for bare singular subjects on their passive versions. This is illustrated in (18).

- (18) a. Nytt telt trengs virkelig.
new tent need-PRES-PASS really
'A new tent is really needed.'
- b. Søppeldunk ble etterlyst av opptil flere.
garbage-can was requested by up-to more
'A garbage can was requested by several persons.'
- c. Dyne ble funnet fram, og så kunne festen starte.
quilt was found forth and then could party-DEFSUFF start
'A quilt was provided, and then the party could start.'
- d. Datamaskin ble skaffet med én gang.
computer was provided with one time
'A computer was provided immediately.'
- e. Bil blir sørget for senere.
car is provided for later
'A car will be provided later.'
- f. Billett ble bestilt allerede første kvelden.
ticket was ordered already first evening-DEFSUFF
'A ticket was ordered already the first evening.'
- g. Buss blir leid inn hvert år.
bus is rented in every year
'A bus is rented every year.'
- h. Sovepose blir leid ut til de som måtte ønske det.
sleeping-bag is rented out to those who might want it
'A sleeping bag is rented out to those who want it.'

Compared to the acceptability of corresponding examples with bare singular objects, the acceptability of these examples is a bit more fragile. The examples are most likely to be natural

if the type discourse referent is already given as a discourse topic or can be seen as a subset of a given set of types of things (as described for bare singulars in existential sentences above), and the content of the sentence also ought to support a type-emphasizing reading of the bare singular as well as a 'profiled have-predicate'-reading of the verb. This sensitivity I will attribute to the fact that subjects tend to be strong in Norwegian (even a-expressions are sometimes not natural subjects), which makes the occurrence of a bare singular (which is almost always weak) a bit surprising and in fact unacceptable if a strong reading is required and the bare singular does not happen to have a generic interpretation.

(8) licenses subjects not only in passive sentences. This is illustrated in (19).

(19) (Context: There has been an accident.)

- a. Sykebil er underveis!
ambulance is underway-AFF
'An ambulance on its way!'
- b. Helikopter er tilgjengelig hvert øyeblikk!
helicopter is available any moment
'A helicopter is available any moment!'
- c. Dykker ankom tidligere i dag.
diver has already arrived in day
'A diver arrived earlier today.'

As the existential sentences in (13)-(16), also these sentences entail the availability of the bare singulars' token discourse referent.

Notably, the verbs in (19) are presentational verbs, so the subject can also occur as the object in a corresponding presentational sentence with an impersonal subject. This is illustrated in (20).⁷⁸

(20) (There has been an accident)

- a. Det er sykebil underveis.
it is car under-way
'There is ambulance on its way.'

⁷⁸ The sentences in (19) have a flavor of hurry to them, in addition to the restriction that the type discourse referent of the bare singulars are preferred to be given as topics, or at least implicitly activated.

- b. Det er helikopter tilgjengelig hvert øyeblikk.
 it is helicopter available any moment
 'There is a helicopter available any moment.'
- c. Det ankommer dykker senere i dag.
 it arrives diver later in day
 'There will arrive a diver later today.'

So far, it seems to be the case that a Norwegian bare singular can occupy the subject position of a profiled have-predicate if and only if the verb or construction in question allows for realizing this argument also as an object. However, this is only partly true. As illustrated in (21) below, not all bare singular objects of presentational have-predicates can be realized as subjects.

- (21) a. *Hammer er i verktøykassa
 hammer is in tool-box-DEF
- b. *Sykkel står i garasjen.
 bike stands in garage-DEF
- c. *Kanin er i buret ditt.
 rabbit is in cage-DEF yours
- d. *Lege er i Mandal.
 doctor is in Mandal

These examples correspond to the well-formed existential sentences in (13)-(16) except that the bare singulars are realized as subjects.

One possible reason why the examples in (21) are illformed whereas those in (19) are fine, appears when we substitute the bare singulars with a-expressions. Whereas the sentences in (22) below (that correspond to those in (19)) allow for weak interpretations of the subjects, the sentences in (23) below (that correspond to those in (21)) only allow for a strong reading of the subject.^{79, 80}

- (22) a. En sykebil er underveis.

⁷⁹ A generic interpretation of the subjects in (23) is unlikely since the matrix predicates are most likely to be read as stage-level predicates, see Carlson, 1977 and Kratzer 1989.

⁸⁰ Notably, this preference is clearly stronger in Norwegian than for corresponding examples in English. It should also be noticed here that the examples in (23) are slightly unnatural.

an ambulance is under-way

'A taxi is on its way.'

b. Et helikopter er tilgjengelig hvert øyeblikk.

a helicopter is available any moment

'A helicopter is available any moment.'

c. En dykker ankom tidligere i dag.

a diver arrived earlier in day

'A diver arrived earlier today.'

(23) a. ?En hammer er i verktøykassa.

a hammer is in tool-box-DEFSUFF

'A hammer is in the tool box.'

b. En sykkel står i garasjen.

a bike stands in garage-DEFSUFF

'A bike is standing in the garage.'

c. En kanin er i buret ditt.

a rabbit is in cage-DEFSUFF yours

'A rabbit is in the cage.'

I will not try to speculate why the subjects in (23) have to be referential in Norwegian. Rather I will simply conclude that for a bare singular to be licensed as a subject in accordance with the 'profiled have relation'-construction in Norwegian, two conditions must hold in addition to the constraints otherwise imposed by the construction definition. First of all, the verb or the predicate that takes the bare singular as its subject has to be of a type that can express its deep object as either a surface object or a surface subject. Secondly, this verb or predicate must allow for a weak reading of an indefinite subject. Not all predicates do so in Norwegian.

The examples of bare singular subjects we have looked at so far in this chapter include bare singular subjects in passive sentences and bare singular subjects of presentational verbs. A third case where we get bare singular subjects in accordance with the 'profiled have-relation construction' is in copular sentences with raising adjectives, as illustrated in (24ab) below.

(24) a. Bil er kjekt å ha.

car is handy to have

'A car is handy to have.'

- b. Hatt er ubehagelig å gå med.
 hat is inconvenient to go with
 'A hat is inconvenient to wear.'
- c. Det er kjekt å ha bil.
 it is handy to have car
 'It is handy to have a car.'
- d. Det er ubehagelig å gå med hatt.
 it is inconvenient to walk with hat
 'It is inconvenient to wear a hat.'

In both (24a) and (24b), the surface subject of the postcopular adjective is logically an object in the adjective's complement clause. In (24a) the bare singular is logically the object of the verb *ha* ('have'), whereas in (24b) the bare singular is logically the complement of the preposition *med* ('with'). Both these predicates are ultimate examples of have-predicates and therefore predicates that are very likely to take bare singular complements. With embedded predicates that are not that likely to take bare singular complements, this construction is not possible.

As noticed by Hellan (1986), bare singulars of the type illustrated in (24ab) don't agree w.r.t. gender with the postcopular adjective. Other types of nominals either have to, or prefer to, agree with the adjective when they occur as subjects in this kind of construction. This is illustrated in (25ab).

- (25) a. Bilen er kjekk/*kjekt å ha.
 car-DEFSUFF.MASC is handy-MASC/*handy-NEUT to have
 'The car is handy to have.'
- b. En bil er kjekk/?kjekt å ha.
 a car is handy-MASC/?handy-NEUT to have
 'A car is handy to have.'
- c. Bil er kjekt/*kjekk å ha.
 car is handy-NEUT/*handy-MASC to have

This is a fact that needs to be accounted for in our analysis. I do not believe it is directly encoded in the 'profiled have-relation'-construction, though, since, as we will see later, predicative adjectives usually agree with bare singulars licensed by the 'profiled have-

relation'-construction. In chapter 13, section 13.6, I will propose an analysis where the source of the "disagreement" is the raising adjective.

7.4.3 *Secondary predication*

As pointed out by Kallulli (1996, 1999), secondary predication is usually incompatible with the use of a bare singular. (26) illustrates this.

- (26) a. Kari kjøpte sykkelen/en sykkel ny.
Kari bought bike-DEF.MASC/a-MASC bike(MASC) new-COMM
'Kari bought the bike/a bike new.'
- b. *Kari kjøpte sykkel ny.⁸¹
Kari bought bike(MASC) new-COMM

In (26a) a secondary predicate states something about the sentence's direct object, which is realized as an a-expression or definite noun phrase. With a bare singular object, the sentence becomes illformed.

The problem is, though, that secondary predication in combination with a bare singular object is sometimes possible:

- (27) a. Har du bil klar?
have you car(MASC) ready-COMM?
'Do you have a car ready?' [NOD, 50]
- b. De har sovepose ferdig til deg.
they have sleeping-bag(MASC) finished-COMM to you
'They have a sleeping bag ready for you.'
- c. Jeg har seng ferdigsnekret oppe på loftet.
I have bed finished-made up on loft-DEFSUFF
'I have a bed ready-made on the loft.'

⁸¹ The unacceptability of (26b) is not due to the fact that there is agreement between the adjective and the bare singular. On the contrary, there has to be agreement. Neuter form on the adjective would make the sentence unacceptable for yet another reason.

Notice in (28) below that secondary predication of an object that is realized as an a-expression (or a definite noun phrase for that case) is not compatible with having a reflexive indirect object in the same sentence.

- (28) a. Kari kjøpte seg en sykkel.
Kari bought REFL a bike
'Kari bought herself a bike.'
- b. *Kari kjøpte seg en sykkel ny.
Kari bought REFL a bike new
'Kari bought herself a bike new.'

Since reflexive indirect objects were argued above to focus, or profile, a predicate's have-relation, the data in (28) may be taken as an indication that a secondary predicate is incompatible with a 'profiled have-relation'-interpretation, and not bare singulars as such. Admittedly, the data in (28) do not prove that it is incompatibility w.r.t. to the profile of the matrix predicate that makes the (28) illformed; it may for instance be argued that it is the presence of an indirect object that rules out the secondary predicate. However, whereas such an explanation would be sufficient for (28), it would not account for why (26b) is illformed, since there is no indirect object present there. On the other hand, if we assume that it is a 'profiled have-relation'-reading that is incompatible with the secondary predicate in (28b), then we can also explain the illformedness of (26b).

But what is it, then, that makes a profiled have-relation and a secondary predication incompatible? Notice that the property assigned to the indefinite's referent by the secondary predicate in (26b) and (28b) does not necessarily hold at the stage where it is possessed, but definitely holds at other stages that the predicate introduces. That is, the bike was definitely new when Kari handed the money over to the prior owner of the bike, but not necessarily when she possessed it. At least not after a while. Thus, we may claim that the secondary predicate in (26b) and (28b) clashes with a profiled have-relation interpretation (induced either by the bare singular or the reflexive pronoun) because it draws attention to other stages than the final stage of possession.

Crucially, this explanation does not entail that secondary predicates can *never* predicate over bare singulars licensed by the 'profiled have-relation'-construction. What is predicted is that it matters whether the secondary predicate states something about the referent of the bare singular at the final stage of possession (in which case the sentence is expected to be acceptable) or

possibly at some other stage involved by the predicate (in which case the sentence is not expected to be acceptable). Exactly as one might suspect, the well-formed examples in (27) designate situations where the secondary predicate states something about the discourse referent of the bare singular at the final stage of possession.⁸²

In other words, bare singular objects licensed by the 'profiled have-relation'-construction can be predicated of by postnominal secondary predicates if and only if this predication is compatible with a profiled have-relation reading.

7.4.4 Summary of section 7.4 (and a revised construction definition)

In the previous sections we have seen that bare singulars that combine with have-predicates can occur as complements of verbs and prepositions, and as subjects. We have also seen that they occur in existential sentences, and that they sometimes, but not often, allow for secondary predication. Earlier in this chapter we have also seen that these bare singulars can be modified (see e.g. (1)), coordinated (see (2e)), topicalized (see (2n)), and that they can be part of questions with subject-verb inversion (see (2p)). We can therefore quite safely conclude that bare singulars licensed by the 'profiled have relation'-construction can occur in any syntactic position that can host the possessed argument of a have-relation, and take part in any syntactic alternation that doesn't do harm to either the constraints on the 'profiled have-relation'-construction in (29) below or to the fact that bare singulars are type-emphasizing.

(29) The 'profiled have-relation'-construction (SECOND VERSION):⁸³

- 1) A bare singular can occur in Norwegian if it is selected as the *possessed argument* of a *profiled have-predicate*.
- 2) A *have-predicate* is a word that introduces a have-relation (either explicitly or implicitly).
- 3) A *have-relation* is an asymmetrical coexistence relation between two arguments, called *the possessor* and *the possessed*, where the possessor is *superior* to the possessed rather than the other way around.
- 4) A *profiled have-predicate* is a have-predicate whose have-relation is focused on

⁸² It may also be argued that locative phrases in existential sentences are secondary predicates. If so, also the data in (13)-(16) illustrate that Norwegian bare singulars can be predicated of by secondary predicates.

⁸³ The final version will be given in section 7.6 below.

relative to other relations or states this predicate involves, if any.

- 5) An argument can be *superior* to some other argument in terms of control, part-whole dependency, animacy, or point of view.

7.5 Final notes

7.5.1 *Some comparisons with the 'conventional situation type'-construction*

Whereas bare singulars licensed by the 'conventional situation type'-construction were examined w.r.t. information structure, antecedenthood, number interpretation, and phonological realization, I will not bore the reader with a thorough examination of bare singulars licensed by (29) w.r.t. these parameters. I will simply encourage the reader to take my word for it when I claim that bare singulars licensed by the 'profiled have-relation'-construction do not differ from corresponding weak a-expressions w.r.t. these parameters, as far as I can see. This is as expected, since the "deviating" properties of bare singulars licensed by the 'conventional situation type'-construction w.r.t. information structure, antecedenthood, number interpretation, and phonological realization were argued to have to do with lexicalization, which is not an issue in the same sense in connection with the 'profiled have-relation'-construction.

One apparent difference between the 'conventional situation type'-construction and the 'profiled have-relation'-construction is that the latter does not license predicative bare singulars (since predicatives cannot represent possessed entities), whereas the former is particularly likely to. This is probably one reason why scholars have often assumed that predicative and non-predicative bare singulars underlie different restrictions (see e.g. Faarlund et al., 1997, and Borthen 1999).

7.5.2 *Different kinds of nominals licensed by Construction 2*

As the 'profiled have-relation'-construction is presently stated, it only licenses bare singulars. But Norwegian have-predicates are of course not restricted to take only bare singulars as their possessed argument. Consider the following data.

- (30) a. Per går med hatt/en hatt/hatter/hatten hver dag.

Per goes with hat/a hat/hats/hat-DEFSUFF every day

'Per uses a hat/hats/the hat every day.'

- b. Kari bruker datamaskin/en datamaskin/datamaskiner/datamaskinen.

Kari uses a computer/computers/computer-DEFSUFF

'Kari uses a computer/computers/the computer.'

- c. Jeg har nøkkel/en nøkkel/nøkler/nøkkelen.

I have a key/keys/key-DEFSUFF

'I have a key/keys/the key.'

When a-expressions are used in (30), the sentences can be close to synonymous with corresponding sentences with bare singulars, which suggests that not only bare singulars are licensed by this construction. On the other hand, there is no requirement that the have-predicate is profiled when the nominal is not a bare singular. There seems to be two options here w.r.t. what class of nominals the construction licenses, and how the construction should be defined according to this class: Either one assumes that the construction has profiling as an inherent property, in which case only bare singulars are licensed. Or, one assumes that the construction does not have profiling as an inherent part, (i.e. it is something that follows from the semantics of bare singulars), in which case all kinds of nominals can be licensed by this construction. I choose the latter option. After all, profiling of the have-relation is something that *can* be directly connected to type-emphasis. Since have-relations impose extremely little affectedness on their semantic objects, it follows that whenever a have-relation is part of a complex event structure that contains also other relations, those other relations will signal more affectedness than the have-relation does. Profiling of the have-relation therefore means less affect, which, in turn, is in accordance with type-emphasis, and therefore favorable for the use of bare singulars.

To sum up, I propose that have-predicates can take any nominals as their possessed argument, and that the profiling of the have-relations that we have seen above arise for bare singulars because they are type-emphasizing. However, I will not rename the construction, since the effects of profiling are so crucial to understand the distribution of bare singulars licensed. The construction name will therefore still be 'the profiled have-relation'-construction, but profiling will not be part of the construction definition, but connected to the semantics of bare singulars (i.e. type-emphasis).

7.6 Summary and conclusions

In this chapter, I have argued for a second construction that licenses bare singulars in Norwegian, namely (31):

(31) The 'profiled have-relation'-construction (FINAL VERSION):

- 1) Any kind of nominal phrase in Norwegian (including bare singulars) can occur as the *possessed argument* of a *have-predicate*.
- 2) A *have-predicate* is a word that introduces a have-relation (either explicitly or implicitly).
- 3) A *have-relation* is an asymmetrical coexistence relation between two arguments, called *the possessor* and *the possessed*, where the possessor is *superior* to the possessed rather than the other way around.
- 4) An argument can be *superior* to some other argument in terms of control, part-whole dependency, animacy, or point of view.

In other words, I assume that there exists a class of predicates in Norwegian that (on certain interpretations) license bare singulars as one of their arguments just as well as other types of nominals.

The connection between the type-emphasizing effect of Norwegian bare singulars and the 'profiled have-relation'-construction is pretty straight-forward: It is simply often highly relevant to inform someone about what type of thing you have, want, or bought, etc., whereas it is not equally relevant or natural to inform someone about what kind of thing you moved, hit or went to, for instance. Thus, what motivates the 'profiled have-relation'-construction is simply that these predicates (on the specific readings that the construction requires) are particularly likely to take a complement or subject that is interesting first of all as a type of thing.

This may seem like a circular argument, but notice the following two points: First, it is not only the case that have-predicates are particularly likely to take bare singular possessed arguments. It is also a fact that it sounds perfectly fine to ask for instance *What type of thing did you use as the tool?*, *What type of thing do you want for Christmas?* and *What type of thing did you buy?* whereas the questions *What type of thing did you hit?*, *To what type of thing did you give it?* and *To what type of thing did you walk?* are more marked, presumably having to do with affectedness. Secondly, it is not only in Norwegian that have-predicates are special w.r.t. what types of nominal arguments they take. In fact, cross-linguistically, have-predicates are

particularly likely to take reduced indefinite nominals as complements, they be morphologically incorporated (as in West Greenlandic) or just determinerless (as in Norwegian and Albanian, for instance).

Some properties of bare singulars licensed by (31) that follow partly from the construction definition, but also from their semantics, are summarized in (32).

- (32) *Bare singulars that are licensed by 'the profiled have-relation'-construction*
- a. are very context-sensitive w.r.t. what aspect of the event is most important (the possession state ought to be important),
 - b. are promoted by reflexive indirect objects,
 - c. are sometimes, but usually not, acceptable if predicated of by a secondary predicate,
 - d. can appear in all syntactic positions except in indirect object position and in predicative position,
 - e. can take part in syntactic alternations like topicalization, passivization, subj/obj-alternation for presentational verbs etc.,
 - f. cannot be arguments of have-predicates that have an interpretation (on the particular use) that involves too much affectedness, and
 - g. are particularly likely to be acceptable as complements of intensional have-predicates.

The fact that the Norwegian bare singulars licensed by (31) represent the possessed argument of a have-relation, doesn't - in principle - restrict these bare singulars to occupy any particular syntactic position. However, not all syntactic positions are likely to host a possessed entity. Thus, (31) is in accordance with the fact that we have found bare singulars of this type in all basic syntactic positions except the indirect object position and the predicative position, which (to the best of my knowledge) never can host a possessed entity in Norwegian. It also follows from (31), as desired, that these bare singulars should be able to "take part in" all kinds of syntactic alternations. This chapter has thus disproven the claims made by e.g. Kallulli (1996, 1999) that Norwegian bare singulars cannot be subjects, that they cannot occur in existential sentences, and that secondary predication of a bare singular is impossible.

As argued above, profiling need not be stated as a stipulation in the construction definition, as it can be directly connected to the semantics of bare singulars. Since have-relations impose very little affectedness on their possessed argument, it follows that whenever a have-relation is part of a complex event structure that contains also other relations, those other relations will signal more affectedness than the have-relation does. Profiling of the have-relation therefore

means less affect, which in turn is in accordance with type-emphasis and therefore favorable for the use of bare singulars. The sensitivity w.r.t. profiling in turn explains the fact that the acceptability of these bare singulars is very context sensitive, that their acceptability is boosted by the presence of a reflexive pronoun, as well as the fact that they are sensitive to secondary predication. The kind of contexts that are preferred for these bare singulars, are those that focus on the final state of possession introduced by the have-predicate. As for the effect of reflexives, the reflexive always denotes the possessor of the have-relation. An explicit mention of a possessor is likely to draw the attention towards the possession state, which suggests that that this state is profiled, and thus in accordance with (31) and the semantics of bare singulars. Secondary predicates, on the other hand, may predicate over the discourse referent corresponding to the possessor as it occurs in different roles throughout the verb's event structure. Depending on where in the event structure the discourse referent is assumed to have this property, secondary predicates may either have the effect that they draw attention away from the possession state, or that they focus on it. Thus, the notion of profiling can also explain the way bare singulars licensed by (31) are affected by secondary predication.

The timewise unacceptability, timewise lack of comfort, seen in bare singulars in subject position can be at least partly attributed to the fact that subjects are often required or preferred to be hosted by strong noun phrases in Norwegian, whereas bare singulars are (usually) not, as shown in chapter 2. Furthermore, the fact that intensional have-predicates are particularly likely to take bare singular complements, also makes sense given that bare singulars are type-emphasizing and given that intensional individuals are not as relevant as tokens as what transparent individuals are. And finally, the fact that affectedness rules out a bare singular even if it is the complement of a have-predicate, is in accordance with what we have observed for all bare singulars, regardless of what construction they are licensed by: highly affected objects are not likely to be realized as bare singulars, presumably because highly affected objects are highly relevant as tokens whereas bare singulars are type-emphasizing.

The fact that have-predicates often take bare singular complements in Norwegian has been noticed throughout the Norwegian descriptive linguistic tradition at least since Falk and Torp (1900), and more recently by Kallulli (1996, 1999), Borthen (1999, 2000, 2002), and Faarlund et al. (1997). Thus, the construction definition in (31) follows up a long tradition regarding generalizations about Norwegian bare singulars. On the other hand, many new data have been acknowledged (e.g. that these bare singulars can be subjects), and we have achieved a unitary analysis of classes of examples that have only been mentioned as separate cases previously. For instance, it has not previously been noticed that instruments and (some) semantic subjects

in existential sentences can be seen as arguments of have-predicates. Finally, the novel notion of *profiling* seems to make the present analysis better suited to account for the observed context-dependencies than what earlier analyses and generalizations have been (including e.g. Borthen, 1999).

8 Construction 3

8.1 Some introductory data

Consider the data in (1)-(3).

- (1) a. Skarp kniv er det mordvåpenet som blir mest brukt.
sharp knife is the murder-weapon-DEFSUFF that becomes most used
'A sharp knife is the type of weapon that is most often used for murder.'
- b. Den rimeligste typen framkomstmiddel er buss.
the cheapest type-DEFSUFF conveyance-DEFSUFF is bus
'The cheapest type of conveyance is the bus.'
- c. Det hjelpemiddelet som er mest brukt er datamaskin.
the tool that is most used is computer
'The type of tool that is used the most is the computer.'
- (2) a. Buss er et naturvennlig kjøretøy.
bus is a nature-friendly vehicle
'A bus is a non-polluting vehicle.' [NOD, 52]
- b. Hammer er et nyttig verktøy.
hammer is a useful tool
'A hammer is a useful tool.'
- c. Ett koselig husdyr jeg kan nevne er hund.
one cozy house-animal I can mention is dog
'One cozy kind of pet that I can mention is the dog.'
- d. Ett populært kjøretøy er bil.
one popular vehicle is car
'One popular kind of vehicle is the car.'
- (3) a. Han skilte nøye mellom penn og blyant.
he distinguished strictly between pen and pencil
'He distinguished strictly between pens and pencils.'

- b. Hun vet ikke forskjellen på mann og dame.
she knows not distinction between man and woman
'She doesn't know the distinction between man and woman.'
- c. Motorsykkel er et like forurensende kjøretøy som bil.
motor-bike is an equally polluting vehicle as car
'A motor bike is an equally polluting vehicle as a car.'

These bare singulars are not licensed by the 'conventional situation type'-construction, since they do not denote conventional situation types together with the main predicate that selects them as arguments. They are furthermore not arguments of have-predicates and thus licensed by the 'profiled have-relation'-construction. Thus we seem to be dealing with a third construction that allows for bare singulars in Norwegian.

8.2 A first generalization

In Borthen (1999) I point out that Norwegian bare singulars sometimes are subjects in copular sentences with predicative nominals, such as in (1a) and (2a), for instance. Considering the full set of data in (1)-(3), however, a more powerful generalization seems to have nothing to do with the copular verb or predicative nominals as such, but with a certain kind of relation. Notice that one thing that is common to all the sentences in (1)-(3) is that the relation that holds between the denotation of the bare singular and its co-argument is either a comparison or an identity relation: In (1), the relation between the two arguments is clearly one of identity. In (2), there is a hyperonym-hyponym relation between the two arguments. Also these relations can be seen as identity relations. For instance, (2a) can be seen as stating an identity relation between the category *car* and some subtype of the category *vehicle*. And in (3), there are different types of relations that all entail a comparison of the two arguments. If we assume that identity relations are a subtype of comparison relations (since you need to compare in order to identify), a first approximation for what is going on in (1)-(3) is that Norwegian bare singulars can occur as either subjects or objects of comparison relations.

8.3 Comparison relations not enough

As the reader may already have suspected, comparison relations do not always license Norwegian bare singulars, though. Compare (4a) with (4b), for instance.⁸⁴

- (4) a. Bil er ikke det samme som buss.
car is not the same as bus
'A car is not the same as a bus.'
- b. ??*Bil kjører fortere enn buss.
car drives faster than bus
'A car drives faster than a bus.'

The difference between these sentences has to do with what kind of comparison relation is involved. Whereas buses and cars are compared in both (4a) and (4b), the buses and cars are presented as more agentive in (4b) than in (4a), which is presumably what leads to the difference in acceptability.

The descriptive content in the bare singular's co-argument can have a similar effect. Compare the sentences in (5) with the ones in (6).

- (5) a. */??Det jeg ødelegger er bil.
that I destroy is car
'That which I am destroying is a car.'
- b. */??Det jeg drepte var hest.
that I killed was horse
'That which I killed was a horse.'
- (6) a. Det jeg trenger er bil.
that I need is car
'What I need is a car.'
- b. Det jeg ønsket meg var hest.
that I want REFL was horse

⁸⁴ Both the subject and the object in (4b) is equally unacceptable. (4b) is perfectly well-formed if the bare singulars are substituted with corresponding a-expressions.

'What I wanted was a horse.'

The crucial difference between the sentences in (5) and those in (6) is that the subject noun phrases in (5) (because of their descriptive content) designate highly affected entities, whereas those in (6) do not. If we assume that comparison and identity relations can only hold between entities of the same type, this can explain why the examples in (5) are illformed whereas those in (6) are fine.⁸⁵ As argued earlier (see e.g. section 4.5.2, chapter 4), bare singulars are not likely to realize highly affected entities.

Also when the bare singular's co-argument does not contain a verb (as it does in (5) and (6)), the descriptive content in this co-argument (and in the bare singular itself) is crucial. Compare the examples in (7) with those in (8), for instance.

- (7) a. Bil er et kjøretøy.
car is a vehicle
'A car is a vehicle.'
- b. Hammer er et verktøy.
hammer is a tool
'A hammer is a tool.'
- c. Jakke er et klesplagg.
jacket is a clothing
'A jacket is a clothing.'
- (8) a. ??Kvinne er et menneske.
woman is a human-being
'A woman is a human being.'
- b. ??Gutt er et barn.
boy is a child
'A boy is a child.'
- c. ?Hund er et dyr.
dog is an animal

⁸⁵ Another reasonable path of argumentation might be to look at the "deep" semantic role of the bare singular, and thus reduce many well-formed examples in this chapter (e.g. those in (1) and (6)) to construction 1 and 2, and explain many ill-formed examples by a failure to be such reducible. However reasonable for some examples, such an approach would not apply to examples such as (2) and (3), though.

'A dog is an animal.'

In the examples in (7), that are fine with bare singulars, the postverbal a-expressions present the bare singulars' denotation as types of tools and clothes, which are semantic roles that are particularly compatible with type-emphasis (see section 4.5.2, chapter 4). In (8), on the other hand, this is not the case, and consequently the examples appear as unacceptable. We will see below, though, that the examples in (8) may be acceptable in certain contexts.

To sum up so far, the data in this section show that it is not sufficient for a Norwegian bare singular to occur in a comparison relation to be acceptable; the semantic content of the sentence also has to be compatible with, and preferably support, that the bare singular is type-emphasizing.

8.4 Facilitating contexts

There are two main types of contexts that facilitate the use of bare singulars in examples such as those in (1) and (2). One is where the type of thing introduced by the bare singular is given as a current discourse topic. For instance, if someone asks what a woman, a boy, or a dog is, then the Norwegian sentences in (10) below can be used felicitously to answer these questions. (Compare with the relatively illformed examples in (8) above).

(10) a. A: Hva er kvinne for noe?

what is woman for something

'What is a woman?'

B: (?)Kvinne, det er et menneske av hunkjønn.

woman, that is a human-being of female-gender

'A woman, that is a female human being.'

b. A: Hva er gutt for noe?

what is boy for something

'What is a boy?'

B: (?)Gutt, det er et barn av hankjønn.

boy, that is a child of masculine-gender

'A boy, that is a male child.'

c. A: Hva er hund for noe?

what is dog for something

'What is a dog?'

B: (?)Hund, det er et dyr mange har som kjæledyr.

dog, that is an animal many have as pet

'A dog, that is an animal that many people have as their pet.'

A's questions in these examples makes it clear that A expects B to describe or define the *types* of things *woman*, *boy*, and *dog*. The topicalization of the bare singular in B's answer supports this context, since indefinites can only be left-dislocated if it is the type discourse referent that is the topic (see section 2.10.1, chapter 2).

The second main type of context that supports the use of a bare singular in comparison relations is illustrated in (11).

(11) A: What type of murder weapon is used the most?

B: Skarp KNIV er det mordvåpenet som blir mest brukt.

sharp KNIFE is the murder-weapon-DEF that becomes most used

'A sharp KNIFE is the type of murder weapon that is used the most.'

Also in (11), A's question makes it clear that A is questioning a type of thing rather than a token. The subject noun phrase in A's question introduces a quite general concept, and A expects a hyponym of this concept (i.e. a type of thing) as the answer to his question, not a token. The bare singular in B's answer gets focal accent and is presented as information-structurally new (i.e. rhematic) information whereas the rest of the sentence is presented as information-structurally given information.⁸⁶ All the examples in (1) and (2) at the beginning of this chapter are of a type that is compatible with the kind of context exemplified in (11). This is not a coincidence, I believe. The presence of a postverbal noun phrase that is likely to be discourse given (and therefore topical), makes it quite likely that the bare singular is rhematic information, contrary to what Norwegian subjects tend to be - which is a prerequisite for accepting a context like the one illustrated in (11) above.

It may seem strange that the type of bare singular-promoting context illustrated in (10) makes the bare singular a clear topic expression, whereas the type of context illustrated in

⁸⁶ Notice that whereas the bare singulars in (10) are left-dislocated, and thus coded topic expressions, the bare singular in (11B) is not. In (11), the bare singular is topicalized (i.e. it is not the sentence's subject), but this does not entail topicality in Norwegian.

(11) makes the bare singular an expression representing clearly rhematic information. Why should both these types of context promote the use of bare singulars? Notice that the two types of contexts have one thing in common: In both cases it is made very clear that the bare singular's token discourse referent is not read as the sentence's topic; in (10) it is the type discourse referent that is the topic, whereas in (11) it is the postverbal phrase that represents the topic, not the bare singular. Whereas topics tend to have a high cognitive status and have to be at least referential in Norwegian (see Reinhart, 1981), bare singulars are only type identifiable and cannot be referential (on the token level). Thus, it makes sense that these two types of contexts, which make sure that the bare singular's token discourse referent is not a likely topic candidate, both promote the use of a bare singular.

Finally, notice that none of the sentences in (1), (2), and (3) are episodic, and that many of them are generic. Whereas there is one particular token involved in an episodic event that is referred to with a string containing a singular nominal, generic statements often abstract away from particular tokens, which intuitively count in favor of using a bare singular. Thus, part of what makes the examples in (1) and (2) acceptable is presumably that they are not episodic but rather generic. As illustrated in (12) below, a comparison relation in an episodic sentence is not necessarily good.

(12) A: What are you doing?

B: ??Jeg sammenligner bok og blad.

I compare book and magazine

'I am comparing a book and a magazine.'

8.5 The 'comparison of types'-construction

Based on the observations made so far in this chapter, I propose the following construction definition:

(13) Construction 3: the 'comparison of types'-construction:

A Norwegian bare singular can occur as an argument of a *comparison or identity relation*.

The fact that the comparison relation must not involve too much affectedness, that generic sentences tend to be more acceptable than episodic ones, and that the bare singular must be presented as being relevant as a type of thing, I assume follows from their type-emphasis, which is a semantic property of Norwegian bare singulars that holds regardless of what construction they are licensed by. The construction in (13) is quite 'fragile', in the sense that the licensing of a bare singular needs to be supported contextually or by the semantic content of the sentence itself.

8.6 Syntactic implications

It follows from (13) that bare singulars licensed by this construction can occur equally well in subject and object position (of either verbs or prepositions), and that they in principle can take part in all kinds of syntactic alternations that do not block the possibility of having a comparison relation. Bare singular indirect objects are not licensed by (13), though, since this syntactic position cannot host an argument of an identity relation, it seems. As for special syntactic constructions, these bare singulars are not expected to occur in existential sentences (since identity relations cannot be expressed in existential sentences), and I haven't found any examples of secondary predication of bare singular arguments of comparison relations.

8.7 Semantic interpretation

Now to the question: What kind of semantics do the bare singulars in (1), (2), and (3) have?

8.7.1 Hypothesis 1

Let us first start out with the hypothesis that (at least some) bare singulars in (1), (2), and (3) have the same reading as definite noun phrases with what has been called the 'well-established kind'-interpretation (see the introductory chapter in Carlson and Pelletier (1995) and works cited therein). On such a hypothesis, it is expected that (14a) and (14b) below have the same interpretation in the case where (14a) is taken as stating something about a particular kind of thing, not a particular token.

- (14) a. Bilen er et kjøretøy.
 car-DEFSUFF is a vehicle
 'The car is a vehicle.'
- b. Bil er et kjøretøy.
 car is a vehicle

One argument that suggests that this is a correct interpretation of (14b) has to do with modification. Consider the following data.

- (15) a. Den gamle bilen er et kjøretøy.
 the old car-DEFSUFF is a vehicle
 'The old car is a vehicle.'
- b. ??Gammel bil er et kjøretøy.
 old car is a vehicle

Whereas the subject in (14a) can have the 'well-established kind'-interpretation, the subject in (15a), which is modified by an adjective, can't. This is assumed to be due to a restriction on these types of phrases that they have to denote well-established kinds: Whereas the concept 'car' is such a kind, the concept 'old car' is not. As you can see in (15b), the bare singular in (14b) becomes unacceptable when it is modified with the adjective *gammel* ('old'). This unacceptability can be explained under the assumption that the bare singular in (14b) has to denote a well-established kind.

However, it is probably the postverbal predicate in (14) and (15), and not the reading of the bare singular *per se*, that restricts the subject in (14b) to be a well-established kind. Consider the examples in (16).

- (16) a. Den gamle bilen er et helt greit kjøretøy å ha stående i garasjen.
 the old car-DEFSUFF is a completely ok vehicle to have standing in garage-
 DEFSUFF
 'The old car-DEF is a completely ok vehicle to have standing in the garage.'
- b. ?Gammel bil er et helt greit kjøretøy å ha stående i garasjen.
 old car is a completely ok vehicle to have standing in garage-DEFSUFF
 'An old car is a completely ok vehicle to have standing in the garage.'

c. Gammel bil er det jeg ønsker meg mest.

old car is that I want REFL most

'An old car is what I want the most.'

Here we see that if we modify the postverbal nominal so that the subject is not supposed to be part of a taxonomy of vehicles, the bare singular can be modified after all, whereas the definite subject in (16a) is still unable to get the 'well-established kind'-interpretation. This shows that these types of bare singulars are *not* generally subject to the same kinds of restrictions as definite noun phrases with a 'well-established kind'-interpretation, and should therefore not be interpreted as such. This conclusion is also in accordance with the fact that the following examples with bare singulars are strictly illformed:

(17) a. *Dinosaur er utdødd.

dinosaur is extinct

b. Dinsauren er utdødd.

dinosaur-DEFSUFF is extinct

'The dinosaur is extinct.'

c. *Bell oppfant telefon.

Bell invented telephone

d. Bell oppfant telefonen.

Bell invented telephone-DEFSUFF

'Bell invented the telephone.'

If bare singulars were able to get a definite 'well-established kind'-interpretation just like certain definite noun phrases, we would expect them to be capable of occurring in cases where definite noun phrases with a 'well-established kind'-interpretation can occur. As illustrated in (17), this is not the case. In other words, the similarity between (14a) and (14b) is not due to a 'well-established kind'-interpretation of the bare singular, but to a coincidence having to do with the fact that the postverbal nominal suggests a taxonomic interpretation of the subject phrase.

8.7.2 Hypothesis 2

Let us now test out the hypothesis that the bare singulars of the type in (14b) are (or can be) generic, or *quasi-universal* (meaning *all* or *most*), just like a-expressions. In other words, let us assume that (19b) below is generic in the same sense as (19a) may be.

- (19) a. En bil er et kjøretøy.
a car is a vehicle
'A car is a vehicle.'
- b. Bil er et kjøretøy.
car is a vehicle
'A car is a vehicle.'

(19a) and (19b) are true and false under the same circumstances, and they both mean that any car is a vehicle. But if the bare singular in (19b) is generic in the same sense as (19a), then how can we explain the fact that the sentences in (20bdf) are illformed?

- (20) a. En bil er laget av metall.
a car is made of metal
'A car is made out of metal.'
- b. */??Bil er laget av metall.
car is made of metal
- c. En bil har fire hjul.
a car has four wheels
'A car has four wheels.'
- d. */??Bil har fire hjul.
car has four wheels
'A car has four wheels.'
- e. En tiger dreper byttet sitt momentant.
a tiger kills pray-DEF REFL momentarily
'A tiger kills its pray momentarily.'
- f. *Tiger dreper byttet sitt momentant.
tiger kills pray-DEF REFL momentarily

In Borthen (1999) and Kallulli (1996, 1999) the data in (20) and similar examples are taken as evidence that Norwegian bare singulars can never have a quasi-universal generic interpretation. Such generic bare singulars are ruled out by the claim that Norwegian bare singulars are unambiguously weak and therefore can never be generic in this sense. Now, if we assume that bare singulars *can* be generic and quasi-universal, in examples such as (19b), for instance, we need another way of explaining why the sentences with bare singulars in (20) are illformed.

Let's start with the most easy case first. Notice that in (20ef), the subject realizes an agent, and is therefore a bad candidate for being a bare singular due to bare singulars' type-emphasis (see chapter 4, section 4.5.2). If we take the quite reasonable stand that bare singulars (because they are type-emphasizing) are reluctant to realize semantic roles that involve much agentivity or affectedness (regardless of whether they have an existential or a generic interpretation), then these facts are accounted for. Furthermore, there is no construction (mentioned so far, at least) that is assumed to license bare singulars of this type.

As for (20b) and (20d), these sentences present their subjects as property-holders. Even though property-holders intuitively seem to be positioned below agents in a semantic role hierarchy, they are still undoubtedly quite high up, and therefore not very good candidates for being realized as bare singulars to begin with. But what explains the difference in acceptability between the examples in (20bd) and those in (1), (2), and (19a), for instance? Being a property-holder is more agentive-like than being compared to some other type of entity, since the latter relation is symmetrical whereas the first one is not. Another thing that distinguishes the examples in (20b) and (20d) from those in (1) and (2) is that the former do not contain a noun phrase that can be seen as the hyperonym of the denotation of the bare singular, which again means that a context where the bare singular's referent is intended to denote a subtype of this concept is particularly likely. This again means that we do not have easy access to a context that makes it clear that the token discourse referent of the nominal is not intended to be the sentence's topic. As expected, if we create the kind of context that the examples in (1) and (2) are likely to give rise to, the examples in (20b) and (20d) become better. This is illustrated in (21).⁸⁷

⁸⁷ The same kind of context as in (21) is not enough to rescue (20f):

- (i) A: Can you mention an animal that kills its prey instantaneously?
 B: *TIGER dreper byttet sitt momentant.
 TIGER kills prey-DEFSUFF REFL-POSS instantaneously
 'A TIGER kills its prey instantaneously.'

- (21) a. A: Kan du nevne noe som er laget av metall?
 'Can you mention something that is made from metal?'
 B: ?BIL er laget av metall.
 CAR is made from metal
 'A CAR is made from metal.'
- b. A: Kan du nevne noe som har fire hjul?
 'Can you mention something that has four wheels?'
 B: ?BIL har fire hjul.
 CAR has four wheels
 'A CAR has four wheels.'

Recall that the strong tendency for Norwegian bare singulars to not have a quasi-universal generic interpretation was the only restriction that we didn't manage to connect by common-sense logical reasoning to the type-emphasizing effect of bare singulars in chapter 2. Now we have a reason why this is so: The tendency for bare singulars to not be quasi-universal does not have anything to do with genericity as such, and therefore cannot be connected to type-emphasis directly. The reason why examples such as those in (20bdf) are illformed has to do with what semantic roles the subject of such sentences has, and what contexts are plausible and implausible for the different sentences.

In fact, I will claim that other things being equal, genericity (including quasi-universal readings) counts in *favor* of type-emphasis, thus increasing the acceptability of a bare singular in a corresponding non-generic sentence. Notice that existential versions of wellformed generic bare singulars are often out. The bare singular in (19b), for instance, is totally unacceptable on an existential interpretation, whereas it is well-formed when it is interpreted as generic and quasi-universal. And recall that bare singulars are often generic in the sense that they are part of a sentence that generalizes over events, as illustrated in (22) below.

- (22) a. Ola kjøper seg ofte avis.
 Ola buys REFL often newspaper
 'Ola often buys a newspaper.'
- b. Det er morsomt å hoppe på trampoline.
 it is fun to jump on trampoline
 'It is fun to jump on a trampoline.'
- c. Kari kjører alltid bil.

Kari drives always car
 'Kari always drives a car.'

As argued in section 6.3.1 in chapter 6, generic statements of these kinds raise the acceptability of a bare singular compared to corresponding non-generic statements, due to properties of the 'conventional situation type'-construction. However, now I will claim generic *sentences in general* are expected to promote the use of a bare singular. This is so, since generic sentences often abstract away from particular tokens referred to by an indefinite phrase.

It is far beyond the scope of this thesis to propose a general analysis of generic readings of indefinite nominals. But borrowing insights from a.o. Heim (1981), Carlson (1989), Diesing (1991), and Carlson and Pelletier (1995), my underlying working hypothesis is that all indefinite generics in fact have an existential interpretation, possibly embedded under a generalization over events. This is illustrated in (23). I assume that both (23a) and (23c) can be interpreted generically, in the sense represented (quasi-formally) in (23b) and (23d).⁸⁸

- (23) a. Ola smokes a pipe after dinner.
 b. GENe [[event(e) & in(o,e) & after-dinner(e) & likely-smoking-event(e)] ->
 $\exists y$ [pipe(y) & in(y,e) & smoke(o,y)]]
 c. Cats miaow.
 d. GENe $\exists y$ [[event(e) & cats(y) & in(y,e) & likely-miaowing-event(e)]->
 [miaow-in(y,e)]]

The representations in (23bd) are only intended to give an idea of the kind of analysis I imagine (how they will be derived formally is far from clear). (23b) states that it is generally true of events that occur after dinner and that are likely smoking events that there is a pipe in that event and that Ola smokes it. And (23d) states that it is generally true of events that involve cats and that are likely miaowing-events, that the cats miaow in this event.⁸⁹

One crucial point here is that generic statements that involve quasi-universal generic indefinites (like (23c)) are not principally different from generic statements that involve other kinds of generic indefinites (like (23a)): Both cases involve generalization over events.

⁸⁸ The sentences in (23) also have other readings, but I will not dwell on that here.

⁸⁹ The fact that (23d), seen as a predicate logic statement with a standard set-theoretic interpretation, is true if there are no cats, or if something else than a cat is applied to the variable *y*, I regard as linguistically irrelevant. Or, stated differently, I intend the semantics of the implication arrow to yield a truth-value gap rather than the truth value *true* in the case where the antecedent is false.

Crucially, there is only one basic interpretation of indefinites, namely an existential interpretation. A quasi-universal generic interpretation is obtained if and only if the denotation of the indefinite is part of the generic operator's restriction domain, as in (23d). Clearly, if one makes a generalization over all or most events that contain cats, then one makes a generalization over all or most cats too.

This way of representing genericity also makes it possible to spell out what a sentence like (1a) (repeated here as (24a)) means:

- (24) a. Skarp kniv er det mordvåpenet som blir mest brukt.
 sharp knife is that murder-weapon-DEF that becomes most used
 'A sharp knife is the type of weapon that is most often used for murder.'
 b. GENe $\exists x$ [[murder-event(e) & tool(x) & in(x,e)]-> $\exists y$ [sharp(y) & knife(y) & x=y]]

The representation in (24b) should be read as: *In most cases, when there is a murder event that involves a tool, this tool is a sharp knife.* Notice that the bare singular has an existential reading, however embedded under an generic statement over events, which indirectly makes it generic.

Not all the bare singulars in this chapter are part of generic sentences. Some have a "plain" existential interpretation.

8.8 Comparisons with bare plurals and bare mass expressions

There is one obvious question arising in connection with generic bare singulars, and that is: If type-emphasis is what rules out most quasi-universal generic bare singulars, why, then, are bare plurals and bare mass expressions, that are also type-emphasizing (see section 2.13, chapter 2), always perfectly well-formed with a quasi-universal generic interpretation?

As argued above, I assume that other things being equal, genericity boosts the acceptability of type-emphasizing phrases, be they bare singulars, bare plurals, or bare mass expressions. This is illustrated for bare plurals in (25) below.

- (25) a. Gutter roper.
 boys shout
 'Boys shout.'

- b. Noen gutter roper.
some boys shout
'Some boys shout.'
- c. Noen katter/??katter løper gjennom hagen akkurat nå.
some cats/?cats run through garden-DEFSUFF right now
'(Some) cats are running through the garden right now.'
- d. Katter løper ofte gjennom hagen vår.
cats run often through garden-DEFSUFF ours
'Cats often run through our garden.'

Whereas the subject in (25b), which is not bare, is likely to be interpreted existentially, stating that some boys are shouting, the subject in (25a), which is bare, strongly favors (if not enforces) a generic interpretation where boys shout in general. On an existential interpretation, the bare plural subject in (25a) is unacceptable or at least highly marked. As shown in (25c), when an existential interpretation is favored because the matrix predicate is a typical stage-level predicate, a bare plural agent is not a good subject candidate in Norwegian. When the sentence is made generic, as in (25d), a bare plural is fine, though. The pattern is that highly ranked semantic roles are unlikely to be realized as bare plurals with an existential interpretation; the more agentive and affected, the more likely a generic interpretation.

As argued above for bare singulars, I believe the reason for this is the following: Bare indefinites are not generally acceptable (in Norwegian), since they are type-emphasizing. The acceptability of a bare indefinite is sensitive to what semantic role it realizes and what syntactic position it occupies, for instance. Furthermore, there is a difference between generic interpretations and existential interpretations of bare indefinites. Other things being equal, generic interpretations are favored for bare indefinites, because genericity abstracts away from particular tokens, which is in perfect accordance with type-emphasis. If a bare indefinite occurs in a position that is quite unlikely to host a type-emphasizing phrase, then it might be that the only way to "rescue" its acceptability is to assume that it is interpreted generically. In other words, the comfort of a bare indefinite is rather fragile; it wants some support to be happy, be it an appropriate semantic role, or a generic interpretation, or both.

What leads to the difference between bare singulars and bare plurals is that bare singulars are more sensitive to syntactic position and semantic roles than what bare plurals and bare mass expressions are (for reasons presented in section 2.13, chapter 2). Whereas bare plurals are not totally out with semantic roles high up in a semantic role hierarchy, bare singulars are

pretty much so. Thus, genericity is not enough to "rescue" a bare singular with the wrong kind of semantic role, whereas it is enough to "rescue" a bare plural. This rules out bare singulars with a quasi-universal generic interpretation in most cases, because these indefinites typically have highly ranked semantic roles.

Some expectations about bare indefinites in other languages present themselves as a consequence of my analysis of the Norwegian pattern. For one thing, on the view on genericity presented in the previous section, it is existential interpretations of indefinites that are "basic", whereas generic interpretations are "derived". It follows from this that I do not expect languages to have generic, but not existential, interpretations of indefinites. To the best of my knowledge, this expectation seems to be borne out (see Carlson 1999). Another prediction is that if a language has both generic and existential interpretations of indefinites, and it has both bare indefinites and indefinite articles, then *other things being equal*, generic readings will be favored for bare indefinites when the bare indefinite has a highly ranked semantic role. Notice the "other things being equal" part. Since existential and generic interpretations are partly in complementary distribution, it may appear as if generic (quasi-universal) interpretations are less accessible even if genericity as such increases the acceptability of bare indefinites compared to nongeneric correspondences.

8.9 Summary and conclusions

Building on insights in Borthen (1999), I have suggested the following construction in this chapter:⁹⁰

(26) *Construction 3: the 'comparison of types'-construction:*

Nominal phrases in Norwegian (including bare singulars) can occur as arguments of *comparison or identity relations*.

The fact that Norwegian bare singulars, which are type-emphasizing, can occur as arguments of comparison relations, makes sense, since you intuitively can compare or identify types of things just as likely as you can compare tokens.

⁹⁰ Like the 'profiled have-relation'-construction, I assume that the construction in (26) does not only license bare singulars, but all kinds of valid nominals.

Bare singulars licensed by this construction are acceptable in all syntactic positions that can contain arguments of comparison relations. Thus, differently from bare singulars in the two constructions looked at previously, these bare singulars are just as likely to be subjects as objects, again disproving the commonly held view that Norwegian bare singulars cannot be subjects. On the other hand, their acceptability is sensitive to what kind of comparison relation is involved, the descriptive content in the co-occurring noun phrase, and the descriptive content in the bare singulars themselves. Comparison relations often do not implicate much about whether a type-emphasizing reading is plausible or not, which makes this construction particularly context-dependent.

Comparison and identity relations are likely to have generic arguments, and thereby also license generic bare singulars. In that connection, I have argued that Norwegian bare singulars can have a quasi-universal generic interpretation, contrary to what has been claimed by e.g. Borthen (1999) and Kallulli (1996, 1999). On the other hand, this is in accordance with Faarlund et al.'s (1997) claim that Norwegian bare singulars tend to be generic.

9 Construction 4

9.1 Bare singulars read as covert infinitival clauses

9.1.1 *Introductory data*

It has long been noticed that Norwegian bare singulars sometimes occur as the subject of copular sentences together with a non-agreeing predicative adjective, with something like a "covert infinitival clause" interpretation (see e.g. Faarlund, 1977, Hellan, 1986). In Borthen (1999), data were presented that suggested that this phenomenon should not be restricted to only involve cases with nonagreeing adjectives. In (1) below, more examples of this kind are presented, now also including bare singular non-subjects.

- (1) a. Bil er kult.
car(MASC) is cool-NEUT
E.g. 'To drive a car is cool.'
- b. Hytte på fjellet er drømmen for enhver nordmann.
cottage on mountain-DEFSUFF is dream-DEFSUFF of every Norwegian
E.g. 'To have a cottage on the mountain is the dream of any Norwegian.'
- c. Datamaskin frister ikke.
computer tempts not
E.g. 'To get a computer is not tempting.'
- d. Jeg vil anbefale telt.
I will recommend tent
'I would recommend (e.g. to use) a tent.'
- e. Han foretrekker flaske.
he prefers bottle
'He prefers (e.g. to have) a bottle.'
- f. Per foreslo buss.
Per suggested bus
'Per suggested (e.g. to use) a bus.'

- g. Jeg tror jeg velger bil.
 I think I choose car
 'I think I choose (e.g. to use) a car.'
- h. Hun sa nei takk til gratis flybillett.
 she said no thanks to free plane-ticket
 'She said no thanks to (e.g. getting) a free plane ticket.'
- i. De takket ja til leiebil.
 they thanked yes to rent-car
 'They accepted (e.g. to get) a renting car.'
- j. Jeg har prøvd meg på kringle før.
 I have tried REFL on coffee-bread-ring before
 'I have tried (e.g. to make) a coffee bread ring before.'
- k. Hvorfor snakket Joe om landtur?
 why talked Joe about picnic
 'Why did Joe talk about (e.g. to go on a) picnic?' [LLD, 22]
- l. Trenger du bil sånn en gang iblant?
 need you car so one time in-between
 'Do you need (e.g. to borrow) a car once in a while?' [NOD, 15]

As already mentioned, the most striking thing about these examples is that the bare singulars are interpreted as if they are part of "covert infinitival clauses". In (1a), for instance, what is cool is to do something to cars, not cars as such. This makes the examples in (1) different from the examples with bare singulars we have looked at so far. Furthermore, the combination of matrix clause predicates and bare singulars in (1) does not refer to conventional situation types, the main clause predicates are not all have-predicates (although some of them entail a have-relation), and the sentences do not represent comparison relations. Thus, I conclude that we are dealing with a fourth construction that licenses bare singulars in Norwegian.

9.1.2 *Required subcategorization frames for the matrix clause predicates*

One thing the examples in (1) have in common is that the matrix clause predicate that takes the bare singular as its argument can take both noun phrases and infinitival clauses as

arguments in the position where the bare singular occurs. That both these subcategorization frames must be possible, is illustrated by the data in (3) and (4) below.

The predicates in (3) below can take infinitival clauses as complements, but not noun phrases, including bare singulars. Thus, (3) shows that it is not sufficient that a verb or adjective can take an infinitival clause as its complement for allowing a bare singular with an "infinitival clause interpretation" in this position.

- (3) a. Det er kult å kjøre bil.
 it is cool to drive car
 'It is cool to drive a car.'
- b. *Det er kult bil.
 it is cool car
 Intended meaning: 'It is cool to drive a car.'
- c. *Det er kult bilen.
 it is cool car-DEFSUFF

If the main clause predicates can take noun phrase subjects, but not subordinate clauses, it is not possible to have a bare singular with an "infinitival clause interpretation" in this position either. Thus, the examples in (4) are illformed with bare singulars. Of course, bare singulars may be acceptable as complements of predicates that cannot take subordinate clauses as complements, but not with the kind of reading seen in (1) above.

- (4) a. *Å ha bil er kul.
 to have car(MASC) is cool-COMM
- b. Bilen er kul.
 car-DEFSUFF.MASC is cool-COMM
- c. *Bil er kul.
 car(MASC) is cool-COMM

Notice that (4a) is identical to (1a) except that the postverbal adjective has neuter form in (1a), which leads to the difference in acceptability between the two sentences. (4a) is illformed because in Norwegian only neuter adjectives can take subordinate clauses as their subject when they occur predicatively, and the adjective in (4a) is not neuter.

What the data in (1)-(4) suggest, then, is that the matrix clause predicate that takes a bare singular argument in examples such as those in (1) must be able to subcategorize for an infinitival clause as well as a noun phrase in the position where the bare singular occurs.

9.1.3 *The covert predicates*

As already mentioned, each bare singular in (1) is read as if it is part of a covert infinitival clause. This is shown in the suggested English translations. The covert clause contains a verbal predicate, and this predicate will have to be induced, partly based on the noun in question, and partly based on other linguistic and non-linguistic sources. The induced verbal predicate will typically denote a default activity or state connected to the denotation of the bare singular, but it can also denote an activity or state contextually evoked.⁹¹ Finally, the matrix clause predicate also affects (by pragmatic reasoning) what kind of relation will be induced. The examples in (5) illustrate some varieties of induced verbal predicates.

- (5) a. Sykkel er dyrt
bike is expensive
'To buy a bike is expensive.'
- b. Sykkel er kult
bike is cool
'To ride a bike is cool.'
- c. Sykkel er drømmen
bike is dream-DEF
'To have a bike is the dream.'
- d. (*Context: the interlocutors are discussing what to steal*)
Sykkel er risikabelt
bike is risky
'To steal a bike is risky.'

⁹¹ As for the suggested interpretations in (1), also other interpretations can be imagined, of course, especially if the context points in the direction some other intended state or activity.

We see that the induced verb is different in each example in (5). However, the possibilities are not unrestricted, as we will soon see.

With an appropriate context, the induced verbal predicate in examples such as those in (5) can be of almost any kind, but there is one restriction that is particular to bare singulars: The verbal predicate that is interpreted as part of the covert infinitival clause must be able to take a bare singular complement. There are several facts that suggest this. First of all, notice that in the English translations of the examples in (1) the verbs that are interpreted as part of the covert infinitival clauses are either have-predicates or predicates that are likely to constitute conventional situation types together with the bare singulars they combine with. In other words, these predicates are capable of taking bare singular objects due to the 'conventional situation type'-construction or the 'profiled have-relation'-construction.⁹²

Secondly, predicates that are not have-predicates, and that are unlikely to be part of strings that denote conventional situation types, cannot be interpreted into these covert infinitival clauses. This is illustrated in (6) below. The sentences in (6) can be perfectly grammatical (as shown in (1)), but not with the intended meanings that are specified in (6).

- (6) a. ??/*Bil er kult.
car is cool
Intended meaning: 'To love a car is cool.'
- b. ??/*Hytte på fjellet er dumt.
cottage on mountain-DEF is stupid
Intended meaning: 'To burn down a cottage on the mountain is stupid.'
- c. ??/*Hun sa nei takk til flybillett.
she said no thanks to plane-ticket
Intended meaning: 'She said no thanks to destroy a plane ticket.'

The verbal predicates that are intended to be induced in (7) are exactly that kind of predicates that are most unlikely to combine with Norwegian bare singulars according to their semantics and the three previously defined constructions that license bare singulars in Norwegian.

There is also a third piece of evidence that suggests that the induced verbal predicate must be able to take a bare singular object according to one of the three bare singular-constructions we

⁹² Stealing a bike is usually not a conventional situation type, but one can imagine contexts where it is. For instance, if the interlocutors in (5) now and then steal things, and bikes is one of the things they sometimes steal, then stealing a bike might be seen as a conventional situation type.

have established. This evidence has to do with how the bare singulars in (1) behave with respect to modification. When the bare singular and the matrix clause predicate point in the direction of an induced verbal predicate that is not a have-predicate,⁹³ the bare singular is sensitive to modification just like bare singulars in the 'conventional situation type'-construction. This is illustrated in (7). (7a) and (7b) are modified versions of (1a) and (1f).

- (7) a. ??Gammel bil er kult.
old car is cool
E.g. 'To drive an old car is cool.'
- b. ??Per foreslo tøff buss.
Per suggested tough bus
'Per suggested that we took a tough bus.'

To drive a car and to take the bus are conventional situation types, whereas to drive an old car and take a tough bus are not likely to be so. Thus, the data in (7) suggest that at least some of the bare singulars in (1) are indirectly licensed by, and therefore also restricted by, the 'conventional situation type'-construction.

When the bare singular and the matrix clause predicate give rise to a covert verbal predicate that is a have-predicate, on the other hand, the bare singular can be modified freely, as long as a nonreferential and nonpartitive interpretation is possible. This is illustrated in (8).

- (8) a. Hun sa nei takk til gratis miniskjørt med prikkete blonder.
she said no thanks to free mini-skirt with dotted lace
'She said no thanks to get a free mini skirt with dotted lace.'
- b. Han takket ja til stor bamse i marineuniform.
he thanked yes to big teddy in marine-uniform
'He accepted to get a big teddy in a marine uniform.'

Since the bare singulars in (7) and (8) behave exactly like bare singulars in the 'conventional situation type'-construction and in the 'profiled have-relation'-construction with respect to modification, this supports the assumption that the induced verbal predicates in the covert subordinate clauses in (1) must be able to take a bare singular complement.

⁹³ For pragmatic reasons, comparison relations are not likely to be induced.

Finally, notice that we expect bare singulars of the type in (1) to be promoted in the same kinds of contexts as those that promote bare singulars in either of the previously established bare singular-constructions. For instance, we expect that generic sentences that generalize over situation types will be particularly likely to contain bare singulars of this type. This is indeed the case. Examples like (1a), that is a generic statement over situation types, are in fact particularly frequent, which is probably why they have gotten most attention in the literature so far.

9.2 The 'covert infinitival clause'-construction

Based on the data seen so far, I suggest the following construction definition:

- (10) *Construction 4: the 'covert infinitival clause'-construction (FIRST VERSION):*
- a. A bare singular can occur in Norwegian if it is selected by a predicate that allows for either a noun phrase or an infinitival clause in this position, and
 - b. this bare singular is interpreted as part of a "covert infinitival clause", where
 - i) the covert verbal predicate in this clause is a default activity or state associated with the denotation of this bare singular, or pragmatically induced, and
 - ii) this covert predicate allows for a bare singular complement either as a consequence of the 'conventional situation type'-construction, the 'profiled have-relation'-construction, or the 'comparison of types'-construction.

Admittedly, this construction definition is quite vague. Most strikingly, the notion of a covert infinitival clause is unclear. In chapter 13, we will return to this issue, and I will present a formalization of the intuitions summarized in (10) that builds on the denotation of nouns that Pustejovsky (1995) proposes. In this chapter, however, where I do not intend to anticipate any formal analysis of the phenomenon, we will stick to the informal construction definition in (10).

9.3 Syntactic implications

The construction in (10) licenses bare singulars in all basic syntactic positions that can be occupied by either noun phrases or infinitival clauses. This rules out the possibility that bare singulars licensed by (10) can occur as indirect objects or in predicative position, since these

syntactic positions never allow for subordinate clauses in Norwegian.⁹⁴ One can also never have a bare singular with an infinitival clause interpretation in an existential sentence, since infinitival clauses can never occur in this position. However, they occur as subjects just as well as direct objects, and they can be passivized, topicalized, and be part of questions with subject-verb inversion, for instance, as illustrated in (11), (12), and (13).

- (11) a. Buss ble foreslått.
bus was suggested
'It was suggested that we take the bus.'
- b. Telt anbefales.
tent recommend-PRES-PASS
'It is recommended to use a tent.'
- (12) a. Bil, det ble foreslått.
car, that-NEUT was suggested
'To use a car, that was suggested.'
- b. Telt, det anbefalte de ikke.
tent, that-NEUT recommended they not
'To use a tent, that they didn't recommend.'
- (13) a. Foreslo de bil?
suggested they car
'Did they suggest to use a car?'
- b. Anbefalte de telt?
recommended they tent
'Did they recommend to use a tent?'

⁹⁴ I assume that examples such as (i) below are identity statements, which means that the covert infinitival clause does not occupy a predicative position.

(i) Drømmen er å fly.
dream-DEF is to fly
'The dream is to fly.'

As for secondary predication, Hellan (1986) points out that one can have postnominal predicates of bare singulars of the type in (1). This is illustrated in (14).⁹⁵

- (14) a. (?)Alt spesialutstyret har gjort sykkel altfor dyrt.
all special-equipment has made bike(MASC) too expensive-NEUT
'All the special equipment has made it too expensive to buy a bike.'
- b. Den nye designen gjorde hjelme kult igjen.
the new design made helmet(MASC) cool-NEUT again
'The new design made it cool to wear a helmet again.'

As long as the postnominal (secondary) predicate is one that allows for both a noun phrase and an infinitival clause as its subject, and it is possible to imagine a covert infinitival clause containing the bare singular, these kinds of sentences are well-formed.

9.4 Different kinds of nominals licensed by Construction 4

As described by Pustejovsky (1996), the phenomenon of nominals being interpreted as if they were part of covert infinitival clauses (my wording) is not specific to bare singulars. Consider the following examples.

- (15) a. En hytte på fjellet er drømmen for enhver nordmann.
a cottage on mountain-DEFSUFF is dream-DEFSUFF of every Norwegian
e.g. '(To have) a cottage on the mountain is the dream of any Norwegian.'
- b. Jeg vil anbefale et telt.
I will recommend a tent
E.g. 'I will recommend (to use) a tent.'
- c. Ola begynte på boka.
Ola began on book-DEFSUFF
'Ola began (to read) the book.'
- d. Er du ferdig med ølet ditt?

⁹⁵ Some informants do not find these kinds of examples particularly good, but they are clearly not ungrammatical.

are you finished with beer-DEFSUFF yours
'Have you finished (drinking) your beer?'

In other words, the construction in (10) should be modified to license not only bare singulars, but any nominal, it be type-emphasizing or not. This will be done in the construction definition in (18) in the next section.

Notice that in the 'conventional situation type'-construction, the 'profiled have-relation'-construction, and the 'comparison of types'-construction, the predicates that select for bare singular arguments are predicates with particular semantic properties that fit the semantics of bare singulars particularly well. The matrix clause predicates referred to in (10), on the other hand, are not connected to the semantics of bare singulars directly. The only restriction that lies on these verbs is that they subcategorize for infinitival clauses as well as noun phrases. This in itself is not something that favors bare singulars. Bare singulars are licensed indirectly through the induced covert predicates, in accordance with the three previously proposed constructions. One effect of this is that whereas bare singulars are usually less likely to be acceptable in subject position, this is not so in this case, as they are semantic objects.

Even though the 'covert infinitival clause'-construction not only licenses bare singulars, there is a subclass of the kind of examples looked at in this chapter do not allow for all kinds of nominals. That is, non-agreeing (neuter) predicative adjectives in copular sentences do not allow for just any kind of subject. As shown in Hellan (1986), weak nominals are accepted (see (16)), but not strong ones (see (17)).

(16) a. Bil er kult.

car(MASC) is cool-NEUT

'A car is cool.'

b. En is er greit, men sjokolade får han ikke.

an ice-cream(MASC) is ok-NEUT, but chocolate(MASC) gets he not

'An ice cream is ok, but he is not allowed to have a chocolate.'

c. Biler er kult.

cars be-PRES cool-NEUT

d. Vann er skummelt.

water(NEUT) is frightening-NEUT

e. To is er greit.

two ice-cream is cool-NEUT

- (17) a. *En av bilene er kult.
 one of cars-DEFSUFF.MASC is cool-NEUT
- b. *En viss bil er kult.
 a certain car(MASC) is cool-NEUT
- c. *Bilen er kult.
 car-DEFSUFF.MASC is cool-NEUT
- d. *Alle biler er kult.
 all cars be-PRES cool-NEUT

I assume that this restriction is not connected to the 'covert infinitival clause'-construction, but to the nonagreeing adjectives. We will return to this in chapter 13.

9.5 Summary and conclusions

Drawing on work by Faarlund (1977), Hellan (1986), and Borthen (1999), I have landed at the following informal construction definition:

- (18) Construction 4: the 'covert infinitival clause'-construction (FINAL VERSION):
- a. A nominal phrase (it be type-emphasizing or not) is licensed if it is selected by a predicate that allows for either a noun phrase or an infinitival clause in this position, and
- b. this nominal phrase is interpreted as part of a "covert infinitival clause", where the covert verbal predicate in this clause is
- i) a default activity or state associated with the denotation of this nominal, or pragmatically induced, and
- ii) this covert predicate is capable of taking the given nominal phrase as its complement (according to the grammar).

That is, I assume that there is a set of predicates in Norwegian that allow for bare singular arguments because they select for events semantically.

In contrast to what is the case w.r.t. the 'conventional situation type'-construction, the 'profiled have-relation'-construction, and the 'comparison of types'-construction, there is

nothing with the type-emphasizing effect of bare singulars that directly motivates the selection of them by the matrix clause predicate referred to in (18a). The matrix clause predicate is not particularly likely to state something of a type of thing in the construction in (18); rather, it states something about events or situations. What *indirectly* motivates for the use of bare singulars in this construction is the fact that they are interpreted as part of covert infinitival clauses, which makes it possible to infer a predicate that is likely to co-occur with a bare singular. In principle, bare singulars are not more restricted in this construction than what other noun phrases are. But since there are relatively few predicates that can take bare singular complements in general, there are correspondingly few valid predicates that be interpreted into the covert infinitival clause, thus licensing bare singulars.

In general we see that bare singulars licensed by the construction in (18) are acceptable in all syntactic positions and constellations that allow for both noun phrases and infinitival clauses. In contrast to bare singulars licensed by the 'conventional situation type'-construction and the 'profiled have-relation'-construction, these bare singulars occur just as likely in subject position as in object position, and they allow for secondary predication. This follows from the fact that it is not the token discourse referent of the bare singular that is the argument of the matrix clause predicate, but some event. Thus, the semantics of bare singulars (i.e. their type-emphasis), which usually disfavors bare singulars in subject position, doesn't affect what syntactic positions these bare singulars can occur in.

I find that this construction is a particularly good argument in favor of assuming that the distribution pattern of Norwegian bare singulars is semantically driven: Usually, bare singulars are not licensed in nominal positions as easily as other nominals. But as soon as a verb does not take a bare singular's denotation as its semantic argument, as in the examples in this chapter, the bare singular is licensed as a syntactic argument without difficulties.

10 Preliminary summary and discussion

10.1 Summary: The distribution pattern of Norwegian bare singulars

The essence of the previous nine chapters is the following: Indefinite nominal phrases introduce both an individual and a type of thing into the discourse, corresponding to a *token discourse referent* and a *type discourse referent*, respectively. The semantic difference between Norwegian a-expressions and bare singulars is that a-expressions are token-emphasizing, and thus signal a relative focus on the token discourse referent, whereas bare singulars are type-emphasizing, and thus signal a relative focus on the type discourse referent. In other words, bare singulars and a-expressions can be seen as denoting the same structure, but they profile different aspects of it.

I have argued that type-emphasis can provide an intuitive explanation for many facts concerning the "semantic behavior" of Norwegian bare singulars (see section 2.12), such as the fact that they can never be partitive, referential, or have wide scope, and tendencies having to do with antecedenthood, descriptive content, and what semantic roles bare singulars tend to realize. However, I also claim that type emphasis is not sufficient to predict the full distribution pattern of Norwegian bare singulars. In particular, it seems difficult to predict when they can *not* occur, merely based on the assumption that they are type-emphasizing (see chapter 5). I therefore propose that bare singulars are not generally licensed in nominal positions in Norwegian, but that there exist (at least) four schemes, or constructions,⁹⁶ that license them. The constructions are all *motivated* (either directly or indirectly) by the semantics of Norwegian bare singulars, but not predicted by it.

10.2 The relation between bare singulars, bare plurals, and bare mass expressions

Although bare plurals and bare mass expressions have not been studied in much detail in this thesis, the few investigations made here suggest that Norwegian bare plurals and bare mass expressions have most of the semantic properties that bare singulars have. I therefore propose that the lack of an otherwise available indefinite article signals type-emphasis in Norwegian.

⁹⁶ The term *construction* is used for expository means only and has no theoretical significance.

In other words, bare plurals and bare mass expressions are type-emphasizing, just like bare singulars. This correctly predicts that bare plurals and bare mass expressions, just like bare singulars, are never referential, never partitive, and never take wide scope, for instance (see sections 2.12 and 2.13 for argumentation).

There have to be linguistically relevant differences between bare singulars on the one hand and bare plurals and bare mass expressions on the other, though, since bare plurals and bare mass expressions occur much more frequently than bare singulars. I believe the reason for this has to do with the fact that bare plurals and bare mass expressions can be used to refer to "unlimited" sets or individuals, whereas bare singulars are used to refer to singular entities. Intuitively, if an indefinite nominal introduces one individual, this individual has a more prominent status as a token than if it were one of a set of individuals whose number is not specified.

Lack of an indefinite determiner is connected to type-emphasis. But rather than *stating* type-emphasis, the lack of a determiner is almost like a cry for help: type-emphasis needs to be *supported*, or justified. The support can come from at least four sources: 1) the denotation of the bare indefinite itself (mass or plurality denotation is preferred to singularity), 2) appropriate semantic role (semantic roles far down on a semantic role hierarchy are preferred to semantic roles that are positioned high up), 3) generic interpretation (generic interpretations (in the wide sense) are preferred to existential interpretations, other things being equal), and 4) the context (contexts that count against regarding the token discourse referent as the topic are preferred). The less support is found in one source, the more support is needed from the other sources in order for the bare indefinite to be acceptable. This predicts that even though all indefinites are sensitive to points 2-4 above, bare singulars (that do not have a "supporting" denotation) are more sensitive to semantic roles, genericity, and context than bare plurals and bare mass expressions are, which explains why they have a more restricted distribution and are only licensed by a relatively small set of constructions. It also follows that the higher ranked a semantic role a bare indefinite realizes, the more likely it is that it has to be (or is preferred to be) interpreted generically (other things being equal).⁹⁷

⁹⁷ Whether a predicate is a typical stage-level or individual-level predicate also plays a crucial role for whether a generic interpretation is possible or not.

10.3 Type/token-emphasis vs. the weak/strong distinction

Notice that contrary to e.g. Milsark (1977), de Hoop (1992), and Diesing (1991), I do not assume that quasi-universal generic nominals and strong existential nominals constitute a natural semantic class, as least not based on the data concerning bare indefinites.⁹⁸ Rather, I group indefinite generics together with weak existentials with my notion of *type-emphasis*. As argued above, I assume that the reason why quasi-universal generics and strong existentials often occur in the same positions or constructions, is not because they belong to the same semantic class, but because they are semantically distinct (i.e. type-emphasizing vs. token-emphasizing), and because bare indefinites have to "justify" their appearance, and therefore become generic in linguistic contexts that favor strong existentials.

This view is connected to my claim that generic indefinites are really existential, however embedded in generic statements that generalize over events; on this view, there is no generic quantifier introduced by a quasi-universal bare indefinite, and thus no strong quantifier either.

10.4 Cross-linguistic predictions

Generalizing from the Norwegian data, and the factors that I assume affect the acceptability of bare indefinites, I make at least five cross-linguistic predictions: 1) In a language that has (something like) indefinite articles, lack of an indefinite determiner signals type-emphasis. That is, the token discourse referent of a bare indefinite will be less discourse salient than the token discourse referent of a corresponding nominal with an indefinite article, and the type discourse referent will be correspondingly more focused on. Notably, type-emphasis is not an absolute notion throughout various languages, but a notion that states that within a language, bare indefinites focus less on the token and more on the type of thing than what corresponding nominals with a determiner do. 2) For semantic reasons, type-emphasis is more natural with plurals and masses than with singulars. It is therefore expected that (other things being equal) bare mass expressions and bare plurals will be more often acceptable than bare singulars, if there is a distinction at all. On the present analysis, it would be surprising to find a language that has bare singulars but no bare plurals, for instance. 3) Since I assume that type-emphasis

⁹⁸ I do not deny the possibility that the classification of quasi-universal generics together with strong existentials might be linguistically relevant. But I question whether there is really a deep semantic justification that lies behind it.

is correlated with semantic roles (e.g. agentivity and affectedness), a third cross-linguistic prediction is that type-emphasizing phrases will tend to realize semantic roles far down on a semantic role hierarchy rather than high up, and consequently, that they will tend to be objects rather than subjects. 4) If bare indefinites are able to have a generic interpretation in a given language, then (other things being equal) generic interpretations of bare indefinites are preferred over existential ones (especially with highly ranked semantic roles). 5) Finally, within the limits presented above, I expect idiosyncratic differences between languages, concerning the distribution of bare indefinites and what constructions they occur in. If I am right in assuming that it is not possible to predict - merely on the basis of bare singular's semantics - when bare singulars can occur in Norwegian, then this may also be so for bare indefinites in other languages.

10.5 Vague linguistic terms and predictive force

In some of the four construction definitions I have presented, vague terms are at use. Now, what is the fruitfulness of using terms like 'conventional situation type' and 'profiled have-relation' that may be argued to make my construction definitions so vague that their predictions are dubious? Why not state each syntactic-semantic environment without referring to these more broad, hardly definable notions? As argued in Hegarty et al. (2002) for a comparable phenomenon, it depends on one's purpose. If the purpose is to computationally determine when bare singulars can occur, then it is presumably more efficient to state a huge set of specific environments in which Norwegian bare singulars can occur. However, such an approach does not account for productivity, which makes it linguistically implausible. Thus, from a linguistic point of view, the more explanatory approach, which involves notions that are hard to formalize, is to be preferred.

Also the notion of type-emphasis that I have presented so far is admittedly quite vague, since *emphasis* is not an easily definable notion. Why not say that Norwegian bare singulars are type *denoting* rather than type emphasizing?

One argument that was presented in chapter 2 is that bare singulars can function as antecedents for token anaphors, i.e. pronouns that refer to the same token discourse referent as their antecedent. If we assume that bare singulars do introduce a token discourse referent (however, with relatively little discourse salience), then we predict this directly.

One may object to this argument that the possibility for bare singulars to function as antecedents of token pronouns can just as well be accounted for in terms of bridging, or inferrables (in the sense of Prince, 1981). On such an account, the bare singular does not introduce a token discourse referent; it is just inferred. This is a possible analysis indeed, but I think there are two arguments against it. First, an account in terms of inferrables does not predict the following data (repeated from chapter 6, section 6.5.4):

- (1)
- a. Jeg bilte til jobben i dag, ?selv om jeg måtte dytte den halve veien.
I drove to work-DEF in day, even if I must push it half way-DEF
'I drove to work today, even though I had to push it half the way.'
 - b. Jeg kjørte bil til jobben i dag, selv om jeg måtte dytte den halve veien.
I drove car to work-DEF in day, even if I must push it half way-DEF
'I drove a car to work today, even though I had to push it half the way.'
 - c. Per er hundeeier. ??Den er veldig snill.
Per is dog-owner. it is very kind
'Per is a dog owner. It (i.e. the dog) is very kind.'
 - d. Per har hund. Den er veldig snill.
Per has dog. it is very kind
'Per has a dog. It is very kind.'

In (1a), the pronoun *den* is supposed to refer to the car entailed by the verb *bile* ('car-drive'). Assuming that this verb does not introduce a token discourse referent for the car, (1a) gives an example of a (not quite felicitous) inferrable. The same holds in (1c), where the pronoun *den* is intended to refer to the dog entailed by the compound *hund-eier* ('dog-owner'), however leading to a rather incoherent text fragment. The minimal pairs (1a) and (1b), and (1c) and (1d), have almost identical meanings, but in (1b) and (1d), the car and the dog is referred to by a bare singular, and the text fragments are fully coherent. Now, if bare singulars do not introduce a token discourse referent as part of their lexical meaning, the difference in coherence between (1a) and (1b), and (1c) and (1d) does not follow directly. If we, on the other hand, assume that it is part of the encoded meaning of bare singulars that they introduce a token discourse referent, then the differences in coherence seen in (1) is as expected.

So, assuming that bare singulars introduce a token discourse referent makes stronger predictions about the data in (1) than assuming that they don't. Furthermore, assuming that this encoding of a token discourse referent does not make too strong predictions (indeed, I

can't see that it does), I take it that this more direct way of accounting for the anaphor-antecedent data is preferable to the more indirect approach represented by bridging.

Another argument for maintaining the notion *type emphasis* has to do with cross-linguistic considerations. It is obviously a fact that many languages that have the indefinite article also have a phenomenon similar to Norwegian bare singulars (see chapter 4). However, it differs from language to language how widely distributed these bare singulars (or reduced nominals) are. If we assume that bare singulars are type denoting, and not only in Norwegian, then either type denotation is not the same across languages, or the different distribution patterns seen in different languages is either a surprise or have to be accounted for by other factors than type-denotation. On the other hand, if we say that bare singulars are type *emphasizing* cross-linguistically (as opposed to corresponding phrases with determiners), then we have a scalar notion that will be fixed for each individual language, but which still captures generalizations across languages. The common determinant for languages with both bare singulars and a-expressions is that a-expressions signal more focus on the token discourse referent than what bare singulars do, and correspondingly, that bare singulars signal more focus on the type discourse referent than what a-expressions do. But among languages that have bare singulars, their degree of type-emphasis varies. That is, it varies from language to language what area on the scale of type/token emphasis bare singulars are associated with, and correspondingly, what area on the scale of type/token emphasis a-expressions are associated with.

Finally, a last argument for assuming that bare singulars are type-emphasizing has to do with formal matters. As will become evident in chapters 11-13, I assume that indices that are used in stating grammatical relations correspond to token discourse referents. Consequently, assuming that bare singulars do not introduce a token discourse referent means the same as assuming that the structure that represents their meaning does not include an index. With no index, it becomes impossible to make sure that a noun predicate and an adjective predicate that are part of the same phrase (and the same reference act) are stated of the same index, and that this very same index corresponds to the theme role in the representation of some verb meaning, for instance. There has to be an index present to express these matters. Therefore, assuming that indices and token discourse referents correspond to each other, there also has to be a token discourse referent there.

10.6 Grammatical phenomenon?

Norwegian bare singulars constitute a linguistic phenomenon that is not easily classified as either syntactic, semantic, pragmatic, or "idiomatic" of nature, at least not at first glance. The question whether it is a grammatical phenomenon or not (and if it is, what this grammar has to look like) appears as equally fuzzy.

In many ways, bare singulars seem to be of a substantially different kind than other nominals in Norwegian. For instance, in writing a grammar for Norwegian, a grammarian may do very well in predicting the syntactic patterns of nominals without referring to semantic subclasses of nominals in the syntactic constructions, if one keeps bare singulars out of the picture. Indefinite as well as definite nominal phrases can occur in nominal positions almost without exceptions. With bare singulars, this is different. We can't just call them nominals and leave it with that because that would vastly overgenerate them. Differently from (most) other nominals, occurrences of bare singulars are often strictly ungrammatical from a sentence-internal perspective.

However, this difference is in fact not as clear-cut as it seems. Also other nominal forms have properties that make them unacceptable (and ungrammatical) from a sentence-internal perspective in certain constructions, but not in others. Consider the following examples with "normal" noun phrases:

- (2) a. Det sitter en mann/*han/*mannen i parken.
there sits a man/*he/*man-DEFSUFF in park-DEFSUFF
'There is a man/*he/*man in the park.'
- b. Den mannen/*en mann, han har jeg sett før.
that man-DEFSUFF/*a man, he have I seen before
'That man/a man, I have seen him before.'

Considering this, the strict illformedness of bare singulars in many nominal positions is not that unique after all. It just happens that the semantic properties of bare singulars more often lead to conflicts like those in (2) above than what is the case for other nominal forms. And differently from most other nominals, even lexical properties of specific lexical items (and not only constructions) may play a role.

Another special property of bare singulars is the following: With most other nominal forms, a sentence can be judged as grammatical, even though it is pragmatically infelicitous.

(3) below, for instance, has the status 'grammatical' even if the personal pronoun is used in a context where its referent is not accessible to the hearer, which means that the sentence is pragmatically infelicitous.

(3) She is smiling.

The grammaticality of (3) regardless of context is traditionally accounted for by assuming that the grammar that generates the sentence in (3) accepts a noun phrase in the subject position regardless of whether it is an indefinite noun phrase or a pronoun, for instance, and regardless of whether the particular form is pragmatically felicitous or not. With Norwegian bare singulars, things are often different. At least as far as intuitions go, the acceptability (and grammaticality) of a sentence containing a bare singular may be context dependent. This is illustrated in (4).

- (4) a. ??/*Kari fant kopp.
Kari found cup
b. ??/*Kari er fregnete ballettdanserinne.
Kari is freckled ballerina
c. ??/*Kari sang i hengekøye.
Kari sang in hammock

The sentences in (4) are intuitively judged as unacceptable (and *ungrammatical*) in certain contexts, acceptable (and *grammatical*) in other contexts (see examples (33) and (37) in section 6.1, and example (9) in section 7.3.1 above). In other words, the type of intuitions people have regarding appropriateness of bare singulars are different from the type of intuitions people have regarding appropriateness of most other nominal forms.

According to my analysis, one reason for this difference is that the *selection* of a bare singular into the syntactic frame of a predicate in some constructions puts requirements on the context. In the 'conventional situation type'-construction, for instance, a verb can take a bare singular complement only if the denotation of the verb and its complement together constitute a conventional situation type, which is highly context dependent. In the 'profiled have-relation'-construction, the have-predicate has to be profiled, which is also highly context-dependent. This makes bare singulars different from most other nominals in Norwegian and leads to the intuition that *grammaticality* (and not only pragmatic appropriateness) of bare

singulars is context dependent. Another factor that may play a role here is the relatively low frequency of bare singulars.

Grammaticality is not supposed to be context dependent according to the Chomskyan tradition. However, if we were to maintain that view, then we would either have to ignore Norwegian bare singulars (claiming that they belong to the "periphery" - God forbid!), or our grammar would vastly overgenerate them. Thus, the distribution pattern of bare singulars in Norwegian shows that it is hard to maintain the traditional strict distinction between grammatical and context-dependent semantic phenomena while doing justice to the given data.

10.7 Some comments on the corpus material

As briefly mentioned in section 1.4 in chapter 1, a corpus consisting of approximately 400 examples of bare singulars in Norwegian has been collected in connection with this study. Only fragments of this corpus has been presented, though. But let me briefly mention how my four constructions fit the naturally occurring data.

The majority of the examples of bare singulars in the corpus were multi word lexical expressions, i.e. combinations of a bare singular and some other expression(s) constituting a meaning not fully derivable from the individual parts. It is therefore a drawback of this thesis that idioms and multi word lexical expressions have not been studied more thoroughly. Both the 'conventional situation type'- construction and the 'have-relation'-construction were well represented in the corpus, the 'covert infinitival clause'-construction occurred occasionally, whereas only one example of the 'comparison of types'-construction was found.

In many cases it has turned out to be hard to determine whether a bare indefinite is singular, plural, or mass, presumably because the count/mass/number distinction is not important. This suggests that the distribution pattern of bare plurals and bare mass expressions is tightly connected to the distribution pattern of bare singulars. I will therefore take it as an important task in the future research on Norwegian bare singulars to not only investigate bare singulars, but also bare plurals and bare mass expressions. Also nouns that denote situations rather than individuals seem to be particularly well suited for occurring without a determiner, something which I have not attempted to develop any explanation for here.

11 Formal framework: HPSG

11.1 Introduction

This formal investigation draws on two main sources. The first source is the theoretical framework Head-driven Phrase Structure Grammar, as it is presented by its main proponents in several books and articles (see the next section). A second, but related, source is a set of computational wide-coverage HPSG-style grammars developed within the LKB (Linguistic Knowledge Builder) format of Copestake (2002). In particular, the Norwegian large-scale grammar *NorSource* (Hellan and Haugereid, 2003), which is presently being developed at the linguistics department at NTNU in Trondheim plays an important role as a set of background assumptions for the present investigation. The development of *NorSource* has been enhanced by *The HPSG Grammar Matrix* (Bender, 2000 (version 0.1), Bender, Flickinger, and Oepen (version 0.4), 2003), a type system extracted from the *English Resource Grammar* (Flickinger, 2000).

11.2 Head-driven Phrase Structure Grammar

Head-driven Phrase Structure Grammar (hence HPSG) is a generative linguistic framework in the sense that it defines formally a set of sequences that represent the well-formed sentences of a given language. Its theoretical aspects have been developed in three major books, namely Pollard and Sag (1987), Pollard and Sag (1994), and Sag and Wasow (1999), as well as in a number of articles. A further development of HPSG can be found in Ginzburg and Sag (2000).

HPSG is a theory of *signs*. Going back to Ferdinand de Saussure's definition of natural language signs as units of *signifiant* and *signifié*, HPSG models signs as units of phonological properties, on the one hand, and a complex of syntactic and semantic properties on the other hand. In other words, a sign is a conventional association of form with meaning. A sign-based conception of language is attractive in that it allows for analytic uniformity. It puts all linguistic expressions (be they lexical entries, inflected words, phrases, or sentences) on an equal footing, and lexical entries, morphological rules and syntactic rules work together

within the same format. This is appealing, not only because we obtain parsimony, but also because a sign-based model provides a good point of departure for stating constraints that express relationships among different modules in the grammar (i.e. interfaces). Another important design property of HPSG is that it is *constraint-based*. The grammar is a set of declarative constraints, each expressing partial information about linguistic structures. Put in simple words, the grammar states explicitly a set of valid structures, and a word or phrase is valid if and only if it fits one of these structures. There are no statements in the grammar that refer to invalid structures. As a result of being declarative and constraint-based, HPSG is non-derivational. This makes HPSG different from the theoretical framework GB (Government and Binding), wherein distinct levels of syntactic structure are sequentially derived by means of operations. One nice effect of this is that the grammar is order-independent, and thus is equally appropriate for describing comprehension and production of language.

HPSG is surface oriented, in the sense that it aims at providing reasonably simple structures that are directly associated with the string of words that constitute each sentence. The main burden of the grammar is put on the shoulders of the lexicon, so most grammatical and semantic information is located within lexical entries. The lexicon is seen as a (possibly) structured object, where lexical entries correspond to lexical types that are related to each other in type hierarchies. Since lexical entries are the key elements that "drive" the construction of the syntactic and semantic structure of a sentence, the grammar rules tend to be quite simple in their formulation and general in their application.

The mathematical description language used in HPSG is constraint logics over typed feature structures, which, in linguistic applications is usually described as attribute-value matrix (AVM) diagrams.

11.3 (Descriptions of) typed feature structures

In any mathematical theory about an empirical domain, the phenomena of interest are modelled by mathematical structures that are conventionally understood as corresponding to the empirical domain. In HPSG, one uses constraint logics over typed feature structures as the lexical and grammatical representation language (see Moshier 1988, Pollard and Moshier 1990, and Carpenter 1992). Feature structures can be thought of in at least two ways. They can be seen as functions (a set of ordered pairs such that each feature has a unique value). Or

they can be seen as directed graphs, where feature names label arcs that point to appropriate labeled nodes.

For grammatical purposes, features structures are usually described as *attribute-value matrix (AVM) diagrams*. These are *descriptions* of feature structures, and (differently from features structures) need not be complete. An attribute-value diagram (with square bracket matrices) is on the following format:

$$(1) \quad \left[\begin{array}{l} \text{ATTRIBUTE1 } \textit{value} \\ \text{ATTRIBUTE2 } \textit{value} \end{array} \right]$$

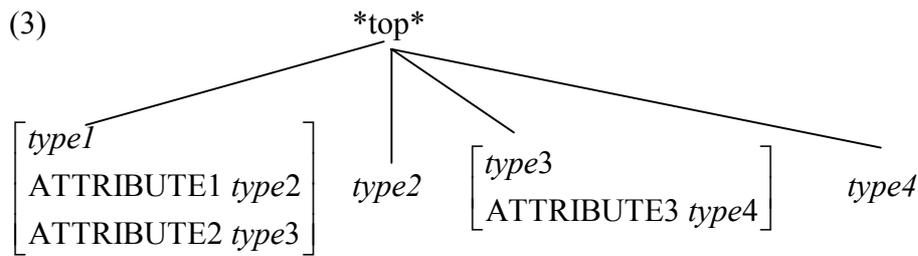
Conventionally, *attributes* (e.g. ATTRIBUTE1) are written in capital letters, whereas *values* (e.g. *value1*) are written in italics. A *feature* is an attribute-value pair (e.g. ATTRIBUTE1 *value*).

Each feature value is identified by a *type*. Types are not necessarily atomic, but can be feature structure descriptions themselves. In the AVM diagrams, types are indicated by left superscripts if the object in question has one or more attributes specified, and by an atomic symbol otherwise. This is illustrated in (2).

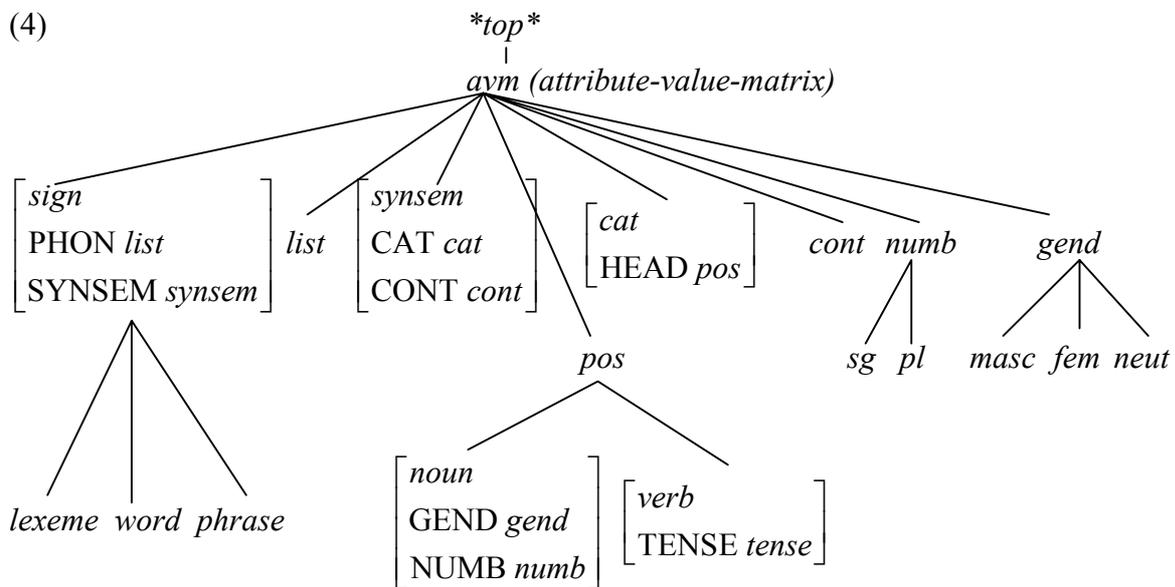
$$(2) \quad \left[\begin{array}{l} \textit{type1} \\ \text{ATTRIBUTE1 } \textit{type2} \\ \text{ATTRIBUTE2 } \left[\begin{array}{l} \textit{type3} \\ \text{ATTRIBUTE3 } \textit{type4} \end{array} \right] \end{array} \right]$$

Every type has to be defined, or declared. A type declaration involves a specification of the type's position in the type hierarchy, a specification of what attributes are appropriate for it, and a specification of what possible values there are for each attribute.⁹⁹ The type declarations needed in order to license the structure in (2) are given in (3) below:

⁹⁹ Like in the LKB system (see Copestake, 2002), I assume that an attribute can be introduced in the type hierarchy only once.

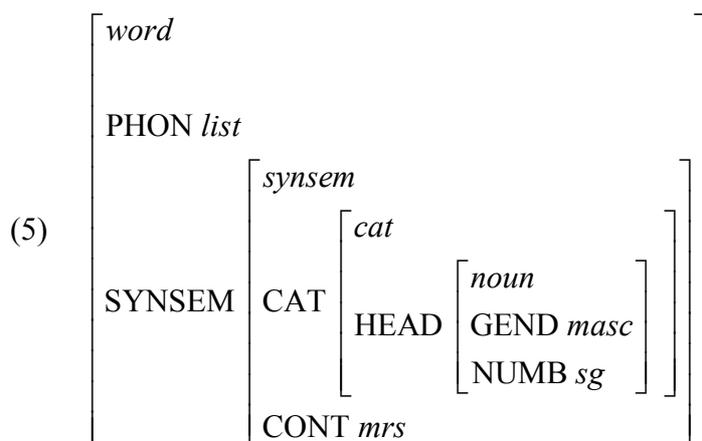


Following this format, a grammar will simply consist of a set of types, organized in a type hierarchy. If one thinks of a language as a system of linguistic entities (words, phrases, categories, sounds etc.), then types of the grammar are simply classes of those entities, each defined with a certain set of attributes, which again are defined as taking certain types as values. A small grammar skeleton of this kind is presented in (4) below.



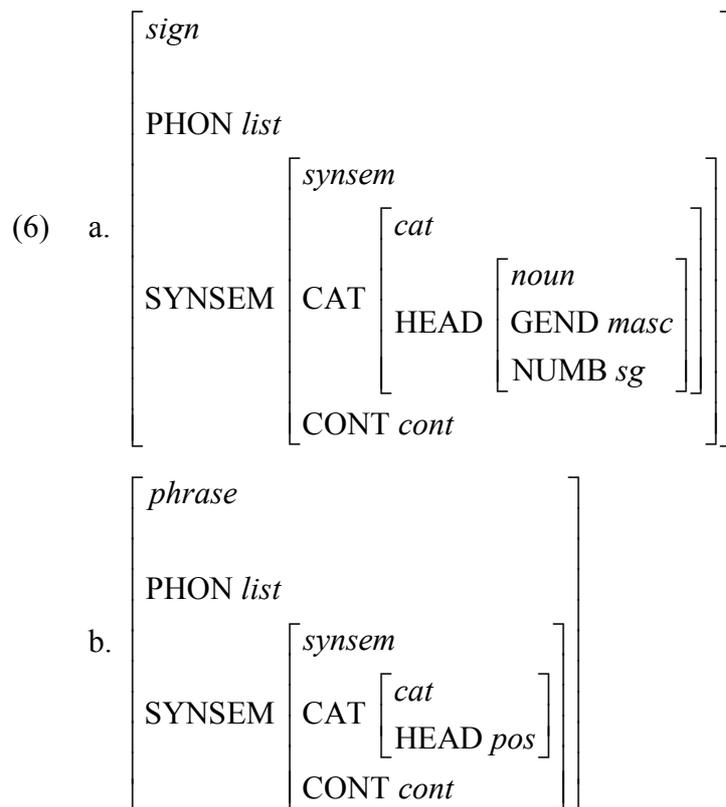
One important type in the grammar in (4) is *sign*, since it is signs that we ultimately aim at modeling. Signs are divided into lexemes, words, and phrases. (In a more developed grammar, these categories will have different features associated with them). Signs have two features, namely PHON *list* and SYNSEM *synsem* (syntax and semantics), which means that they are correlations between form and meaning. The type *synsem* has two features declared on it, namely CAT *cat* and CONT *cont*, corresponding to syntactic and semantic information, respectively, and *cat* has one feature, namely HEAD *pos*, which corresponds to the sign's part-of-speech category. In this grammar, there are two part-of-speech categories, namely *noun* and *verb*, each with features appropriate for just this category. Whereas TENSE *tense* is an appropriate feature for verbs, it is not appropriate for nouns, for instance.

The following AVM diagram can be licensed by (4):



An important mechanism in type hierarchies is *inheritance*. A type inherits all the properties of its supertype (or supertypes). For instance, notice that in (5), the type *word* has the attributes PHON and SYNSEM even though these attributes are not declared on *word* in (4). Since *word* is a subtype of *sign*, it inherits all the properties of *sign*, which means that it is a sign itself and that it has the features PHON *list* and SYNSEM *synsem*. Types that stand in an inheritance relation with each other are *compatible* with each other. For instance, notice that the value of GEND is *masc* in (5), even though the value of GEND is said to be *gend* in (4). The representation in (5) is valid since *masc* is a subtype of *gend*, and therefore compatible with it. The type *tense*, on the other hand, is not compatible with *gend*, and is therefore not a valid value of GEND.

The present format allows for different kinds of *underspecification*. For instance, one can talk about masculine, singular nominals (without specifying whether they are lexemes, words, or phrases), by referring to signs with the HEAD value *noun*, the GEND value *masc*, and the NUMB value *sg*, as illustrated in (6a). Or, one can refer to phrases (without specifying what category they are of) by referring to the type *phrase* and leave the HEAD value underspecified, as in (6b). This is useful for stating linguistic generalizations.



Feature structure descriptions can be abbreviated. That is, one can leave out type names for feature structures, or features that one is not presently concerned about, if they follow from the type definitions in the grammar. This is practical, since AVM diagrams modelling natural language tend to be large. For instance, (7a) below is a valid structure that represents nominal signs. But we can also represent nominal signs more compactly, by leaving out the type names *sign*, *synsem*, and *cat*, and by leaving out the features PHON *list*, CONT *cont*, NUMB *numb*, and GEND *gend*, as in (7b). That (7b) is equivalent with (7a) follows from the type declarations in (4). For instance, since the attribute SYNSEM is introduced only on *sign* in (4), (7b) has to be a feature structure description of type *sign*. And since all signs have a feature PHON *list*, there is inherently such a feature present also in (7b). Finally, (7c) is a notational variant of (7b).

- (7) a.
$$\left[\begin{array}{l} \textit{sign} \\ \text{PHON } \textit{list} \\ \text{SYNSEM} \left[\begin{array}{l} \textit{synsem} \\ \text{CAT} \left[\begin{array}{l} \textit{cat} \\ \text{HEAD} \left[\begin{array}{l} \textit{noun} \\ \text{GEND } \textit{gend} \\ \text{NUMB } \textit{numb} \end{array} \right] \\ \text{CONT } \textit{cont} \end{array} \right] \end{array} \right] \end{array} \right]$$
- b.
$$\left[\text{SYNSEM} \left[\text{CAT} \left[\text{HEAD } \textit{noun} \right] \right] \right]$$
- c.
$$\left[\text{SYNSEM.CAT.HEAD } \textit{noun} \right]$$

11.4 Unification

So far, we have looked at the representation of simple signs. Now is time to turn to the amalgamation of information when linguistic constituents combine with each other. In HPSG, this is done through the process of *unification*.

According to Copestake (2002:54), unification is (informally) the combination of two typed feature structures to give the most general typed feature structure which retains all the information which they individually contain. If there is no such typed feature structure, unification is said to fail. Based on this (informal) definition, and the type hierarchy in (4), the unification of (8a) and (8b) is (8c).

- (8) a.
$$\left[\text{SYNSEM} \left[\text{CAT} \left[\text{HEAD} \left[\begin{array}{l} \text{GEND } \textit{gend} \\ \text{NUMB } \textit{sg} \end{array} \right] \right] \right] \right]$$
- b.
$$\left[\text{SYNSEM} \left[\text{CAT} \left[\text{HEAD} \left[\begin{array}{l} \textit{noun} \\ \text{GEND } \textit{masc} \end{array} \right] \right] \right] \right]$$
- c.
$$\left[\text{SYNSEM} \left[\text{CAT} \left[\text{HEAD} \left[\begin{array}{l} \textit{noun} \\ \text{GEND } \textit{masc} \\ \text{NUMB } \textit{sg} \end{array} \right] \right] \right] \right]$$

Two feature structure descriptions can unify only if they are consistent and compatible. That is, they cannot unify if they are feature structure descriptions of conflicting types or have incompatible values for the same feature. For this reason, (9a) and (9b) cannot unify, and neither can (9a) and (9c), nor (9a) and (9d).

- (9) a.
$$\left[\begin{array}{l} \textit{sign} \\ \text{SYNSEM} \left[\text{CAT} \left[\text{HEAD} \left[\begin{array}{l} \textit{noun} \\ \text{GEND } \textit{gend} \\ \text{NUMB } \textit{sg} \end{array} \right] \right] \right] \end{array} \right]$$
- b.
$$\left[\begin{array}{l} \textit{sign} \\ \text{SYNSEM} \left[\text{CAT} \left[\text{HEAD} \left[\begin{array}{l} \textit{noun} \\ \text{GEND } \textit{gend} \\ \text{NUMB } \textit{pl} \end{array} \right] \right] \right] \end{array} \right]$$
- c.
$$\left[\begin{array}{l} \textit{sign} \\ \text{SYNSEM} \left[\text{CAT} \left[\text{HEAD } \textit{verb} \right] \right] \end{array} \right]$$
- d.
$$\left[\begin{array}{l} \textit{synsem} \\ \text{CAT} \left[\text{HEAD } \textit{noun} \right] \end{array} \right]$$

(9a) and (9b) cannot unify, since they have conflicting values for the attribute NUMB, (9a) and (9c) cannot unify, since they have conflicting values for the attribute HEAD, whereas (9a) and (9d) cannot unify, since they are feature structure descriptions of different types (i.e. *sign* and *synsem*, respectively).

Structure sharing is indicated in feature structure descriptions by multiple occurrences of boxed numerals, called *tags*, as illustrated in (10). Structure sharing, and therefore also co-tagging, require that the structures be unifiable.

- (10)
$$\left[\begin{array}{l} \text{ATTRIBUTE1} \boxed{1} \textit{value1} \\ \text{ATTRIBUTE2} \left[\text{ATTRIBUTE3} \boxed{1} \right] \end{array} \right]$$

This feature structure description states that ATTRIBUTE1 and ATTRIBUTE3 share the same value, namely *value1*. The values of ATTRIBUTE1 and ATTRIBUTE3 are said to be *token identical*.

Unification is an important analytical tool in HPSG, as it is necessary for accounting for merging information from more than one source.

11.5 Basic feature structure architecture

In this section, I present the basic grammar architecture that is standardly found in HPSG, and which will function as the point of departure for my formal analyses.

In the standard HPSG theory, it is assumed that all signs at least possess the two attributes PHON and SYNSEM. The value of the PHON attribute is assumed to be some kind of feature representation of the sign's sound content that serves as the basis for phonological and phonetic interpretation, typically glossed as lists of phoneme strings, or of orthographies.

The value of the SYNSEM attribute is another structured object, of the type *synsem*, with two attributes, called LOCAL (LOC) and NONLOCAL (NONLOC). The information within the SYNSEM attribute forms a natural class in the sense that it is this information that has the potential of being subcategorized for by other signs, for instance. The value of NONLOC corresponds to information relevant for unbounded dependency phenomena, and will not be given much attention in this thesis. The LOC information includes all other syntactic and semantic information, distributed among the three attributes CATEGORY (CAT), CONTENT (CONT), and CONTEXT (CTXT).

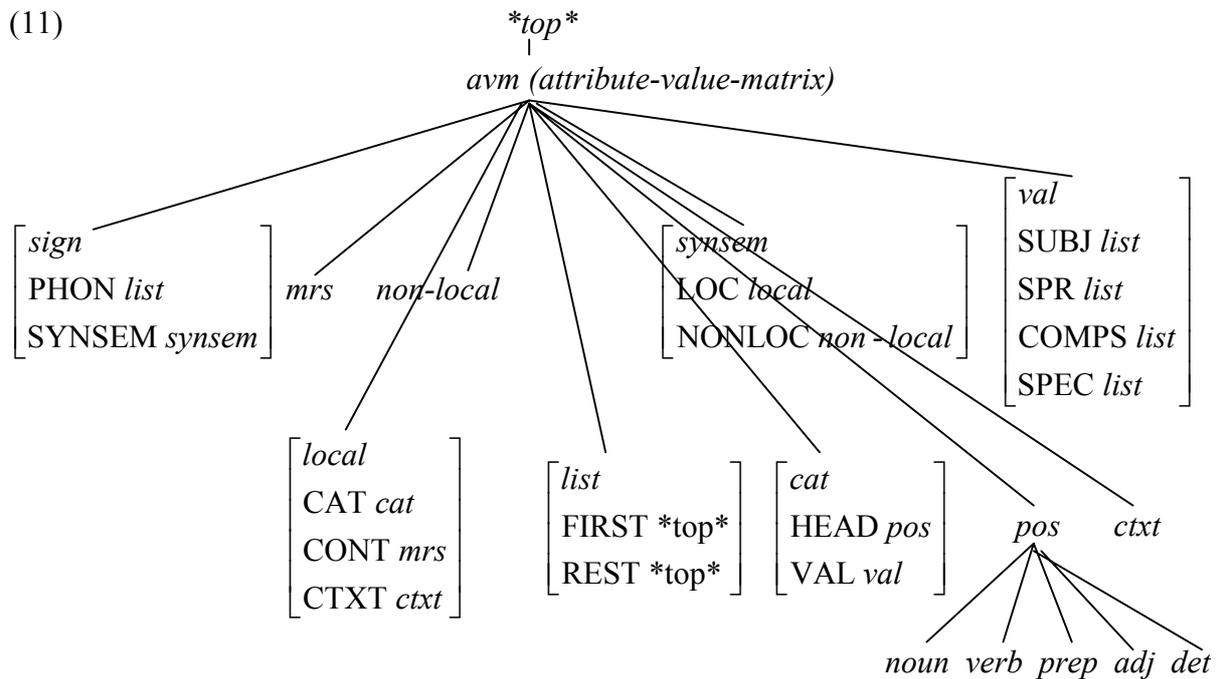
CAT includes not only the syntactic category of a word or phrase, but also the grammatical arguments it requires. It contains the two attributes HEAD and VALENCE (VAL). The HEAD value of a sign is its part of speech (pos), which again is assigned features relevant for the part of speech in question. The HEAD value of any sign is (usually) structure-shared with that of its phrasal projections, if any.

The VAL value specifies a sign's valence. In other words, it states what other signs the sign in question must combine with in order to become saturated. I follow the HPSG Grammar Matrix (hence, the Matrix) in that the VAL value introduces the attributes SUBJ, SPR, COMPS, and SPEC, that all have lists as values. Lists may be empty, or contain one or more elements. Descriptions of lists are often abbreviated by the use of angle-bracket notation (instead of the attribute labels FIRST and REST), with '<>' describing an empty list, '<[]>' describing a list with one element on it, and '< [], [] >' describing a list with two elements on it. Lists can in principle contain any number of elements.

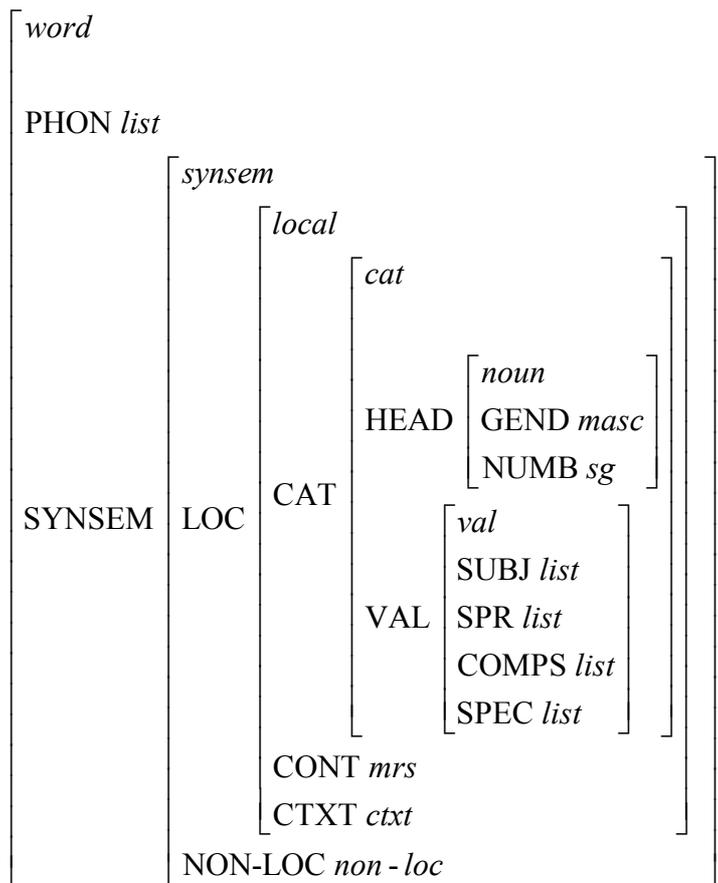
The CONT value constitutes a word's contribution to aspects of the semantic interpretation of any phrase that contains it.

Finally, the CTXT value contains certain context-dependent linguistic information usually discussed under such rubrics as indexicality, presuppositions, and/or conventional implicature.

(11) is a summary of the types assumed in the system so far, whereas (12) is an example of a valid feature structure description licensed by (11).



(12)



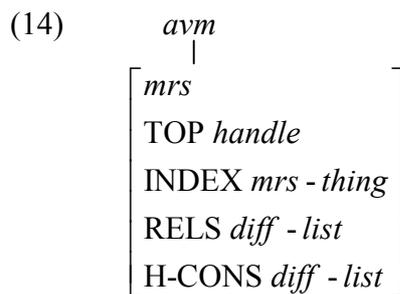
(11) is the back-bone architecture that I will take as the point of departure of my investigation in the following chapters. The architecture of the semantic module of the grammar is yet to be specified, though (we will turn to this in the next section), and more types and attributes will be introduced as we go along.

11.6 Minimal recursion semantics (MRS)

Minimal recursion semantics (hence MRS) is a framework for describing semantic structures, proposed in Copestake et al. (1999) (but see also Copestake et al., 2001, and Copestake et al. 1995). This representational language assumes a minimal, flat structure, contrary to standard semantic representation languages. This means that the semantic representations are easy to decompose, they are well-suited for transfer rules (i.e. for translations between languages), and appropriate for both parsing and generation in computational applications. Yet another sense in which MRS differs from standard semantic representation languages is that it allows

for *underspecification* of scope. Since it is often very difficult to resolve scope, and even sometimes not necessary (as in the case of translation), this is desirable. The syntax of MRS is designed to be naturally expressed in terms of feature structures, thus easily integrating with a feature-based grammar like HPSG.

Following Copestake et al. (1999), the type representing the semantic content of a sign, i.e. *mrs*, includes a TOP attribute, an INDEX attribute, a RELS (relations) attribute, and a H-CONS (handle constraints) attribute, as shown in (14) below.

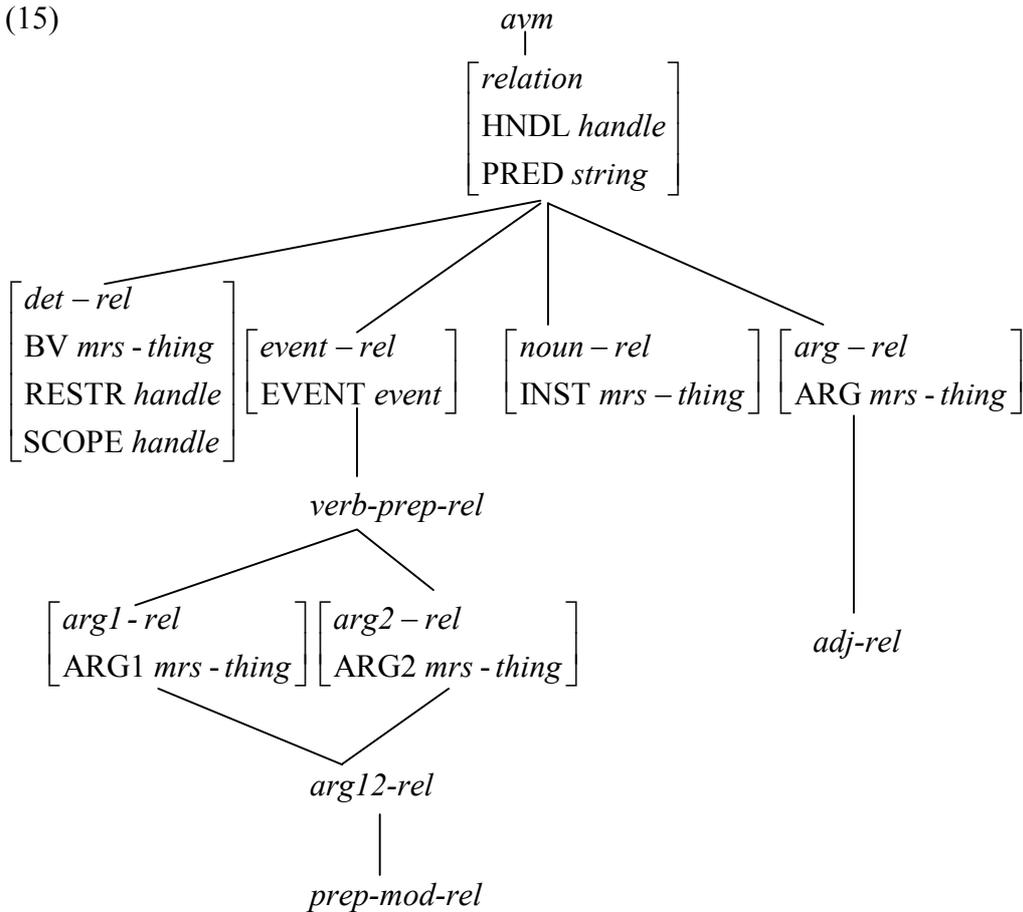


We will first consider the feature RELS *diff-list*, which constitutes the main semantic contribution of a sign. It consists of a list (i.e. a difference list¹⁰⁰) of relations, or so-called *elementary predications*. Typically, an elementary predication corresponds to a single lexeme. Thus, in a sentence like *Every dog chases some white cat*, the elementary predications correspond roughly to *every(x)*, *dog(x)*, *some(y)*, *cat(y)*, and *chase(x,y)*.

An elementary predication has four components: 1) a handle which is the label of the relation (i.e. HNDL *handle*), 2) the predicate of the relation (i.e. PRED *string*), 3) zero or more ordinary variable arguments of the relation (e.g. EVENT *event* and ARG1 *mrs-thing*), and 4) zero or more handles corresponding to scopal arguments of the relation (i.e. RESTR *handle* and SCOPE *handle*). Whereas all relations have the HNDL and PRED attributes, only determiner relations have the RESTR and SCOPE attributes. What kind of variable arguments are stated on a relation, depends on what kind of relation it is, as shown in the type hierarchy of relations in (15) below.

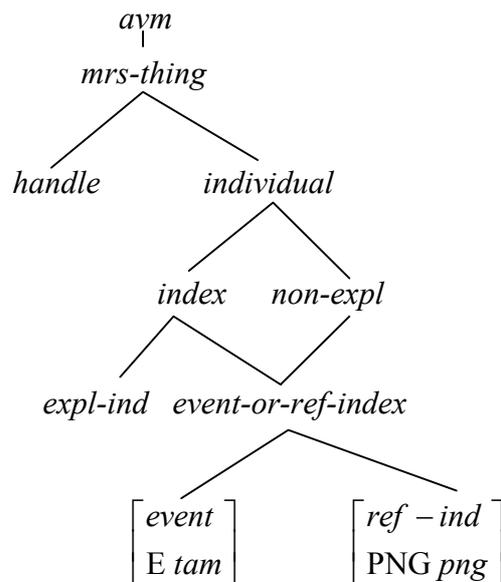
¹⁰⁰ A difference list is a mathematical object that allows one to append lists. Formally, it has the features LIST *list* and LAST *list*. A common notation variant is to use <! !> for an empty difference list and <! [] !> for a difference list with one element.

(15)



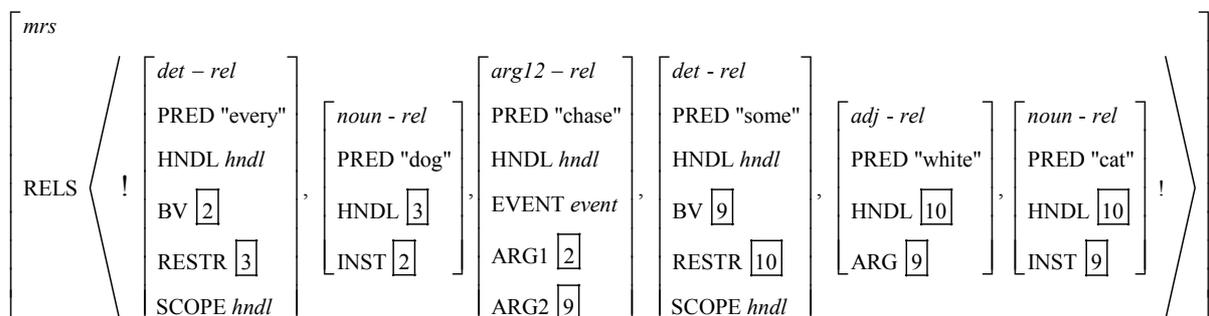
A transitive verb, for instance, will introduce on its RELS list an *arg12-rel*, which means that it takes two arguments, ARG1 (argument 1) and ARG2 (argument 2), in addition to introducing an event variable. With the exception of the PRED value, the values of all the attributes introduced in (15) are (different types of) indices. (16) below declares a type hierarchy of indices, some of which appear as feature values in (15) above. (16) is a simplified version of the hierarchy of 'mrs-thing'-types assumed in the Matrix Grammar.

(16)



Based on the type hierarchy in (15), as well as a number of lexical entries and rules that we have not yet seen, we can propose the following simplified RELS list for the sentence *Every dog chases some cat*.

(17)



The PRED values identify the relations in question, since each lexical item has a unique PRED value specified in the lexicon. As for BV (bound variable), RESTR (restriction) and SCOPE, these are attributes appropriate for quantificational relations only. The feature BV *mrs-thing* tells what variable is being bound by a quantifier, the feature RESTR *handle* tells what is being quantified over, and the feature SCOPE *handle* can tell what scope the given quantifier has relative to other scope-interacting elements. In (17), it is stated that the relation corresponding to *every* binds the index of the noun *dog*, since the BV value of the determiner-relation is unified with the INST value of the noun-relation (which is the noun's referential index). The fact that the relation corresponding to *every* is quantifying over dogs, is

represented in that the determiner-relation's RESTR value is unified with the HNDL value of the noun-relation corresponding to *dog*. Handles are labels that enable us to grab hold of elementary predications and specify their position in a logical form.

Nothing is said about which quantifier takes widest scope in (17), since neither determiner-relation has a SCOPE value that is unified with anything. That is, scope is here left *underspecified*. If one wants to represent the wide scope interpretation of *every*, for instance, then this could (on this simplified version) be done by letting the HNDL value of *some* go into the SCOPE slot of *every*.

There are many details in (17) that can only be accounted for in the larger context of a full grammar. For instance, we haven't seen yet how determiner relations happen to bind the correct variables in (17), how the verb's arguments happen to be unified with the INST values of the correct nouns, how the relations corresponding to the noun *cat* and the adjective *white* get the same handles and the same value for their INST and ARG attributes, and why the RESTR values of *every* and *some* are as they are. These issues will be determined partly lexically and partly syntactically. For instance, attributive adjectives will be associated with a restriction saying something like "My ARG value must be structured shared with the INST value of the nominal that I modify", and determiners will declare something like "I take the HNDL value of the nominal I combine with as my RESTR value". We will not go into all these details here, though, since these things are part of the grammar, not the MRS framework as such.

In (17), the HNDL value of *dog* is plotted directly into the RESTR slot of *every*. However, unfortunately things are not that simple. Consider the following example.

(19) Every nephew of some fierce aunt runs.

There is one reading of this sentence in which the quantifier relation introduced by *some* takes scope over the quantifier relation introduced by *every*, namely the reading where there is one fierce aunt such that all her nephews run. Usually, the nominal constituent that a determiner combines with functions as the determiner's restriction, and indeed, this is the assumption that is reflected in (17). But if we follow the pattern suggested in (17), we would not predict that *some* can take scope over *every* in (19). The solution presented in Copestake et al. (1999) is to introduce a particular kind of equation relation, i.e. *qeq*, which (informally speaking) leaves the possibility open that there might be something inside a nominal phrase that can take scope over its determiner-relation. I will not go into the formal definition of *qeq*'s here, since special

scopes such as the one illustrated in (19) are not an issue in this thesis. The main point to notice here is that scopal constraints are formulated as lists of *qeq*'s, which can usually be thought of as equations. The type *qeq* is defined in (20) below.

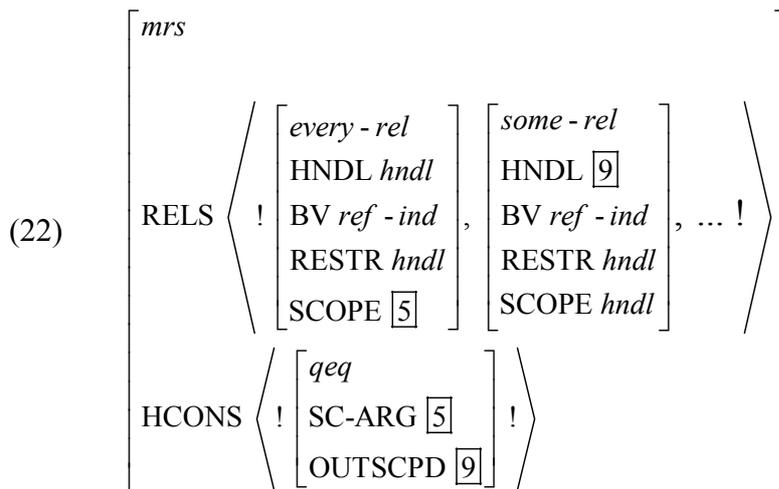
$$(20) \quad \underset{\downarrow}{\text{aym}} \left[\begin{array}{l} \text{qeq} \\ \text{SC-ARG } \textit{handle} \\ \text{OUTSCPD } \textit{handle} \end{array} \right]$$

Instead of writing (21a), as we did in (17) above, we now write (21b).

$$(21) \quad \left[\begin{array}{l} \text{a.} \\ \text{b.} \end{array} \right. \left[\begin{array}{l} \text{mrs} \\ \text{RELS} \left\langle \begin{array}{l} \text{!} \\ \left[\begin{array}{l} \textit{det - rel} \\ \text{PRED "every"} \\ \text{HNDL } \textit{hndl} \\ \text{BV } \boxed{2} \\ \text{RESTR } \boxed{3} \\ \text{SCOPE } \textit{hndl} \end{array} \right] \left[\begin{array}{l} \textit{noun - rel} \\ \text{PRED "dog"} \\ \text{HNDL } \boxed{3} \\ \text{INST } \boxed{2} \end{array} \right] \dots \text{!} \end{array} \right. \end{array} \right]$$

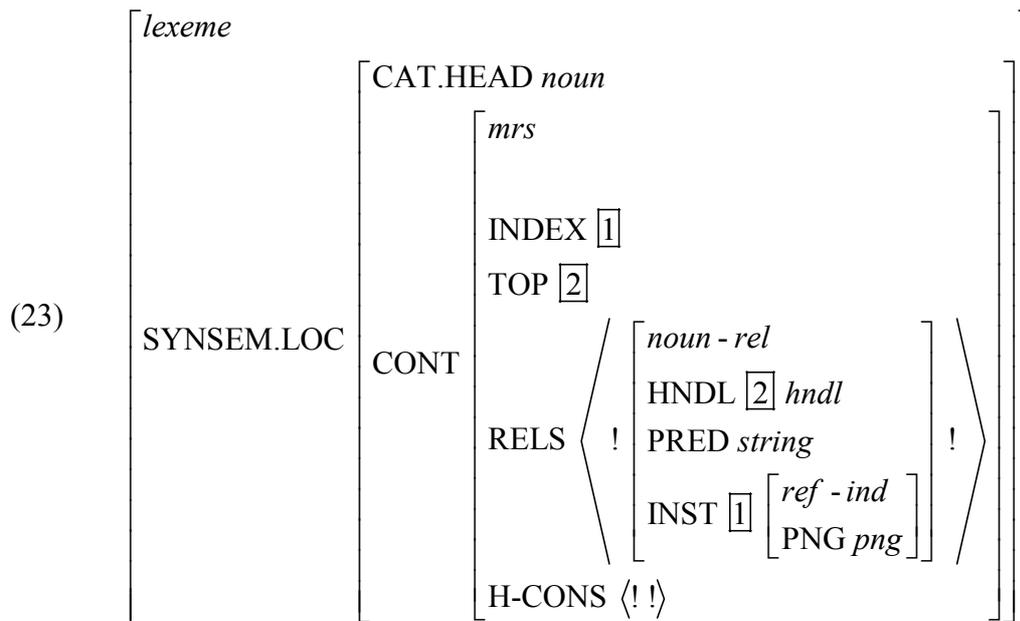
$$\left[\begin{array}{l} \text{mrs} \\ \text{RELS} \left\langle \begin{array}{l} \text{!} \\ \left[\begin{array}{l} \textit{det - rel} \\ \text{PRED "every"} \\ \text{HNDL } \textit{hndl} \\ \text{BV } \boxed{2} \\ \text{RESTR } \boxed{3} \\ \text{SCOPE } \textit{hndl} \end{array} \right] \left[\begin{array}{l} \textit{noun - rel} \\ \text{PRED "dog"} \\ \text{HNDL } \boxed{5} \\ \text{INST } \boxed{2} \end{array} \right] \dots \text{!} \end{array} \right. \\ \text{H-CONS} \left\langle \begin{array}{l} \text{!} \\ \left[\begin{array}{l} \textit{qeq} \\ \text{SC-ARG } \boxed{3} \\ \text{OUTSCPD } \boxed{5} \end{array} \right] \text{!} \end{array} \right. \end{array} \right]$$

Also *scope resolution* can be expressed by *qeq*'s. For instance, if we take (17) as our point of departure, and we want to represent the reading where *every* takes scope over *some*, this can be represented as follows:



There are still a couple of features on *mrs* that have to be commented on, namely, TOP *handle* and INDEX *mrs-thing*. The TOP value of a word or lexeme is always unified with its HN DL value. In phrases, on the other hand, there are possibly several relations on the RELS list, and therefore possibly several handles involved. The function of TOP *hndl* is then to specify whose HN DL value should be made visible at the phrasal level, and whether all HN DL values on the RELS list should be structure shared, for instance. The feature INDEX *mrs-thing* has a similar function. The INDEX value of a lexeme or word will be unified with the INST value of a noun, with the ARG value of an adjective, with the BV value of a determiner, and with the EVENT value of a verb or preposition. In phrases, which possibly contain several constituents, on the other hand, one index will be superior to the others and thus the phrase's INDEX value. For instance, in a verb phrase consisting of a verb and its direct object, it is the event index of the verb that is made visible at the phrasal level, not the index of its nominal object. Thus, the verb's event index is available for filling an argument slot of a predicate that subcategorizes for the verb phrase, whereas the nominal's index is not.

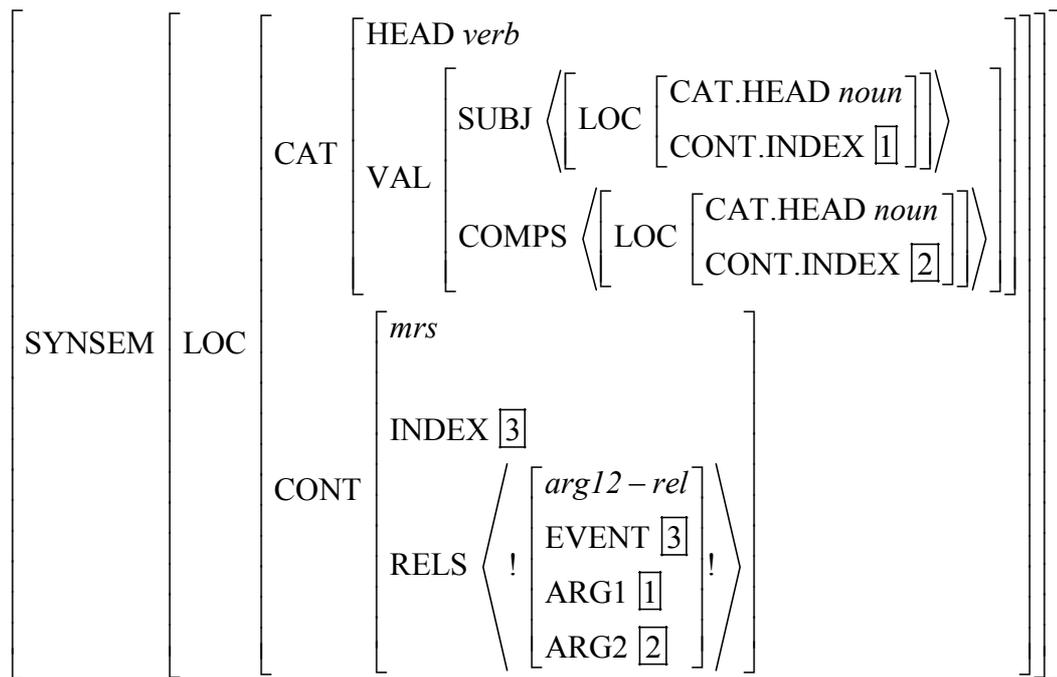
(23) below shows a nominal lexeme, and how the values of TOP and INDEX relate to the values of HN DL and INST.



We see from this that there are two ways to refer to the index of a nominal; either one can refer to the value of INDEX, or to the value of INST. For practical reasons, I will usually refer to a nominal's index as the value of INDEX rather than as the value of INST in this thesis.

Following Pollard and Sag (1994), HPSG indices can be thought of as the analog of a reference marker in discourse representation theory. Two nominals are said to be coindexed if their indices are token-identical. For instance, in the sentence *He shaved himself*, the indices of *he* and *himself* will be token identical. Linking between (syntactic) valence and (semantic) argument structure is also made explicit through structure sharing of indices, as illustrated in (24) (which is not a reflexive structure).

(24)



This verb takes a nominal subject and a nominal complement, and the subject corresponds to ARG1 and the object corresponds to ARG2.

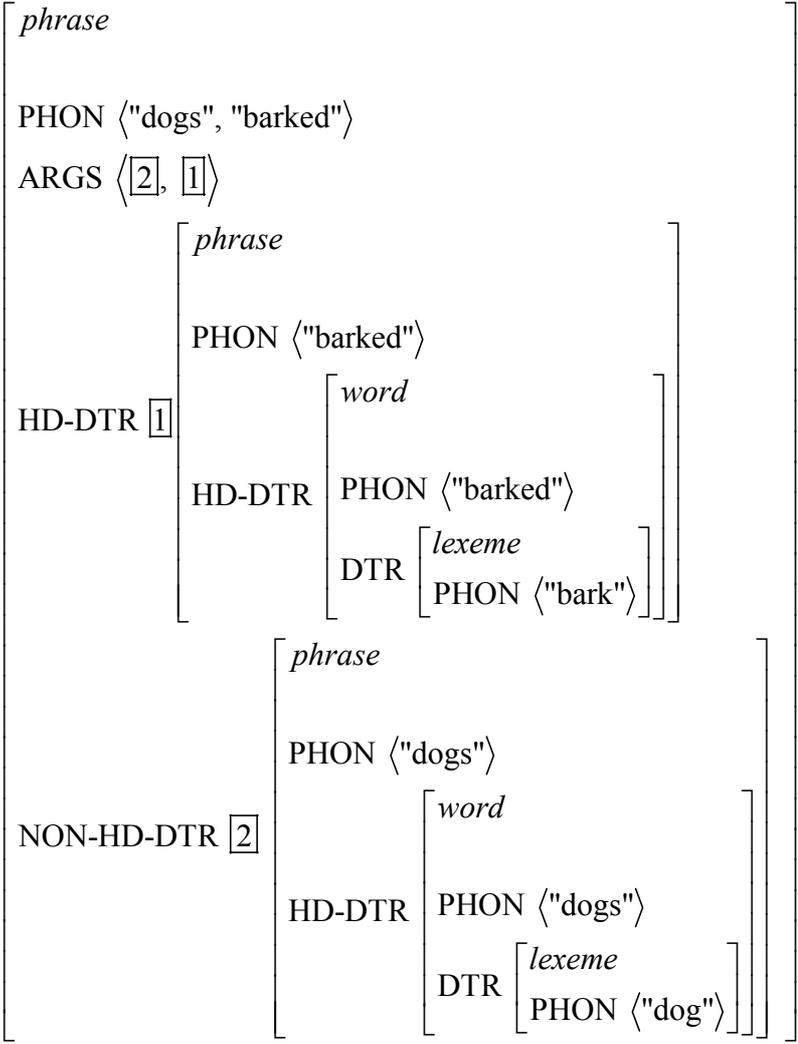
One last comment before we close this section is required. Notice that the type *ref-ind*, as defined in (16), has the feature PNG *png*, which is an abbreviation for person, number, and gender. Also this choice goes back to Pollard and Sag (1994). Pollard and Sag observe that covariation w.r.t. these features is always correlated with coreference. Rather than assuming that the attributes PER (person), NUM (number), and GEND (gender) are part of syntactic categories, they assume that these features belong to the internal structure of referential indices. If two indices are token identical, so are their agreement features; thus, there is no need for a separate constraint that accounts for (this type of) agreement. Given the assumption that anaphora and antecedents share indices, this means that anaphor-antecedent relations involve identity of nothing other than indices, for instance. Index agreement is involved also in, e.g., subject-verb agreement and determiner-noun agreement.

11.7 Constituent structure

In HPSG, morphological and syntactic constituent structure is not modelled by trees, but in feature structure descriptions. More precisely, there are types that refer to constituent levels

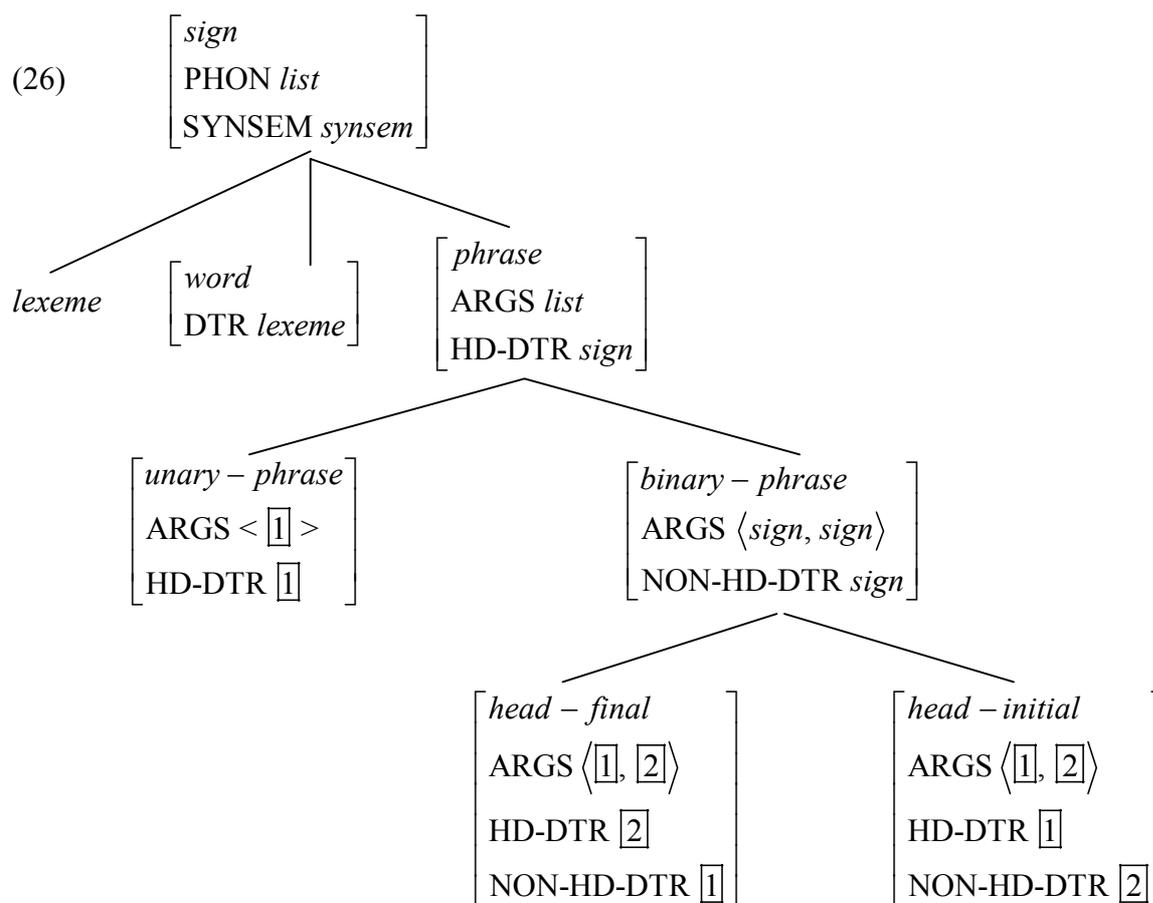
like lexeme, word, and phrase, and there are features referring to daughters. A sign, be it a lexeme, word, or phrase, is represented as one AVM diagram, with other signs embedded "inside" it as values of attributes. Very schematically, the constituent structure of a sentence like *Dogs barked* can be represented as in (25).

(25)



The phrase corresponding to the sentence has two attributes, HD-DTR (head-daughter) and NON-HD-DTR (non-head-daughter), that correspond to the verb phrase and its subject, respectively. The order of the two constituents is represented by the ARGS list. A list is ordered, which means that in (25), the non-head-daughter precedes the head-daughter. Each of these phrases has a word as their head, which in turn has a DTR attribute with a lexeme as its value.

The main types needed for deriving (25) are given in (26) below.



This type hierarchy is a simplification. For one thing, the types in (26) ought to specify what information is shared between a lexeme and a word and between a word and a phrase, in which case unification will be used to a great extent. Secondly, there are more features needed than those that are presented here. For instance, it seems hard to develop a grammar without assuming that a construction, and not only lexical items, can contribute meaning. Thus, like in ERG and the Matrix Grammar, I assume a feature C-CONT (constructional content) as appropriate on (certain types of) signs. The type hierarchy in (26) furthermore needs to be enriched by other types of signs, e.g. a type for lexeme-to-lexeme rules, that are often used in HPSG.

However, I will save both the author and the reader for the pain of presenting and comprehending a full-fledged type hierarchy of signs.

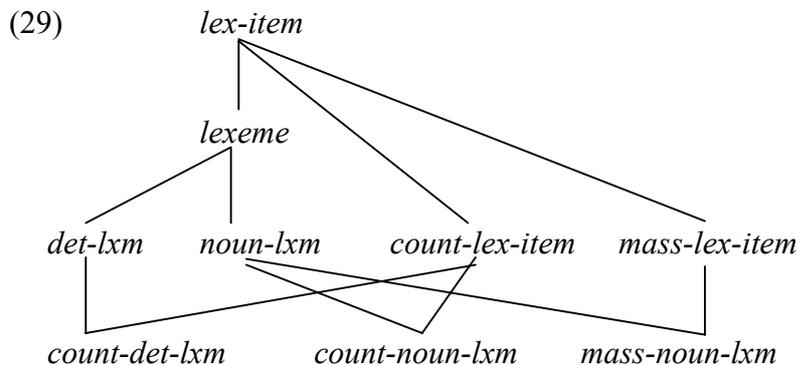
11.8 Lexical type hierarchies

One last property of HPSG that is particularly relevant here, is the extensive use of type hierarchies, particularly for lexical types. Lexical entries typically have a very simple structure, as illustrated by the lexical entry for *hund* ('dog') in (28). (The sign := is to be read "is a subtype of").

(28) *hund* :=

$$\left[\begin{array}{l} \textit{count-noun-lxm} \\ \text{PHON } \langle \text{"hund"} \rangle \\ \text{SYNSEM.LOC.CONT.RELS } \langle ! [\text{PRED "hund"}]! \rangle \end{array} \right]$$

Thus, lexical entries contain a lexical type, a certain phonology (i.e. PHON value), and a certain meaning (i.e. PRED value). Everything else follows from the lexical type that the lexical entry is said to inherit from. Consider the simple type hierarchy in (29).



Noun lexemes are subtypes of lexemes, and therefore also have all the properties of lexemes, but they will also be specified as having the HEAD value *noun*, and introducing a relation of type *noun-rel* on their RELS list, for instance (this is not made explicit in (29)). Determiner lexemes, on the other hand will have the HEAD value *det*, and they will introduce a relation of type *det-rel* on their RELS list. Both nouns and determiners can be divided into countable and uncountable objects, and can therefore be cross-classified with the types *count-lex-item* and *mass-lex-item*. For other part of speech categories, the lexical type hierarchy will reflect other parameters. An important aspect of verbs, for instance, is subcategorization frames.

12 The internal structure of Norwegian bare singulars

12.1 Introduction

In this chapter, the intuition that Norwegian bare singulars are type-emphasizing (argued for in chapter 2) will be formalized within an HPSG-styled typed feature structure formalism. Type-emphasis will be related to semantic notions like partitivity, referentiality, definiteness, and scope, and bare singulars will be compared to other kinds of nominals such as *a*-expressions, other bare indefinites, and the type anaphor *det*. This chapter also addresses the question of what a type discourse referent is, and how to predict the fact that indefinites can be left-dislocated if the topic is taken to be a type of thing rather than a token (as showed in section 2.10).

But before we can start to look at the internal structure of Norwegian bare singulars, we have to take a look at Norwegian nominals in general. This is the topic of section 12.2 below.

12.2 Some features on Norwegian nominals

12.2.1 *Number and the mass/count distinction*

As shown in (1), adjectives, nouns, and determiners have to agree w.r.t. number in Norwegian. Both nouns and adjectives are inflected for number, whereas at least some determiners are not inflected for number, but have a determined number value in the lexicon.

- (1) a. en katt
 a cat
 b. *to katt
 two cat
 c. *en katter
 a cats
 d. to katter
 two cats

- e. pene katter
pretty-PL cats
- f. pen katt
pretty cat
- g. *pen katter
pretty cats
- h. *pene katt
pretty-PL cat

Determiners and nouns have to be compatible w.r.t the mass/count distinction as well, as illustrated in (2) below.¹⁰¹ Adjectives are not sensitive to the mass/count distinction; that is, they have the singular form regardless of whether the noun they combine with is a mass noun or a singular count noun.

- (2)
- a. litt snø
some snow
 - b. *litt datamaskin
some computer
 - c. *to snø
two snow
 - d. to datamaskiner
two computers
 - e. litt skitten snø
some dirty snow
 - f. en skitten datamaskin
a dirty computer

Many determiners have a fixed mass or count interpretation. However, there are also determiners that are underspecified w.r.t. the mass/count distinction. From the examples in (3) below we observe that some determiners (e.g. *masse* ('much')) combine with either mass nouns or plural nouns, whereas others (e.g. *den* ('the')) combine with either mass nouns or singular count nouns.

¹⁰¹ I am using Pelletier and Schubert's (1985) definition of mass and count nouns, as presented in section 1.2.

- (3) a. masse snø
 much snow
 b. to gulrøtter
 two carrots
 c. masse gulrøtter
 much carrots
 d. den snøen
 that snow-DEFSUFF
 e. den gulroten
 that carrot-DEFSUFF

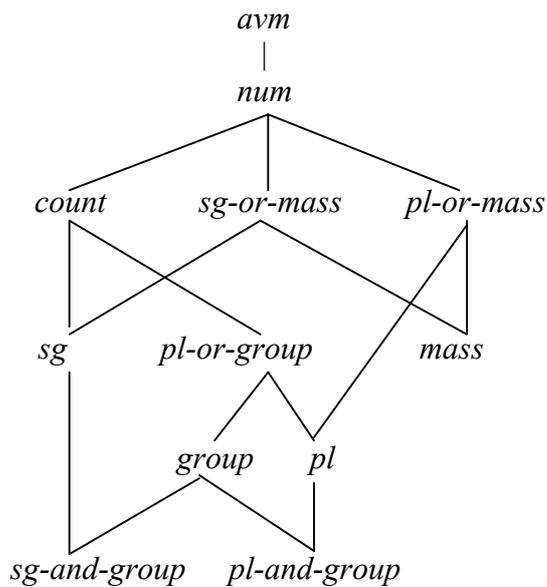
Finally, (4) illustrates the fact that some nouns are singular in the sense that the determiner that combines with it is singular, whereas an anaphoric pronoun that takes this noun phrase as its antecedent, may be plural.

- (4) *Den familien* liker jeg. *De* er snille.
 that family-SG.DEFSUFF like I. they are kind-PL
 'I like *that family*. *They* are kind.'

This happens when a singular noun denotes a group of individuals.

To sum up, it seems plausible to treat number and the mass/count distinction as one parameter, with the types given in (5) below.

(5)



With these types, we are able to distinguish between singular and plural individuals (as needed in (1)), and between mass and count individuals (as needed in (2)). For instance, the determiner *en* ('a') will be specified as combining with a singular (*sg*) noun, whereas the determiner *to* ('two') will be specified as combining with a plural (*pl*) noun. These types both inherit from the type *count*, but not from the type *mass*, which means that both the determiner *en* ('a') and the determiner *to* ('two') can combine with count nouns, but not mass nouns. The determiner *litt* ('some'), on the other hand, will be specified as combining with a mass (*mass*) noun. Thus, the mass/count distinction is accounted for, as well as the singular/plural distinction.

In addition, we have provided types that allow us to avoid stipulation of two lexical entries for a grapheme like *masse* ('much'), that combines with either mass nouns or plural nouns (see (3abc)). This determiner will be restricted to combine with a noun compatible with the number specification *pl-or-mass*. This means that the noun can either be a mass noun (*mass*) or a plural noun (*pl*). Since the noun will be of a more specific type than the determiner with respect to number, the type of noun will determine how the phrase is interpreted.

The definite determiner *den* ('the') will be specified as combining with nouns that are compatible with the number specification *sg-or-mass*, which means either singular (*sg*) or mass (*mass*) nouns. This rules out plural nouns, which is exactly what we want.

Finally, a group noun like *familie* ('family'), will be specified as having the number specification *group* in the lexicon. Like any other count noun, it goes through either singular or plural inflection. If it gets singular inflection, the number specification *sg* will be unified with the number specification *group*, which results in the valid type *sg-and-group*. This type

is compatible with the type *sg*, which predicts that this type of noun can combine with a singular determiner. If we furthermore assume that a plural anaphoric anaphor like *de* ('they') is specified as being connected to either a plural or a group-denoting antecedent (i.e. any nominal compatible with the type *pl-or-group*), then we are in the position to predict the data in (4), since the type *sg-and-group* (which will be the number specification of the nominal *familien* ('the family')) is compatible with the type *pl-or-group*.

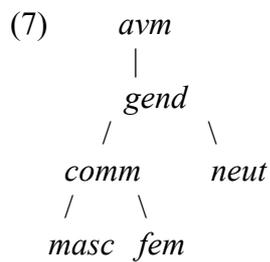
12.2.2 Grammatical gender

Norwegian adjectives, nouns, and determiners have to agree w.r.t. grammatical gender in addition to being compatible w.r.t. number and the mass/count distinction. The gender 'originates' on the noun, since one gender is specified lexically for each noun, whereas determiners and adjectives inflect for gender. Gender inflection on adjectives is overtly realized only on indefinite adjectives.

- (6) a. en (pen) katt
 a-COMM (pretty-COMM) cat(MASC)
- b. et (pent) hus
 a-NEUT (pretty-NEUT) house(NEUT)
- c. *et katt
 a-NEUT cat(MASC)
- d. *en hus
 a-COMM house(NEUT)
- e. *en pent katt
 a-COMM pretty-NEUT cat(MASC)
- f. *et pen hus
 a-NEUT pretty-COMM house(NEUT)
- g. *et pen katt
 a-NEUT pretty-COMM cat(MASC)

As summarized in (7) below, there are three grammatical genders in Norwegian; masculine (*masc*), feminine (*fem*), and neuter (*neut*). However, at least in some dialects, as well as in the

writing norm *bokmål*, the distinction between masculine and feminine nouns is hardly present, which motivates the gender common (*comm*).



12.2.3 Noun form

Determiners determine whether the noun they combine with has to have a definite suffix or not. Whereas this parameter has often been referred to as DEF *bool*,¹⁰² I refer to this parameter as 'noun form' (N-FORM *n-form*). The pattern is that all indefinite determiners (such as the indefinite article in (8a)) require no suffix on the noun, some definite determiners require a definite suffix on the noun (as illustrated in (8b)), whereas other definite determiners require no suffix (as in (8c)). As for adjectives, they are not sensitive to noun form, but to whether the determiner (or the nominal projection as such) is definite or not (we will return to this in the next section).

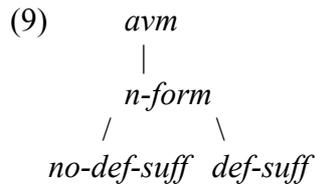
- (8)
- a. en (pen) katt
a (pretty) cat
 - b. den (pene) katten
that (pretty-DEF) cat-DEFSUFF
 - c. min (pene) katt
my (pretty-DEF) cat
 - d. *en katten
a cat-DEFSUFF
 - e. *min katten
my cat-DEFSUFF

¹⁰² For instance, Börjars (1994) and Neville (2000) use the feature DEF *boolean* to account for definiteness of determiners and nouns.

f. */!den katt¹⁰³

that cat

As summarized in (9), there are two noun forms; one with a definite suffix (*def-suff*), and one without any definite suffix (*no-def-suff*). As the label *n-form* implies, only nouns are inflected with respect to n-form.



12.2.4 Definiteness

12.2.4.1 Inflection of adjectives

As mentioned above, adjectives are inflected for definiteness (or declension)¹⁰⁴ according to the determiner that precedes them. Determiners are lexically specified as being either definite or indefinite. Adjectives that combine with indefinite determiners have an indefinite form, whereas adjectives that combine with definite determiners have a definite form. This is shown in (10) below.¹⁰⁵

(10) a. en pen katt

a pretty cat

c. min pene katt

¹⁰³ An exclamation mark (!) in front of a phrase signals that this kind of phrase is usually unacceptable, but may be acceptable in very specific linguistic and non-linguistic contexts. The kind of phrase given in (8f) is only acceptable if it is modified by a relative clause and has an attributive (i.e. nonreferential) interpretation, as in *Den mann som klarer denne oppgaven vil motta en premie* ('that man who manages this task will receive an award'.)

¹⁰⁴ The inflectional paradigm for adjectives with respect to definiteness is often referred to as *declension* (see e.g. Neville, 2000, Netter, 1994), and adjectives are correspondingly marked as *weak* or *strong*. However, since all weak adjectives in Norwegian occur in definite nominals, whereas all strong adjectives occur in indefinite nominals, one might just as well (or even more successfully) refer to this paradigm as definiteness. Thus, I follow Vangsnes (1999) and refer to weak and strong adjectives as definite and indefinite ones, respectively.

¹⁰⁵ I assume with Gundel et al. (1993) that a determiner is definite if and only if it signals that its associated discourse referent is at least uniquely identifiable to the hearer, indefinite if it only signals that its referent is at least type identifiable (see section 2.9 for more details).

- my pretty-DEF cat
- c. den pene katten
the pretty-DEF cat-DEFSUFF
- d. *en pene katt
a pretty-DEF cat
- e. *min pen katt
my pretty cat
- f. *den pen katten
the pretty cat-DEFSUFF

When there is no determiner present, the adjective has the form that is compatible with the noun's n-form. That is, when an adjective combines with a noun with a definite suffix (which only allows for a definite determiner), it has to be definite, as illustrated in (11cd). When an adjective combines with a noun with no suffix (which allows for either a definite or indefinite determiner), the adjective can be either definite, as in (11a), or indefinite, as in (11b). The definiteness values on the adjectives in (11ab) correlate with how the phrases are interpreted. That is, (11a) is interpreted as definite, whereas (11b) is interpreted as indefinite.¹⁰⁶

- (11) a. !pene katt
pretty-DEF cat
- b. !pen katt
pretty-INDEF cat
- c. !pene katten
pretty-DEF cat-DEFSUFF
- d. *pen katten

¹⁰⁶ Recall that an exclamation mark (!) in front of a phrase means that this type of phrase is usually ungrammatical, but sometimes grammatical. It has commonly been claimed that phrases such as those in (11abc) are not licensed in Scandinavian languages (see e.g. Delsing, 1993, Neville, 2000). Clearly, these types of phrases all have a very restricted use in Norwegian, but they do occur on certain interpretations in certain contexts (see Borthen 1998). Some wellformed sentences with the kinds of phrases given in (11a) and (11c) are presented in (i) below.

- (i) a. *Beste elev* mottok en premie.
best-DEF student received an award
- b. *Snille gutt*, kom hit.
kind-DEF boy, come here
- c. *Peneste jenta i klassa* var Kari.
prettiest-DEF girl-DEFSUFF in class-DEFSUFF was Kari
- d. Og der kom hun, *store jenta*, løpende mot meg.
and there came she, big-DEF girl-DEFSUFF, running towards me

Definiteness and n-form have to be seen as two distinct parameters, even though there are correlations between the two. Let us tentatively assume that definiteness is the only relevant parameter in (8), (10), and (11), and that the definite suffix encodes definiteness whereas no suffix leaves it open whether the noun is part of a definite or indefinite noun phrase. Then we correctly predict that indefinite determiners cannot combine with nouns with a definite suffix, and that both indefinite and some definite determiners can combine with nouns with no definite suffix. However, we are not able to predict the fact that (8e), which is a phrase consisting of a definite determiner and a noun with the definite suffix, is illformed, for instance. Thus, we need to refer to noun form irrespectively of definiteness.

If we, on the other hand, tentatively assume that n-form is the only relevant parameter in (8), (10), and (11), and ignore definiteness, then we are not able to predict the form on adjectives, since, as shown in (8) and (10), adjective form is sensitive to definiteness, not n-form. In sum, we need to represent both definiteness and n-form in Norwegian nominals. As shown in section 12.3 later, I take definiteness to be a semantic feature reflected in all nominal constituents (i.e. determiners, adjectives, and nouns), whereas n-form is a syntactic feature on nouns. The correlation between these two parameters, i.e. the fact that the presence of a definite suffix on a noun always entails definiteness, will be captured by type inheritance (see section 12.3.3 below).

12.2.4.2 *Definiteness in terms of cognitive statuses*

We have now established the need for something like a feature *DEFINITE bool* in order to account for the inflection of adjectives in Norwegian nominals.¹⁰⁷ However, I will take a more

¹⁰⁷ There are other ways to account for definite and indefinite adjective forms than to assume a feature that reflects this parameter directly. Börjars (1994) presents an account of adjective inflection (with respect to definiteness) without assuming a separate feature like *DECL decl*. She suggests that indefinite adjectives select for a noun whose selected determiner is indefinite, whereas definite adjectives select for a noun whose selected determiner is definite, which is an analysis similar to the one proposed by Pollard and Sag (1994) for German. As argued in Oepen (1994) (against Pollard and Sag, 1994), this kind of analysis is a bit counter intuitive, since it is really the determiner that governs the adjective form, not the other way around, as this analysis suggests. In the analysis that I will present shortly, I follow Börjars in that I do not introduce a separate feature just to account for indefinite and definite adjective forms. I also follow Börjars in that I assume that the distinction between indefinite and definite determiners is crucial for the form on adjectives, but I do not adopt her analysis as such.

general approach to definiteness. Recall from section 2.9 in chapter 2 that Gundel et al. (1993) propose a Givenness Hierarchy, which consists of six cognitive statuses. These are assumed to play a role in human communication, and more specifically, they are assumed to play a role for the use and interpretation of different referring expressions. In (12), the hierarchy is mapped up with certain English determiners and pronouns.

(12) The Givenness Hierarchy

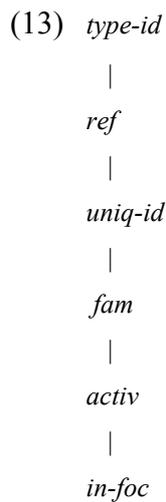
In focus ->	Activated ->	Familiar ->	Uniquely Identifiable ->	Referential ->	Type identifiable
<i>it</i>	<i>that, this,</i>	<i>that N</i>	<i>the N</i>	<i>indefinite</i>	<i>a N</i>
	<i>this N</i>			<i>this N</i>	

According to this hierarchy, the English demonstrative determiner *that*, for instance, signals that its (token) discourse referent is at least familiar to the hearer (and therefore in memory), whereas the pronoun *it* signals that its (token) discourse referent is in focus (and therefore in current center of attention). This piece of information is part of determiners' or pronouns' meaning, and helps the hearer to find the intended interpretation of an expression, since the signaled cognitive status narrows down the search space for the intended referent.

If we agree with Gundel et al. that these signaled cognitive statuses are part of determiners' and pronouns' meaning, then we need a general approach to 'definiteness' in our grammar regardless of adjective inflection.¹⁰⁸ This means - among other things - that what has usually been referred to as the definiteness or declension paradigm for Norwegian adjectives can be seen as part of this more general parameter having to do with referential givenness.

However, we cannot use the Givenness Hierarchy directly to account for grammatical phenomena. If we translate Gundel et al.'s hierarchy into a type hierarchy of the conventional format introduced in chapter 11, we see that there is just one line of dominance. This means that all the types in principle are compatible with each other; some are just more specific than others:

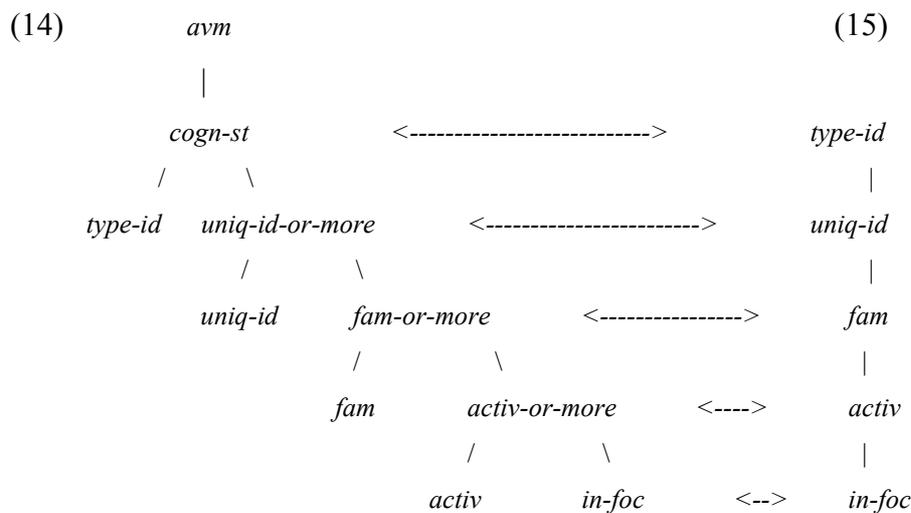
¹⁰⁸ Observing that grammatical phenomena are sensitive to definiteness, van Eynde (2003) argue for a feature DEFINITENESS *definiteness* in Dutch nominals. van Eynde's approach is, however, less general than the one presented here, since it only refers to the definite/indefinite distinction. The present approach, based on the Givenness Hierarchy, allows for reference to several distinctions on a scale of referential givenness.



As intended by Gundel et al., this hierarchy says that if a discourse referent is uniquely identifiable (*uniq-id*), it is also referential (*ref*) and type identifiable (*type-id*), since *uniq-id* is a subtype of *ref* which is a subtype of *type-id*. And if a discourse referent is familiar (*fam*), it is also uniquely identifiable (*uniq-id*), referential (*ref*), and type identifiable (*type-id*), since *fam* is a subtype of *uniq-id*, which is a subtype of *ref*, which is a subtype of *type-id*. Whereas these entailment relations are intuitive w.r.t. people's attention states, they become unpractical if one tries to state grammatical constraints with the types in (13). Imagine that we want to license indefinite adjectives only in indefinite nominals by restricting them to have the cognitive status specification *type-id*. Assuming that this cognitive status has to be unified with the cognitive status specification of the noun and the determiner in the phrase, and assuming that indefinite determiners are *type-id*, whereas definite ones are at least *uniq-id*, one would possibly expect this to rule out the combination of an indefinite adjective and a definite determiner, for instance. But this is not the case. Since all the cognitive statuses in (13) entail type identifiability, this constraint in fact licenses indefinite adjectives in all kinds of nominals, regardless of whether they are definite or indefinite. Similar problems will occur whenever we attempt to make use of the hierarchy of cognitive statuses in (13) in order to account for grammatical phenomena. Thus, even though the hierarchy in (13) is successful in predicting appropriateness of NP forms in discourse (at least when it is supplemented by Gricean principles - and thus implicatures - that account for unlikely forms, as proposed in Gundel et al. 1993), it is not well-suited for stating restrictions on grammatical phenomena. This was also not the intention of Gundel et al. (1993).

It seems to me that the cognitive statuses proposed by Gundel et al. can be linguistically relevant in (at least) two ways: They might be relevant as actual attention states of discourse

referents, in which case the lower states are entailed by the higher ones, as described by Gundel et al. But they may also be relevant as mutually exclusive "minimally required" cognitive status categories, as observed in grammatical phenomena. Instead of assuming syntactic features that (possibly) duplicate the set of cognitive statuses that Gundel et al. propose for discourse purposes, I propose to extend the hierarchy to also include types of cognitive statuses that are incompatible with each other, in order to account for grammatical phenomena. A first step towards such a taxonomy is given in (14) below.¹⁰⁹ (15) is the original Givenness Hierarchy in a type hierarchy format.



Notice that the original hierarchy of compatible types that Gundel et al. propose is still present in the new hierarchy in (14), as indicated by the dotted lines. All I have done is to introduce some additional types. For instance, the type *uniq-id-or-more* in my system in (14) corresponds to the type *uniq-id* in Gundel et al.'s system in (15), whereas the type *uniq-id* in my system in (14) does not have a correspondence in Gundel et al.'s system. This results in a rather flexible system of cognitive status types, in which reference to mutually exclusive (classes of) cognitive statuses is possible just as well as reference to compatible (classes of) cognitive statuses.

We will discuss later where in the feature geometry the feature COGN-ST *cogn-st* belongs, and I will also propose to enrich the hierarchy of cognitive status types with more categories than in (14) (see section 12.4 below). But even without this piece of information, it should be clear that (14) provides a set of types that might be useful for a number of different phenomena that are sensitive to referential givenness. The interpretation of determiners has

¹⁰⁹ A more fine-grained hierarchy of cognitive status categories will be given in section 12.4.3 below.

usually been accounted for by different types of relations, i.e. *indef-rel*, *demonstr-rel* etc. in the HPSG literature. Even though this approach is plausible enough, relations are hard to take advantage of, since they are elements on the RELS list, and elements on a list are hard to keep track of. Thus, a feature COGN-ST *cogn-st* is much more usable to account for the NP-external behavior of different types of nominals. Both (some aspects of) determiner meanings and e.g. adjective inflection in Norwegian will be accounted for with the feature COGN-ST *cogn-st*.

What has usually been referred to as DEFINITE +/- will in the type system in (14) correspond to type identifiable (*type-id*) vs. uniquely identifiable or more (*uniq-id-or-more*). In other words, according to the present analysis, an adjective with indefinite form will be specified as being part of a nominal with the cognitive status specification *type-id*, whereas an adjective with definite form will be specified as being part of a nominal with a cognitive status specification compatible with *uniq-id-or-more*. This means, for instance, that a definite (*uniq-id*) or demonstrative (*fam*) determiner can combine with a nominal that contains a definite adjective, whereas an indefinite determiner (i.e. one with the cognitive status specification *type-id*) cannot. Since nouns without any definite suffix are underspecified for definiteness in Norwegian, the analysis correctly predicts that the form on the adjective may be crucial for determining the set of possible determiners, as well as for determining the interpretation of the phrase as either definite or indefinite.

As already mentioned, I will return to the cognitive status hierarchy in section 12.4 below, and show that adjective inflection in Norwegian relates to a fully general analysis of grammatical phenomena that bear on cognitive status categories.

12.2.5 Natural gender and person

Like in English, Norwegian pronouns and some determiners mark whether they are stated of (human) feminine, (human) masculine, or nonhuman individuals in the real world. Differently from English, there is not just one form that refers to nonhuman individuals, though, but two, as illustrated in (17c) and (17d).

- (17) a. Hun løper.
 she runs
 b. Han løper.

he runs

c. Den løper.

it-COMM runs

d. Det løper.

it-NEUT runs

The pronoun in (17c) has the grammatical gender *comm*, but as shown in (18) below, it cannot be stated of human individuals even if they are referred to by nominals with a grammatical gender compatible with *comm*. It can only be stated of *nonhuman* individuals referred to with an expression with a grammatical gender compatible with *comm*.

(18) a. *Den nye eleven* kom for sent. *Han/#den* hadde forsovet seg.

the-COMM new student-DEFSUFF.MASC came too late. he/#it-COMM had overslept REFL

'The new student came too late. He had overslept.'

b. *Denne datamaskinen* er fantastisk. *Den/#han* har alt.¹¹⁰

this-COMM computer-DEFSUFF.MASC is fantastic. it-COMM/*he has everything

'This computer is fantastic. It has everything.'

This shows that natural and grammatical gender need to be represented separately for (at least some dialects of) Norwegian.¹¹¹

I said above that the pronouns *han* ('he') and *hun* ('she') are used to refer to human individuals, whereas the pronouns *det* ('it'-NEUT) and *den* ('it'-COMM) are used for reference to nonhuman individuals. There are two hedges to this statement, though. For one thing, animals can be regarded as either human or nonhuman, and so can different types of creatures that are a bit like human beings. Furthermore, as shown in (19b) below, the token anaphor *det* ('it'-NEUT) can be used to refer to a human being whose natural gender is not known, if this pronoun has an antecedent with the grammatical gender *neut*.

(19) a. *Dette huset* er fint. *Det* har alt.

¹¹⁰ This pattern represents some Norwegian dialects, and the written norm bokmål. In other dialects, and in the written norm nynorsk, *han* ('he') can refer to nonhuman individuals.

¹¹¹ A similar division between natural and grammatical gender has been proposed for e.g. Dutch (see van Eynde, 2003).

this house-DEFSUFF.NEUT is nice-NEUT. It-NEUT has everything

'This house is nice. It has everything.'

b. Jeg så *et menneske* langt borte. Så forsvant *det/han/hun*.

I saw a-NEUT human-being(NEUT) far away. then disappeared it-NEUT/he/she

'I saw a person far away. Then the person/he/she disappeared.'

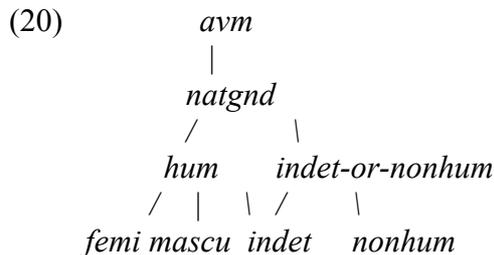
c. Jeg så *et kvinnemenneske* langt borte. Så forsvant *hun/#det*.¹¹²

I saw a-NEUT woman-human-being(NEUT) far away. then disappeared she/#it-NEUT

'I saw a woman far away. Then she disappeared.'

The reason why the anaphor *det* is acceptable in (19b) but not in (19c) is that the natural gender of a human being might not be known to the speaker, whereas the natural gender of a female human being is known. Notably, it is only *det* ('it'-NEUT) that can be used to refer to gender undetermined human beings; *den* ('it'-MASC) can not be used in this sense.

In sum, the data in (17)-(19) motivate the natural gender types in (20) below.



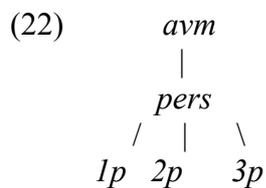
We can now assume that both the nouns *menneske* ('human being') and *kvinnemenneske* ('woman-human-being') denote individuals that are human, which means that they can function as antecedents of the pronoun *hun* ('she'), for instance. However, the noun *menneske* ('human being') differs from *kvinnemenneske* ('woman-human-being'), since it does not specify what natural gender its associated discourse referent has, which means that its natural gender is undetermined (*indet*). If we assume that the pronoun *det* ('it'-NEUT), requires either a nonhuman or a gender undetermined antecedent (i.e. *indet-or-nonhum*), we are now in the position to predict the data in (19) without postulating two lexical entries for the grapheme *det* ('it'-NEUT) (when *det* is a token anaphor).

¹¹² (19c) can be uttered if the speaker intends to express an insult towards the woman referred to. There seems to be some dialectal variation w.r.t. the degree of insult, though. This insulting effect is not present in (19b).

Like in English, Norwegian also distinguishes between first, second and third person, as shown in (21).

- (21) a. Hun_i slo [seg selv]_i/*[meg selv]_i.
 she hit 3p.REFL self/*2p.REFL self
 'She_i hit herself_i/*myself_i.'
 b. Jeg_i slo [meg selv]_i/*[seg selv]_i.
 I hit 2pREFL self/*3pREFL self
 'I_i hit myself_i/*herself_i.'

The relevant types for person are given in (22).



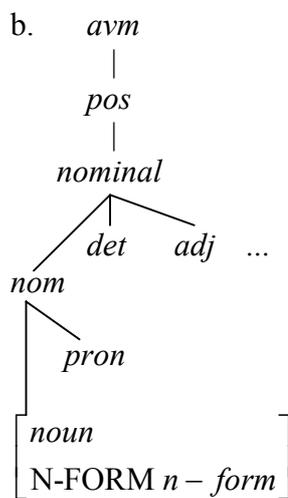
12.3 The position of nominal features in the feature geometry

In the previous section we established the different types and type hierarchies needed to capture a wide range of linguistic distinctions appearing in Norwegian nominals, subsumed under the (slightly unprecise) label *agreement*. In this section, we will discuss where in the feature geometry these types should occur.

12.3.1 Noun form

Recall from section 12.2.3 above that Norwegian determiners govern the form of the noun they combine with. Whereas indefinite determiners require no definite suffix on the noun, definite determiners differ with respect to what noun form they require. Since *n-form* does not necessarily correlate with semantic interpretation, and furthermore is a feature that neither adjectives, nor determiners inflect for, I assume that this is a syntactic feature on nouns that

determiners subcategorize for. Since we want the feature N-FORM *n-form* to be visible at the phrasal level (since determiners are assumed to subcategorize for it), I take it to be a head feature, i.e., a feature introduced on the part-of-speech type *noun*. The position of the feature N-FORM *n-form* in the feature structure description of a sign is given in (23a), whereas its type declaration is represented in (23b).



N-FORM *n-form* is assumed to be a syntactic feature in (23), but since all nouns with a definite suffix are part of definite phrases, there is a correlation between *n-form* and semantic interpretation. This link can be captured if one defines types for nominals with and without a definite suffix. If nouns with a definite suffix inherit from a type for definite signs, then it follows automatically that any noun with a definite suffix will be part of a definite phrase.

12.3.2 Agreement features

As mentioned in section 11.6 in chapter 11, Pollard and Sag (1994) observe that agreement (with respect to person, number, and gender) always correlates with structure sharing of indices, and conclude from this that the semantic index of nominals should carry agreement information. As shown in (23) below, the features PER *per*, NUM *num*, and GEND *gend* are stated on the type *ref*, which corresponds to the referential index of a nominal. This step

provides an efficient way of accounting for (certain types of) agreement, since (this type of) agreement involves nothing else than structure sharing of indices.

$$(23) \left[\text{SYNSEM.LOC.CONT.INDEX} \left[\begin{array}{l} \textit{ref} \\ \text{PER } \textit{per} \\ \text{NUM } \textit{num} \\ \text{GEND } \textit{gend} \end{array} \right] \right]$$

Recall that it was shown above that Norwegian has both grammatical and natural gender, i.e. GEND *gend* and NATGND *natgnd*, respectively. Whereas the natural gender of a discourse referent (usually) remains the same throughout different references to it during a discourse, the grammatical gender of a nominal is often completely independent of what discourse referent it is intended to refer to. This is illustrated in (24).

(24) a. Se på *det dyret*. *Den hunden* bare må jeg ha.

look at that-NEUT animal-DEFSUFF.NEUT. that-MASC dog-DEFSUFF.MASC
just must I have

'Look at *that animal*. I just have to have *that dog*.'

b. Jeg møtte *et menneske*. *Han* var pen/*pent.

I met a-NEUT human-being(NEUT). he was pretty-COMM/*pretty-NEUT

'I met a human being. He was pretty.'

c. Jeg kjenner *et postbud*. *Hun* er snill/*snilt.

I know a-NEUT mailman(NEUT). She is kind-COMM/*kind-NEUT

'I know a mailman. She is kind.'

If one assumes that anaphors share index with their antecedent, and indices carry a grammatical gender feature, then the text fragments in (24) are expected to be illformed because of conflicting gender specifications on the anaphors and their antecedents. Therefore, I propose that for Norwegian, indices (or what corresponds to a discourse referent) should not contain a feature for grammatical gender, but one for natural gender. Instead of the AVM diagram in (23), that follows from Pollard and Sag's (1994) treatment of indices, I propose a grammar component that licenses the following AVM diagram for Norwegian:

$$(25) \left[\begin{array}{c} \text{SYNSEM.LOC.CONT.INDEX} \\ \text{PNG} \left[\begin{array}{c} \text{ref-ind} \\ \text{png} \\ \text{PER per} \\ \text{NUM num} \\ \text{NATGND natgnd} \end{array} \right] \end{array} \right]$$

I assume that the attributes PER, NUM and NATGND (not GEND) are collected under the feature PNG *png*. As in the Matrix Grammar, I use the type label *ref-ind* instead of Pollard and Sag's type label *ref*.¹¹³

So much for person, number, and natural gender. Now, what about definiteness (or, cognitive status) and grammatical gender? Where do these features fit in?

Let us consider cognitive status first. What kind of feature is this? First of all, COGN-ST *cogn-st* is not a good candidate for being a syntactic feature, as it clearly has to do with interpretation. Next, as I use this feature, it is not a context-dependent semantic feature, since I am not concerned with the *actual* cognitive status of a discourse referent, but with what cognitive status is conventionally signalled as the *minimally required* one by a certain form. Let's therefore assume that the feature COGN-ST *cogn-st* belongs to the semantic component of a sign. Having landed on this view, its position in the feature structure description is still not obvious. One possibility is to introduce a feature for cognitive status on CONT *mrs*. However, recall that I assume that one nominal can introduce two discourse referents (i.e. a token discourse referent and a type discourse referent), which both should be assigned a cognitive status. Thus, if cognitive status is a feature on *mrs*, we need at least two such features. More generally, there are as many cognitive statuses as there are discourse referents. A more appealing approach is therefore to connect cognitive status to discourse referents directly. Unfortunately, it would be counter intuitive and lead to wrong predictions to assume that cognitive status is a feature on *ref-ind* as this type is presently interpreted, since we (presumably) do not want to assume that coreference entails sameness of minimally required cognitive status. In the case of discourse anaphora, for instance, it is not the case that the antecedent has to signal the same cognitive status as the anaphor does, nor a compatible one. Rather, cognitive status is a property of a discourse referent at a particular *reference act*.¹¹⁴ The correlation between nominal forms and signaled cognitive status of a discourse referent is

¹¹³ I do not attempt to claim that grammatical gender cannot be a feature on indices in other languages. I just say that this is so for (some dialects of) Norwegian.

¹¹⁴ This excellent term I owe to Lars Hellan, p.c.

something that makes the discourse referent recoverable at a particular occasion of mentioning, and therefore cannot be assumed to be an inherent property of the discourse referent.

The same holds for grammatical gender, in fact. In Norwegian, grammatical gender has to be positioned in the feature structure such that structure sharing of indices does not entail structure sharing of grammatical gender. And like cognitive status, it is a property of nominals at a certain reference act that helps the hearer to keep track of the discourse referent. Differently from cognitive status, it is not generally used for making the discourse referent recoverable in discourse (some anaphors do, others don't), but it is often used for making the discourse referent *recognizable* in sentences, since predicative adjectives agree with their semantic subjects w.r.t. grammatical gender (which may have a disambiguating effect). Common for both grammatical gender and cognitive status is that these features intuitively are properties closely associated with discourse referents, but not close enough to be assumed to be inherent properties of indices.

What I will propose, is that we introduce the features COGN-ST *cogn-st* and GEND *gend* on *ref-ind*, together with a feature representing the *real* index of a nominal, i.e. DR *dr* (discourse referent) as shown in (28).

$$(28) \left[\begin{array}{l} \text{SYNSEM.LOC.CONT.INDEX} \\ \left[\begin{array}{l} \text{ref-ind} \\ \text{DR } dr \\ \text{PNG } png \\ \text{COGN-ST } cogn-st \\ \text{GEND } gend \end{array} \right] \end{array} \right]$$

The type *ref-ind* now includes the discourse referent together with a set of features whose function is to make the discourse referent recoverable and/or recognizable in discourse and in sentences. Metaphorically speaking, we can look at this as the discourse referent as it is "dressed up" at a certain reference act, whereas the DR *dr* feature represents the "naked" discourse referent, and therefore the real index.

It is in fact not only the desire to connect cognitive status and grammatical gender to discourse referents that motivates the introduction of the feature DR *dr* on *ref-ind*. As Pollard and Sag (1994) point out themselves, there are some problems with their notion of indices. The problem is that as soon as two expressions do not agree with respect to person, number,

or (natural) gender, co-indexing is ruled out. This includes examples such as those in (29) and (30).

(29) That dog is so stupid, every time I see it I want to kick it. He's a damned good hunter though.

(30) A: You are mistaken.
B: Yes, I am.

In (29), co-indexing of *it* and *he* is ruled out because of conflicting natural gender specifications, whereas in (30) *you* and *I* cannot be coindexed, since these words have conflicting person specification. Intuitively, though, the pairs *it* and *he*, and *you* and *I*, are coreferential. These kinds of examples are few compared to the many "well-behaved" anaphor-antecedent relations, but I take the stand that a grammar should at least in principle be capable of accounting for exceptional properties of languages. By introducing a bare discourse referent, DR *dr*, as proposed in (28) above, the kind of examples in (29) and (30) can be accounted for.

I will make one modification to the representation in (28). One of the main reasons why Pollard and Sag proposed to introduce person, number, and (natural) gender as features on referential indices, is that structure sharing of indices almost always goes hand-in-hand with structure sharing of agreement features. That is, indices and person, number, and gender constitute a natural class together. In (28), this is no longer the case. I therefore propose that we introduce a new feature to reflect this natural class, i.e. IND-AGR *ind-agr* (index agreement). This linguistic object is exactly what will be referred to in so-called 'index agreement' phenomena. We now end up with the following feature structure description:

$$(31) \left[\begin{array}{l} \text{SS.LOC.CONT.INDEX} \left[\begin{array}{l} \text{ref} - \text{ind} \\ \text{IND-AGR} \left[\begin{array}{l} \text{ind} - \text{agr} \\ \text{PNG } \textit{png} \\ \text{DR } \textit{dr} \end{array} \right] \\ \text{COGN-ST } \textit{cogn - st} \\ \text{GEND } \textit{gend} \end{array} \right] \end{array} \right]$$

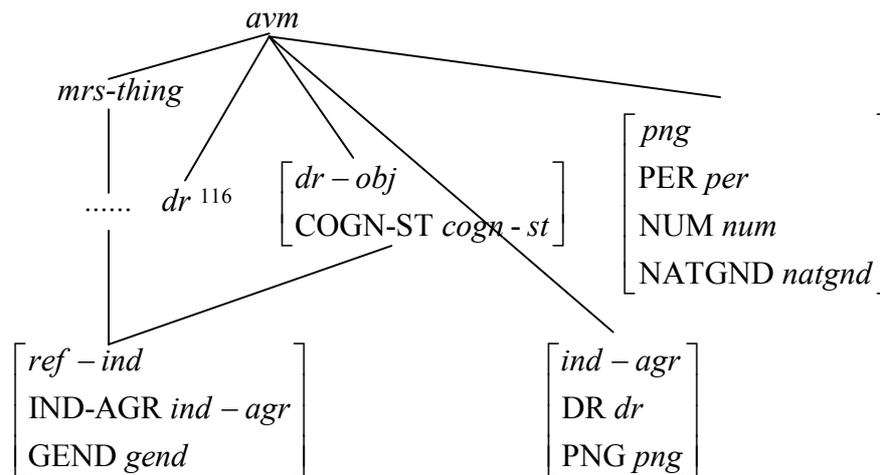
The DR value in (31) is the nominal's real index, or (token) discourse referent, the IND-AGR value represents the (token) discourse referent and its (more or less) constant properties, whereas *ref-ind* metaphorically speaking can be seen as the (token) discourse referent as it is dressed up at a given reference act in different kinds of non-permanent costumes. On the present analysis, it becomes an item-dependent, construction-dependent, and language-dependent matter to what degree it is possible for two signs to share index (i.e. DR value) without sharing (different kinds of) agreement information as well.

We have landed at a more elaborate structure for the semantic aspects of signs than what Pollard and Sag (1994) proposed, which is not an immediate advantage. But we have achieved at least three advantages with the present approach: First, even though we consider a wider range of data than what Pollard and Sag did (by having separate features for grammatical and natural gender, and by introducing a feature reflecting definiteness, or cognitive status), we maintain Pollard and Sag's easy way of accounting for agreement, and even improve it in some cases. NP-internal agreement between nouns, adjectives, and determiners in Norwegian (w.r.t. number, definiteness, and grammatical gender), for instance, can be captured merely by structure sharing of INDEX values. If grammatical gender or definiteness (cognitive status) were assumed to be syntactic features, this type of agreement would have to be stated as at least two cases of structure sharing instead of one. Secondly, as already pinpointed, the present approach leaves open the possibility that one can have structure sharing of indices (i.e. of DR values) without structure sharing of agreement features, which accounts for the data in (29) and (30). And thirdly, by locating together information that intuitively has to do with discourse referents, we clear the ground for stating a relatively simple type hierarchy for semantic classes of nominals. That is, on the present approach this corresponds to a hierarchy of "dressed up" discourse referents (i.e. subtypes of *ref-ind*), whereas it would have to be a hierarchy of nominal *synsem* types if this kind of information were partly syntactic and partly semantic, or *mrs* types if this kind of information were partly stated on CONT *mrs* and partly on INDEX *ref-ind*. (There will be more about this in the next section).

(32) gives a summary of the types needed for licensing (31).¹¹⁵

¹¹⁵ In (32), *dr* and *ind-agr* are not subtypes of *mrs-thing*, but this is definitely a possibility. We will discuss this possibility in chapter 13.

(32)



Notice that the feature COGN-ST *cogn-st* is introduced on the type *dr-obj* (discourse referent object) which is a type that is supposed to be situated quite high up in the type hierarchy, so that any linguistic (semantic) object that can possibly function as a discourse referent can inherit from this type. This assumption makes it possible to assume that also type discourse referents (whatever semantic object they may be) have a cognitive status that make them possible topics in left-dislocation constructions, for instance (see section 2.10.1, chapter 2). We will return to this issue in section 12.6 below.¹¹⁷

¹¹⁶ In (32), *dr* does not have any subtypes. However, one distinction that I intend to be reflected as subtypes of *dr* in a more comprehensive system, is the distinction between concrete individuals and abstract kinds, as illustrated by the two readings of the phrase *the lion*, as this phrase can either refer to a particular lion or a particular kind of animal. Differently from a-expressions, Norwegian bare singulars can never combine with adjectives such as *type* ('type'), which may be accounted for if we assume that *dr* has two subtypes; *token* and *kind*. If we assume that bare singulars have the DR value *token*, a-expressions have the DR value *dr*, whereas the adjective *type* has the DR value *kind*, then we make the desired predictions.

¹¹⁷ Also the type *event* should inherit from *dr-obj*. Hegarty et al. (2002) and Hegarty et al. (2003) discuss reference to clausally introduced entities by the pronouns *it* and *that*, and show that what pronoun is used depends on what cognitive status the eventive entity has, i.e. whether it is just activated, or in focus of attention. As for the introduction of the feature PNG *png* on *ind-agr* in (32) above, this is probably a simplification. I suspect that we easily run into the same kind of problem with event indices as we did with referential indices, namely that we want to unify two indices but cannot because they carry different agreement information (i.e. tense, aspect, and mood for events). In a more general type hierarchy, the type *ind-agr* should not have the feature PNG *png* on it, but be subdivided into two subtypes *event-ind-agr*, and *ref-ind-agr*, which have the features TAM *tam* (tense, aspect, mood) and PNG *png* (person, number gender), respectively.

12.3.3 Some partial feature structure descriptions

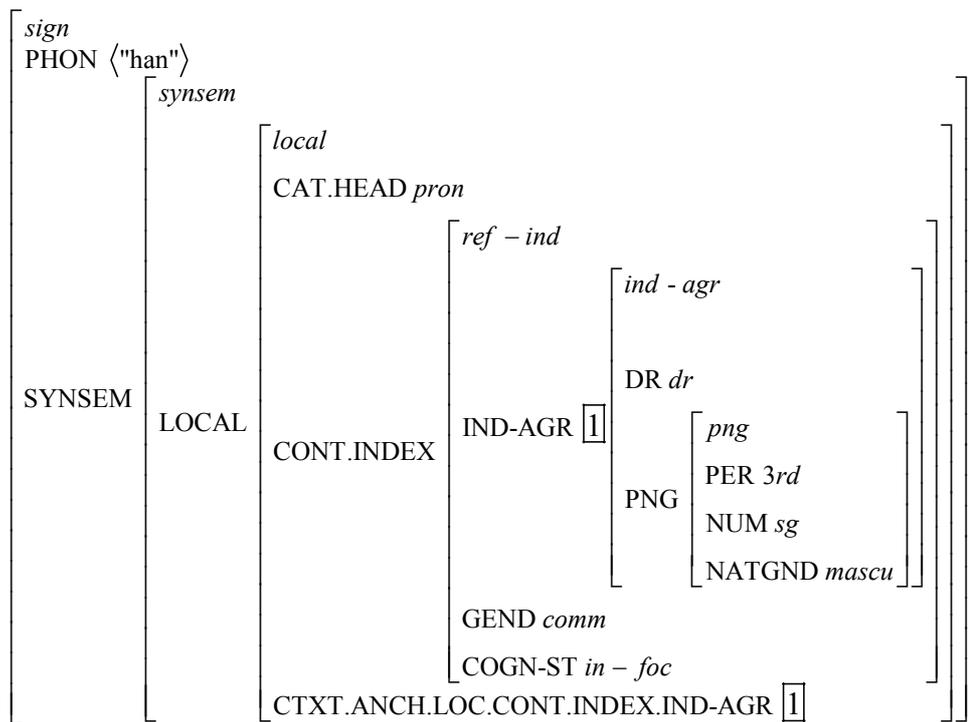
In this section, I will show some partial feature structure descriptions for some Norwegian words, according to the structure of *ref-ind* that I have proposed. But before we do that, I want to introduce one more feature which is needed in order to specify different types of restrictions on anaphoric expression, namely a feature that points to a possible antecedent of a sign. Let us call this feature 'anchor' (i.e. ANCH *synsem*), and assume that it is introduced on the type *ctxt*, as given in (33) below. This means that information about a sign's possible set of antecedents is seen as a contextual restriction.

- (33) a. *avm*
|
[*ctxt*
 ANCH *synsem*]
- b. [*sign*
 SYNSEM.LOC.CTXT.ANCH *synsem*]

With this type we are capable of stating what aspects of an antecedent and an anaphor have to be compatible. Notably, I have no intention to fully account for anaphor resolution here. The attribute ANCH *synsem* is just introduced for the purpose of being explicit w.r.t. what aspects of an anaphor and its antecedent need to be unified. However, it is assumed that this kind of information will be relevant for any algorithm whose purpose is to assign reference to anaphoric expressions.

Now, let's turn to some partial feature structure descriptions that illustrate the points made so far in this chapter. (34) below is a partial description of the personal pronoun *han* ('he').

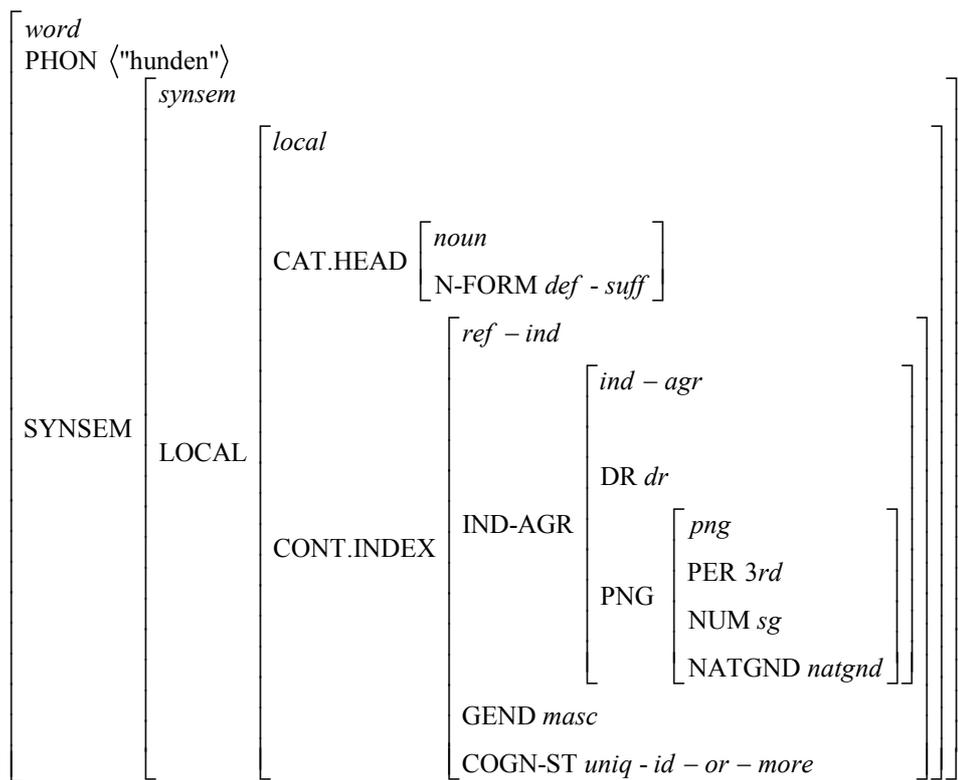
(34)



This pronoun is used to refer to third person singular masculine individuals. The cognitive status specification *in-foc* shows that the associated discourse referent is supposed to be in focus of attention at the moment of the utterance. This cognitive status specification is not shared with the pronoun's antecedent (if it has one), though, since that would predict that pronouns only could have pronouns as antecedents, which is of course not the case. (34) also predicts the fact that this kind of pronoun (differently from some other pronouns in Norwegian) is not sensitive to the grammatical gender of its antecedent. At the same time, the pronoun itself is assigned the grammatical gender *comm*. This means, for instance, that if this pronoun appears as the subject of a predicative adjective, then this adjective has to have a gender specification compatible with *comm*.

(35) is a partial AVM diagram for the definite noun *hunden* ('dog'-DEFSUFF).

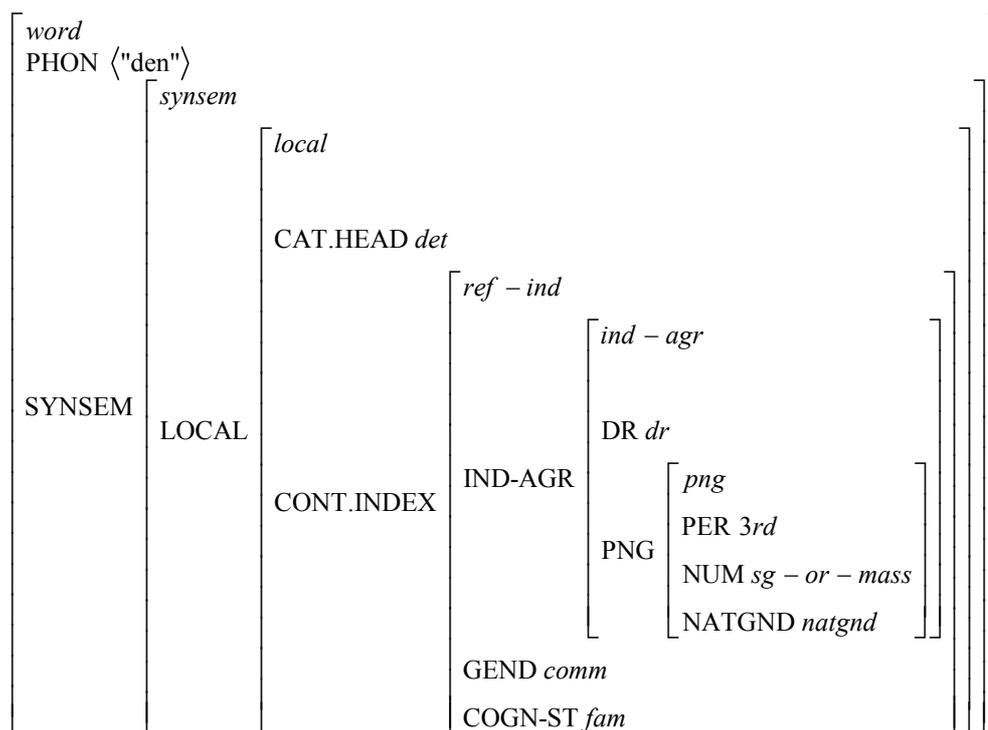
(35)



The word *hunden* ('dog-DEFSUFF') has a definite suffix, and is therefore definite, which means that it has the cognitive status specification *uniq-id-or-more*. This value will be more specific at the phrasal level, depending on what determiner the noun combines with (if any). Given the assumption that determiners and nouns share INDEX value (the phrasal schemas imposing this will be given in section 12.5 below), the representation in (35) predicts correctly that this word can either combine with a demonstrative determiner (that has the specification COGN-ST *fam*), or with a definite determiner (that has the specification COGN-ST *uniq-id*). On the other hand, indefinite determiners (with the specification COGN-ST *type-id*) are ruled out. Since animals can be referred to either as humans or nonhumans (i.e. they can be referred to either with personal or impersonal pronouns), the value of NATGND is specified to be the most general available type, namely *natgnd*. It also follows from (35) (and the assumption that determiners and nouns share INDEX value) that the determiner it combines with (if any) has to be masculine and singular, whereas nothing is said about natural gender.

(37) below is a partial feature structure description for the demonstrative determiner *den* ('that'-COMM).

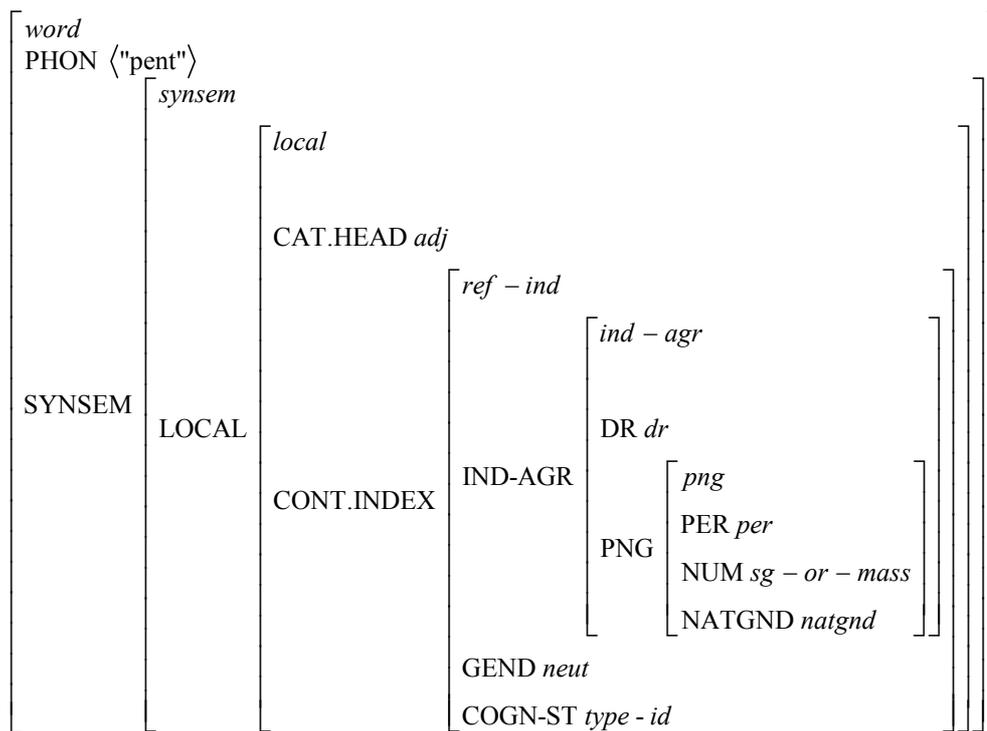
(37)



As desired, the number specification *sg-or-mass* predicts that this demonstrative determiner can combine with either mass nouns or singular count nouns, but not with plural nouns. Its cognitive status specification entails that any adjective that it may combine with has to have definite form, since indefinite adjectives have the cognitive status specification *type-id*, which is incompatible with *fam*, whereas definite ones have the cognitive status specification *uniq-id-or-more*, which is compatible with *fam*.

Finally, a partial AVM representation of the indefinite adjective *pent* ('pretty'-NEUT) is given in (38).

(38)



This adjective is indefinite, since its cognitive status value is *type-id*. Given that attributive adjectives share INDEX value with the nominal they combine with, this correctly predicts that the adjective in (38) can only occur in an indefinite noun phrase, not a definite one. As a consequence of this, it can combine only with nouns with no definite suffix, and only with indefinite determiners. Any noun or determiner that combines with this adjective has to be either singular or mass denoting, and either neuter or underspecified for gender.

12.4 Representing semantic classes of nominals

12.4.1 Type-emphasis vs. token-emphasis

12.4.1.1 Representing type-emphasis

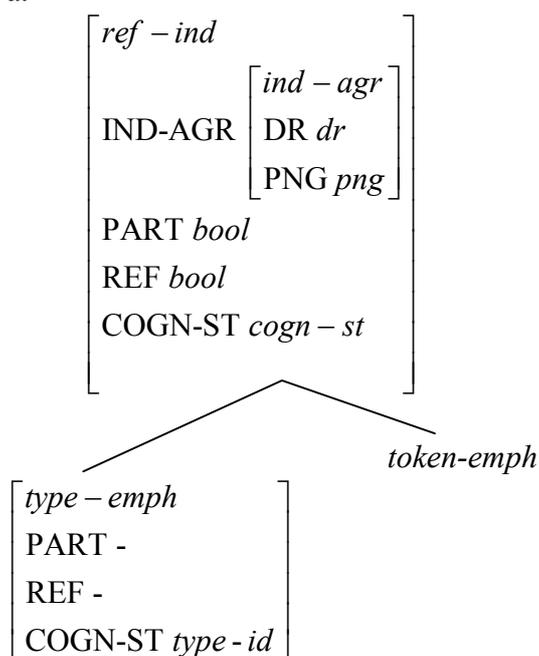
In chapter 2, I argued that Norwegian bare singulars are never referential, never partitive, never take wide scope, and are poorer antecedent candidates for token anaphors than a-expressions. From these (and other) facts I concluded that Norwegian bare singulars are type-emphasizing. That is, whereas indefinite nominals introduce both a type discourse referent and a token discourse referent into the discourse, the token discourse referent that a bare

singular introduces is less discourse salient, or less profiled, than the one introduced by a corresponding a-expression.

On the present analysis, the feature DR *dr* corresponds to the token discourse referent of a nominal, and informally speaking, we can say that the more general feature INDEX *ref-ind* corresponds to the token discourse referent as it is dressed up in different kinds of costumes whose purpose is to help interlocutors to keep track of it; to see where it comes from and when it is referred to next.

Having said so much, there are also other features that call for being introduced on *ref-ind*. Partitivity is one such feature; it tells whether or not the token discourse referent is one of a previously activated set of discourse referents. And referentiality, meaning whether the speaker has a particular individual in mind or not, is a feature that has discourse structuring effects with respect to the coming discourse. Furthermore, the idea of a discourse referent in different kinds of "costumes" that (possibly) change throughout a discourse, intuitively lends itself to representing the distinction between type-emphasizing and token-emphasizing nominals. That is, type-emphasis and token-emphasis can be seen as a difference in how the token discourse referent is "dressed up" at a certain reference act. (40a) below gives the type declaration for *ref-ind* when partitivity (PART *bool*) and referentiality (REF *bool*) is introduced, now with the two subtypes *type-emph* (type emphasizing) and *token-emph* (token emphasizing).

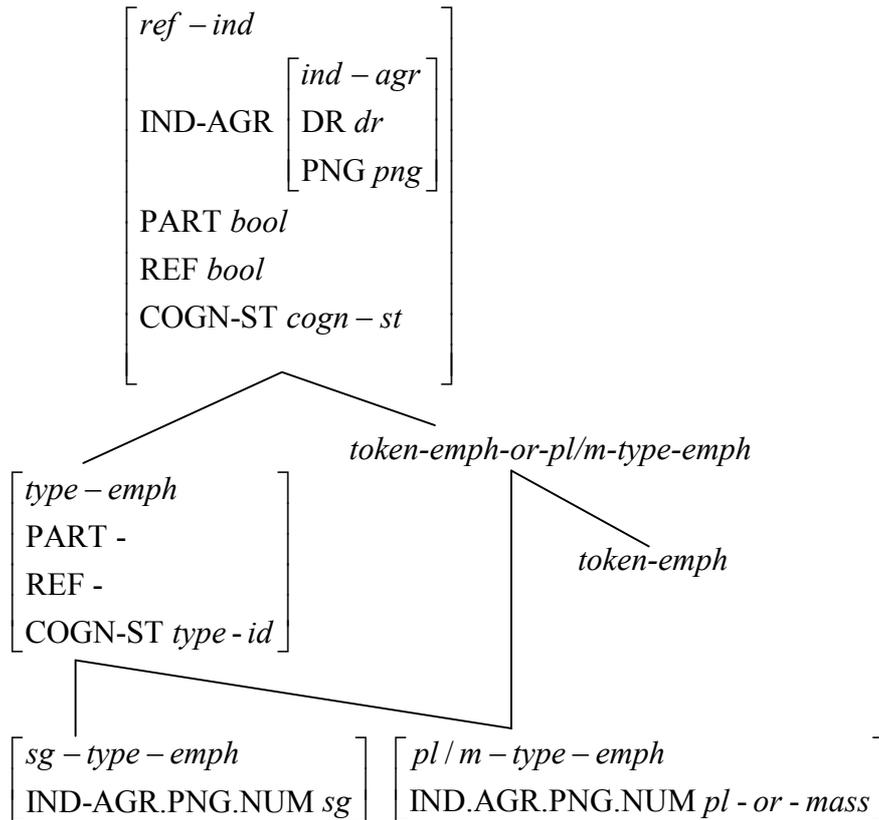
(40) a.



A type-emphasizing nominal can now be represented as one whose INDEX value is *type-emph*, whereas a token-emphasizing nominal can be represented as one whose INDEX value is *token-emph*. It follows directly from (40a) that bare singulars (given that they are type-emphasizing) never can have a definite, partitive or referential interpretation (on the token-level), whereas token-emphasizing phrases are underspecified with respect to these parameters. (40a) also provides the basis for predicting the fact that adjectives like *spesifikk/bestemt/ viss* ('specific'/'certain') never can appear in Norwegian bare singulars (see section 2.3, chapter 2). Such adjectives will simply be specified as having an INDEX value of the type *token-emph* (or, alternatively be marked as REF +) which (since the INDEX value of an adjective and the noun it combines with ought to be structure shared) rules out such adjectives in bare singulars.

Recall from chapter 2 that I argued that also bare plurals and bare mass expressions are type-emphasizing. However, they are used more commonly than bare singulars in Norwegian, and thus appear in more constructions than what bare singulars do. In order to predict this efficiently, *type-emph* can be further subdivided with respect to number interpretation, thus indirectly making a distinction between bare singulars on the one hand and bare plurals and bare mass expressions on the other. Having done that, one can also declare a supertype that groups token-emphasizing nominals together with bare plurals and bare mass expressions, in order to be able to exclude only bare singulars in certain constructions. This is given in (40b) below.

(40) b.



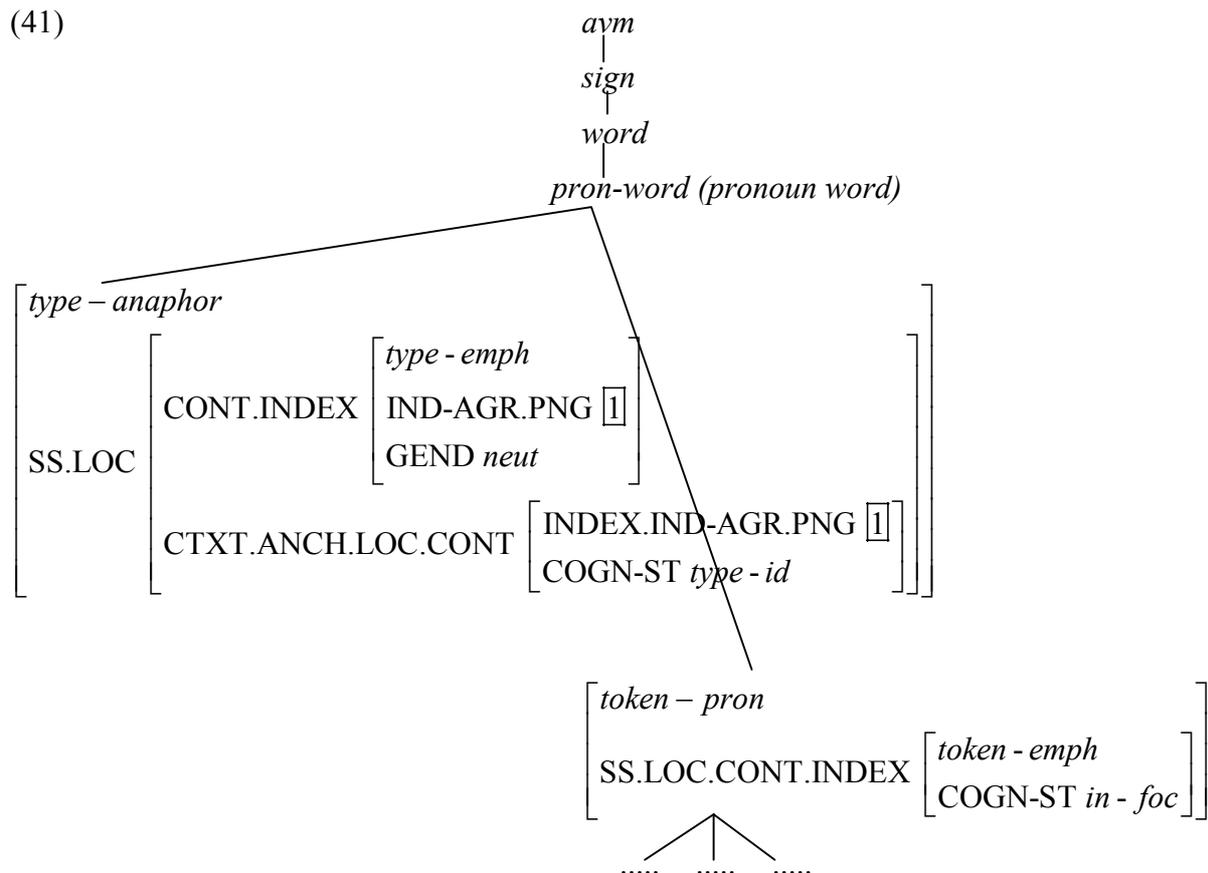
For a language like Norwegian, where bare plurals and bare mass expressions have a wider distribution than bare singulars, but still are not as widely used as nominals with determiners, this approach is to be preferred to an approach where bare plurals and bare mass expressions are grouped together with nominals with determiners because they have an empty SPR list (see e.g. Sag and Wasow, 1999). The present approach allows for grouping bare plurals together with bare singulars in some cases, and grouping them together with token-emphasizing nominals in other cases, which 'the empty SPR list'-approach does not allow for. Simultaneously, the present approach accounts for the semantics of bare indefinites.

12.4.1.2 The type anaphor 'det'

It was shown in section 2.8.3, chapter 2, that the type anaphor *det* can never occur in a sentence unless the position it occupies can alternatively be occupied by a bare indefinite. In other words, whatever restrictions there are on bare indefinites, the same ones should hold for the type anaphor *det* as well. In order to capture this generalization, we need a way of referring to the type anaphor and bare indefinites as a group. Syntactically, this is hard, since bare indefinites are syntactically recognizable in that they "lack" a determiner, whereas the

type anaphor doesn't. By assuming that both bare indefinites and the type anaphor *det* have the INDEX value *type-emph*, on the other hand, we have the tool we need.

I assume that one important formal difference between the type anaphor *det* and definite token pronouns is that the type anaphor's INDEX value is *type-emph*, as given in (41) below, whereas token pronouns are token-emphasizing and have the COGN-ST value *in-foc* (in focus).



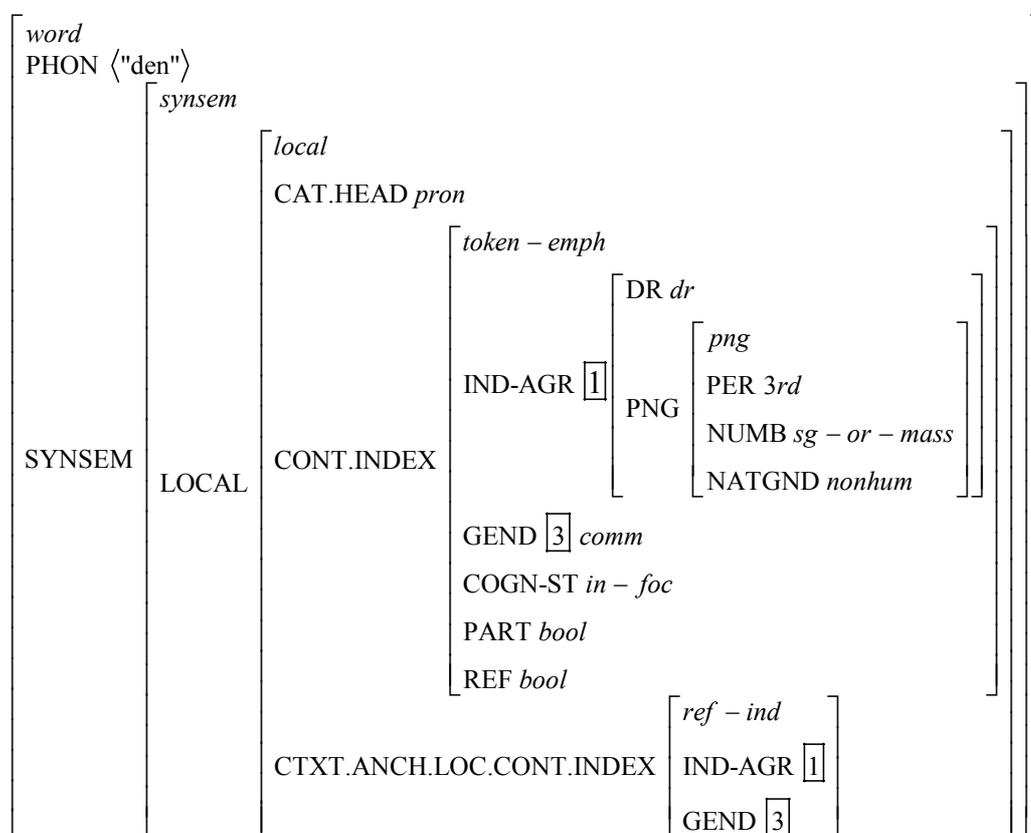
The fact that type anaphors are type-emphasizing entails that their COGN-ST value is *type-id* which means that they are indefinite and introduce a new token discourse referent into the discourse. As mentioned in chapter 2, this token discourse referent has to have the same person, number, and natural gender interpretation as the antecedent (in addition to referring to the same type of thing), and the antecedent has to be indefinite. One effect of these facts is

that whenever the type anaphor has a singular antecedent, it will behave like a bare singular, and whenever it has a plural antecedent, it behaves like bare plural.¹¹⁸

12.4.1.3 Bare singulars as antecedents of token pronouns

As mentioned in section 2.8.1, chapter 2, bare singulars can be antecedents of singular token anaphors. This fact is compatible with the present approach. Consider the following partial feature structure description of the token anaphor *den* ('it'-COMM):

(42)



If anaphors and antecedents were to have token-identical INDEX values, then bare singulars would have been ruled out as antecedents of token anaphors, since *type-emph* and *token-emph* are incompatible types in (40a). However, since anaphors and antecedents don't have to have token-identical INDEX values on the present approach, there is nothing that formally prevents

¹¹⁸ As argued in section 2.9 in chapter 2, type anaphors introduce a type discourse referent that has to be previously activated. This is what distinguishes type anaphors and bare indefinites. We will return to this issue in section 12.6 below.

bare singulars from being antecedents of token anaphors. All the pronoun in (42) requires is that its IND-AGR value and GEND value be unifiable with the values of the corresponding attributes of its antecedent. As for why bare singulars (other things being equal) are poorer antecedent candidates for token anaphors than a-expressions, I attribute this to the fact that token anaphors are assumed to refer to a discourse referent that is presently in focus of attention. A direct effect of type-emphasis is that the token discourse referent is presented as less profiled, or discourse salient, than a corresponding discourse referent introduced by a token-emphasizing phrase. I have no intention to formally predict such facts, though. This has to be stated in a separate algorithm for reference resolution.

12.4.1.4 Some unexpected consequences of the analysis

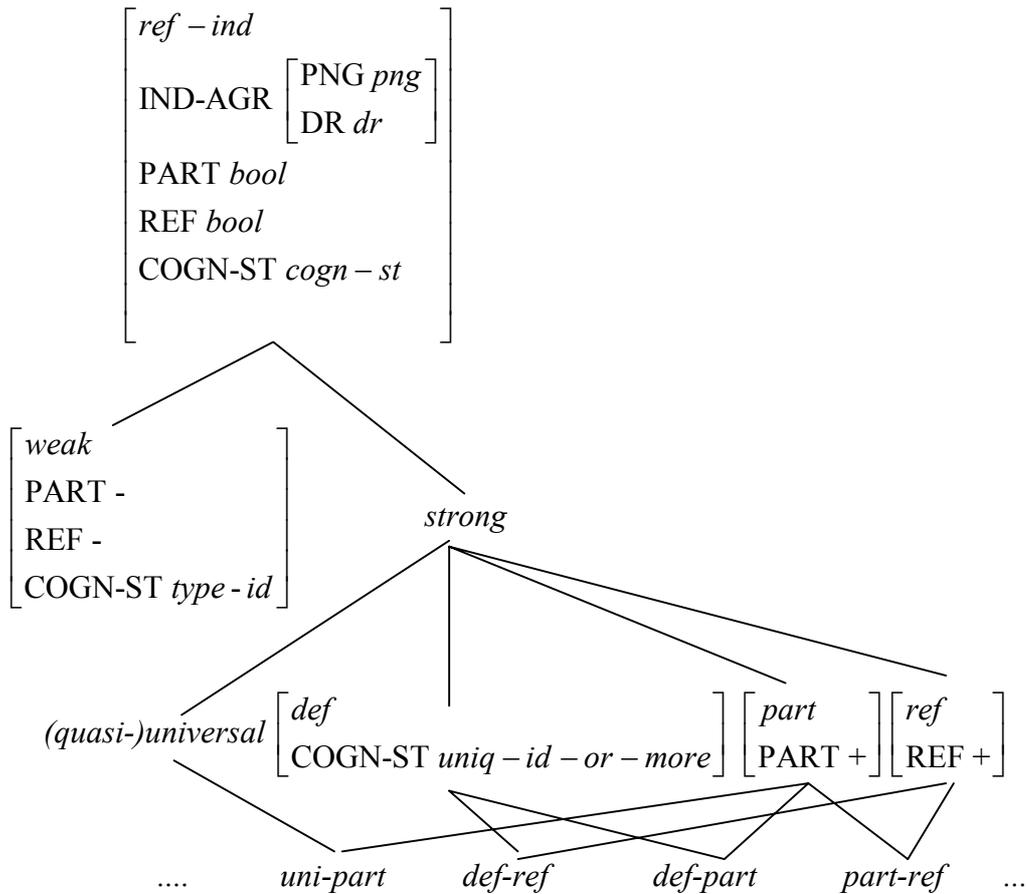
An interesting, and in fact unexpected, consequence of the present analysis of bare singulars is that it offers what might seem to be an explanation for some intuitions that people tend to have regarding the interpretation of Norwegian bare singulars. Some linguists have suggested to me that whereas a-expressions are singular, bare singulars are [count -], which means that the number distinction does not apply for them. Others claim that whereas a-expressions are [specific +\-], specificity (or referentiality in our terms) is not a relevant parameter for bare singulars; the distinction simply does not apply. And yet others propose that bare singulars do not have grammatical gender "visible" to the same degree as nominals with a determiner. On the present approach, number, grammatical gender, and referentiality are features on *ref-ind*, which corresponds to the token discourse referent as it is dressed up in its discourse structuring costumes. *Ref-ind* is divided into *type-emph* and *token-emph*, where *type-emph* is interpreted as meaning that the token discourse referent is not as profiled as it would have been if it were of the type *token-emph*. Now, if the token discourse referent is backgrounded, then so are its associated "costumes". Thus, in fact, it is not unreasonable that certain features on bare singulars may appear as less prominent, or visible, than on a-expressions. I will strongly insist, though, that Norwegian bare singulars do have all the features stated in (40a). There are, as far as I can see, no convincing data that indicate the opposite.

12.4.2 *The weak/strong distinction*

The reinterpretation of *ref-ind* and the introduction of the features COGN-ST *cogn-st*, REF *bool*, and PART *bool* is useful not only for representing the distinction between type-emphasizing and token-emphasizing phrases. One grammatically relevant semantic distinction that has often been mentioned is the weak/strong distinction. According to Milsark (1977), only weak indefinites are acceptable in English existential sentences, and the same holds for Norwegian, according to Vangsnes (1994). According to Enç (1991), Turkish direct objects with accusative case are interpreted as strong, and Diesing (1991) claim that the weak/strong distinction is also relevant for phenomena such as antecedent-contained deletion in English, and extraction and scrambling in German.

As presented in section 2.7, chapter 2, strong nominals are those that are either definite, partitive, referential or universal, whereas weak nominals are those that are nonpartitive, nonreferential, and indefinite. A type hierarchy that reflects the weak/strong distinction is given in (44).

(44)



On the present approach, a weak nominal is one whose INDEX value is *weak*, a strong one is one whose INDEX value is *strong*. This means that the restriction against strong nominals in existential sentences in e.g. English or Norwegian can be accounted for simply by restricting the semantic subject in this construction to have an INDEX value of the type *weak*. If determiners and nominal constructions are sufficiently marked w.r.t. cognitive status and partitivity, this will allow nonpartitive and nonreferential indefinites only.

With the present type system, nominals of the same syntactic category need not be of the same semantic category. Thus, the fact that indefinite pronouns can appear in existential sentences, is not a problem. Consider the following kind of data, pointed out by Lødrup (1994):

- (45) a. A: Har du hørt om grønt slim på boks?
have you heard about green slime on can
'Have you heard about canned, green slime?'
- B: Det finnes ikke dét her i byen.

there exists not that-NEUT here in town-DEFSUFF

'There is no such thing in this town.'

b. A: Hva med spade?

what with spade

'What about a spade?'

B: Dét er det i garasjen.

that-NEUT is it in garage-DEFSUFF

'That there is in the garage.' / 'There is one in the garage.'

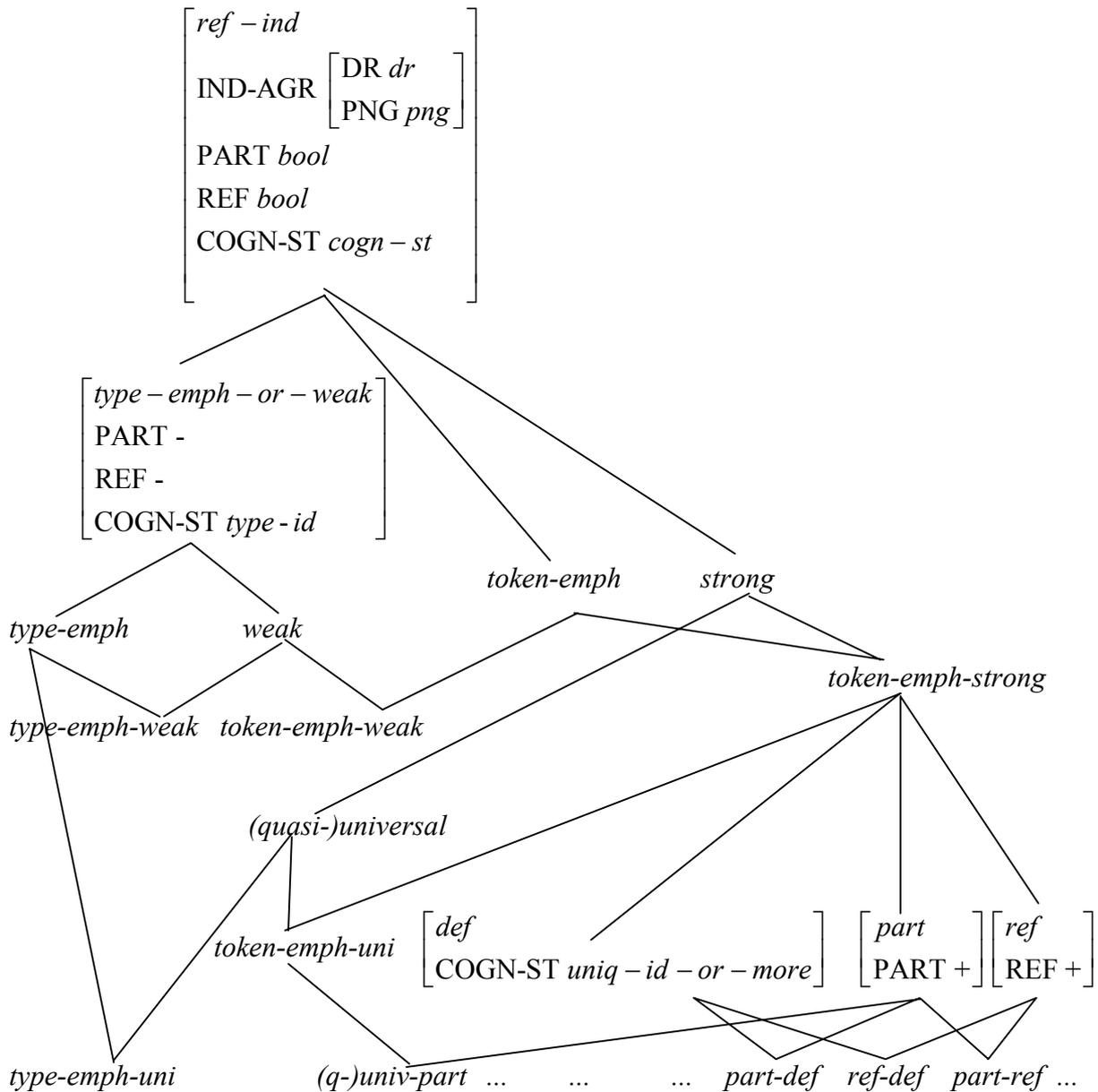
As we see here, the type anaphor *det* can occur in existential sentences in Norwegian, just as the indefinite pronoun *én* ('one') can (when it has a nonpartitive, nonreferential interpretation). Since I have argued above that the type anaphor *det* is indefinite (and in fact also nonpartitive and nonreferential), this is exactly what we expect.

The weak/strong distinction that is made in (44) need not be relevant for all languages, of course. For instance, as reported in Vangsnes (1994), Finish existential sentences allow for partitive semantic subjects, so for Finish one presumably needs a classification that groups the feature PART + differently than in (44). The same holds for West Greenlandic, which allows for morphological incorporation of partitive nominals. What I assume is cross-linguistically valid, though, is that the features stated on *ref-ind* in (44) (if relevant features of a language), typically interact, and therefore should be seen as constituting a natural (semantic) class.

12.4.3 *Strength vs. type/token-emphasis*

Type-emphasizing nominals have many common properties with weak nominals, which means that it might be useful to see how type/token-emphasis relates to strength. A type hierarchy with a cross-classification of type-emphasis and strength (as useful in Norwegian) is presented in (46).

(46)



The type *type-emph-or-weak* states what type-emphasizing and weak phrases have in common, namely that they are nonpartitive, nonreferential, and indefinite (in the sense that the token discourse referent is only type identifiable). There are two differences between weak and type emphasizing phrases in Norwegian, though. One is that weak phrases may also be token emphasizing (i.e. expressed by a noun phrase with a determiner). This is given by the type *token-emph-weak*, which says that a phrase can be both token emphasizing and weak at the same time. Type emphasizing phrases cannot be token emphasizing, though. This is accounted for in (46), since there is no type that inherits both from the type *type-emph* and from the type *token-emph*. The other difference between weak and type emphasizing phrases

is that type emphasizing phrases can be generic (i.e. quasi-universal), at least in Norwegian. In (46), this is accounted for by the type *type-emph-uni*, which states that a phrase can be both type emphasizing and quasi-universal at the same time. Weak phrases are not supposed to be (quasi-)universal, though. Thus, there is no type in (46) that inherits both from *weak* and *(quasi-)universal*.

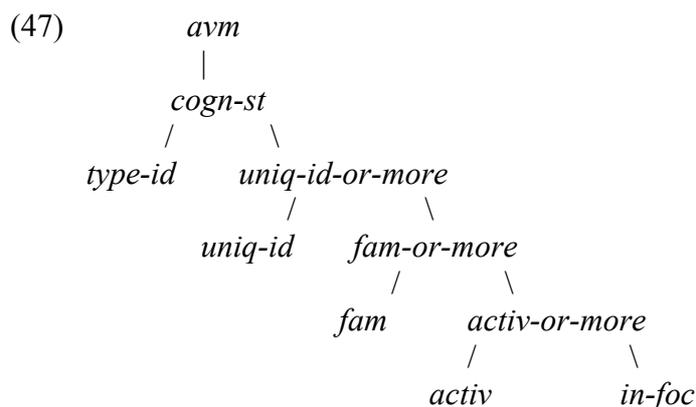
As for strong phrases, I have divided these into *strong* and *token-emph-strong*, where (quasi-)universal phrases are necessarily *strong* but not necessarily *token-emph-strong*, as reflected by the two types *type-emph-uni* and *token-emph-uni*.

The types *def*, *(quasi-)universal*, *part*, and *ref* are cross-classified. For instance, we need the type *part-def* to account for the fact that some phrases are both definite and partitive, we need the type *ref-def* to state that a phrase may be both referential and definite at the same time, etc.

We now have a rather powerful type hierarchy for referential indices in Norwegian, which can be used as a basis for accounting for the distribution pattern and semantics of bare singulars and bare indefinites, as well as for accounting for restrictions on nominals in existential sentences.

12.4.4 More semantic classes of nominals

Recall the type hierarchy of cognitive statuses that I proposed in section 12.2.4 above:



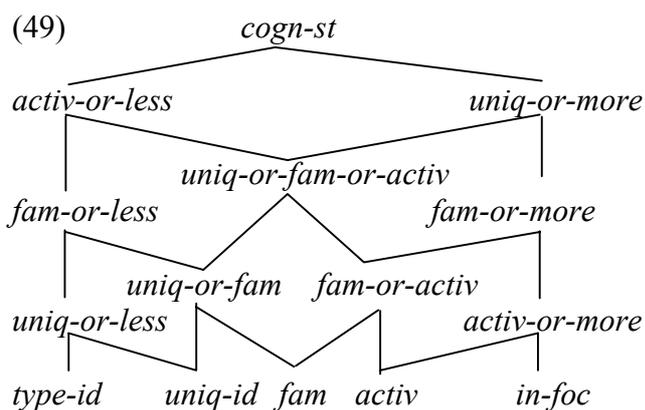
According to this hierarchy, one does not expect linguistic phenomena that pick out classes of cognitive statuses like 'activated or less', or 'familiar or activated', for instance. But this restriction seems too strict. Consider the following data.

- (48) a. Den bilen/dén, den liker jeg.
 that car/that, that like I
 'That car/that, that I like.'
- b. *Den/*én /*en bil/*en av bilene, den liker jeg.
 *it/*one/*a car/*one of cars-DEFSUFF, it like I
- c. En jente som jeg gikk i klasse med på skolen, hun døde av forkjølelse.
 a girl who I went in class with at school-DEFSUFF, she died from cold
 'A girl in my class at school, she died from a cold.'

As shown in (48a), left-dislocation in Norwegian (where the topic is taken to be a token¹¹⁹) is possible with definite nominals and definite demonstrative pronouns (these are accented in Norwegian). On the other hand, as illustrated in (48b), left-dislocation is impossible with definite personal pronouns (that are unaccented in Norwegian), with indefinite pronouns, and usually with indefinite nominals. However, as shown in (48c), indefinites can be left-dislocated if they contain so much descriptive content that it is obvious that the speaker has a particular individual in mind, and therefore intends a referential interpretation.¹²⁰ Now, if we want to restrict this phenomenon, we want to say that the cognitive status of the token discourse referent ought to be activated or less, but in (47) above, there is no type that corresponds to this class of cognitive statuses. Assuming that this phenomenon is not the only one across languages that picks out a class of cognitive statuses that is *not* on the form *cognitive-status-x-or-more*, I propose the following general type hierarchy of cognitive statuses:

¹¹⁹ As we saw in chapter 2, left-dislocation of indefinites is perfectly fine if the topic is taken to be a type of thing rather than one or more tokens. That type of left-dislocation has to be stated as a different (but related) construction than the one that licenses the well-formed sentences in (48).

¹²⁰ Definites do not need to be referential in order to be left-dislocated, though.



This type hierarchy contains any combination of cognitive statuses that are adjacent to each other in Gundel et al.'s Givenness Hierarchy. I assume that classes of non-adjacent cognitive statuses will not be linguistically relevant.

With (49) as our point of departure, we can now sketch an analysis of the data in (48). Indefinite determiners, as well as indefinite pronouns will be specified lexically as signaling the cognitive status *type-id*, personal (unaccented) definite pronouns will be specified as *in-foc*, whereas demonstrative determiners and demonstrative pronouns have the cognitive status specifications *fam* and *activ*, respectively. A left-dislocated constituent will be restricted to be either *uniq-or-fam-or-activ*, or *type-id* and REF +. This predicts that nonreferential indefinites and (unaccented) definite personal pronouns are ruled out, whereas all other nominals are licensed.

As mentioned in footnote 7 in section 12.2.4 above, I did not include Gundel et al.'s cognitive status *referential* in the cognitive status hierarchy that I proposed. What I suggested instead was to introduce a separate parameter REF *bool*, as given in (40a) above. This step enables us to cross-classify referentiality and definiteness. This is useful for accounting for the above phenomenon, since there is no requirement that left-dislocated definites be referential in the same sense as indefinites have to. But it is also useful for other phenomena. Consider the following data:

- (50)
- a. I hate John Smith's murderer. He is a beast.
 - b. Beste elev vant.
best-DEF student won
'The best student won.'
 - c. Neste kunde skal få en premie.
next-DEF customer shall get an award

'The next customer will receive an award.'

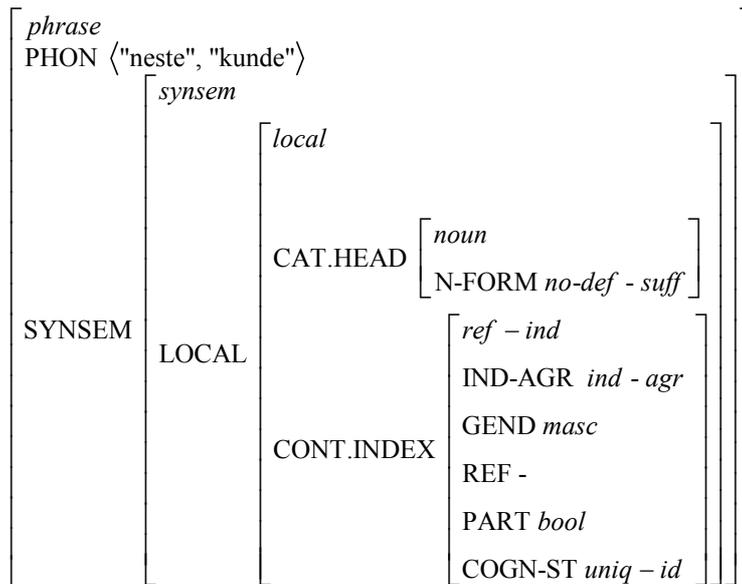
The expression 'John Smith's murderer' in (50a) is definite, or has the cognitive status uniquely identifiable, but at the same time it can have either a referential or a nonreferential (i.e. attributive) reading, as shown by Donnellan (1966). That is, the speaker may either hate whoever turns out to be John Smith's murderer (because of what he has done), or the speaker may use the description 'John Smith's murderer' to refer to a particular individual who he has in mind and happens to hate.

As argued in Borthen (1998), the possibility for cross-classifying hearer-oriented cognitive statuses and the referentiality parameter (that is speaker-oriented) is also crucial for accounting for certain phrases in Norwegian that consist of an adjective with definite form and a noun with no definite suffix. These phrases, illustrated in (50b) and (50c) are definite in the sense that their associated token discourse referent is supposed to be uniquely identifiable to the hearer, but they can never have a referential reading in the sense that the speaker knows the referent and intends to refer to exactly this referent; i.e. the descriptive content in the phrase plays a crucial role. For instance, the one who receives an award in (50c) is whoever turns out to be the next customer; it can't be a certain person the speaker has in mind.

This indicates that we need to cross-classify referentiality and cognitive statuses. Gundel et al.'s Givenness Hierarchy in (12) in section 12.2.4 above doesn't state anything that contradicts such a cross-classification between cognitive statuses and referentiality, but differently from Gundel et al., I believe that the cognitive status *referential* can be taken out from the givenness hierarchy once we assume such a cross-classification. The only linguistic evidence that Gundel et al. present for assuming the cognitive status referential, is English indefinite *this N*, and it seems plausible that the feature REF + can account for the distributional restrictions on this type of phrase just as well as the cognitive status *referential* can.

(51) below presents an AVM diagram for the subject in (50c).

(51)



The cognitive status *uniq-id* means that the phrase is definite. This piece of information is contributed partly by the definite adjective, since the noun is underspecified w.r.t. cognitive status, whereas the adjective is marked as *uniq-or-more*. Since referentiality is not entailed by the status *uniq-id-or-more* in the present system, we can mark the phrase as REF -. I assume that the specification of the phrase as REF - is contributed by the constructional content of a unary rule for this type of phrases. It is also this constructional content that restricts the COGN-ST value to be *uniq-id* rather than *uniq-or-more*. The unary rule is needed not only for the purpose of marking the phrase as nonreferential and restricting its signaled cognitive status, but also for introducing a quantifier that binds the nominal's variable, or INDEX value.

12.4.5 Some final comments on semantic classes of nominals

In the HPSG literature and the different broad-coverage grammars that have been developed lately, one has so far not landed on a convention for representing semantic classes of nominals. For instance, definiteness (i.e. DEF *bool*) commonly appears as a syntactic feature in nominals, ACTIVATED *bool*, is a feature on CTXT *ctxt* in the current English Resource Grammar, SPECIFIC *bool* is assumed to be a feature on *content* in Asudeh and Mikkelsen (2000), and the current Norwegian HPSG grammar NorSource, has a head feature on nominals reflecting the distinction between so-called "light" and "heavy" nominals; i.e. HEAVY *bool*, whose purpose is simply to distinguish unaccented, definite pronouns (i.e.

nominals that signal the cognitive status *in focus*) from all other nominals. On the present approach, the features DEF *bool*, ACTIVATED *bool*, and HEAVY *bool* can be captured by one feature, i.e. COGN-ST *cogn-st*, and I have proposed that this feature, as well as features for referentiality and partitivity be grouped together on the same linguistic object, thus simplifying the task of defining and picking out semantic classes of nominals.

I believe the present approach provides a good point of departure for capturing desired semantic generalizations across different syntactic patterns. As shown in chapter 4 and mentioned earlier in this chapter, languages like Danish, Swedish, Hungarian, West Greenlandic, Albanian and Turkish all have special 'reduced nominals' that put restrictions on some or all of the notions *definiteness*, *partitivity*, *referentiality* and *(quasi-)universal interpretations*. The 'reducedness' may be marked by the lack of a determiner, by morphological incorporation, or by case marking, each correlating with certain semantic effects. If these semantic effects are indeed represented as semantic features and on the same format across languages, as proposed here, we are in a position where e.g. automatic translation between languages has a pretty good chance for being successful w.r.t. semantic classes of nominals.

12.5 Nominal phrases

12.5.1 Introduction

In (1), chapter 1, I defined bare singulars as indefinite, countable, and singular, and in the previous section, I suggested where this information ought to be represented. In addition, we should represent the fact that bare singulars do not have a phonetically realized determiner, whereas adjectives and other modifiers may be contained in a bare singular.

One obvious way of representing the difference between bare singulars and a-expressions, is to say that they are of different syntactic categories. For instance, bare singulars may be argued to be noun phrases whereas a-expressions are determiner phrases (see e.g. Longobardi 1994, Delsing 1993, and Kallulli 1999). However, my view on this issue is that the distribution pattern of Norwegian bare singulars is determined primarily by their semantics, not their syntax. There may of course be a correlation between syntax and semantics, but I have chosen to focus on the semantic aspect of bare singulars. Thus, for the present investigation, the syntax of bare singulars is not the fundamental question. It will therefore be

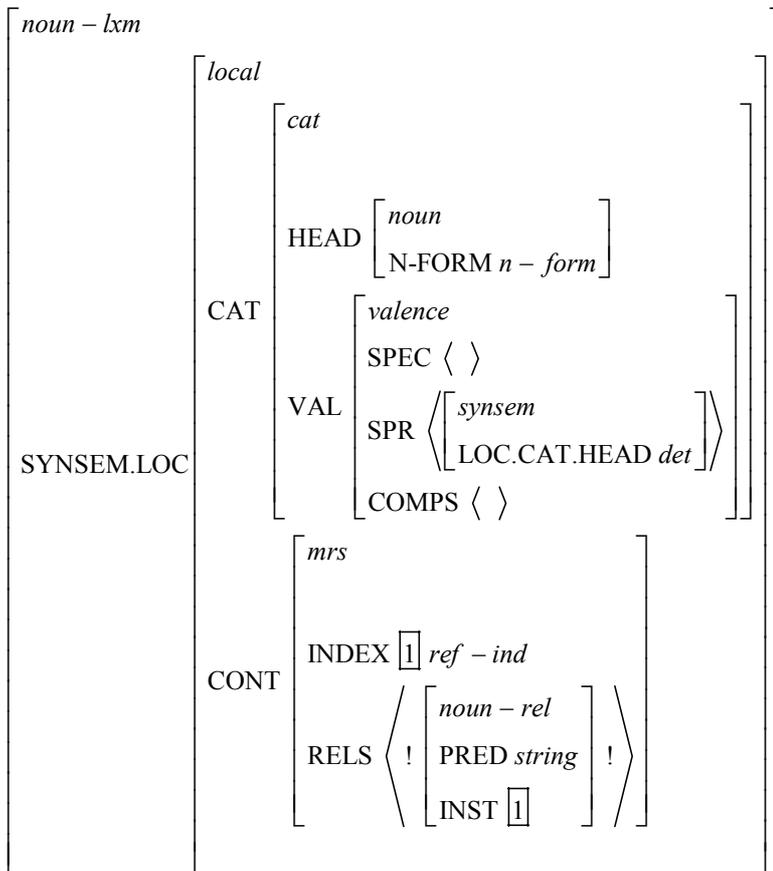
beyond the scope of this thesis to present arguments in favor of a certain syntactic analysis of bare singulars. In what follows, I will simply adopt an analysis for nominals that has recently been suggested, namely the one assumed in the English Resource Grammar (ERG) (Flickinger, 2000) and Sag and Wasow (1999). This analysis of noun phrases will then be slightly modified in order to accommodate Norwegian bare singulars. The syntactic category for bare singulars and a-expressions is assumed to be the same, whereas their semantics is different. In principle, there should be nothing to prevent the analysis to work also in cases where the syntax of bare singulars and a-expressions is assumed to be different, though. On the contrary.

12.5.2 Relational properties of nouns and determiners

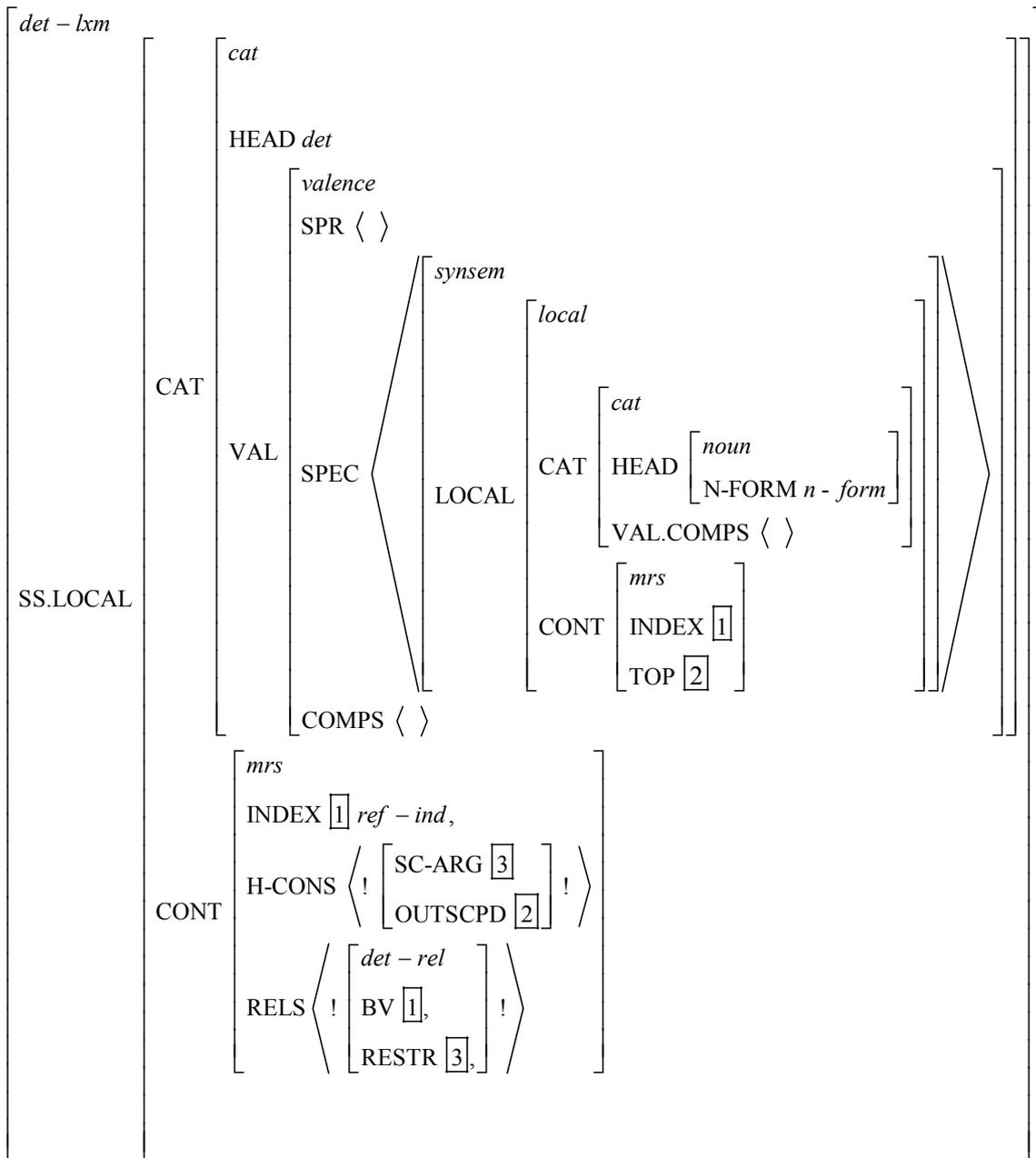
Following ERG (Flickinger, 2000) and Sag and Wasow (1999), I assume that nouns select for a determiner through their SPR list, as given in (52), and that determiners select for an unsaturated nominal projection through their SPEC list, as given in (53).¹²¹

¹²¹ In (52), I have assumed that nouns do not take complements, and in (53) I have assumed that determiners don't take specifiers or complements. This is of course a simplification, but for the present purpose, this is not an important issue.

(52) *avm*
 |
lexeme
 |
noun - lxm



(53) *avm*
 |
lexeme
 |

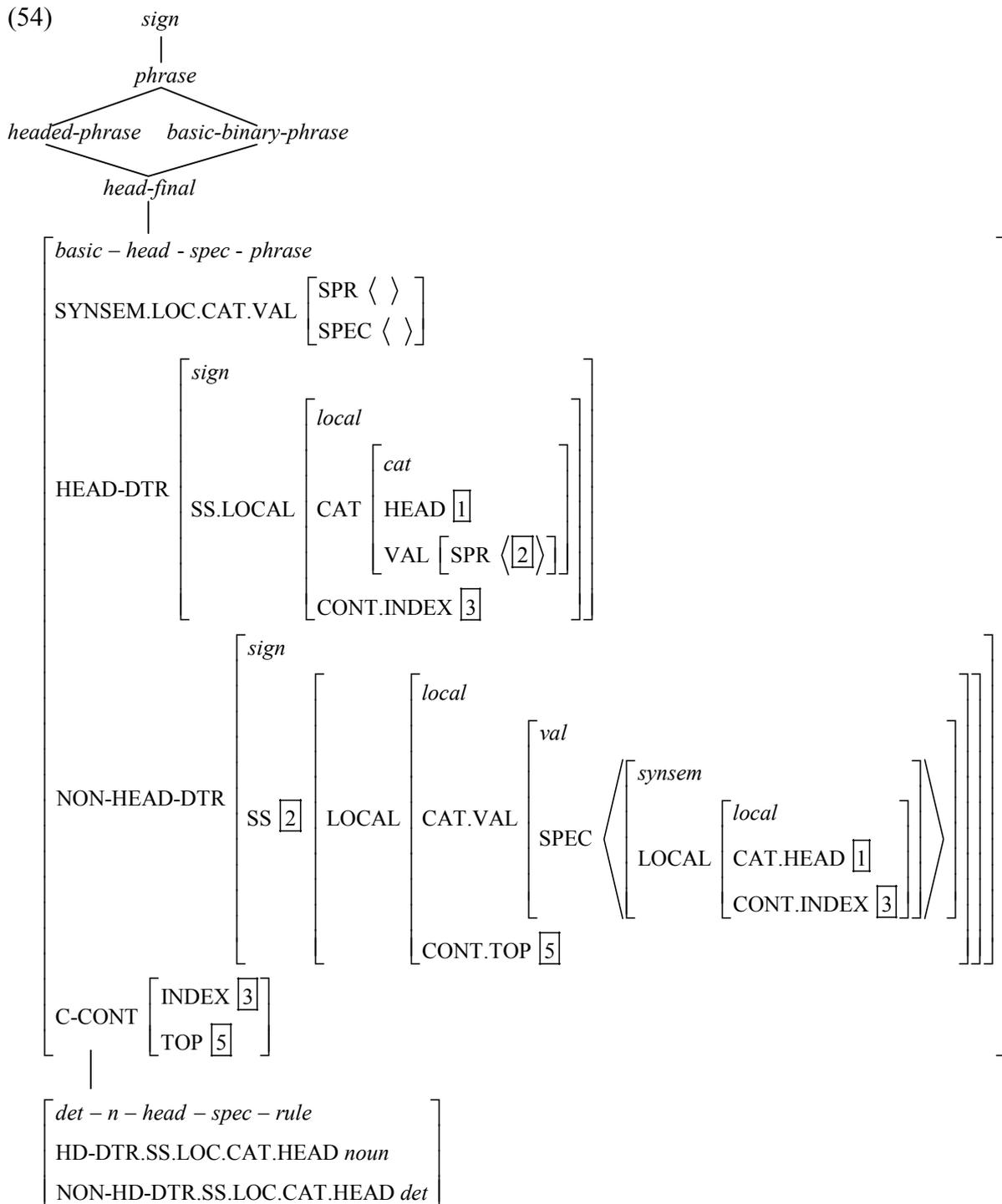


Norwegian nouns will be specified in the lexicon according to what grammatical gender they have, what natural gender they have, and whether they are count nouns, mass nouns, or group nouns. They will also be specified as 3rd person. The lexeme will then "go through" an inflectional rule to "become" a word. Nouns are inflected for n-form and number.

Norwegian determiners are divided into classes according to what N-FORM value they require on the noun they combine with, what number specification they have, what cognitive

status they signal, and what person specification they have. Most determiners inflect for grammatical gender.

A noun and a determiner are combined by a rule *det-n-head-spec-rule*, which inherits from the phrase type *basic-head-spec-phrase*, represented (a bit simplified) in (54) below.

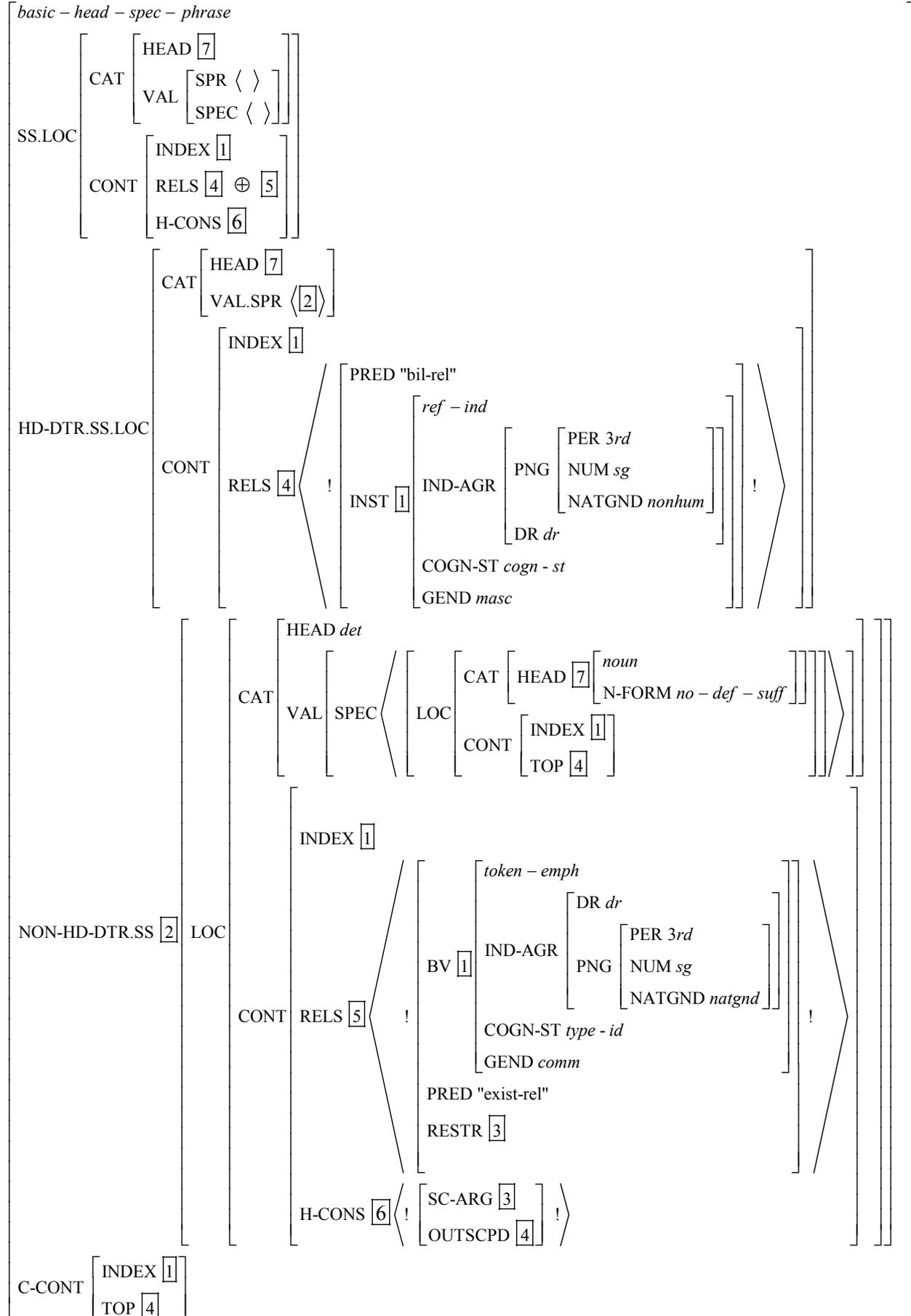


This rule combines a noun and a determiner into a saturated phrase (with empty SPR and SPEC lists) if and only if the determiner's SYNSEM value is unifiable with the one element on the noun's SPR list, and the noun's HEAD value and INDEX value are unifiable with the corresponding values on the one element on the determiner's SPEC list. In other words, the noun states restrictions on its determiner at the same time as the determiner states restrictions on the noun it selects for.

Be aware that the representation of the type *basic-head-spec-phrase* in (54) is only partial. That is, it inherits information from the type *head-final* that is not explicitly expressed in (54). For instance, all headed phrases have the same HEAD value as the head daughter, all binary phrases have two daughters, and in all phrases of the type *head-final*, the head follows the non-head. Furthermore, phrases have a feature C-CONT *mrs*, that allows constructions to contribute meaning, and information on C-CONT *mrs* will be carried over to CONT *mrs* by unification.

(55) below gives a partial feature structure description of the combination of the noun *bil* ('car') and the determiner *en* ('a'), resulting from the type *basic-head-spec-phrase*, the types that this type inherit from, and lexical entries for the noun *bil* and the determiner *en*, as described in (52) and (53) above.

(55)



After unification, the INDEX value of the sign in (55) will be as follows:

$$(56) \quad \left[\begin{array}{l} \text{INDEX } \boxed{3} \\ \text{IND-AGR} \left[\begin{array}{l} \text{DR } \textit{token - dr} \\ \text{PNG} \left[\begin{array}{l} \text{PER } \textit{3rd} \\ \text{NUM } \textit{sg} \\ \text{NATGND } \textit{nonhum} \end{array} \right] \\ \text{GEND } \textit{masc} \\ \text{COGN-ST } \textit{type - id} \end{array} \right] \end{array} \right] \end{array} \right]$$

To sum up some main points in (55) and (56), the grammatical gender and natural gender of the phrase *en bil* ('a car') originate on the noun, which is specified as nonhuman and masculine in the lexicon, whereas definiteness (cognitive status) and the noun's form is determined by the determiner (since the noun has a form that is underspecified for cognitive status). Both the noun and the determiner are furthermore specified as singular and 3rd person. In other words, the determiner and noun contribute partial information about a single object, namely their common discourse referent at a certain reference act. This discourse referent is of the type *token-emph*. I assume that (almost) all determiners will be specified as binding a variable of this type.

Let's now turn to bare singulars.

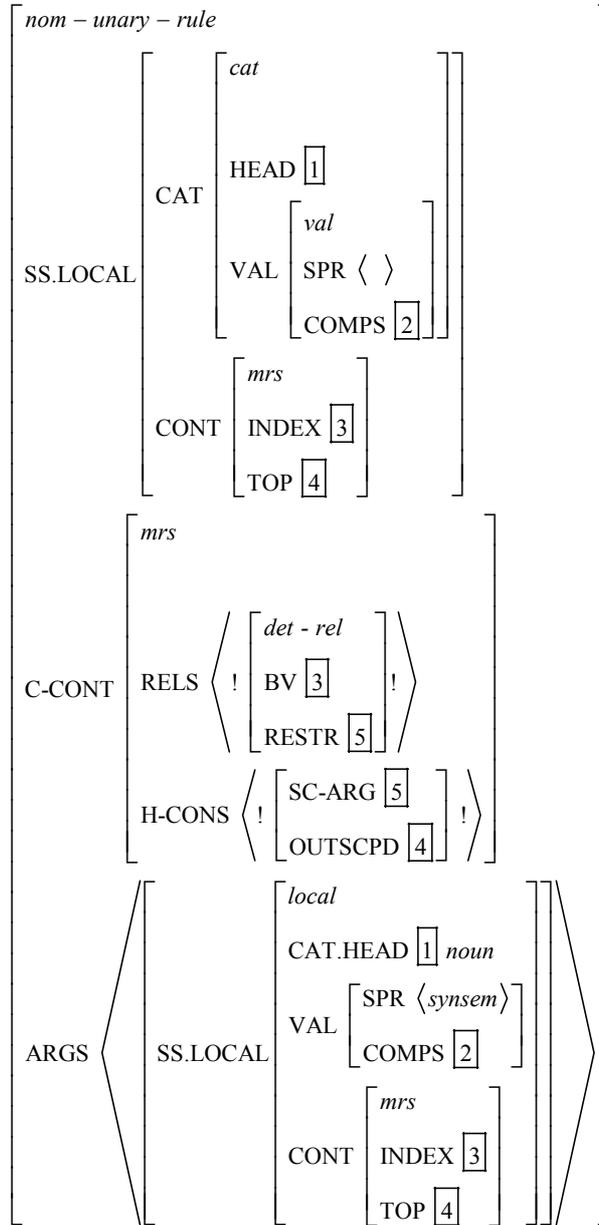
12.5.3 Bare singulars

There are many determinerless nominals in Norwegian, both definite and indefinite ones (see e.g. section 12.4 above). A challenge concerning these nominals is to restrict their interpretation sufficiently; that is, we need to bind the index they introduce with a quantifier, (i.e. a determiner relation). Since these phrases don't have an overt determiner, a reasonable way to do this, is to assume a unary rule that contributes a determiner relation as a piece of constructional content.

I assume a hierarchy of unary rules for Norwegian nominals. The most general ones are given in (57) below.

(57)

phrase
 basic-unary-phrase headed-phrase ...

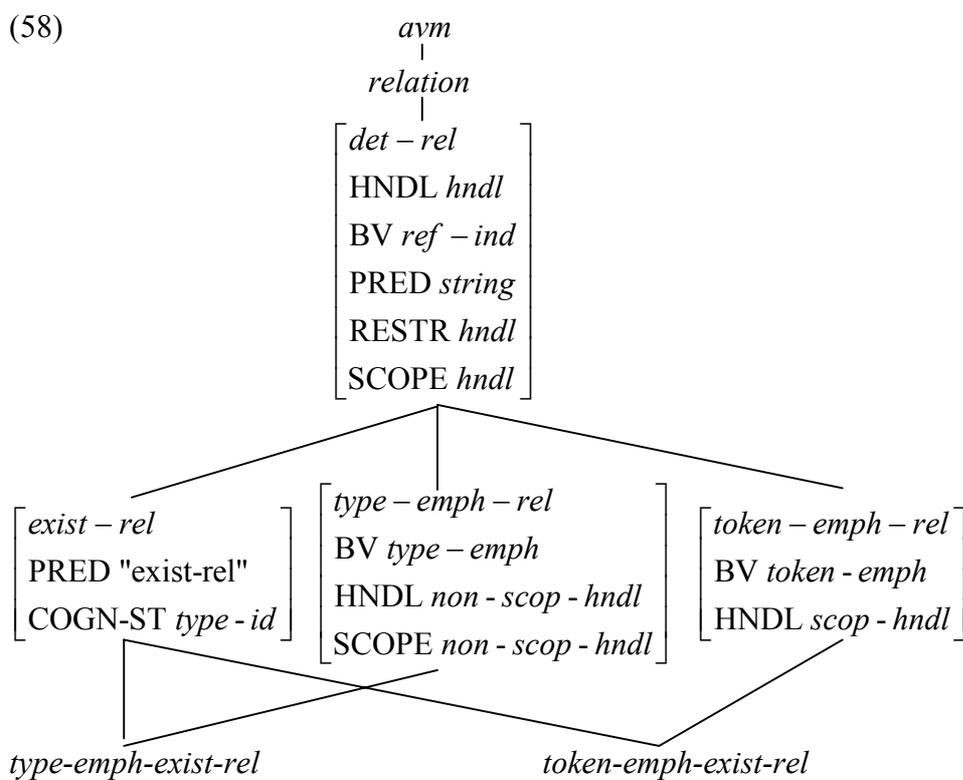


[*indef-unary-rule*
 C-CONT.RELS < ! [*type-emph-exist-rel*] ! >]

[*def-unary-rule*
 C-CONT.RELS < ! [*token-emph-rel*, **BV.COGN-ST** *uniq-id-or-more*] ! >]

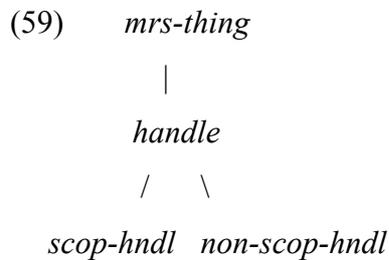
The type *indef-unary-rule* will license bare indefinites in Norwegian, whereas *def-unary-rule* will license bare definites.

I have claimed earlier that the INDEX value of bare indefinites is *type-emph*. What ensures this restriction in (57) is the determiner relation that the unary rule for bare indefinites introduces, i.e. *type-emph-exist-rel*. The type declarations for this relation type is given in (58), together with the determiner relation that I assume that indefinite determiners introduce, i.e. *token-emph-exist-rel*.



The relation *type-emph-exist-rel* restricts the relations' bound variable to be of type *type-emph*, since this type inherits from *type-emph-rel*. This means that all bare indefinites licensed by the unary rule for indefinites in (57) are type emphasizing. This again means that these types of phrases can never be referential, partitive, or definite. Overt determiners, on the other hand, will be specified as introducing a relation of type *token-emph-rel*, which means that the INDEX value is *token-emph* (and therefore underspecified with respect to referentiality, partitivity, and cognitive status).

Notice that the relation *type-emph-exist-rel* is different from *token-emph-rel* in that its HNDL value and SCOPE value are of the type *non-scop-hndl*. Relations of the type *token-emph-rel* have *scop-hndl* as their HNDL value and *hndl* as their SCOPE value. The relevant handle types are given in (59) below.



The different values for HNDL and SCOPE seen in (58) have consequences for scope possibilities. Recall from section 11.6 in chapter 11 that scope is resolved by identifying (or *req'ing*) a relation's SCOPE value with some other relation's HNDL value. Given the hierarchy of relations and handles in (58) and (59), this means that a relation of the type *type-emph-exist-rel* can never take scope over relations that are of the type *token-emph-rel*, since relations of type *type-emph-rel* require a handle of type *non-scop-hndl* as their SCOPE value, whereas the handle of a relation of type *token-emph-rel* is of type *scop-hndl*. This means that bare singulars never can take scope over a-expressions, for instance. More generally, the only kinds of phrases that bare singulars can take scope over, is phrases that are type-emphasizing. This last point ensures that all the variables in the structure are being bound also in the case where two bare indefinites appear in the same sentence.

The type *token-emph-exist-rel* in (58) is supposed to be the relation introduced by an indefinite article. Notice that this type, just like the type *type-emph-exist-rel* (which is the kind of determiner relation that appears in bare indefinites) inherits from the type *exist-rel*, which means that both relations have the PRED value "exist-rel". This accounts for the intuition presented in section 2.2 in chapter 2 that both bare singulars and a-expressions introduce what corresponds to an existential quantifier in predicate logic. What makes bare singulars and a-expressions semantically distinct, is their INDEX value, i.e. the way their token discourse referent is being presented.

To sum up, let's go through the derivation of the bare singular *bil* ('car').

Lexically, *bil* is marked as a nonhuman masculine count noun, i.e. of type *nonhum-masc-count-noun-lxm*, with the PHON and PRED specifications given in (60).

(60) *bil* :=

$\left[\begin{array}{l} \textit{nonhum - masc - count - noun - lxm} \\ \text{PHON} \langle \text{"bil"} \rangle \\ \text{SS.LOC.CONT.RELS} \langle ! \text{ [PRED "bil-rel"] } ! \rangle \end{array} \right]$
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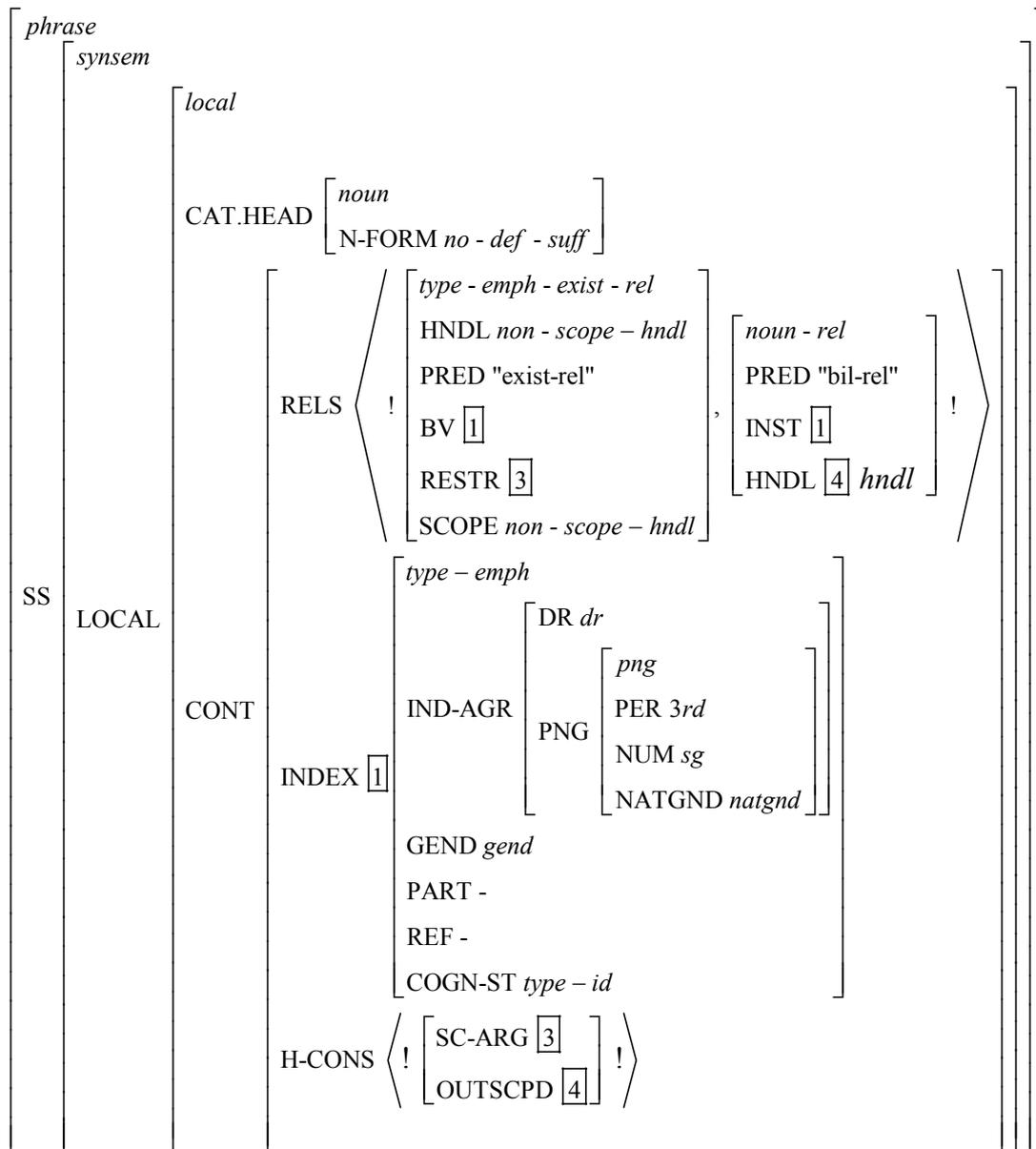
This lexeme is appropriate as the DTR value of a certain word type (or "inflectional rule"). This word type has a nominal lexeme as its DTR value, the word itself has a more specific N-FORM value and NUM value than what its DTR value has (i.e. either *def-suff* or *no-def-suff* and either *sg* or *pl*), and it has a PHON value based on that of its DTR, but not necessarily the same. Most other information is carried over from the DTR value to the word. The word *bil* ('car') can be represented as follows (where the DTR attribute is left out):

(61)

$\left[\begin{array}{l} \textit{word} \\ \text{PHON} \langle \text{"bil"} \rangle \\ \textit{synsem} \end{array} \right]$	$\left[\begin{array}{l} \textit{local} \\ \text{CAT} \left[\begin{array}{l} \text{HEAD} \left[\begin{array}{l} \textit{noun} \\ \text{N-FORM} \textit{no - def - suff} \end{array} \right] \\ \text{VAL.SPR} \langle \text{[LOCAL.CAT.HEAD } \textit{det} \text{]} \rangle \end{array} \right] \\ \text{RELS} \langle ! \left[\begin{array}{l} \textit{noun - rel} \\ \text{INST} \boxed{1} \\ \text{PRED "bil-rel"} \end{array} \right] ! \rangle \\ \text{CONT} \left[\begin{array}{l} \textit{ref - ind} \\ \text{INDEX} \boxed{1} \left[\begin{array}{l} \text{IND-AGR} \left[\begin{array}{l} \text{DR } \textit{dr} \\ \text{PNG} \left[\begin{array}{l} \textit{png} \\ \text{PER } \textit{3rd} \\ \text{NUM } \textit{sg} \\ \text{NATGND } \textit{nonhum} \end{array} \right] \end{array} \right] \\ \text{GEND } \textit{masc} \\ \text{COGN-ST } \textit{cogn - st} \end{array} \right] \end{array} \right] \end{array} \right]$
--	--

This word can combine with an indefinite article, which introduces a determiner relation of type *token-emph-exist-rel*. Alternatively, the noun in (60) is a valid element on the ARGS list of the unary rule *indef-unary-rule* in (57), which licenses the following phrasal sign:

(61)



Notice that even though the (partially) expanded type for the bare singular in (61) is quite formidable, the selection of, or subcategorization for, a bare indefinite comes about simply by stating that the INDEX value of the selected nominal ought to be of the type *type-emph*. The selection of a bare singular comes about simply by specifying the INDEX value to be of the

type *type-emph*, and the NUM value to be of the type *sg*. All other properties of bare singulars follow from these two feature values and the unary rule in (57).

12.6 The type discourse referent

We have now marked type-emphasis on token discourse referents, saying that there are two types of "dressed" token discourse referents: those that are relatively discourse salient (i.e. of type *token-emph*), and those that are not (i.e. of type *type-emph*). Assuming that backgrounding of the token discourse referent entails a relative foregrounding of the type discourse referent, this one distinction on token discourse referents is actually sufficient to account for the distinction between type- and token-emphasis. And we can do so even without considering what type of formal linguistic object the type discourse referent is at all.

But this is not really satisfactory. For one thing, we do want to know what type of linguistic object a type discourse referent corresponds to, and secondly, this is strictly speaking necessary in order to account for the interpretation of the type anaphor *det*, as we will see below.

On the analysis of nominals assumed here, a noun like *car* corresponds to the following partial feature structure description:

(62)

$$\left[\text{SS.LOC.CONT.RELS} \left\langle ! \left[\begin{array}{l} \text{noun - rel} \\ \text{PRED "car-rel"} \\ \text{INST} \left[\begin{array}{l} \text{ref - ind} \\ \text{IND-AGR.DR } dr \end{array} \right] \end{array} \right] ! \right\rangle \right]$$

We have already argued that the token discourse referent is the DR value (if one wants it "naked"), or the INDEX or INST value (if one wants it in its current "discourse structuring costumes"). One candidate for being a nominal's type discourse referent, is the PRED value. On this hypothesis, a token emphasizing phrase profiles the token discourse referent to the cost of the PRED value, whereas a type emphasizing phrase does not, and consequently gives more prominence to the PRED value.

However, things are more complicated than this, for a bare singular can very well contain one or more adjectives, or more generally, any kinds of modifiers. In that case, the type discourse referent is not merely the PRED value of the noun, but also the PRED value of the modifier(s). For instance, for a phrase like *stor bil* ('big car') the type of thing introduced is 'big car', not just 'car'. In the current system, the different relations that are being introduced are amalgamated on the RELS list, as given in (63) below.

(63)

$$\left[\text{SS.LOC.CONT.RELS} \left\langle ! \left[\begin{array}{l} \text{adj - rel} \\ \text{PRED "stor"} \\ \text{ARG } \boxed{1} \text{ ref - ind} \end{array} \right] , \left[\begin{array}{l} \text{noun - rel} \\ \text{PRED "bil"} \\ \text{INST } \boxed{1} \end{array} \right] ! \right\rangle \right]$$

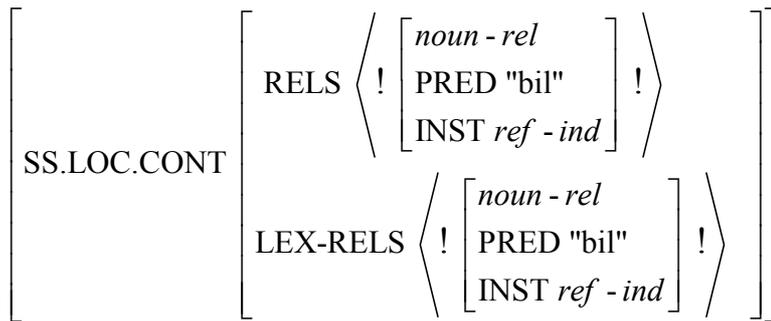
A discourse referent is something that can be referred to by anaphoric expressions, and as argued in section 2.8.3 in chapter 2, the type anaphor *det* intuitively picks up the type discourse referent of its antecedent. But how is that done formally? Consider the following example.

(64) Per har *fin bil*. *Det* har Ola også.
 Per has nice car. that-NEUT has Ola too
 'Per has a nice car. That Ola has too.'

If we imagine that the type anaphor *det* somehow "picks up" its antecedent's RELS list, then *det* will automatically also share INDEX value with its antecedent, since the relations in (64) include specific referential indices. This is an effect that we do not want, since the type anaphor always introduces a (possibly) new discourse referent.

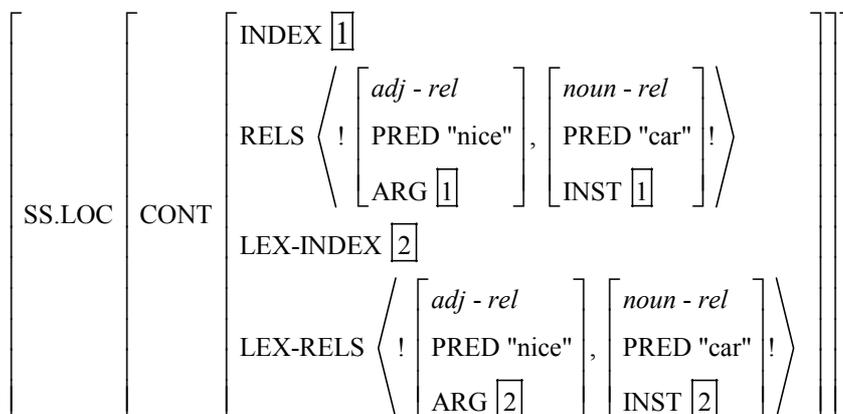
There is no simple solution to this problem in the present framework, as far as I can see. The most obvious option I can see, is to duplicate all relations in lexical items, however not by structure sharing. This is illustrated in (65) below.

(65)



In addition to the RELS list, I assume a list of lexical relations, LEX-RELS in (65). The relations on the RELS and LEX-RELS lists are the same, but they are *not* structure shared. Also the INST values are not structure shared. This provides a point of departure for accounting for the anaphoric aspect of the type anaphor, since we can now avoid coindexation across the two lists of relations, but at the same time make sure that the desired coindexations *internal* to the elements on the LEX-RELS list follow the pattern of those on the RELS list. To ensure this last point, we need a feature LEX-INDEX, to play a similar function as INDEX. Consider the following partial feature structure description:

(66)



Importantly, the value of the adjective relation's ARG attribute and the noun relation's INST attribute are structure shared both on LEX-RELS and on RELS, but there is no coindexation across the two lists. In order to make sure that there is coindexation between the ARG value of the adjective-relation and the INST value of the noun-relation, this has to be stated in the rule that combines these items.

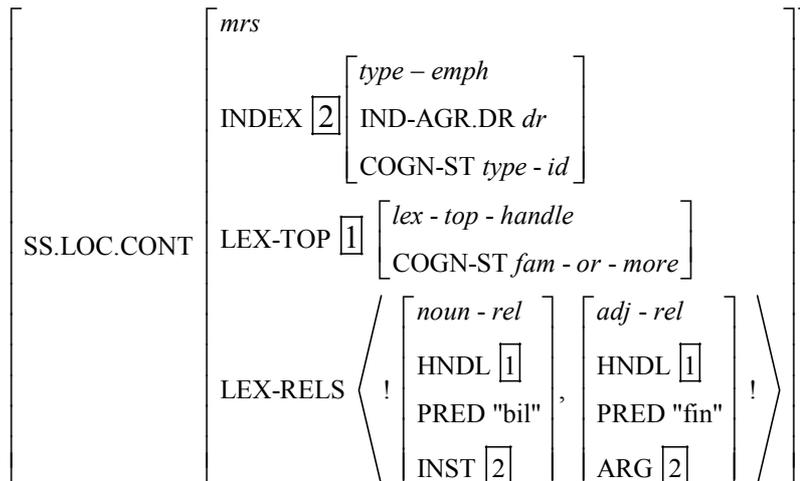
other types of phenomena, like other types of anaphoric expressions, and ellipsis. Some examples are given in (68).

- (68) a. Mary slept and so did John.
b. Mary threw a stone and John a knife.

Intuitively, one needs to get hold of the verbal predicate in these examples without simultaneously stating coindexation between this predicate's arguments as it occurs overtly, and the predicate's arguments as it occurs in the elliptical version. This can be done by the LEX-RELS feature.

Recall that I claimed in section 2.9 in chapter 2 that type discourse referents as well as token discourse referents should be assigned a cognitive status in the grammar. In (32) in section 12.3.2 above it is stated that the type *ref-ind* inherits from the type *dr-obj*, which introduces the feature COGN-ST *cogn-st*. The type *dr-obj* is intended to be a supertype for all semantic objects that can possibly function as discourse referents. Since I have argued that the value of LEX-RELS is such a semantic object, this suggests that at least certain difference lists should inherit from *dr-obj* and have COGN-ST *cogn-st* as a feature. However, I will rather propose another way of assigning a cognitive status to lists of relations, namely by use of a handle. Let's assume a feature LEX-TOP, and let's assume that this feature is structure shared with the HNDL value of all the predicates on the LEX-RELS list. Let's furthermore assume that there is a subtype of the type *handle*, i.e. *lex-top-handle*, that inherits from the type *dr-obj* and therefore has the feature COGN-ST *cogn-st*. Now, nouns and other contentful predicates, can be specified as having a LEX-TOP value of type *lex-top-hndl* with the COGN-ST value *fam-or-more* (since any type of thing is familiar to the hearer as long as he or she knows the meaning of the word). This is illustrated in (69), which is a partial feature structure description of a bare singular.

(69)



We are now in the position to predict the fact that (nonreferential) indefinites can be left-dislocated in Norwegian if the topic is taken to be the type discourse referent rather than the token discourse referent. The topic of a Norwegian left-dislocation needs to be a discourse referent that either has the cognitive status specification *uniq-or-fam-or-activ*, or one that has the cognitive status specification *type-id* and is nonreferential. Whereas the token discourse referent in (69) does not fulfill any of these requirements, the type discourse referent does.

12.7 Summary

In this chapter, I have proposed to modify Pollard and Sag's (1994) treatment of referential indices by distinguishing between 1) the *real* index of a nominal; i.e. the nominal's "naked" (token) discourse referent stripped from agreement features as well as any other features, 2) a semantic object that includes the discourse referent as well as more or less constant properties of it (i.e. person, number, and natural gender (*png*) features), and 3) a semantic object that in addition to the index and its associated *png* features includes (at least) features corresponding to cognitive status (i.e. referential givenness), specificity, and partitivity. The latter level of representation can be seen as the discourse referent as it is "dressed up" in different kinds of costumes whose purpose is to make it recognizable and recoverable in sentences and in discourse.

One effect of the present analysis is that it becomes an item-dependent, construction-dependent, and language-dependent matter to what degree it is possible for two signs or structures to share indices without sharing (different kinds of) agreement information as well.

Another effect is that semantic classes of nominals can be seen as corresponding to subtypes of the "dressed up" discourse referent. This provides a basis for capturing several grammatical phenomena that bear on semantic classes of nominals across languages, among them the difference between type-emphasis and token-emphasis, that I have claimed to be the crucial semantic distinction between Norwegian bare singulars and corresponding phrases with an indefinite article.

The difference between Norwegian bare singulars and a-expressions is that an a-expression has an overt determiner, which introduces a determiner-relation of the type *token-emph-exist-rel*. Bare singulars don't have an overt determiner, but "go through" a unary rule, which adds a determiner-relation of the type *type-emph-exist-rel*. This determiner relation is like the one for the indefinite article in that it corresponds to the existential quantifier in predicate logic, and in that the cognitive status signaled for the token discourse referent is *type-id*, which means that the phrase it is part of is indefinite. Whereas the determiner relation introduced by the indefinite article can take wide scope over scope-interacting relations, and furthermore binds a variable of type *token-emph*, the determiner relation introduced by the unary rule for bare indefinites cannot take wide scope over scope-interacting elements, and it binds a variable of type *type-emph*. Because of certain feature values stated on the types *type-emph* and *token-emph*, this entails (among other things) that a-expressions can be referential, partitive, and take wide scope, whereas bare singulars cannot.

The type discourse referent, introduced in chapter 2, has been argued to be hard to model in the conventional HPSG framework in a satisfactory way. The proposal presented here is to see it as a list of "lexical relations". The feature COGN-ST *cogn-st* has been proposed to be appropriate for all semantic objects that can function as discourse referents. This has enabled us to predict that nonreferential indefinites can be left-dislocated if and only if the topic introduced by this indefinite is taken to be a type of thing rather than a token.

In sum, I have presented a semantically oriented grammatical representation of Norwegian bare singulars. This approach accounts for several aspects of their semantics, and it speaks in favor of a semantically "driven" analysis of bare singular's distribution pattern. A semantically based analysis is supported by the fact that this phenomenon is extremely sensitive to semantic and contextual factors, and by the fact that the type anaphor *det* is also type-emphasizing, even though its surface syntax is crucially different from that of bare indefinites.

13 Selection of bare singulars

13.1 Introduction

In the previous chapter, I proposed a formal analysis of the internal properties of Norwegian bare singulars. In this chapter, I will take the four proposed constructions in chapters 6-9 as my point of departure, and attempt at presenting a sketch for how these might be represented formally.

13.2 The 'conventional situation type'-construction

13.2.1 Informal construction definition

In chapter 6, I arrived at the informal construction definition given in (1):

(1) Construction 1: 'The conventional situation type'-construction (FINAL VERSION):

1. A bare indefinite can occur in Norwegian if it is
 - a) selected as a complement by a predicate and together with this predicate (and possibly other selected elements) designates a *conventional situation type*, and
 - b) can be seen as a reasonable candidate for being part of a *multi word lexical entry* together with this predicate (and possibly other selected elements).
2. A *conventional situation type* is a property, state, or activity that occurs frequently or standardly in a given contextual frame (e.g. in the macro social frame) and has particular importance or relevance in this frame as a recurring property-, state-, or activity type.
3. A *multi word lexical entry* is a lexical entry that in addition to the lexical item itself specifies one or more words that this item co-occurs with (i.e. selects). The multi word lexical entry constitutes a semantic and phonological unit.

As argued in chapter 6, not only bare singulars, but also other bare indefinites (i.e., bare plurals and bare mass expressions) are licensed through this construction, as well as the type anaphor *det*. However, it does not license nominals with determiners.

As shown in sections 6.1-6.4, and as repeated in (2) below, bare singulars licensed by the 'conventional situation type'-construction occur in different syntactic positions and configurations, and the conventional situation type may be denoted by two or more items, always including the bare singular. The domain for 'conventional situation type'-denotation is marked by square brackets in (2).

- (2) a. Per [bygger hytte].
Per builds cottage
'Per is building a cottage.'
- b. Kari [er lærer].
Kari is teacher
'Kari is a teacher.'
- c. [I bursdag] kan man gjøre som man vil.
in birthday-party can one do as one wants
'At a birthday party, one can do as one wants.'
- d. Ola [sover i hengekøye].
Ola sleeps in hammock
'Ola is sleeping in a hammock.'
- e. Har du [gitt baby grøt] før?
have you given baby porridge before
'Have you given a baby porridge before?'
- f. Det [er brann].
it is fire
'There is a fire.'

When formalizing the 'conventional situation type'-construction, we have to make sure all these kinds of examples are accounted for.

13.2.2 Asudeh and Mikkelsen's HPSG account of syntactic noun incorporation

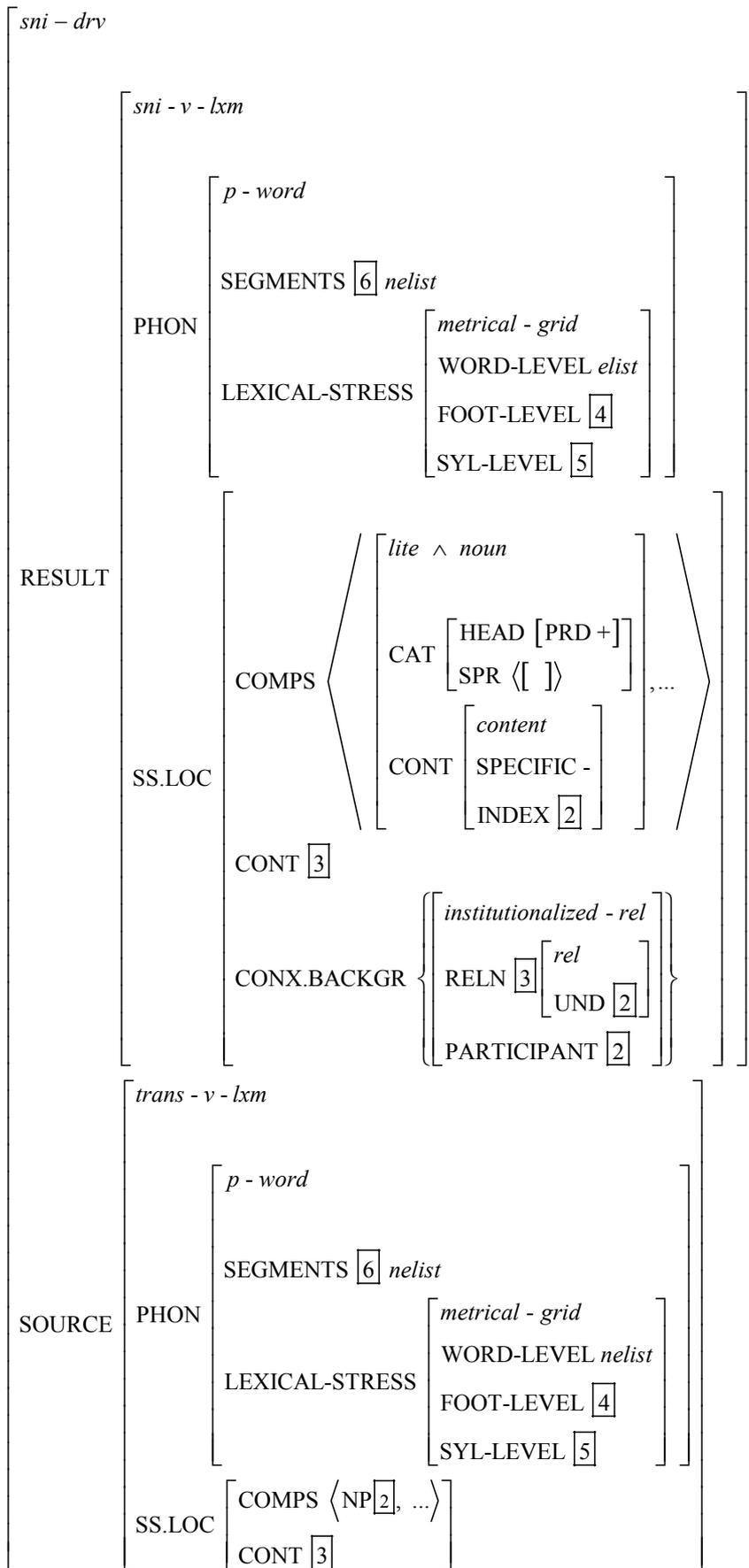
It was pointed out in section 4.4.1 in chapter 4 that the Danish phenomenon described by Asudeh and Mikkelsen (2000) as "syntactic noun incorporation", is resemblant of the Norwegian phenomenon captured by the 'conventional situation type'-construction in (1) above. Asudeh and Mikkelsen give a formal analysis of Danish syntactic noun incorporation within the HPSG framework. This analysis says that syntactically incorporated noun phrases are a special kind of unsaturated noun phrases. They have an unsaturated (i.e. non-empty) SPR list, and are of the sign type *lite* (in the sense of Abeillé and Godard, 1998), which entails that they cannot be modified by relative clauses. Nonspecific reference of the incorporated nominal arises as a consequence of being both *lite* and predicative (PRD +). A partial AVM representation of an incorporated nominal as Asudeh and Mikkelsen present it, is given in (3) below.

$$(3) \left[\begin{array}{l} \textit{lite} \wedge \textit{noun} \\ \text{CAT} \left[\begin{array}{l} \text{HEAD} [\text{PRD } +] \\ \text{SPR} \langle [] \rangle \end{array} \right] \\ \text{CONT} \left[\begin{array}{l} \textit{content} \\ \text{SPECIFIC } - \\ \text{INDEX } \textit{ref} \end{array} \right] \end{array} \right]$$

Syntactically incorporated noun phrases enter sentences through a lexical rule that "converts" a transitive verb (which presumably takes a full noun phrase as its complement) into a syntactically incorporating verb. Asudeh and Mikkelsen use a description level lexical rule (in the sense of Meurers, 1995, 1999) to state the lexical relationship between normal transitive verbs and syntactically incorporating verbs. This rule is given in (4) below. The value of the attribute SOURCE corresponds to the transitive verb that is the "input" to the rule, whereas the RESULT value corresponds to the "resulting" noun incorporating verb that selects for a bare singular complement. ¹²²

¹²² I have put the words *converts*, *input*, and *resulting* in hatch marks above, since these words suggest that a lexical rule of this type is a procedural process, which it is not. In what follows, I may use terms that have a "order-dependent" flavor to them to describe lexical rules, but this is only for convenience because lexical rules are easily conceived of as procedural.

(4)



This lexical rule captures three main facts concerning syntactic noun incorporation in Danish.

Firstly, this rule captures the fact that the incorporating verb differs from its transitive correspondence in that it has to be unstressed at the word level. The stress reduction on the verb is specified in that the value of the attribute WORD-LEVEL is an empty list, which means that there is no word-level stress. All other phonological properties of the incorporating verb are shared with its non-incorporating correspondence, as represented by the co-taggings of the remaining feature values on *p-word*.

Secondly, the subcategorization requirements on incorporating verbs is captured by the fact that the incorporated nominal must be of type *lite* (and full nominals are not). Asudeh and Mikkelsen are not explicit with respect to the properties of the selected NP in the input verb, but presumably this NP has an empty SPR list (which means that it contains a determiner) and is not of type *lite*. The reentrancies of tag [2] in (4) show that the full NP selected for by the input verb is coindexed with that of the incorporated nominal selected for by the output verb. Since this index also appears in the specification of the verb's semantics (as the value of one of the verb's argument features), this means that the incorporated nominal has the same semantic role as a corresponding NP with a determiner, which in (4) is the role 'undergoer' (UND *ref*).

Thirdly, a new kind of relation is introduced, namely *institutionalized-rel*, to capture the restriction that the incorporating verb and its incorporated direct object have to refer to an "institutionalized" activity. Since the "institutionalized reference" restriction never applies to the subject (i.e. the subject is free to vary), the restriction must be imposed only on the verb plus its incorporated direct object. This is not easily stated in standard HPSG, Asudeh and Mikkelsen point out. What they suggest as a plausible solution is to treat the content of the verb as the value of the attribute RELN on *institutionalized-rel* and to have an attribute PARTICIPANT, whose value is coindexed with the undergoer. The restriction on institutionalization then applies to the undergoer relative to the verb's relation.

As desired, this lexical rule allows the standard linearization principles of Danish to apply. In particular, subject verb inversion in interrogatives and adverb placement will follow the usual patterns.

13.2.3 Asudeh and Mikkelsen's approach applied to Norwegian

Asudeh and Mikkelsen's lexical rule seems to provide a good point of departure for formalizing the 'conventional situation type'-construction in (1). However, (as pointed out also in section 4.4.1 in chapter 4) even though Asudeh and Mikkelsen's approach is appealing in many ways, there are some aspects of it that cannot be carried over to Norwegian bare singulars licensed by Construction 1.

For one thing, Asudeh and Mikkelsen refer to their syntactically incorporated nominals by the sign type (*lite*) and by the unsaturated SPR list, whereas I have proposed that Norwegian bare singulars are of the same syntactic category as indefinites with a determiner (see chapter 12). Rather, I refer to bare singulars by restricting their INDEX value to be of type *type-emph*. The main reason for this choice is that I take the difference between bare singulars and *a*-expressions to be basically semantic, and because I want to capture the fact that the type anaphor *det* is type-emphasizing, just like bare singulars, even though it is of a different syntactic category than them. Another reason not to use the feature *lite* for Norwegian is that relative clauses are assumed to be *non-lite* (and therefore impossible modifiers of Danish incorporated nominals), whereas Norwegian bare singulars can be modified by relative clauses in some cases (see section 2.3 in chapter 2).

Secondly, Asudeh and Mikkelsen assume that the syntactic noun incorporation rule can only apply to transitive (activity) verbs. As argued in chapter 6, Norwegian bare singulars can be licensed as complements of prepositions or the copular verb just as well as transitive verbs, according to Construction 1. They can also be indirect objects (but only if the direct object is also a bare indefinite, see section 6.4.4).

Thirdly, I assume a slightly different constraint on the bare singular-selecting predicate and its complement than what Asudeh and Mikkelsen do. Asudeh and Mikkelsen say that the activity referred to has to be institutionalized, and they define this as an activity that is conventionally associated with a certain structure or set of activities. I claim that the relevant constraint on the Norwegian construction is that the selecting predicate and its bare indefinite complement have to refer to a *conventionalized* activity, state, or property. That is, an activity, state, or property that occurs frequently or standardly in a given contextual frame (e.g. in the macro social frame), and that has particular importance or relevance in this frame as a recurring property-, state-, or activity type.

Fourth, I find Asudeh and Mikkelsen's *institutionalized-rel* not convincingly motivated. For instance, it is not clear why it is a relation between a *relation* and a *referential index*. Why

not between the verb's event index and the undergoer's referential index, or between the verb's relation and the complements relation(s)? Furthermore, I would prefer an analysis that is more in accordance with the intuition that the verb and its complement *together* denote a institutionalized, or conventionalized, situation type.

Fifth, I argued in section 6.5.6 that even though there is a certain correlation between accent pattern (i.e. deaccentuation of the verb) and the present construction, the correlation is not systematic enough that I believe it should be encoded in the grammar. Rather, I assume that the correlation occurs as a consequence of the fact that these combinations of predicates and bare indefinites are candidates for being lexicalized.

And finally, whereas Asudeh and Mikkelsen only operate with one general rule in (4), I proposed in chapter 6 that we need to operate with subtypes of the conventional situation type construction in order to account for differences in degree of acceptability and productivity.

13.2.4 Construction 1 in terms of a lexical rule

I will now try to modify Asudeh and Mikkelsen's lexical rule in accordance with the objections made above.

As argued in the previous chapter, I assume that a bare indefinite is identified by the INDEX value *type-emph*, as given in (5) below.

$$(5) \quad \left[\text{LOC} \left[\begin{array}{l} \text{CAT.HEAD } \textit{nom} \\ \text{CONT.INDEX } \textit{type-emph} \end{array} \right] \right]$$

The HEAD value *nom* specifies that this is either a pronoun or a constituent headed by a noun (according to the type hierarchy in (23b), section 12.3.1). The INDEX value *type-emph* entails that the given nominal does not have an overt determiner, is nonreferential, nonpartitive, indefinite, and indirectly it follows that it never takes wide scope. As desired, we pick out not only bare singulars, bare mass expressions, and bare plurals, but also the type anaphor *det* by the partial feature structure description in (5).

Instead of restricting the lexical rule to only apply to transitive verbs, we should restrict it to apply to any complement-taking lexeme that selects for a nominal (including the copular verb and prepositions, for instance). (6) is intended to refer to this class of lexical items:

$$(6) \quad \left[\begin{array}{l} \textit{lexeme} \\ \text{SS.LOC.CAT.VAL.COMPS} \left\langle \left[\text{LOC} \left[\begin{array}{l} \text{CAT.HEAD } \textit{nom} \\ \text{CONT.INDEX } \textit{token - emph} \end{array} \right] \right] \right\rangle \end{array} \right]$$

This specification applies equally well to conventional transitive verbs as to prepositions or the copular verb, which is what we want. The fact that the INDEX value is *token-emph* means that this lexeme selects for "full" nominals. This ensures that the lexical rule does not apply recursively to its output, since the INDEX value of the complement in the output will be *type-emph*.

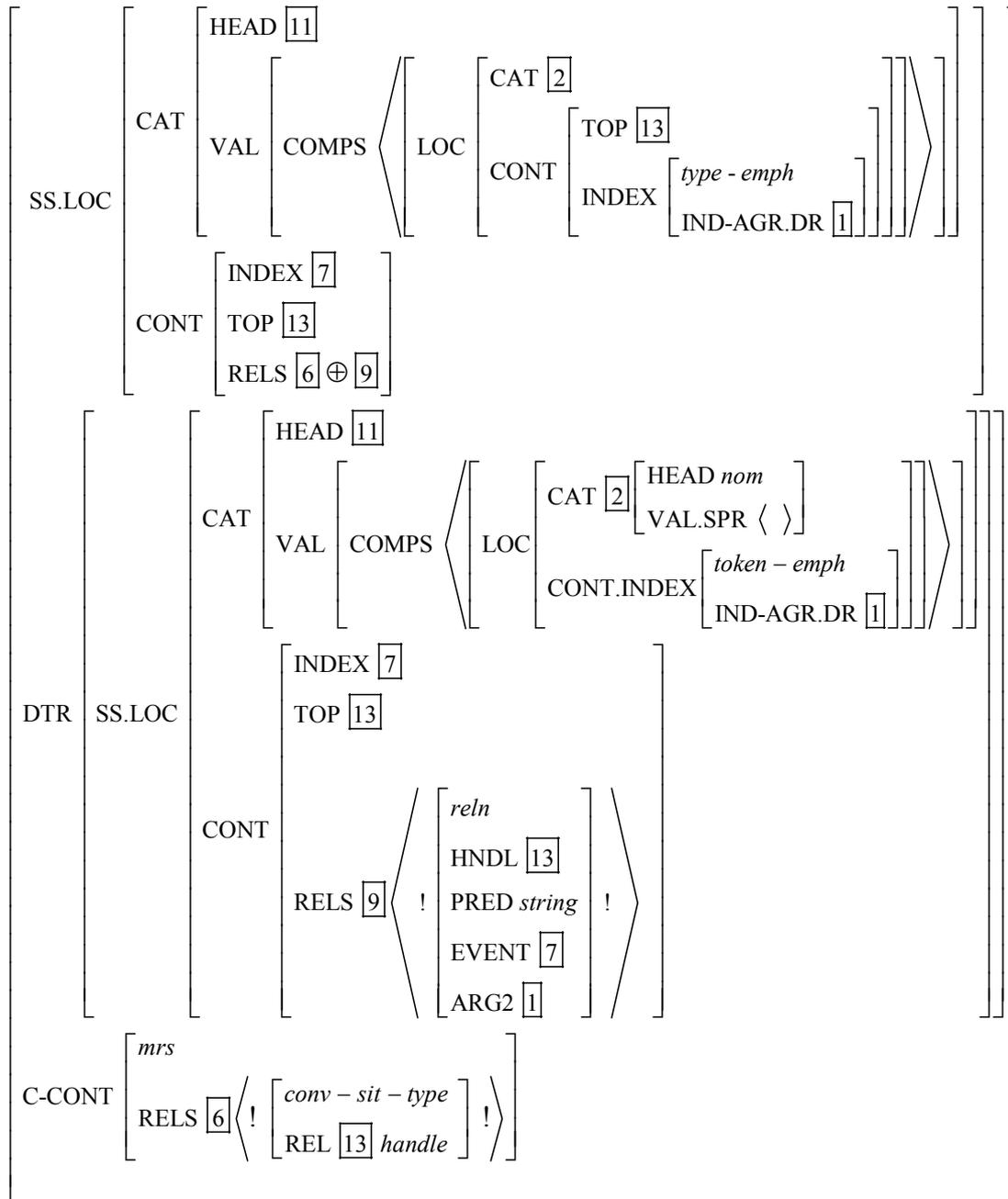
Instead of assuming a 'conventional situation type'-relation between a verb relation and its undergoer, as Asudeh and Mikkelsen do, I will make use of handles (that are labels on relations, used e.g. to account for scope, see chapter 11). The internal argument of the 'conventional situation type'-relation is a handle, and this handle will pick out both the verb-relation and the relations introduced by the bare singular.

$$(10) \quad \begin{array}{c} \textit{aym} \\ | \\ \textit{relation} \\ | \\ \left[\begin{array}{l} \textit{conv - sit - type - rel} \\ \text{SIT-TYPE } \textit{hndl} \end{array} \right] \end{array}$$

With the three above mentioned modifications of Asudeh and Mikkelsen's lexical rule for Danish incorporated nominals, we are now almost ready to state the lexical rule that corresponds to the 'conventional situation type'-construction in (1). Three more details of deviation should be mentioned first, though. One is that I follow the conventions for lexical rules assumed in the Matrix Grammar (Bender, 2000 (version 0.1), Bender, Flickinger, and Open (version 0.4), 2003). The rule is stated as a lexical sign that contains another lexical sign as its daughter (DTR) value. Secondly, instead of assuming that the 'conventional situation type'-relation is a member of a set of background assumptions, I take this relation to be part of the sign's content; i.e. as an element on the RELS list. And thirdly, like in the Matrix Grammar, I assume that a piece of meaning that is not contributed by a phonologically realized constituent, is contributed by the given construction, which is formally encoded as the value of the attribute C-CONT.

Now consider the lexical rule in (11), which corresponds to (a general version of) the 'conventional situation type'-construction.

(11)



This lexical rule takes a predicate (let's say a verb) with a token-emphasizing (i.e. "full") noun phrase complement to a predicate with a type emphasizing noun phrase complement, which means that the output verb can take bare indefinites or the type anaphor as its complement. The rule furthermore adds the restriction that a the verb-relation and the relation(s) introduced

by the bare singular constitute a conventional situation type. This is represented in that the REL value of the 'conventional situation type'-relation is a handle (tag [13]), which in turn is structure shared with the TOP values of the verb and the bare singular, which in turn means that what constitutes the conventional situation type is the relations introduced by the verb and the bare singular.

Notice that I assume that the value of ARG2 (as well as the value of ARG1, ARG3, and more generally all non-inherent arguments) is the type *dr* and not *ref-ind*. Let me mention three reasons for this step. 1) It is superfluous to have *ref-ind* rather than *dr* as the value of ARG1, ARG2, and ARG3, since there are other possibilities for specifying the fine-grained semantics of arguments that are subcategorized for, namely on the verb's valence lists. 2) It counter intuitive that the basic meaning of a verb includes its arguments' fine-grained semantics. And 3), for reasons such as that of stating a lexical rule corresponding to Construction 1, it is desirable to only refer to the inner index level DR *dr*. If *ref-ind* were the value of ARG2 in (11) above, then the lexical rule would change the meaning of the verb, since ARG2 first is of type *token-emph* and then of the type *type-emph*. That would lead to a very cumbersome rule.

The lexical rule in (11) can account for cases such as (2a), (2b), (2c), and (2f) above, i.e., all cases where the bare singular is selected as a direct object by some predicate, and the conventional situation type is denoted by the bare singular and its selecting predicate only. The rule in (11) does not account for the case where a prepositional phrase, a bare singular, and a verb denote a conventional situation type together, as in (2d). To represent this case we can assume a lexical rule for prepositions fully compatible with the one in (11), just differing from it in that the preposition not only selects for a bare singular complement, but also modifies something. If this something is restricted to have the same TOP value as the preposition (and the REL value of the 'conventional situation type'-relation and the TOP value of the bare singular), then the desired predications are made. A completely similar approach will do for indirect objects as well. With (11) as one's point of departure, one just needs to add one more complement with the INDEX value *type-emph*, and add one more cotagging of handles. These constructions can be seen as subtypes of (11).

Differently from (1), the lexical rule in (11) says nothing about lexicalization. As a consequence of this, nothing is predicted about the verb's prosody (syllable number and word accent), or the tendency for the bare singular to *not* constitute rhematic information on its own, for instance (see section 6.5 in chapter 6). However observable as tendencies, I am of the view that these facts are not part of the symbolic grammar, and thus not part of (11).

13.2.5 An alternative approach: phrase structure rules

Although lexical rules may work nicely when applied to one phenomenon at a time, they have been argued to be both theoretically and practically problematic (see e.g. Briscoe and Copestake, 1999). When used in large-scale grammars like NorSource (Hellan and Haugereid, 2003, Grammar 1), lexical rules for syntactic constructions tend to lead to huge parse charts (and therefore huge processing costs), and they are potentially hard to restrict when interacting with other lexical rules. It is beyond the scope of this thesis to land on a conclusion w.r.t. the problematic status of lexical rules, but I should at least consider whether there are possible alternatives to the lexical rule proposed above.

In Borthen (2002) I proposed a formal analysis of Construction 1 by way of a phrase rule. On this approach, predicates are underspecified for whether they subcategorize for a full nominal or a bare indefinite in the lexicon, and there are two head-complement rules; one that combines a predicate with a full nominal without any further restrictions, and one that combines a predicate with a bare singular and adds the restriction that they have to denote a conventional situation type. The main disadvantage with this kind of approach is that one needs not only an additional head-complement rule, but also an additional extraction rule, for instance, for accounting for topicalization of bare singulars. More generally, one needs one additional phrase rule for bare singulars licensed by Construction 1 for any phrase rule that applies to complements in the grammar, which is not needed with the lexical rule in (11). The lexical rule in (11) is furthermore better suited for accounting for cases where not only two elements are part of the conventional situation type.

In sum, the disadvantages of using phrase structure rules to account for the use of Norwegian bare singulars seem more serious to me than the problematic status of lexical rules; at least when the lexical rule in (11) is seen in isolation.

13.3 The 'profiled have-relation'-construction

In chapter 7, we ended up with the following construction definition:

(14) The 'profiled have-relation'-construction (FINAL VERSION):

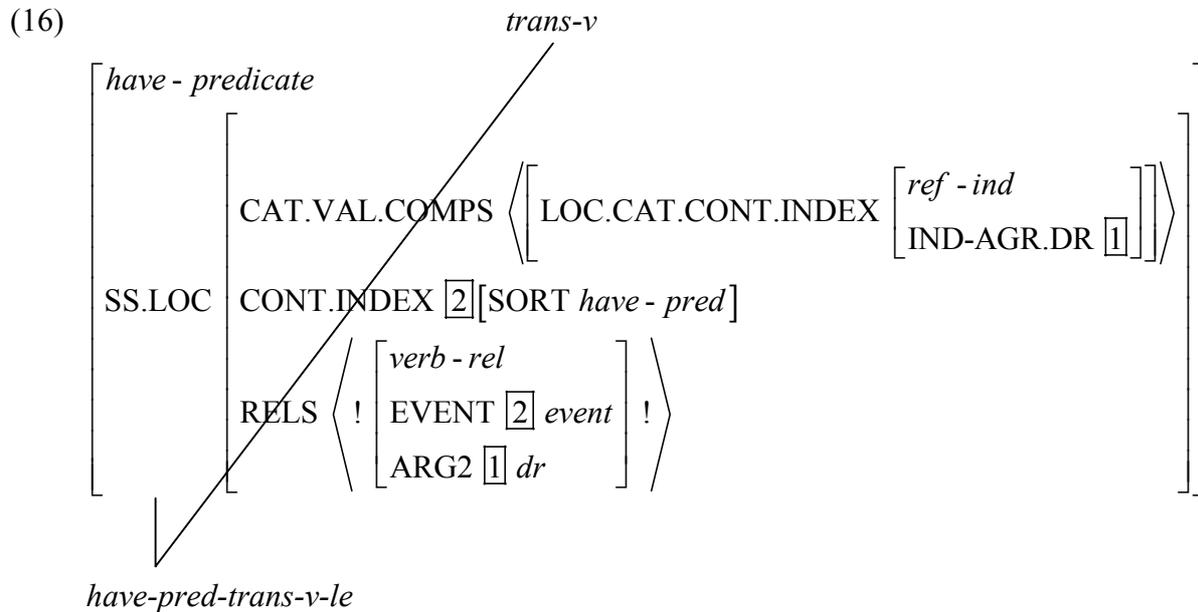
- 1) Any kind of nominal phrase in Norwegian (including bare singulars) can occur as the *possessed argument* of a *have-predicate*.
- 2) A *have-predicate* is a word that introduces a have-relation (either explicitly or implicitly).
- 3) A *have-relation* is an asymmetrical coexistence relation between two arguments, called *the possessor* and *the possessed*, where the possessor is *superior* to the possessed rather than the other way around.
- 4) An argument can be *superior* to some other argument in terms of control, part-whole dependency, animacy, or point of view.

This construction seems to be of a different kind than the 'conventional situation type'-construction. It licenses all kinds of nominals, it applies to a semantic class of predicates, and there is no constructional meaning added to the combination of the selecting predicate and the bare singular that does not follow directly from bare singulars' type-emphasis. This opens for the possibility to make a formal correspondence of (14) merely by identifying a semantic class of predicates lexically, and allow these to combine with either bare indefinites or full nominal phrases. That is, the semantic type of their complement will be underspecified w.r.t. type/token-emphasis. I assume that the additional restrictions on the have-predicates when they take bare singular complements (such as profiling of the have-predicate and little affectedness) follow from the semantics of bare singulars.

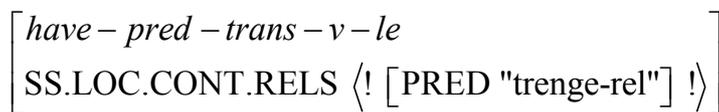
Like in the English Resource Grammar (ERG) (Flickinger, 2000), I assume a type hierarchy of *sort* types, which is supposed to reflect semantic classes of predicates. This is illustrated in (15). Lexical entries, like the one in (17), may inherit from types that have a certain SORT value, as illustrated in (16).

- (15) *avm*
|
sort
|
pred-type
|
have-pred

If used with cleverness and care, a system of sort types may have a function similar to lexical decomposition, thus providing a point of departure for capturing a wide range of linguistic generalizations. The sort system in (15) doesn't by any means do justice to the potentials of such a system.



(17) *treng* :=



As the INDEX value of the complement in (16) is *ref-ind*, this class of predicates can combine with either bare indefinites or full nominals, however only if the sentence is in accordance with the semantics of the given nominal. Notice that also prepositions can inherit from the type *have-predicate*.

All kinds of lexical and syntactic rules that modify the syntactic position of nominal phrases are intended to apply to bare singulars licensed by this construction.

13.4 The 'comparison of types'-construction

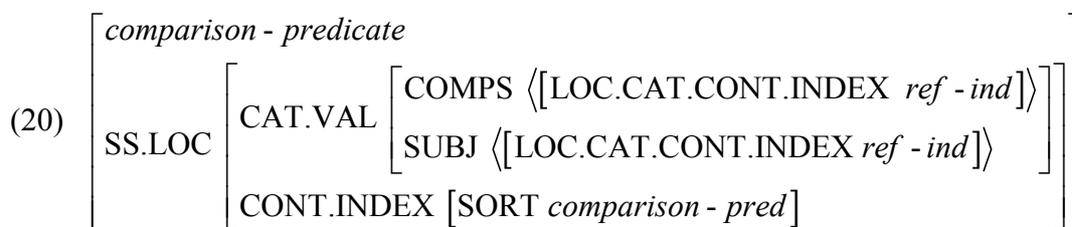
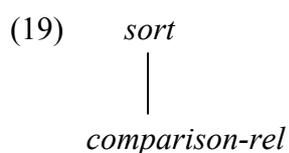
The essence of chapter 8 was the following construction definition:

(18) Construction 3: the 'comparison of types'-construction:

Any type of nominal phrase in Norwegian (including bare singulars) can occur as the argument of a *comparison or identity relation*.

Just as with the 'profiled have-relation'-construction, this construction picks out a semantic class of predicates that can take either token-emphasizing or type-emphasizing nominals as their arguments. The further restrictions on bare singulars licensed by this construction were argued in chapter 8 to be directly connected to the semantics of bare singulars.

I propose that the formal representation of this construction is parallel to that of the 'profiled have-relation'-construction, with the only difference that not only complements, but also subjects can be realized as bare singulars. So, I assume a subtype of *sort* named *comparison-pred*, as given in (19), and a lexeme type *comparison-predicate*, from which lexical entries can inherit to ensure that these predicates can take both type-emphasizing and token-emphasizing nominals as complements or subjects.



13.5 The 'covert infinitival clause'-construction

The last construction that we defined in the first part of this thesis, was the following:

(22) Construction 4: the 'covert infinitival clause'-construction (FINAL VERSION):

- a. A nominal phrase (it be type-emphasizing or not) is licensed if it is selected by a predicate that allows for either a noun phrase or an infinitival clause in this position, and

- b. this nominal phrase is interpreted as part of a "covert infinitival clause", where the covert verbal predicate in this clause is
- i) a default activity or state associated with the denotation of this nominal, or pragmatically induced, and
 - ii) this covert predicate is capable of taking the given nominal phrase as its complement (according to the grammar).

The fact that nouns sometimes are interpreted as if they refer to events, can be illustrated by the following examples, taken from Pustejovsky (1995).

- (23) a. Mary began the book.
 b. Agatha Christie finished the book.

Whereas (23a) means that Mary began reading the book, (23b) means that Agatha Christie finished writing the book. In order to account for such data, Pustejovsky proposes the following semantic representations of the noun *book* (Pustejovsky 1995: 116):

$$(24) \left[\begin{array}{l} \mathbf{book} \\ \text{ARGSTR} = \left[\begin{array}{l} \text{ARG1} = \mathbf{x : info} \\ \text{ARG2} = \mathbf{y : physobj} \end{array} \right] \\ \text{QUALIA} = \left[\begin{array}{l} \mathbf{info.physobj_lcp} \\ \text{FORMAL} = \mathbf{hold(y, x)} \\ \text{TELIC} = \mathbf{read(e, w, x.y)} \\ \text{AGENT} = \mathbf{write(e', v, x.y)} \end{array} \right] \end{array} \right]$$

The TELIC information tells what purpose the given individual (in this case a book) has, whereas the AGENT information tells how it comes into existence.

A verb like *begin* has the following denotation (Pustejovsky 1995:116):

$$(25) \left[\begin{array}{l} \mathbf{begin} \\ \text{EVENTSTR} = \left[\begin{array}{l} E_1 = \mathbf{transition} \\ E_2 = \mathbf{transition} \end{array} \right] \\ \text{ARGSTR} = \left[\begin{array}{l} \text{ARG1} = \mathbf{x : human} \\ \text{ARG2} = \mathbf{e2} \end{array} \right] \\ \text{QUALIA} = \left[\begin{array}{l} \text{FORMAL} = \mathbf{P(e_2, x)} \\ \text{AGENTIVE} = \mathbf{begin_act(e_1, x, e_2)} \end{array} \right] \end{array} \right]$$

Notice that this verb's ARG2 value is an event index. This means that when the verb *begin* combines with a projection of the noun *book*, ARG2 of *begin* can - at least principally - be instantiated by the event variable *e* of the TELIC role in (24). In other words, to begin a book can mean to begin reading a book.

It is exactly in cases like these that Norwegian bare singulars can alternate with a- expressions if the predicate introduced by the TELIC attribute of the noun is one that can combine with a bare singular.

Consider the following Norwegian example:

- (26) Bil er kult.
 car(MASC) is cool-NEUT
 '(To drive) a car is cool.'

Let's assume that QUALIA, and thus TELIC are features on CONT *mrs*, as given in (27) below. Furthermore, let's use the notation convention we are used to in this thesis, with predicates and arguments as features. The noun *bil* ('car') can now be represented with the following partial feature structure description.

$$(27) \left[\begin{array}{l} \text{PHON} \langle \text{"bil"} \rangle \\ \text{SS.LOC.CONT} \left[\begin{array}{l} \text{INDEX.IND-AGR.DR} \boxed{1} \\ \text{QUALIA} \left[\begin{array}{l} \text{TELIC} \left[\begin{array}{l} \textit{verb-rel} \\ \text{EVENT } e \\ \text{PRED "kjøre-rel"} \\ \text{ARG1 } \textit{ref-ind} \\ \text{ARG2} \boxed{1} \end{array} \right] \end{array} \right] \end{array} \right] \end{array} \right]$$

It is part of the lexical entry for *bil* ('car') that it has the TELIC information in (27), which means that a car's usual purpose is to be driven.

Rather than operating with coercion rules in order to make the eventive variable of a noun available for selection, as Pustejovsky does, I assume that adjectives that can take event indices as their subject, come in (at least) two versions. One class selects for the event index of a clausal subject, and one class selects for some event index introduced by the QUALIA structure of a nominal subject. For instance, we can imagine the following partial feature structure description of the adjective *kult* ('cool').

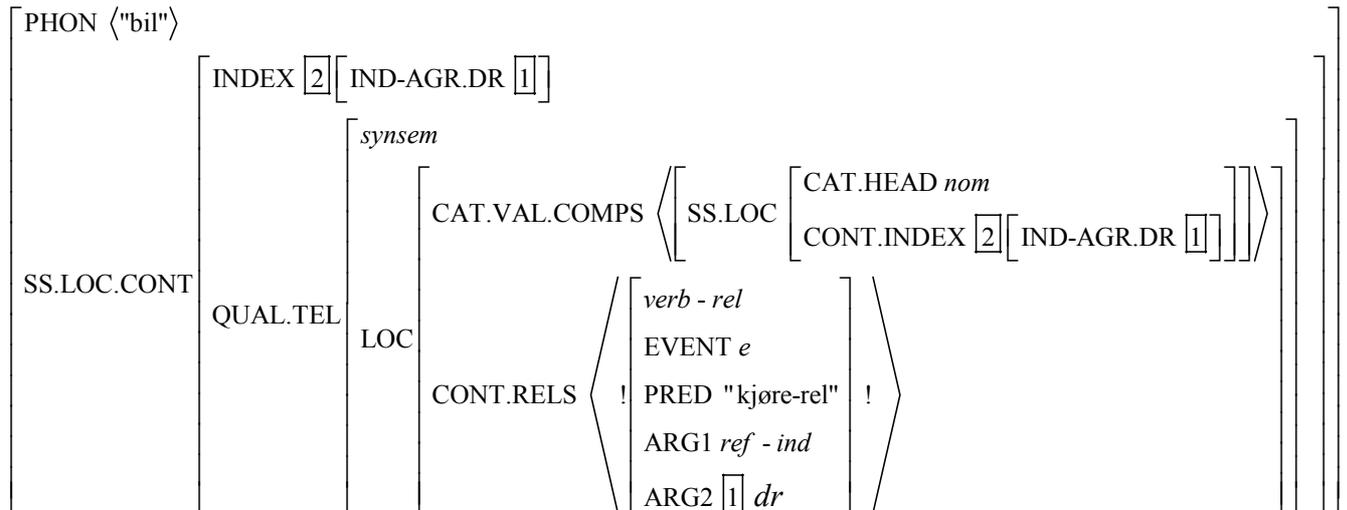
$$(28) \left[\begin{array}{l} \text{PHON} \langle \text{"kult"} \rangle \\ \text{SS.LOC} \left[\begin{array}{l} \text{CAT.VAL.SUBJ} \left\langle \left[\text{LOC.CONT} \left[\begin{array}{l} \text{INDEX } \textit{weak} \\ \text{QUALIA.TELIC} \left[\text{EVENT} \boxed{1} \right] \right] \right] \right\rangle \\ \text{CONT.RELS} \left\langle ! \left[\begin{array}{l} \text{PRED "kult-rel"} \\ \text{ARG1} \boxed{1} \end{array} \right] ! \right\rangle \end{array} \right. \end{array} \right]$$

This feature structure description corresponds to a lexical item that syntactically selects for a (weak) noun phrase, but semantically selects for an event that is part of the noun's QUALIA structure.

We see that on this kind of analysis, bare singulars are licensed indirectly, and not by the predicate that selects them as subjects or complements syntactically. The main clause predicate *kult* semantically selects an event index that the bare singular introduces, and therefore is not sensitive at all to the bare singular's INDEX value, which is of type *type-emph*. Consequently, these bare singulars (different from those in construction 1 and 2) are just as fine in subject position as in non-subject positions, for instance.

On thing that (27) and (28) do not predict is that the "covert" predicate that the bare singular denotes (e.g. *kjøre* ('drive') in (27)) must be capable of taking a bare singular as its complement. In order to capture this formally, the value of TELIC should be an object of type *synsem* rather than a relation. This is reflected in (29) below. If the INDEX value (tagged [2]) of the verb's complement is *token-emph*, and (29) is a partial representation of a bare singular (which means that the sign's INDEX value (also tagged [2]) is *type-emph*), then unification between the INDEX value of the bare singular, and the INDEX value of the verb's complement is not possible, and the structure is not valid.

(29)



One thing that the present approach does not account for is the fact that the predicate that is now represented lexically as TELIC information, may also be contextually induced.

13.6 Some cases of "disagreement"

It was noted in section 3.4 in chapter 3 that adjectives that are part of Norwegian bare singulars always agree with the noun (w.r.t. definiteness, number, and grammatical gender). However, bare singulars as such do not always agree with predicative adjectives, nor anaphoric expressions. As for NP-internal agreement, this was accounted for in chapter 12, since a noun, a determiner, and an adjective that are part of the same projection always share INDEX value, and the index value includes features for definiteness, grammatical gender, and number. The fact that the type anaphor *det* does not need to agree with its antecedent w.r.t. grammatical gender was accounted for in section 12.4.1.2, since it does not put any restrictions on its antecedent w.r.t. grammatical gender. What remains to be explained concerning bare singulars and agreement are some cases of what seems to be "disagreement" between bare indefinites and certain predicative adjectives that were mentioned in the previous section.

Recall the following kind of data:

- (30) a. En bil/bilen er kul.
a car(MASC)/car-DEFSUFF.MASC is cool-COMM
'A car/the car is cool.'
- b. *Biler/*huset er kul.

cars/house-DEFSUFF.NEUT is cool-COMM

'Cars/the house is cool.'

- c. Bil/biler/snø/en bil/to biler er kult.

car(MASC)/cars/snow(MASC)/a car(MASC)/two cars is cool-NEUT

'(To ...) car/cars/snow/a car/ two cars be-PRES cool.'

- d. *Den/*bilen/*en av bilene/*en bil som broren min eier er kult.

that-COMM/car-DEFSUFF.MASC/one of cars-DEFSUFF.MASC/a car which
brother-DEFSUFF.MASC mine owns is cool-NEUT

'That one/the car/one of the cars/a car that my brother owns be-PRES cool.'

- e. *Bil/*biler/*snø/*en bil/*to biler er blått.

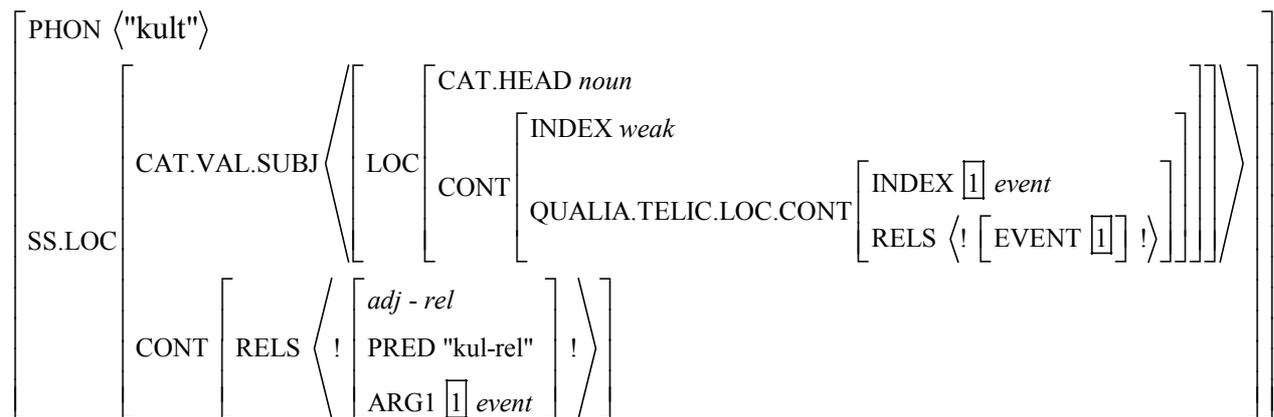
car(MASC)/cars/snow(MASC)/a car(MASC)/two cars is blue-NEUT

'A car/cars/snow/a car/ two cars be-PRES blue.'

As shown in (30ab), there is usually agreement w.r.t. number and grammatical gender between a predicative adjective and its logical subject in Norwegian. However, as shown in (30cde), weak indefinites (including bare singulars) need not agree with a predicative adjective if this adjective is of a kind that can take a sentential subject, and therefore possibly selects for events semantically. The distinction in acceptability between (30c) and (30d) shows that the subject has to be weak, whereas the distinction in acceptability between (30c) and (30e) shows that the adjective has to be of a kind that can select for an eventive argument.

The subjects of (30c) have an eventive interpretation in the sense described in the previous section. This suggests that the adjective is stated of an event index introduced by the nominal subject rather than its referential index. I therefore propose the following representation of the adjective *kult* ('cool') that appears in (31).

(31)



This adjective has a semantic subject (i.e. ARG1) of type *event*, which is an index type that does not carry either number or grammatical gender features. Thus, it is as expected that the adjective does not covary with its semantic subject in grammatical gender or number. Notice that on the present analysis, which locates the "disagreement" trigger in a particular class of adjectives, we predict that there may be obligatory agreement between predicative adjectives and weak subjects in other cases - which is indeed the case (see section 3.4, chapter 3).

Another set of "disagreement" data are given in (32a).

(32) a. Hatt/hatter/vatt/?en hatt/*hatten er fint å ha på seg.

hat(MASC)/hats/cotton(MASC)/a hat(MASC)/hat-DEFSUFF.MASC is nice-NEUT to have on REFL

'A hat/hats/cotton/a hat/the hat be-PRES nice to wear.'

d. En hatt/hatten er fin å ha på seg.

a hat(MASC)/hat-DEFSUFF.MASC is nice-COMM to have on REFL

'A hat/the hat is nice to wear.'

For the tough-movement constructions in (32), we cannot apply the same analysis as in (31), since one does not get the eventive interpretations of the subjects, as one does in (30c). Without going into the details of this construction, it should be clear from chapter 12 that the "disagreement" can in principle be accounted for, since I have introduced a token discourse referent that does not carry agreement information. It is therefore possible to state that the kind of adjective illustrated in (32) does not have a form that covaries with its subject. In other words, also in this case, I claim that the source of the "disagreement" is a particular kind of

predicative adjective (or a certain construction, depending on how one sees it), not the weak subjects, as proposed in Hellan (1986).

13.7 Summary

In this chapter I have presented some preliminary ideas about how the formal properties of bare singulars proposed in chapter 12 may interact with predicates in a way that predicts (as far as possible) what sentences are acceptable with bare singulars and what sentences are not.

I have interpreted the four constructions arrived at in chapters 6-9 as three different types of formal phenomena. 1) Construction 1 is interpreted formally as a (set of) lexical rule(s); Constructions 2 and 3 are seen as corresponding to two semantic classes of predicates that underspecify the semantic type of complement that they subcategorize for (i.e. whether it is of type *token-emph* or *type-emph*); and Construction 4 has been formally accounted for by help of an enriched denotation structure of nominals in the sense of Pustejovsky (1995). Construction 4 is particularly interesting, as it has been argued to license bare singulars not because the matrix clause predicates in question are particularly compatible with type-emphasizing arguments, but because they select event indices (that might appear "inside" nominals) as their semantic arguments. This means that the referential index of a bare singular is in fact not relevant for the predicate that selects it as its syntactic argument - which in turn explains the fact that bare singulars are licensed just as likely as other nominals (other things being equal). This fact supports one of my main claims in this thesis, namely that the phenomenon regarding bare singulars in Norwegian is semantically driven, not syntactically, and that this semantics should be connected to referential indices.

14 Summary and concluding remarks

I have argued in this thesis that there is an important distinction between the *type-level* and *token-level* of reference. Singular indefinite nominal phrases introduce both a token discourse referent and a type discourse referent into the discourse, intuitively corresponding to a variable and the nominal predicate in predicate logic. For instance, the noun phrase *a cat* introduces a type of thing into the discourse, namely the type of thing 'cat', and it introduces a token, namely some individual cat. Whereas all indefinites have both these aspects of meaning, different forms may signal a difference in profiling; that is, relative focus on either the token discourse referent or the type discourse referent.

Norwegian bare singulars have a.o. the following semantic properties: They never take wide scope; they are never referential; they are never partitive; they are usually not generic (or, "quasi-universal"), but may be; they can be antecedents of anaphors that refer to tokens, but other things being equal, they are poorer antecedent candidates than corresponding nominals with an article; they are perfect antecedents of pronouns that refer to types of things; they are indefinite in the sense that they introduce a possibly new token discourse referent into the discourse; they can be left-dislocated, but only if the topic of the sentence is taken to be the type of thing introduced by the bare singular (and not the token); and nouns with a very poor descriptive content, such as *thing*, tend to not be realized as bare singulars. Furthermore, bare singulars tend to realize semantic roles far down on a semantic role hierarchy, and they tend to be objects rather than subjects. I claim that all these properties can be given an intuitive explanation (either directly or indirectly) if we assume that bare singulars focus on the type discourse referent that they introduce, and correspondingly "background" their token discourse referent. More precisely I argue that Norwegian bare singulars are *type-emphasizing*, whereas corresponding phrases with the indefinite article are *token-emphasizing*.

Formally, I represent token-emphasis vs. type-emphasis as a semantic type distinction. I modify Pollard and Sag's (1994) treatment of referential indices by distinguishing between 1) the *real* index of a nominal; i.e. the nominal's "naked" (token) discourse referent stripped from any features, 2) a semantic object that includes the discourse referent as well as more or less constant properties of it (i.e. person, number, and natural gender (*png*) features), and 3) a semantic object that in addition to the index and its associated *png* features includes (at least) features corresponding to cognitive status (i.e. referential givenness), specificity, and

partitivity. The latter level of representation can be seen as the discourse referent as it is "dressed up" in different kinds of costumes whose purpose is to make it recognizable and recoverable in sentences and in discourse. Semantic classes of nominals correspond to subtypes of this "dressed up" discourse referent. This provides the basis for representing the difference between type-emphasizing and token-emphasizing nominals, as well as predicting the semantic effects of these classes.

But type-emphasis alone cannot explain the distribution pattern of Norwegian bare singulars, since there are cases where bare singulars are expected to be acceptable based on their semantics, but where they in fact are not. I therefore propose that bare singulars are not generally licensed in nominal positions in Norwegian. Rather, I assume that there exists a set of *schemes*, or *constructions*, that do license them. For Norwegian, I have identified the following four constructions: the 'conventional situation type'-construction, the 'profiled have-predicate'-construction, the 'comparison of types'-construction, and the 'covert infinitival clause'-construction. These constructions are all *motivated* by the semantics of bare singulars (i.e. their type-emphasis), but not fully predicted by it. Formally, they are interpreted as three distinct grammatical phenomena. The 'conventional situation type'-construction is interpreted as a lexical rule, the 'profiled have-relation'-construction and the 'comparison of types'-construction are interpreted as semantic classes of predicates that underspecify their semantic type of nominal complement, whereas the 'covert infinitival'-construction is interpreted by way of an enriched denotation of nominals, in the sense of Pustejovsky (1995).

Type-emphasis is defined in a specific way for Norwegian (implying nonpartitivity, and nonreferentiality, for instance), but I do not expect this very definition to be relevant across languages that have bare singulars or other reduced indefinites. What I expect to find is that reduced indefinites are more likely than corresponding nominals with determiners to have the properties listed above; i.e. be nonpartitive, nonreferential, take narrow scope, tend to realize semantic roles far down on a semantic role hierarchy, and to be objects rather than subjects, etc. I also expect that there will be more or less language-specific constructions that license bare singulars, just as it is in Norwegian. These should be motivated, but not necessarily predicted by the semantics of bare singulars.

As for further research on the topic, I will point out three main directions of studies that I would have liked to develop if I had more time. First, chapter 13 only gave a brief and not very coherent sketch of possible ways of interpreting the constructions in chapters 6-9. In order to evaluate the plausibility of the formal analysis of bare singulars in chapter 12, a deeper and more holistic formal analysis of how bare singulars enter sentences is called for.

Secondly, the extensive use of bare singulars in idioms and as part of multi-word lexical entries is striking. In fact, they seem to be more frequent than bare singulars licensed by the general constructions proposed in this thesis. Still, nothing is said about the formal treatment of multi-word expressions in this thesis, which calls for further investigations. Finally, this thesis has focused heavily on bare singulars and has just briefly touched onto bare plurals and bare mass expressions. After this investigation, though, I strongly believe that bare singulars should be seen in close connection with the two other types of bare indefinites, and the other way around. I suspect that bare singular will appear as less shy and easier to get to know if they are studied together with their bare cousins.

Appendix: Corpus

From "Lucky Luke: Bandittenes dronning – Calamity Jane". Album 4. [LLB]

1. Du skiller lag med revolveren din (s. 4)
2. som alle forteller eventyr om (s. 5)
3. Og jeg som trodde du var nykomling (s. 5)
4. Jeg bare leker rodeo (s. 6)
5. Du er jo bare jente (s. 6)
6. Kan jeg få lov å være med (s. 6)
7. da jeg ble stor tok jeg jobb som speider (s. 6)
8. jeg hadde anlegg som muldyrdriver (s. 6)
9. så var jeg gullgraver (s. 6)
10. Jeg var med på jernbaneanlegg også (s. 6)
11. Jeg er på vei til El Plomo som later til å være sentrum i trafikken (s. 7)
12. Koselig å ha reisefølge (s. 7)
13. Forutsatt at jeg kan velge stedfortreder (s. 12)
14. Hvis Lucky Luke er oppmann (s. 12)
15. Prise deg lykkelig at du er jente (s. 14)
16. For å drive tesalong må en være i stand til å servere te og kaker (s. 16)
17. Jeg er redaktør i avisen (s. 17)
18. Jeg er på diett (s. 18)
19. I natt holder jeg vakt i saloonen (s. 22)
20. Det er ikke jeg som har fått lang nese (s. 28)
21. Jeg har nesten fått skikk på saloonen igjen (s. 28)
22. Hun har tenkt å søke medlemskap i Deres forening (s. 28)
23. Om noen dager blir hun innkalt til opptaksprøve i foreningen (s. 28)
24. Nå er De dømt til å bli dame (s. 29)
25. De er eier av saloonen (s. 29)
26. og for å bli i byen, må De bli medlem av El Plomo kvinneforening (s. 29)
27. hva skal jeg gjøre for å bli dame? (s. 29)
28. Det er vel lov å skøye litt (s. 30)

29. Jeg kan ikke sitte barnevakt hele dagen (s. 32)
30. en gammel sølvgruve som har vært ute av drift lenge (s. 32)
31. Jeg er alt på vei dit (s. 32)
- 32.
33. Nå er det sengetid (s. 36)
34. Deres undervisning bærer frukt (s. 36)
35. De fikk altså kasser og tønner med kuler og børser under dekke av at det var drikkevarer (s. 38)
36. Ta det med ro og gå pent i fengsel (s. 38)
- 37.
38. En dame går ikke med borse, det er parasoll De skal ha (s. 41)
39. Jeg skulle gjerne sett en dame forsvare seg med parasoll på et jernbaneanlegg (s. 41)
40. Er det sant at De har vært sykepleierske under en epidemi (s. 42)
41. Du må ikke tro det er lett å leke amasone i de skjørtene (s. 43)
42. Og smake på disse kakene jeg selv har bakt etter en oppskrift som har gått i arv i familien (s. 45)
43. Jeg takker Dem og gratulerer Dem med vel utført oppdrag (s. 46)

From "Lucky Luke: Daisy Town. Album 43." [LLD]

1. Vi utnevner deg til sheriff for Daisy Town. (s. 9)
2. Snart blir det arrangert folkedans i Daisy Towns saloon (s. 11)
3. Nå som musikkstimen er over, er jeg lutter øre (s. 18)
4. Når jeg drar på landtur, glemmer jeg aldri boksåpneren! (s. 22)
5. Hvorfor snakket Joe om landtur? (s. 22)
- 6.
7. Jeg har innkalt til møte fordi vi må kvitte oss med de coyotene (s. 23)
8. Jeg vil være dommer (s. 23)
9. Jeg vil være sheriff (s. 23)
10. Er du ikke kandidat, du, Averell?(s. 23)
11. Hvorfor er ikke jeg kandidat, Joe? (s. 24)
12. Om en time møtes vi i duell, mann mot menn! (s. 25)
13. Jeg vil ha hevn over Daisy Town! jeg vil ha hevn! (s. 27)

14. Den pappskallen vil bare være midtpunkt! (s. 27)
15. Vi skal få hevn over Daisy Town (s. 28)
- 16.
17. ...forbereder indianerne seg på krig. (s. 31)
18. Gi nå beskjed til hæren (s. 33)
19. Karavanen setter seg i bevegelse (s. 36)
20. Det som nå kalles topp-møte (s. 44)

From Henning Mankell (2001): "Vindens sønn". [HM]

1. Kråkenes uro varslet om høst (7)
2. Ettersom det åpenbart var mord (7)
3. var han likevel nødt til å ta forbehold om at sannheten (8)
- 4.
- 5.
6. gitt opp alle tanker på å fullføre universitetsstudiene og avlegge eksamen (11)
7. hadde han først tenkt å bli lege (12)
8. blitt fraktet hjem til Sverige i kiste (12)
- 9.
10. Så hadde de gått inn i Anatomiteateret i samlet tropp (12)
11. overveid å bli militær (12)
12. tenkt på å bli prest (12)
13. søkt om opptak ved botanikken (13)
14. der faren levde som rentenist (13)
15. Han hadde pådratt seg syfilis (13)
16. han neppe kunne vente seg noen arv av betydning (13)
17. tiden var inne til å ta avskjed (14)
18. Han fikk skyss (14)
19. For pels hadde han (14)
- 20.
21. lett etter skyss (14)
22. Jeg selger børster og huskurer mot barnløshet og gikt (14)
23. et menneske som holder kjeft (14)

24. etter å ha vært på fottur sammen med en kamerat (15)
25. Der hadde turkameraten plutselig fått feber (15)
26. Han tok ut arven sin på forskudd (16)
27. Husholdersken pleide å hente inn faren ved soloppgang (16)
28. En kort stund hadde hun vært tjenestejente (17)
29. Alt fikk plass i en liten kiste (18)
30. begynt å anlegge skjegg (18)
31. fikk løfte om å få bli med som passasjer (18)
32. kjente hvordan noe skjøt fart inni ham (18)
33. Plutselig fikk han lyst til å være barn igjen (18)
34. Hoppe tau (18)
35. Uten navn, uten fortid, uten annet enn en køye blant mannskapet (19)
- 36.
37. vist seg å lide av periodisk tilbakevendende galskap (19)
38. omfattet ham med stor kjærighet (19)
39. når det trakk opp til storm (21)
40. det var land i sikte (21)
41. Ved daggry tok han avskjed (21)
42. Så ble han rodd i land (21)
43. På kaien hersket det stor forvirring (21)
44. som av en eller annen grunn var svensk og norsk konsul i Kappstaden (22)
- 45.
46. og nå var bordelleier (23)
47. Siden kan du dra av sted (24)
48. De unge mamsellene spiller piano (24)
49. han burde satse på elefantjakt (24)
50. som het Erasmus til fornavn (25)
51. I mangel av noe bedre (25)
52. dro han av sted (25)
53. de ville føre ham på rett vei (25)
54. De hadde slått leir (25)
55. slik han hadde sett den som barn (25)
56. når insekter gikk til angrep (26)
57. for å holde middagshvil (27)

58. Han hadde ikke lenger diaré (28)
59. minst egnet til å stå under dette treet i Afrika, som leder for en ekspedisjon, på jakt etter et ukjent insekt (28)
- 60.
61. Da det nye hjulet var på plass (30)
62. Like før den korte solnedgangen slo de leir (31)
63. hadde han fått del i noen nye teorier (31)
64. det er fare på ferde (32)
65. mennesker kunne utleveres på nåde og unåde (33)
66. Mens jeg, en mislykket student fra Småland, er medlem av det dynastiet som består av... (33)
67. hva livet egentlig hadde som endelig mål (36)
68. fortsatt kunne fylle ham med sterk attrå (37)
69. En svært liten bil med grønnblått skall (37)
70. og satte merkelapp på (37)
71. Iblant ble han forvirret ved daggry (38)
72. holdt oksedriverne seg alltid på avstand (38)
- 73.
74. Solen brant med sitt blendende lys fra skyfri himmel (38)
75. En dag kommer det til å ta slutt (39)
- 76.
77. jeg endelig fikk selskap (41)
- 78.
79. Får vann, mat, samtale... (45)
80. Han hadde krøpet i land (46)
81. uten at han egentlig la merke til hvordan (47)
82. Uten at jeg har lagt merke til det (48)
83. En gang skulle jeg bli lege (48)
84. Som verken er predikant eller udyr (48)
85. Min far var apoteker (49)
86. Snike meg om bord på et skip (49)
87. Til jeg drev i land her (49)
- 88.
- 89.

90. alt var tuftet på byttehandel (50)
91. han alltid lot til å bli rammet av sorg (51)
92. Slumret inn først ved daggry (51)
93. Du kan ikke være uten kvinne lenger (51)
94. Jeg vil velge kvinne selv (51)
95. han fikk orgasme (51)
96. var hun der av fri vilje (52)
- 97.
- 98.
99. betraktet Bengler med avsmak (55)
100. Så ga han tegn til Geijer (53)
101. Et menneske uten navn eksisterte ikke (55)
102. som om han ville tilby fred (56)
103. er du ikke jøde (57)
- 104.
105. da han hadde vært nødt til å stikke hull på Anderssons ryggbyll (57)
106. Andersson utøvet den samme brutaliteten med diskresjon (58)
- 107.
108. I forhold til han tilhørte Bengler (58)
109. som aldri ville komme til å få makt (58)
110. hadde han tatt på seg ren skjorte (59)
111. Jeg holder riktignok orden (60)
112. Jeg skal bevise at du tar feil (60)
113. spiste de i taushet (60)
114. I morgen oppbrudd. (60)
115. Det ansvaret han helt uten ettertanke hadde tatt (61)
116. Det kom plutselig, uten forvarsel (62)
117. Det kommer til å ta tid (62)
118. Han hadde fått slaganfall på bordellen sin (62)
119. Da han tok sin første spasertur på dekk (64)
120. for å holde dem i fangenskap (64)
121. nødvendig å holde ham i sele (64)
122. hadde vært på midlertidig besøk hos en av sine søstre (65)
123. mens de forlot land (66)

124. før de befant seg i åpen sjø (66)
125. De hadde også rukket til knapper, nål og tråd (66)
126. De hadde storm to ganger (67)
127. Bengler gikk ut på dekk (68)
128. ”Chansonette” seilte i lett medvind (68)
- 129.
130. Bengler hadde en gang pleid omgang med (69)
131. Er det derfor du har ham i bånd (69)
132. Jeg har rett til å ikke bli forstyrret (70)
133. ble det arrangert begravelse om bord (71)
134. Da de gikk i land (72)
135. som de hadde klippet til i passende lengde (74)
136. Han er på midlertidig besøk i Sverige (75)
- 137.
138. når dere hopper tau (75)
139. Daniel kunne hoppe tau (75)
140. der en svart gutt hoppet tau sammen med to jenter (76)
141. blitt rammet av akutt diaré (77)
142. Han er utlending på besøk (78)
- 143.
144. Han er på vei (78)
145. Bagasjen hadde han latt stå i Simrishamn som garanti (78)
- 146.
147. blitt rammet av slag (79)
148. Han tar ikke imot besøk (79)
149. Så var hun tilbake igjen med papir og blyant (80)
150. og sto vakt ved døren (80)
151. og pekte med utstrakt arm i hvilken retning (82)
152. Vi skal sove her i natt (83)
153. det var som å ha selskap av en hundevalp (83)
154. En værelsespike i stivet forkle sto der (84)
155. la Bengler merke til at gutten i detalj hadde merket seg (84)
- 156.
157. og hadde dårlig ånde (85)

158. til han ble kastet ut som siste gjest (85)
159. Vi er bare på gjennomreise (86)
160. lært ham å bruke kniv og gaffel (86)
161. piken som skulle sitte barnevakt (87)
162. reise rundt og holde foredrag (87)
163. Jeg har allerede selskap (88)
164. I morgen skal jeg holde deg med selskap (89)
165. kunne ikke la være å gripe tak i brystene hennes (89)
- 166.
167. alle lydene han var nødt til å få plass til i hodet sitt (95)
- 168.
169. det som siden ble kalt menneske (98)
170. Men valgte Molo feil tidspunkt (99)
171. De gikk av sted ved tidlig daggry (99)
172. vi må på jakt igjen (100)
173. det befant seg på vill flukt (100)
174. som lå et sted mellom drøm og virkelighet (101)
175. hadde han hodepine (101)
176. Daniel lå under noe som lignet seilduk (104)
177. hadde Far fått feber og stygg hoste (104)
178. En medisinmann i mørk frakk (104)
179. Når Far snakket i villelse (104)
180. Så fikk hun øye på Daniel (105)
181. Innenfor var det et rom uten tak (108)
182. til det ble kveld (109)
183. Far var trollmann (110)
184. som aldri lot til å ta slutt (111)
185. som Far hadde kalt kråke (112)
186. lært seg å hogge riktig ord med riktig øks (112)
187. En svart katt med avrevet hale (113)
188. katten uten hale (114)
189. de hadde beveget seg i hesteskoform (114)
190. som forvandlet bakken under føttene hans til skipsdekk (115)
191. de hvite mennene hadde reist telt (116)

192. som hadde redsel i ben og armer (116)
193. Kapteinen på båten hadde ikke uniform (116)
194. fordi han hadde tannverk (116)
195. Daniel sto på dekk (117)
196. så på ham med stor mistenksomhet (117)
197. Han stilte seg på tå (117-8)
198. holdt utkikk (119)
199. de slo leir (119)
200. En gang hadde han vært soldat (119)
201. Etter det hadde han blitt sjømann (119)
202. hadde han bare arbeidet på mindre skuter som gikk i kystfart (119)
203. er du blitt fosterbarn (120)
204. den magre mannen med tornekrone (120)
205. Hva er marked? (121)
206. å legge merke til det (121)
207. la ham være i fred (122)
208. en stor mann med bar overkropp (125)
209. Han hadde fått krampe i kjevene (125)
210. uten å ha fått lov til (126)
211. Jeg er kullbærer (126)
212. Han hopper tau (126)
213. Han er på midlertidig besøk (127)
214. Skal det aldri ta slutt (127)
215. da en hest og kjerre ramlet forbi (134)
- 216.
217. Som regel gjentok han (137)
218. klage over hodepine (137)
219. En liten mann med høy hatt (139)
220. Han stirret med forferdet henrykkelse (139)
221. Det hersker stor forventning foran foredraget (149)
222. gjentatt gang på gang (141)
223. som hadde møtt dem på gaten i skitten hatt (143)
224. en mann med stor makt (143)
225. det var skandale (144)

226. marsjerte i sluttet tropp (144)
227. Jeg var blitt lovet godtgjørelse (145)
228. Han hadde rød ytterfrakk (147)
229. der han oppbevarte blekkhus og penn (148)
230. et bord med hvit duk (149)
231. Borgermesteren, som er botaniker (151)
232. lover stor deltakelse (151)
233. slept seg lang vei med brukket ben (151)
234. I natt bor vi på hotell (152)
235. kanskje man skal kalle det foredrag (153)
236. oppvise betydelig list (153)
237. Jeg er modist med syv ansatte (154)
238. Vi syr på bestilling (154)
239. tok frem notatblokk og blyant (155)
240. De skal naturligvis ikke løse billett (158)
241. Det var klar himmel (159)
242. Jeg ber om unnskyldning (160)
243. brøt det straks ut krangel (163)
244. kan det hele munne ut i konkurs (163)
245. Kall meg aldri skurk (164)
246. å kalle deg stratenrøver (164)
247. en spar med lav verdi (164)
248. hadde bestilt tidlig supé (164)
249. Der er det dårlig akustikk (165)
250. sprang gjennom lyskretsen mot ukjent mål (166)
- 251.
252. ville domstol og mentalsykehus være en tenkelig konsekvens (171)
253. Det blir skandale (176)
254. Det var morgen (178)
255. Det var allerede blitt kveld (180)
256. å skaffe oss plass og billetter (180)
257. en mann i uniform (181)
- 258.
259. hadde hest og vogn (183)

260. han hadde billett (183)
261. bar med seg samme lukt (183)
262. rautet på dekk (184)
263. får dårlig rykte (186)
264. Derfor ble han lege (190)
265. Han kunne ha blitt lærd (190)
266. tid til å ta ordentlig avskjed (192)
267. Han tok tak i Daniels hånd (198)
268. som akkurat spiste frokost (198)
269. Hun snakket dårlig svensk (198)
270. Hun burde ta lærdom (198)
271. Han er jo prest (200)
272. han er sønn av en landsbyhore oppe i Småland (200)
273. han fikk bli dreng (201)
274. skulle han skaffe seg greie på (201)
275. slo den med voldsom kraft i hodet på grisen (203)
276. Edvin ga tegn til drengen (204)
- 277.
278. følte han trang til å le (207)
279. Så stilte han seg foran speilet med bøyd hode (208)
- 280.
- 281.
282. som han fikk beskjed om (209)
283. Forvandle villmannen til menneske (210)
284. Jeg har besøk (211)
285. dødd av koldbrann (211)
- 286.
287. samlet rundt ham i bønn (211)
288. for at en skal få plass i kisten (213)
289. Dagen etter var det søndag (218)
290. å ha sovemorgen (218)
291. som han hadde fått beskjed om (218)
292. ville vekke glede (223)
293. og hogg tak i ham (223)

294. tok tak i benet hans (224)
295. skal han avlegge full bekjennelse (225)
296. Han skal be om forlatelse (225)
297. er å avlegge bekjennelse (225)
298. Da blir det spissrotgang (226)
299. Det er doktor i Simrishamn (227, nb)
- 300.
301. å være menneske (230)
302. at en ikke skal drepe gris (230)
303. Daniel innså med forferdelse hva (231)
304. Det får han ikke lov til (232)
305. som hadde blekt ansikt og gult hår (235)
306. og hadde skallet hode (235)
307. sendt herrene på besøk (235)
308. og skiftet stilling (236)
309. Mulatt. Med lav intelligens (237)
310. et rødt mursteinshus med tårn i midten (241)
311. det begynte å bli oppoverbakke (242)
312. for å heise seil (243)
313. Jeg er på vei hjem (245)
314. Det som kalles ørken (246)
315. Jeg kan heise seil (247)
316. Du har voldt Alma og Edvin stor bekymring (248)
317. Daniel så med forferdelse på Madsen (248)
318. De kom ut på dekk (248)
319. at hun ikke var passende selskap (251)
- 320.
- 321.
322. Hvem skulle han ha følge med (253)
323. Hun snakker i villelse (256)
324. at det skulle bli kveld (264)
325. Oskar hadde kvelden før fått hodepine (269)
326. i ferd med å binde lodd rundt en menneskekropp (269)
327. Er det mord (269)

328. og gjorde honnør (271)
329. En mann med grått skjegg (271)
330. Han ber om tillatelse til å obdusere (272)
331. Skal det skjæres i lik på kongens skip (272)
332. de hadde begitt seg ut på seiltur (273)
333. Han blir brakt i land (273)
- 334.
335. før Hans Majestet gir tillatelse (274)
336. som tegn på underkastelse (275)
337. i tilfelle han skulle kaste seg over bord igjen (276)
338. hadde lenge hatt mistanke om (279)
- 339.
- 340.
341. Arnmann hadde stor innflytelse (280)
342. hadde godt lag med hester (280)
343. uttalte Arnmann med kraftig røst (281)
- 344.
345. Han lå til langt på natt (282)
346. har satt noen av karene sine på post ved kirken (283)
347. Daniel gled mellom søvn og våken tilstand (284)
348. De holdt seg på avstand som om brevet inngjød dem stor respekt (289)
349. som har stukket henne med kniv (291)
350. og med lav stemme ropt på Alma (295)
351. Det fantes ikke håp (297)
352. hadde kjørt seg fast med lastebil (301)
353. Jeepen med firehjulstrekk og kraftig motor (302)

Some naturally occurring bare singulars in Norwegian (mostly spoken data) in the period (1999-2003). [NOD]

1. Hun sendte ut spørreskjema.
2. Han måtte hjem og passe sykt barn.
3. Hva er det som får en 21-åring til å drive gård sånn helt alene?

4. ... selv om ny traktor står på ønskelista.
5. Soknerådet stilte i dag med kake.
6. I morgen er det duket for fest i Holmenkollen.
7. Det er i dag ny løypetrasé.
8. Jeg bruker ikke nakent nomen.
9. Senere blir det liten kuling.
10. Vi har ikke vanlig badekar engang. Og langt mindre boblebad.
11. Hva skulle vi gjort uten do?
12. Kan jeg ha med notatbok?
13. Vi får ta med paraply.
14. Skal jeg hente dyne til deg?
15. Trenger du bil sånn en gang iblant?
16. Det er god økonomi å leie bil hos "rent-a-wreck".
17. Pågangen er ganske stor, så om du trenger bil, er det lurt å ringe på forhånd.
18. Kjører du med piggdekk kan du vente deg bot.
19. Da hadde han sikkert vært i telefonkiosk og ringt.
20. Den første uka i leir var kummerlig for kosovoalbanerne.
21. Ja, i dag skulle vi sett film hele kvelden.
22. Det er mye morsommere å kjøre ut til Agdenes fyr og kjøre på hjort.
23. Ja, dette gikk jo bra, men en annen gang så bør du nok ikke spise banan under muntlig eksamen.
24. De har stadig sånne forsøk med mikrobølgeovn.
25. Han ble massert med dildo i bar overkropp.
26. Dette er første gangen jeg har vært blakk siden jeg kjøpte hus.
27. Det er i grunn merkelig at flere tar selvmord nå enn før.
28. Denne remuladen er perfekt på pølse eller til hamburger.
29. A: Den må du være forsiktig med. B: Den (gitaren) skal få sitte i stol.
30. De ble enige om å bruke tankbil.
31. ... med beskjed om å møte ham ved parken på sykkel.
32. ... og får nøkkel til Akersgaten 5.
33. Vi er under ordre.
34. De arbeidet overtid.
35. ... vaktet av fire mann med hund.
36. ... men blir møtt av en vaktmann med pistol.

37. ... var tvunget til å stå vakt der nede.
38. Der er det flatt tak.
39. De bruker Oscars hjem som base. Vi hadde filial der og vårt navn var i grunnen kjent for Gestapo.
40. Så bestemte de at alle rasjoneringskortene måtte hentes ved personlig frammøte.
41. ... dersom de ikke senere ville bruke maten som politisk virkemiddel.
42. Man kunne presse opp porten uten å bruke nøkkel.
43. Han driver butikk.
44. Det er jo ikke så vanskelig å stryke genser akkurat, da.
45. Bil er et naturvennlig kjøretøy.
46. Det var utrolig hyggelig å få pakke av deg.
47. Skal ha møte med sjefen min i morgen tidlig.
48. Skal vi holde musene borte fra huset så må vi ha katt.
49. Jeg kan lese bok, jeg.
50. Har du bil klar?
51. Føler meg veldig på gyngende grunn.
52. Buss er et naturvennlig kjøretøy.
53. Hvis folk tar kontakt med henne sånn at hun skjønner at folk vet om det
54. Får så dårlig selvtillit av dette med jobbmangel
55. Rusletur på Ladestien og kinotur inviterer ikke til første kyss
56. Men bare trofékjæreste vil jeg ikke være
57. Selv om jeg ikke har jobb og penger
58. Noe jeg ikke er i stand til for tiden
59. Tror han kommer til å innse hvor fattig, arbeidsledig og sekretær jeg er
- 60.
61. Da er det litt greit at kroppen sier ifra om at hvit dag er velkommen
62. Det er passelig besøkstid for sånne
63. Skal kanskje på besøk til han fra forrige helg
64. Nå må han selv ta ansvaret for oppfølging

From a formal letter sent to all students at the University (2002): [FL]

1. Alle studenter må betale semesteravgift til Studentsamskipnaden.

2. Lånebrev utleveres mot fremvisning av gyldig semesterkort eller kvittering på *betalt semesteravgift og legitimasjon*.
3. Studenter på HF-fakultetet, SVT-fakultetet og realfagsstudenter må benytte studweb [...].
4. Studweb er tilgjengelig for nye studenter fra og med uke 33.
5. Skal du ikke ta eksamen dette semesteret, må du angi det semesteret du skal ta eksamen som eksamenstidspunkt.
6. Er du student ved profesjonsstudiene, kan du f.o.m. uke 33 benytte studweb til adresseendring, men ikke til eksamensmelding da du blir automatisk meldt opp til eksamen.
7. Ta kontakt med Studentservice for oppmelding i frivillige fag.
8. NÅR DU ER REGISTERET, VIL DU FÅ TILSENDT SEMESTERKORT TIL SEMESTERADRESSE/STUD.POST/MED.POST.
9. Hvis du endrer semesteradresse i løpet av studiet, må du registrere din nye adresse [...]

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