Mari Nygård

Discourse ellipsis in spontaneously spoken Norwegian

Clausal architecture and licensing conditions

Thesis for the degree of Philosophiae Doctor

Trondheim, May 2013

Norwegian University of Science and Technology
Faculty of Humanities
Department of Scandinavian Studies and Comparative Literature

NTNU – Trondheim
Norwegian University of
Science and Technology

NTNU
Norwegian University of Science and Technology

Thesis for the degree of Philosophiae Doctor

Faculty of Humanities
Department of Scandinavian Studies and Comparative Literature

ISBN 978-82-471-4330-8 (printed ver.)
ISBN 978-82-471-4331-5 (electronic ver.)
ISSN 1503-8181

Doctoral theses at NTNU, 2013:115

Printed by NTNU-trykk

Preface

Even though the process of writing a dissertation is lonely at times, in my case this has indeed been a qualified truth. I have been surrounded by persons who have helped and supported me in different ways, and for this I am deeply grateful.

I would never have been able to fulfill this achievement without the help and support from my supervisor, Professor Tor A. Åfarli. Not only has he contributed with his impressive expertise within theoretical linguistics, he has also been an infinite source of inspiration and encouragement. I sincerely admire his open-mindedness towards empirical data and his theoretical creativity. This has led to many fruitful discussions from which I have benefited and learned enormously. Tor has a metaphor for everything. Thank you for believing so strongly in my project, and for being an extremely thorough and competent reader.

I also feel greatly indebted to Terje Lohndal for having read the whole manuscript at a late stage. His suggestions and comments were insightful and inspiring, and they have without doubt contributed to improve the quality of the dissertation. I also thank Bridget Samuels for a thorough proof-reading and language check of the thesis. Yet, all remaining flaws are my own.

This project has been financed by the Faculty of Humanities at NTNU, and I have conducted my work at the Department of Scandinavian Studies and Comparative Literature. I have benefited from various linguistic seminars which have included participants also from other departments at the Faculty of Humanities at NTNU. I wish to thank my colleagues in my department and in other departments for friendship and encouragement. In particular, thanks to Heidi Brøseth and Kristin M. Eide for commenting on my work, and to Brit K. Mæhlum for being a constant source of motivation. Last, thanks to Karin M. Hansen for administrative help; this indeed did improve my everyday life at work.

During the autumn 2009 and spring 2010, I was very fortunate to have several visits at the Centre for Languages and Literature at Lund University. I wish to thank Professor Marit Julien for formally inviting me. Professor Halldór Sigurðsson generously took of his time to discuss theoretical issues with me. These discussions directly led to the development of my dissertation, and for this I am very grateful. Moreover, I wish to thank both of them, as well as Johan Brandtler and Piotr Garbacz for their friendly hospitality during my time in Lund.

The social environment among the PhD students in my department has created a good atmosphere at work, and many of my colleagues have also become dear friends. I thank Guro Busterud, Stian Hårstad, Hanne Rustad, Leiv Inge Aa and Inger Johansen for a companionship which has been very important to me. My special thanks to Guro for fruitful discussions on syntax and for having read and commented on my work. Thanks to Ingvild Hagen Kjørholt, Tatjana Kielland Samoilow and Øyvind Prytz for friendship and mutual encouragement.

I thank my family and friends for being my private cheer-leading team, and for stepping in as baby-sitters when needed. A final word of gratitude is reserved for my dear husband Espen Fredriksen, for his patience and care, and my two wonderful sons Oskar and Ola, for lots of affection and laughter.

List of abbreviations

A’	*A bar*
AP	*Adjective Phrase*
AdvP	*Adverbial Phrase*
AGR	*Agreement*
Aux	*Auxiliary*
CLn	*Context Linker*
COMP	*Complementizer*
CP	*Complementizer Phrase*
CS	*Conceptual Structure*
Decl	*Declarative mood*
DM	*Distributed Morphology*
DP	*Determiner Phrase*
ELEC	*Empty Left Edge Condition*
E-semantics	*Externalized semantics*
F	*Feminine gender*
Fin	*Finite*
GB	*Government and Binding*
G-semantic	*Grammar semantic*
Imp	*Imperative mood*
INFL	*Inflection*
Interrog	*Interrogative mood*
IP	*Inflectional Phrase*
I-semantics	*Internalized semantics*
LF	*Logical Form*
masc	*Masculine gender*
MP	*Minimalist Program*
n	*neuter*
nc	*null constant*
neut	*Neuter gender*
NoTa	*Norwegian Speech Corpus – the Oslo part*
NDC	*Nordic Dialect Corpus*

NP	*Nominal Phrase*
NUCL	*Nucleus*
OBJ	*Object*
OEA	*Obligatory Element Absent*
OEP	*Obligatory Element Present*
Op	*Operator*
P & P	*Principles and Parameters*
PERF/PerfP	*Perfective/Perfective Phrase*
PF	*Phonetic Form*
phi val	*Valued phi feature*
PL	*Plural*
PP	*Prepositional Phrase*
Pred	*Predicate*
PrP	*Predicational Phrase*
PS rules	*Phrase Structure rules*
REFL	*Reflexive*
SG	*Singular*
S-semantic	*Situational semantic*
Spec	*Specifier*
Subj	*Subject*
t	*Trace*
Top	*Topic*
TP	*Tense Phrase*
uF	*Unvalued feature*
uphi	*Unvalued phi-feature*
vP	*Little vP/little verb phrase*
VP	*Verb Phrase*
V1	*Verb first*
V2	*Verb second*
Ø	*Phonetically null*
¤	*Slot for insertion*
Λ_A	*Logophoric agent*
Λ_P	*Logophoric patient*

Contents

1 Introduction

1.1 Ellipsis and fragmentary language in spontaneous speech

When confronted with transcriptions of spontaneous speech, people tend to be surprised by its incoherent and chaotic appearance. Many linguists have pointed out that this register represents a challenge to conventional syntactic analysis (Teleman 1983, Cheshire 2005). Spontaneous speech exhibits several features which are distinct from the characteristics of the more well-behaved written language. For instance, because spoken dialogues take place in real time, there is no time lag between production and reception, and the speakers may rephrase their utterances while speaking. As a consequence, sentence boundaries are often unclear, and we typically find overlapping speech, interruptions and grammatically incomplete utterances.

Speech is a primary form of linguistic behaviour: it is through speech that children learn their mother tongue, and being currently spoken is a criterion for defining a living language (Lindström 2008):

> Det talade språket, kanske just i form av samtal, manifesterar emellertid en mycket grundläggande form av människans språkliga verksamhet och kompetens. Det talade språket är en biologisk förmåga hos människan, ett medel för bekräftande och förnyande av sociala kontakter i omedelbara möten mellan individer. Ett studium av samtalsspråk kan därför avslöja något grundläggande om språkanvändningen och därigenom också om språkstrukturen, eftersom språkanvändning förutsätter bemästrande av strukturer (Lindström 2008: 26).

> *The spoken language, maybe precisely in form of dialogue, still manifests a very fundamental form of human linguistic activity and competence. Spoken language is a biological capability in humans, a means of confirming and renewing social contexts in spontaneous encounters between individuals. A study of the language in spoken dialogues can therefore reveal fundamental insights about language use and by this also about linguistic structure, since linguistic performance presupposes a mastery of structures.*[1]

Thus, it has often been stated that spoken data should constitute the empirical base for linguistic theories. However, the practice has been radically different. Traditional grammars have generally been based on idealized written language. In Antiquity, grammar was directly connected to the art of writing, and in most theories of grammar, this written bias has been upheld.

[1] My translation.

However, since spontaneous speech is the primary linguistic medium, the specific features of this register need to be described and explained, both empirically and theoretically. The present dissertation is an attempt to do just that. Still, I do not aim to grasp all features of spoken language, neither to propose a complete grammar for the spoken register. This would be an impossible task within the frames of a dissertation.

A distinction which needs to be made at this point is the one between spoken language *per se*, i.e., as contrasted to written language, and on the other hand spoken dialogues, i.e., as contrasted to monologues and recitations. Whereas the term *spoken language* points to the medium of the linguistic expression, the term *spoken dialogue* focusses on the contextual setting. This dissertation is concerned with characteristics of spoken dialogues.[2] A typical trait of spoken dialogues is that many things are implicitly understood, and this often leads to a fragmentary appearance. This will constitute the empirical focus of this dissertation. Hence, rather than primarily describing the differences between spoken and written language, this dissertation investigates the properties of fragmentary as opposed to non-fragmentary language.

More specifically, the focus is confined to the investigation of one specific feature which is frequently attested in spoken dialogues, namely so-called situational ellipses (Leech 2000) or discourse ellipses.[3] The examples below are typical occurrences with (1) displaying a case of an omitted referential subject, (2) an omitted expletive subject, (3) an omitted object, and (4) a case of an omitted subject and an auxiliary verb:[4]

(1) ~~Jeg~~ husker litt fra jeg var åtte. NoTa[5]
~~I~~ remember some from I was eight
'I remember a little bit from the time I was eight.'

(2) ~~Det~~ var én som hadde kjørt forb… over en rev. NoTa
~~it~~ was one that had driven past… over a fox
'There was one who had hit a fox.'

[2] Although formal, generative linguistics has been working with spoken data, e.g., eliciting acceptability judgments from informants, it is fair to claim that very little formal linguistic work has been done on spoken dialogues.
[3] These two terms are equivalent. For the sake of consistency, I will use the term 'discourse ellipsis' throughout this thesis.
[4] In these examples and throughout the rest of the dissertation, the strikethrough indicates that the element in question is elided. Obviously, it is not possible to specify exactly which elements that have been elided. Rather, the elements that are assumed to be silent are the most probable candidates from contextual information.
[5] NoTa stands for Norwegian Speech Corpus – the Oslo part. See section 1.7.1 for more information.

(3) ~~Det~~ skal jeg òg. NoTa
~~that~~ shall I too
'I am going to do that, too.'

(4) ~~Jeg har~~ vokst opp i et stort stort hus. NoTa
~~I have~~ grown up in a big big house
'I grew up in a big, big house.'

The investigation in this thesis is restricted to data from spoken Norwegian. Obviously, it would be interesting to look at other languages as well, and to compare the restrictions on the ellipses to see whether they coincide or differ. However, within the frames of this dissertation, it has been necessary to restrict the empirical focus to Norwegian data. An additional reason for restricting the empirical scope is that there has not been any previous work on discourse ellipsis in Norwegian. Consequently, before turning to other languages, it is necessary to provide a fairly comprehensive overview of the Norwegian situation.

The overall purpose of this work is thus to develop a grammar of discourse ellipses in spoken Norwegian. A question which then arises is the following: is it necessary to establish a separate grammar for this register, or is the existing grammar developed for idealized/written language suitable? I propose that, despite the fragmentary impression given by spoken language, the underlying syntax is basically the same as for written or non-fragmentary language. Of course, the licensing conditions for fragmentary as opposed to non-fragmentary data are not necessarily the same. However, I believe that it is a mistake to explain these differences by pointing to different grammars. Rather, it is necessary to single out at what point in the linguistic process these constraints come to differ. This is an overarching goal for this dissertation.

Two major types of questions need to be addressed. First, the object of study must be described. Given that discourse ellipses exist, what are their characteristics? Are the ellipses truncated structures, or are they best analysed as underlyingly full-fledged sentence structures? Second, why are discourse ellipses possible in the first place? What are their licensing conditions?

Another fact which bears investigation is that, despite the fact that meaning-bearing constituents may be absent, discourse ellipses are easily parsed and most often do not lead to misunderstandings. Hence, the ellipses do not create ambiguity. Why is this so? To answer this, we need to investigate both structural and semantic/pragmatic conditions.

In this introductory chapter, I establish the empirical focus of the dissertation. I briefly present different types of fragments, e.g., structural ellipsis types and what I refer to as freestanding constituents, and I show how these constructions differ from discourse ellipses and thus why they are not included in this thesis. Moreover, I discuss whether the grammar of spontaneous speech is equal to the grammar of idealized written language, or whether these registers are governed by different systems. I outline some basic theoretical, i.e., generative, assumptions which are fundamental to the analysis proposed in this thesis. Thereafter, I discuss the value of performance data and the distinction between I-language and E-language, as well as the one between grammaticality and acceptability. This leads me to a comparison of different methods for collecting data, discussing their advantages and disadvantages with respect to this study. Finally, I show examples of related elliptical data from selected written registers.

1.2 The empirical base

A first distinction that must be established is the one between dialectal variation among spoken varieties and general characteristics of spontaneous speech. This difference is discussed in Sandøy (1994), who defines *spoken language* as contrasted with written language. The relevant distinction is then the one between the oral medium and the written medium. *Dialects*, on the other hand, are defined as geographical or social varieties,[6] and this will not be investigated in this thesis.

I have established that the empirical focus of this dissertation will lie not on spoken language *per se*, but rather on spoken dialogues. Yet, as emphasized by Teleman (1983), it is naïve to assume that written texts are characterized by monologue, whereas spoken texts are dialogues. There are several hybrid categories, and we therefore need to determine which of these are relevant for our purposes. The characteristics of prepared spoken material such as lectures, sermons and recitations may have more in common with written than with spoken language, and they will therefore not be of any interest to this study. On the other hand, the language in certain written media, e.g., text messaging, Facebook comments and interviews, share several characteristics with the language of spoken dialogues, and will therefore

[6] Syntactic properties of diverse Scandinavian dialects are currently being broadly studied through the projects/networks *Scandiasyn*, *NorDiaSyn*, *NORMS* and *N'CLAV*.

occasionally be included for purposes of illustration.[7] I will briefly describe some of these fragmentary written registers in section 1.7.

In principle, relevant data could therefore be found also in the written registers mentioned above. However, for my purposes, spoken dialogues probably provide the most suitable source of data. Spoken data surround us continuously. Moreover, thanks to tagged spoken corpora, these data are easily accessible. In these corpora, the context is easily observed, both the linguistic context, since the corpus provides earlier utterances in the dialogue, and in some cases also the non-linguistic context.[8] This is fortunate, since the licensing of discourse ellipses is very often context dependent. Finally, elliptical data in spoken dialogues are not influenced by written standards, contrary to the data found in fragmentary written registers. Hence, by primarily using spoken data, a possible source of bias is avoided.[9]

1.3 Narrowing down the object of inquiry

As mentioned, I will investigate so-called *discourse ellipses*. Ellipsis can generally be defined as the non-expression of sentence elements, as witnessed by the quotations given below:

> **ellipsis** Any construction in which some material which is required for semantic interpretation and which could have been overtly present is absent but immediately recoverable from the linguistic context, particularly when that material is overtly present elsewhere in the sentence (Trask 1993: 89).
>
> Elliptical processes capitalize on the redundancy of certain kinds of information in certain contexts, and permit an economy of expression by omitting the linguistic structures that would otherwise be required to express this information (Merchant 2001: 1).
>
> **ellipsis** The omission of one or more words that are obviously understood but that must be supplied to make a construction grammatically complete (Merriam-Webster Online Dictionary[10]).

This phenomenon has triggered the interest of many linguists, among other things because the usual form/meaning mappings appear to break down in ellipsis: there is meaning without form (Merchant forthcoming). In order to develop a correct model for the analysis of ellipsis,

[7] The increased use of digital social media makes this aspect relevant, since the language in these registers have very similar characteristics to the spoken language. Thus, the generalizations reached in this work may be applicable to the structural description of these registers too.
[8] Some modern corpora (e.g. the NoTa corpus and the Big Brother corpus) include video recordings of the spoken dialogues.
[9] Note that the examples provided in this thesis do in general follow the orthography of the Norwegian *Bokmål* ('Book Language'), which is one of the two standard forms of written Norwegian. When an example is given in the other written standard, *Nynorsk* ('New Norwegian'), this is indicated in the surrounding text. The corpus examples cited follow the same pattern, as the corpora that I have used are orthographically and not phonetically transcribed.
[10] http://www.merriam-webster.com/dictionary/ellipsis [Accessed September 2012]

accounting for the form-meaning correspondence is therefore very important. Two distinct approaches to this issue, global and selective theories of semantics, will be compared in chapter 2.

Ellipses and fragments come in various kinds, and most of them will not be discussed in any depth in this dissertation. The goal of this section is to restrict the empirical focus and to pin down the data types which will constitute the main object of inquiry. Three types of fragments will be presented and then left out of further consideration:

1 Structural non-discourse triggered ellipses
2 Performance governed apocopes
3 Freestanding constituents

1.3.1 Structural ellipses

There are many types of ellipses, and some of the subtypes have been vividly debated in generative work. Yet, this debate has focussed mainly on ellipses that are not particularly discourse triggered, but which occur also in the written standard. Merchant (forthcoming) gives the following overview of different ellipsis types. The examples given are also from his article. For purposes of presentation, I will label this group *structural ellipsis*:[11]

Sluicing

(5) John can play something, but I don't know what ~~John can play~~.

VP-ellipsis

(6) John can play the guitar; Mary can ~~play the guitar~~, too.

NP-ellipsis (or N'-ellipsis)

(7) John can play five instruments, and Mary can play six ~~instruments~~.

[11] The examples in (5-11) are taken from Merchant (forthcoming). In addition, Merchant includes what he labels *fragment answers:*

Q: Who can play the guitar?
A: (Not) John

As opposed to the remaining categories in the list, it is unclear whether this ellipsis type has clausal structure. I will come back to fragments of this form shortly.

Gapping

(8) John can play the guitar, and Mary ~~can play~~ the violin.

(9) John can play the guitar better than Mary ~~can play~~ the violin.

Stripping/bare argument ellipsis

(10) John can play the guitar, {and Mary, too/and Mary as well/but not Mary}.

(11) John can play the guitar better than Mary.

These structural ellipsis types differ from discourse ellipses in at least three ways:

A. The ellipsis belongs to the core grammar.
B. The omission is not necessarily optional, and the ellipsis is not necessarily semantically parallel to the non-elliptical counterpart.
C. The elided constituent is recoverable sentence-internally.

Firstly, structural ellipses are typically analysed as belonging to core grammar (see Merchant 2001, Fox & Lasnik 2003, Lasnik 2005, 2010, among others). As opposed to discourse ellipses, the occurrence of structural ellipses is not register-specific. Rather, these ellipses are found in both spoken and written texts.

Secondly, in discourse ellipses, omission is optional. A corresponding non-elliptical version would be acceptable, and it would in most cases yield the same reading as the elliptical version.[12] In structural ellipses on the other hand, the meaning of the elliptical and the non-elliptical variants are not necessarily the same. Hendriks & Spenader (2005) give the following examples for this (12)-(13). Example (14) illustrates the opposite situation in discourse ellipsis:

(12) A fish walked and a fish talked. *(2 different fish)*

(13) A fish walked and __ talked. *(The same fish)*

[12] Yet, note that discourse ellipses may give rise to several different interpretations which are not available for the corresponding non-elliptical variants, in which one overt specified subject must be chosen. This is seen in the following example: ~~*Jeg/han/hun/vi*~~ *var på kino i går*. 'I/He/She was at the cinema yesterday.'

(14) Jeg/~~Jeg~~ driver og prøver å komme på når jeg sist var på kino. NoTa
I/~~I~~ keep on and try to come on when I last was on cinema
'I am trying to figure out when was the last time I went to the cinema.'
('Jeg' refers to the same person in both cases)

In structural ellipses, a non-elliptical variant would sometimes be ungrammatical, contrary to what is the case for discourse ellipses: "Surprisingly, even if ellipsis is the non-expression of sentence elements, these do not necessary have to be elements that are normally expressible" (Hendriks & Spenader 2005: 4). Hence, ellipsis can in these cases be the only way to express a certain meaning, as the corresponding non-elliptical form would violate syntactic or semantic constraints. Merchant (2001) gives the following example of so-called repair by ellipsis:

(15) They want to hire someone who speaks a Balkan language but I don't remember which (*Balkan language they want to hire someone who speaks).

Finally, in structural ellipses, the semantic content of the elided constituents is recoverable sentence-internally, whereas in the discourse ellipses, a sentence-internal antecedent is often not found. The sluicing example in (5) above and repeated as (16) illustrates this, and it displays a striking contrast to the discourse ellipsis in (17):

(16) John can play something, but I don't know what (John can play).
(17) (pointing to a poster of a movie):
~~Har du~~ sett den, eller?
~~have you~~ seen it or
'Have you seen it, or what?'

To sum up, there are some fundamental differences between structural ellipsis and discourse ellipses. The licensing conditions of structural ellipses will not be treated here, as this is in itself a vast area of research (see e.g. Johnson 2001, Merchant 2001, among many others). Note, however, that certain overarching theoretical questions may still be relevant for both groups. Merchant (forthcoming) proposes that the following basic questions arise when analysing ellipses:

- The structure question: Is there unpronounced syntactic structure in ellipsis sites?
- The identity question: What is the relationship between the understood material in an ellipsis and its antecedent?
- The licensing question: Which heads, positions and structures allow for ellipsis, and what are the locality conditions on the relation between these structures and ellipsis?

All these questions will be relevant in my investigation of discourse ellipses, but as will become clear, the answers will not be the same as the ones proposed for structural ellipses.

1.3.2 Irregular 'error types' in spoken language

Having dismissed the various types of structural ellipsis, my focus is now narrowed down to ellipses triggered by discourse. In this section I will briefly discuss certain types of fragments which are typical in spoken discourse and comparatively rare in written or idealized registers. However, these strings cannot be categorized as discourse ellipses proper, and therefore they will be excluded from my study.

The linguistic properties of spontaneous speech were investigated in the TAUS project (the spoken language investigation in Oslo) (Hanssen et al. 1978), which is the largest project investigating spoken Norwegian to date. TAUS primarily had a sociolinguistic focus; syntactic properties were not investigated in depth. A parallel project, *Talsyntax*, was carried out for Swedish in the 1960s and '70s. Other accounts of the grammar of spoken language are found in Miller (2006), Miller & Weinert (1998), Blanche-Benveniste (1997) for French, Nygård (2004) and Johannessen and Jørgensen (2006) for Norwegian.

In the TAUS project, the construction types specific to spoken language were labelled 'error-types'. The intention was to target constructions which deviated from traditional grammatical requirements for idealized Norwegian. Although it was emphasized that the term 'error-type' was intended as descriptive, and not pejorative, it does unavoidably insinuate that spoken language is a variety with imperfections, compared to the flawless written register.

The construction types presented below are based on the categorization in Hanssen et al. (1978) and in Johannessen & Jørgensen (2006). The examples are taken from Johannesen & Jørgensen (2006), who collected them from the NoTa corpus.[13] Note that the construction of interest is in each case marked with underscore in the example.

Lexical Epanorthosis or lexical corrections are corrections of one or more words without breaking the structure of the sentence:

(18) det kommer fra jeg kjøpte det i Devil's Lake North Dakota.
it comes from I bought it in Devil's Lake North Dakota
'It comes from, or rather I bought it in, Devil's Lake North Dakota.'

Syntactic Epanorthosis or syntactic corrections are also corrections, but in this case, the structure of the sentence is not completed. More precisely, the speaker starts out with one syntactic construction, but this construction is changed during the utterance:

(19) ja hvis jeg flyt- la oss si at vi fl- jeg f- bodde der fra jeg gikk i åttende.
yes if I mov- let us say that we m- I m lived there from I went in the 8th
'Yes, let us say that we moved – I lived – there from I was in the 8th grade.'

Syntactic Apocope occurs when an utterance lacks one or more obligatory parts that, if present, would occur sentence-finally. According to Hanssen (1983), this is the most widespread irregularity within the spoken register. Several subtypes of syntactic apocope can be distinguished. A speaker may be interrupted by another speaker, who in turn may either bring in a new construction, or may complete the construction that was initiated by the first speaker. Finally, a speaker can interrupt himself with a new construction before finishing the previous one. The last scenario is illustrated in (20):

(20) følte du at du måtte forandre deg sjøl da eller eller h- holdt du på …
felt you that you must change yourself then or or d- did you …
'Did you feel that you had to change or were you …'

[13] The English terms are taken from Johannessen & Jørgensen (2006), who translated them from the 'error-types' in TAUS, and labelled them *rhetoric types* instead, since they were recognized already in antiquity. Johannessen & Jørgensen claim that many of them were used to give a sense of dialogue into otherwise monotonous monologues.

Johannessen & Jørgensen (2006) also mention the category *Ellipsis*, which is parallel to the discourse ellipses discussed in this thesis.[14] The missing constituents in ellipses are elided either sentence-initially or sentence-medially. Johannessen & Jørgensen (2006) give the following example, displaying an omitted subject:

(21) em har bodd ganske mange steder.
ehm have lived quite many places
'Well, (I) have lived in quite many places.'

Both syntactic apocope and discourse ellipses involve the omission of constituents. However, in apocope, elements are omitted sentence-finally, whereas discourse ellipses display sentence initial or sentence medial omissions (Hanssen et al. 1978, Johannesen & Jørgensen 2006). Moreover, in apocope the omission of elements is more random. It appears to be governed purely by performance-related factors. In the discourse ellipses on the other hand, the omission does not occur randomly, but rather obeys certain structural patterns.

Anacoluthons can be described as telescopic constructions in which two sentences melt into one, such that one constituent is common to both. Thus, these constructions are syntactic blends. The common element is a constituent in both sentences, yet it can fill different syntactic functions in the two sentences:

(22) Bogstadveien Hegdehaugsveien er det egentlig ganske forferdelig bortsett fra et par steder så er det kun gutter i blå skjorte og mørke bukser.
The Bogstad Road The Hegdehaug Road is it actually quite horrible except from at a few places are there only blokes in blue shirt and dark trousers.
'In Bogstadveien or Hegdehaugsveien it is actually quite horrible apart from at a few places there are only blokes with blue shirts and dark trousers.'

[14] The category of *Ellipsis* in the TAUS project is also discussed in Wiggen (1986).

False starts are a subtype of apocope, characterized by a "lack of continuation of an utterance" (Johannesen and Jørgensen 2006: 6). Very often, this occurs after only one word:

(23) nei da vi har det bra vi så…
oh no we have it good we so
'Oh no, we have a very good time, so…'

Epizeuxis is defined as the repetition of elements. Structurally, this could be characterized as a parallel case to the Lexical Epanorthosis, since both types involve a lexical doubling:

(24) følte du at du måtte forandre deg sjøl da eller eller h-holdt du på…
felt you that you must change yourself then or or w were you at
'Did you feel that you had to change yourself or or w- were you…'

As noted, an important difference between the discourse ellipses and the remaining 'error-types' in spoken discourse is that whereas the ellipses obey systematic restrictions, the remaining constructions are governed solely by performance factors. Therefore, none of these construction types will be discussed any further in this thesis.

1.3.3 Freestanding constituents

The last type of fragment that will not be discussed further is what I will label a freestanding constituent. With this term, I refer to constituents which do not seem to have a clausal structure, but which still express full-fledged propositions and function as independent utterances:

(25) New shoes?
(26) (Rude dinner guest): 'Salt!'

This type of fragment is often mentioned when the issue of ellipsis is brought up. The question is: Are these ellipses in a technical sense? And if they are, what are they ellipses of? Wittgenstein (1953: §2) discusses this issue in his *Philosophical Investigations*, and he gives the following illustrative example of a conversation between a builder A and an assistant B:

> A is building with building-stones: there are blocks, pillars, slabs and beams. B has to pass the stones, and that in the order in which A needs them. For this purpose they use a language consisting of the words "block", "pillar", "slab", "beam". A calls them out; – B brings the stone which he has learnt to bring at such-and-such a call.

The relevant issue here is whether the call *Slab!* – intended as an order to bring the slab, should be defined as a sentence or a word. Wittgenstein leaves the question open, and says that one could call *Slab!* a word and also a sentence. He points out that if it is a word, then it does not have the same meaning as the like-sounding word *slab* in the ordinary language. In other words, *Slab!* used as an order conveys an extra meaning compared to cases when the word is used as a constituent in a sentence. On the other hand, if *Slab!* were to be considered a sentence, it would probably be a degenerate one, a shortened form of the sentence *Bring me a slab!* (Wittgenstein 1953).

The fact that *Slab!* functions as a call, and thus represents a full-fledged semantic proposition, is in my opinion not debatable. The problem is whether to assume that the word is technically an underlying sentence with a full syntactic structure at some linguistic level, or whether an enrichment process towards a full proposition happens at a purely conceptual or pragmatic level of the linguistic derivation. I read the following passage from Wittgenstein (1953: §2) as cutting straight to the heart of the matter:

> Because if you shout "Slab!" you really mean: "Bring me a slab". – But how do you do this: how do you *mean that* while you *say* "Slab!"? Do you say the unshortened sentence to yourself? And why should I translate the call "Slab!" into a different expression in order to say what someone means by it? (…) But when I call "Slab!", then what I want is, *that he should bring me a slab!* – Certainly, but does 'wanting this' consist in thinking in some form or other a different sentence from the one you utter?

A crucial difference between these freestanding constituents and discourse ellipses is that the freestanding constituents do not appear to relate to the sentence structurally.[15] Contrary to discourse ellipses, they generally do not display any *connectivity effects*, defined as grammatical dependencies similar to the dependencies manifested in non-elliptical sentences (Merchant 2004). Such effects could give information about the structural content of the ellipsis site and would consequently motivate a sentence analysis of the fragments. Hence, freestanding constituents demonstrate the necessity of distinguishing between different levels of language processing. Structurally, these are probably non-clausal phrases (XPs), and hence they are not ellipses of sentences, linguistically speaking. Still, they may be described as

[15] In this respect, the freestanding constituents also stand in contrast to most of the 'error types' of spontaneous speech discussed in section 1.3.2, and also the structural ellipsis types discussed in 1.3.1.

ellipses at a conceptual level, since the pragmatically enriched meaning of the XP must be interpreted as a full proposition.

Fragments of this type are currently the issue of much discussion in the literature. See for instance Merchant (2010), who distinguishes between syntactic, semantic and pragmatic ellipses, and Stainton (2006), who argues that such utterances *should* be ascribed a full sentential structure, because, according to him, some of them actually do display certain connectivity effects. These constructions are also discussed in Eluguardo & Stainton (2005), Progovac et al. (2006) and Stanley (2000). The theoretical problems related to this data type are huge. As noted, the opinions diverge, and I will therefore leave the question of whether freestanding phrases are underlying sentences or not open in this work, noting however the fundamental theoretical importance of the issue.

1.3.4 Discourse ellipses and connectivity effects

Having excluded structural ellipses, irregular error types and freestanding constituents from my study, I am left with discourse ellipses proper, as exemplified in 1-4, repeated below in (27)-(30). Note however that this is not an exhaustive list:

Omitted referential subject

(27) ~~Jeg~~ husker litt fra jeg var åtte. NoTa
~~I~~ remember some from I was eight
'I remember a little bit from the time I was eight.'

Omitted expletive subject

(28) ~~Det~~ var én som hadde kjørt forb… over en rev. NoTa
~~it~~ was one that had driven past… over a fox
'There was someone who had hit a fox.'

Omitted initial object

(29) ~~Det~~ skal jeg òg. NoTa
~~that~~ shall I too
'I am going to do that, too.'

Omitted subject and auxiliary

(30) ~~Jeg har~~ vokst opp i et stort stort hus. NoTa
~~I have~~ grown up in a big big house.
'I grew up in a big, big house.'

As already noted, in discourse ellipses, elements are missing sentence-initially or occasionally also sentence-medially. The meaning of the missing elements is most often fully recoverable, and the ellipses can thus easily be paraphrased as full-fledged sentences.

Many of the discourse ellipses display *connectivity effects*. As will become clear, this is an indication that the elided item is syntactically active, and that these fragments should be analysed as full sentences. Illustrative examples of such effects are ellipses containing anaphors pointing back to a non-realized subject and ellipses with main verbs requiring a specific auxiliary, but where this auxiliary is null. In (31), the anaphor *meg* requires the presence of a silent 1st person singular subject. The ungrammaticality of (32) underlines the same point, since in this case there is a mismatch between the silent subject (1st person singular) and the anaphor (2nd person singular). In (33), the perfective participle *sett* requires the presence of a silent perfective auxiliary:[16]

(31) ~~Jeg~~ kan tenke meg det. NoTa
~~I~~ can think me$_{REFL}$ that
'I can imagine that.'
(32) * ~~Jeg~~ kan tenke deg det.
~~I~~ can think you$_{REFL}$ that
(33) ~~Har du~~ kjørt mye skuter i påska? NDC
~~have you~~ driven much scooter in Easter
'Have you been driving scooter a lot during Easter?'

Connectivity effects are not witnessed in all instances of discourse ellipsis. One reason for this is that Norwegian has neither visible subject–verb agreement nor many other forms of visible agreement. Still, the connectivity effects seen in examples like the ones above strengthen the assumption of full sentence structures even for the cases where these effects are not visibly manifest. Hence, connectivity effects are important diagnostics for recognizing discourse

[16] The elements displaying connectivity effects are underlined in the examples.

ellipses. In fact, the attempt to analyse ellipses in general often boils down to looking for signs of the elided elements in the instantiated part of the utterance:

> Detecting and arguing for such 'missing' structures is analogous to searching for a black hole: one can tell it's there only by its effects on surrounding material. The logic of the hunt for elided structure is similar (Merchant forthcoming: 8).

To sum up, connectivity effects suggest that the discourse ellipses have full-fledged syntactic structures. This idea will be further explored in the following chapters. For now, it is sufficient to establish this as a hypothesis. Yet, this issue points to a question which has been the subject of extensive debate, namely whether or not spoken language is governed by a separate grammar. In the following section, I will briefly present some views in this debate, and I will also argue for my own point of view.

1.4 A distinct grammar for spontaneous speech?

As noted, spontaneous speech may give an unstructured impression, due to a high frequency of incoherent and/or incomplete sentences. Crystal (1976: 166) claimed that the linguistic organization of the spoken register until then had been "fundamentally misconceived". In this section I discuss what kind of grammar could be appropriate for this variety. Is the sentence a fruitful theoretical unit for this register? And moreover, is the grammar of written language suited to account also for spontaneous speech, or should two different grammars be postulated for the two registers? Different theorists have taken different stands on these issues.

1.4.1 The status of the *sentence* in spoken language

According to Linell (1988), the language of spoken conversation consists of loosely related phrases and clauses, combined into structures which are less clear and hierarchical than the ones found in traditional grammars. Such observations have made several theorists recognise the problematic nature of the sentence in spoken conversation.

> It is not easy to establish what units can be recognized in spoken language and are useful for its analysis. Some analysts maintain that sentences are not recognizable in spoken language, others – that they are.
>
> The central problem is that it is far from evident that the language system of spoken English has sentences, for the simple reason that text-sentences are hard to locate in spoken texts (Miller and Weinert 1998: 30).

Quirk et al. (1985: 47) point out that sentence boundaries may be difficult to locate in spoken data, and Crystal (1987: 94) states that it is not easy to decide whether pauses in spoken language function as sentence boundaries, or whether the whole text is one loosely constructed sentence. Many linguists working with spoken language have in fact abandoned the sentence as an analytical unit (Halliday 1989, Miller 1995, Brazil 1995, Carter & McCarthy 1995, Miller & Weinert 1998 and Biber et al. 1999).

However, both Leech (2000) and Miller (1995) highlight the distinction between the terms *sentence* and *clause*, arguing that even if *sentence* is problematic, the term *clause* should be maintained for the spoken register. A traditional understanding of a sentence includes the words and phrases found between large punctuation marks (Linell 2005). Clearly, this definition is tied to the written medium. A parallel definition for the oral medium could be based on pauses and intonation contours, as proposed in Chafe and Danielewicz (1987). Yet, these indications are not as definite as the ones assumed for written language.[17]

Clause, on the other hand, is defined by Trask (1993: 44) as "any constituent dominated by the initial symbol S", and by Radford (2004: 440) as "an expression which contains (at least) a subject and a predicate, and which may contain other types of expression as well". Hence, *clause* is more unambiguously a grammatical term, and it seems safe to state that it is relevant for spoken as well as written language. This view is supported by both Miller (1995) and Linell (2005):

> Satsen, däremot, förblir då ett huvudbegrepp i grammatiken, och har en uppenbar roll i samtalsspråk (…). I den mån satser finns överallt, kan detta bli till ett argument för en gemensam underliggande grammatik (som i exempelvis neochomskyansk lingvistik) (Linell 2005: 312).
>
> *The clause, on the other hand, remains a basic term in grammar, and has an obvious role in the language of spoken dialogues. To the extent that clauses exist everywhere, this can be taken as an argument for a common underlying grammar.*[18]

The important point for my purposes is to pin down what is intended when theorists claim that the term sentence is irrelevant in accounts of spoken language. According to Leech (2000), the reason for rejecting this term is that spoken language data should not be forced into the analytical frames constructed for written language. We can conclude that the term *sentence* belongs to written text, whereas *clause* belongs to the system underlying our capacity for

[17] Both Linell (2005) and Leech (2000) argue that on an analytic level, the definition of the term *sentence* is not crystal clear. It is occasionally used as a syntactic category, but it is also used more descriptively, defining whatever is placed between two punctuation marks, or as any sequence of words which are capable of standing alone to express a coherent thought. Consequently, use of the term can give rise to misunderstandings.
[18] My translation.

language (Miller 1995, Leech 2000). A rejection of the notion of sentence in spoken language should therefore not be confounded with a rejection of the clause.

Hence, despite a widespread denial of the existence of sentences in spoken language, several theorists accept the existence of structural clauses. This entails that the idea of constituent structure grammar is not automatically rejected (Leech 2000). Even though spoken language is characterized by fragmentary utterances, the assumption of an abstract clause obeying syntactic restrictions should be maintained.

1.4.2 Same grammar or different grammars?

Implicit in the view that the sentence is an irrelevant unit for spoken language is the suggestion that this register exhibits a grammar which is distinct from the grammar of written or idealized language: "If sentences are to be admitted as units of written but not spoken language, the next step is to analyse written and spoken language as having different language systems" (Miller 1995: 118). The issue at stake is whether there is one kind of grammar governing both spoken and written language, or whether these registers are characterized by separate grammatical systems.

As mentioned, non-linguists who are presented with written records of spontaneous speech are often surprised by how messy it appears. Interestingly, Teleman (1983) reports that even grammatically trained linguists tend to get the impression that spoken texts are restricted by a completely different grammar than written texts are. Teleman explicitly argues against this view, and he also rejects the view that spoken language doesn't follow any grammatical restrictions:

> Den naiva uppfattningen att talet inte har någon grammatik är naturligtvis felaktig. Talet organiseras grammatiskt, annars vore våra yttranden ju bara hopar av enstaka lexiconord. Vi säger inte "gatan på bilen igår förstås" utan våra talade ord sammanbinds meningsfullt av grammatiska konventioner precis som orden i skrift. Vad mera är: dessa konventioner eller regler eller normer är i stort sett desamma som i skrift (Teleman 1983: 1).
>
> *The naïve view that spoken language has no grammar is of course wrong. Spoken language is grammatically organized, otherwise our utterances would simply be chunks of single lexical words. We do not say "the street on the picture yesterday you see", rather our spoken words are connected in a meaningful way by grammatical conventions precisely like the words in written language are. Moreover: these conventions or rules or norms are mostly the same as in written language.*[19]

[19] My translation.

Leech (2000) points out that in the study of English grammar, there has been a tendency to assume that a completely fresh look at grammar is needed when the grammatical characteristics of speech are being examined. Cheshire (2005: 83) underlines the same point:

> However, several researchers who have analysed corpora of spoken language claim that the structures of spoken language differ both from data obtained from intuitions and from the syntax of planned written language.

Leech (2000) examines three different corpus studies with respect to two different standpoints, the 'same grammar view' and the 'different grammar view'. Biber et al. (1999) are representative of the former view; Brazil (1995) is a proponent of the latter, whereas Hughes, Carter & McCarthy (1998) represent an intermediate position.[20]

Brazil (1995) proposes that there is a fundamental structural distinction between spoken and written language. He rejects the relevance of 'sentence grammar' as well as mainstream constituent-structure analysis for accounts of spoken language, because these are implicitly based on the study of written language. Instead, he opts for a linear, process-oriented approach to the spoken register. A central goal for Brazil is to study grammar on its own terms, and thus he represents the 'different grammar view'. Contrary to Brazil, Biber et al. (1999) propose that by and large, spoken and written grammar may be characterized by the same descriptive apparatus of categories, structures and rules. Hence, they represent the 'same grammar view'. Finally, the *Nottingham school*, represented by Hughes, Carter & McCarthy (1995) and McCarthy (1998), is positioned in between these two extremes. This group insists that spoken grammar should be dealt with on its own terms, but they still recognise that the same grammatical categories often apply to both media. Like Brazil (1995), they claim that the apparatus of theoretical grammars has been too heavily influenced by the written-grammar tradition, and they believe that the use of corpora can amend this by offering confrontation with linguistic reality (Leech 2000). However, the theorists of the Nottingham school recognize the dangers of taking an extreme position:

> (a) that we may rush off and assume that everything is different in spoken grammar and that nothing we say about written language has any validity for the description and the teaching of spoken language, or (b), equally dangerously, that we should assume that descriptions of the written grammar can simply be imported wholesale into spoken grammars (McCarthy 1998: 3).

[20] According to Leech (2000), the distinction between the 'same grammar approach' and the 'different grammar approach' can be traced back to earlier traditions in English grammar writing. The 'same grammar approach' of Biber et al. finds its antecedent in Quirk et al. (1972, 1985), who represented a shift from a written language bias towards the spoken language (Leech 2000). Still, they were convinced that a single integrated approach to English grammar could account for both speech and writing. On the other hand, the 'different grammar view' of Brazil can be traced back to Palmer (1924).

Importantly, Leech (2000) points out that Brazil interprets grammar solely in terms of language use, not taking into consideration the grammatical system behind that use. In Chomskyan terms, Brazil only considers performance factors, and excludes the level of competence:

> To go back to the old analogy of language and a game of chess, I believe that by focusing exclusively on the process of producing or interpreting grammatical sequences, Brazil is rather like a chess player who denies that the rules of chess have an existence independent of this or that game, seen as a sequence of moves (Leech 2000: 54).

Leech does not intend to say that the study of performance should be ignored, but rather that a focus on performance should not lead to an ignorance of competence. It does not seem plausible that spoken and written language originate from different cognitive structures. In fact, the link between competence and performance is emphasized as an explanation of why the same system of grammatical categories may apply to both registers: "It is obvious that the abilities to speak English and to write English are not unconnected, and surely they must be connected in the mind of the native speaker" (Leech 2000: 54). Consequently, Leech's (2000) claim is that the same analytical framework of grammatical categories can be applied to both registers. This is an argument that I endorse.

1.4.3 Dialogism versus monologism

I close this section by recalling Linell's (1998) claim that spoken conversation consists of structures which are less clear and hierarchical than the structures in written language. In the description of the Swedish project *Grammar in conversation: A Study of Swedish*, this view is manifest:

> Det finns goda skäl att anta att samtalsspråkets grammatik är mindre systematisk och integrerad än enligt strukturalistiska och generativa teorier, som ofta sökt efter de maximalt generella reglerna (Hopper 1998).[21]

> *There are good reasons to believe that the grammar of spoken dialogues is less systematic and integrated than what is assumed in structural and generative theories, which have often sought maximally general rules (Hopper 1998).*[22]

I do not agree with this claim. Despite a high frequency of fragments and interrupted utterances, I argue that spontaneous speech does indeed follow a clause-constructing

[21] http://www.ofti.se/gris/beskrivning.html, accessed 20.07.2012. The reference to Hopper (1998) is a part of the quote.
[22] My translation.

grammar. Of course, this does not necessarily imply that all spoken utterances are sentence structures underlyingly. As discussed in 1.3.3, freestanding constituents are possible exceptions. Still, I will not accept the claim that spoken language is chaotic and that regular grammatical constraints do not apply. Consequently, my position stands in contrast to Linell's (2005: 309) claim that in spontaneous speech, syntax is less influential than in written language:

> Syntaxen spelar inte så stor roll som i skrift, utan måste konkurrera (eller samverka) med prosodi och pragmatik.
>
> *Syntax does not play an equally important role as in written language, rather syntax must compete with (or interact) with prosody and pragmatics.*[23]

This seems to me to be a weird claim. How can syntax compete with pragmatics? In the model of analysis that I will propose, syntax is present both in written and spoken language as a structure building operation. Syntax cannot be replaced with pragmatics or intonation, because then spoken utterances would not adhere to any grammatical constraints, e.g., restrictions on word order. Intuitively, this is true neither for spoken language nor for any other linguistic variety.

Note that the theoretical fundamentals assumed in Linell's study of grammar in spontaneous speech are radically different from the formal generative theory that I will assume. Linell establishes a sharp distinction between *dialogism* and *monologism*. A basic idea in dialogism is that all individuals at all times are in dialogue with other individuals as well as different contexts, and moreover that these dialogues affect the speaker. Monologism is defined as an opposite view, where cognition and processing take place internally in each individual (Linell 2005). Crucially, the dialogic perspective constitutes the basis of Linell's theory, and he claims that a monologic point of view is fundamental in generative theories.

I believe that this strict division needs to be questioned. In the model I am going to develop, it will be of primary importance to isolate distinct levels of analysis, so that contextual input does not affect all levels of the construction or processing of an utterance. It is crucial to distinguish between the structural derivation of a sentence and the pragmatically-influenced processing of an utterance. According to Linell (2005), structural and generative grammar is devoted to an abstract grammar, as it investigates decontextualized utterances from a monologist perspective. In opposition to this view, I believe that it is perfectly possible

[23] My translation.

to include contextual influence, but at the same time keep the assumption that narrow syntax is decontextualized. Contextual information affects other levels of the derivation.

1.5 Fundamental theoretical assumptions

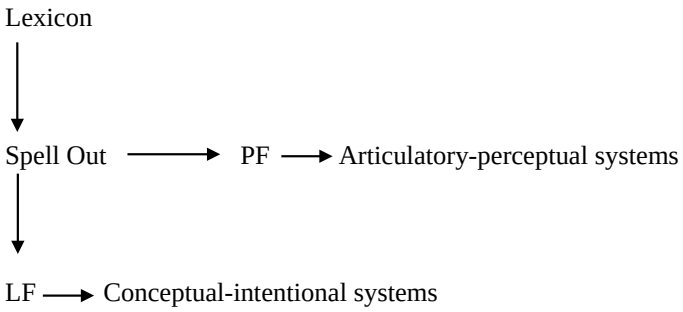
This dissertation is written within a generative framework. A central claim within this theory is that the faculty of language is innate. This faculty of language or Universal Grammar is understood as an organ of the body. All children are thus equipped with the ability to learn a language by virtue of having the language organ with this function, and the acquisition process is characterized by the setting of parameters in response to positive input alone, rather than a conscious learning process. The knock-down argument given for this view is the poverty of stimulus argument: the linguistic data available to the child are not sufficient to establish the linguistic knowledge of an adult (Boeckx 2006: 204). The ease with which a child acquires his mother-tongue thus cannot be explained without assuming innate language potential, i.e., Universal Grammar, which is assumed to consist of fixed principles common to all languages, and open parameters which are fixed during acquisition. Hence, the framework has been labeled the Principles & Parameters (P&P) approach. In order to account for language acquisition, and not only describe language structures *per se*, generative theory aims at achieving explanatory, and not only descriptive, adequacy.

Since its birth in the 1950's, generative grammar has gone through different theoretical stages. The current framework, the Minimalist Program (MP), further develops central insights from the preceding one, i.e., Government and Binding Theory (GB). The main contribution of the MP is the exploration of the Strong Minimalist Thesis, namely that UG is perfectly designed. In other words, the MP seeks to answer a particular research question: to which degree is the language faculty an optimal realization of interface conditions (Hornstein et al. 2005: 14)? Theoretical simplicity is thus a goal within the MP, leading to a rejection of levels of representation (Deep Structure and Surface Structure), theoretical modules (e.g., X'-theory) and operations (e.g., government) which are argued to be theoretically redundant.

Crucially, MP is a research program; it is a mode of investigation, and not a theory. Thus, the questions asked are broad enough to be pursued in many different directions, leading to a degree of flexibility in what can be counted as a minimalist analysis (Boeckx 2006: 5). This thesis can therefore be seen as a minimalist piece of work, even though it explores and challenges some of the commonly accepted minimalist assumptions.

Some basic technical concepts of the framework need to be introduced, since these will be applied without further explanation in the following chapters. The overall grammar model assumed in the MP (the T-model), and which I will use as my point of departure, is the following:

(34) *The minimalist model of grammar*



Elements are selected from the lexicon, in order to construct the syntactic structure. In this thesis, the syntax-lexicon interface will be challenged and discussed in depth, and I will therefore not elaborate on it at this point. Lexical elements are assumed to consist of three types of features, namely formal, semantic and phonetic features. Some features are assumed to enter the derivation with a value, while others are unvalued at the outset but must be valued in course of the derivation.

The process of generating a sentence with a specific syntactic structure is characterized as a derivation, meaning a syntactic computation with a starting point and an endpoint involving various syntactic processes and rules (Chomsky 1957, Boeckx 2006: 199). In earlier generative models (e.g., GB), a derivation was understood as a process which took an underlying Deep Structure and made it undergo certain syntactic operations, in order to yield the Surface Structure and the Logical Form. This understanding is revised in the MP, since there is no level of Deep Structure. Rather, the structure is built incrementally, and the term derivation is then better understood as the representation of stages in the process of generating a syntactic string (Åfarli & Eide 2003: 359). The relation between two different stages of a derivation can be characterized as a transformation, i.e., the process of developing the syntactic structure from one stage of the derivation to another. It is assumed that a derivation is always as economical as possible.

Assuming the minimalist model as outlined above, the lexical elements are brought together by the operation Merge, which is responsible for building phrase structure. Merge takes two elements and unifies them. The number of elements must be at least and at most two, which guarantees that syntactic structures are binary. The operation Merge can be either internal or external. External Merge picks elements from the lexicon and merges them into the structure. Internal Merge, also called Move, on the other hand, picks elements from within the syntactic tree or phrase-marker and re-Merges them. By assuming these two variants of Merge, the displacement property of language is also accounted for. Moreover, it is assumed that there is no upper limit to the number of applications of Merge. This yields recursion, i.e., that fact that sentences are potentially infinite (Boeckx 2006: 78).

Crucially, Merge can only apply to the root of a syntactic object. This is formalized in the Extension Condition, later subsumed by the No Tampering Condition (Chomsky 2005). The No Tampering Condition says that when X and Y are merged, neither of these syntactic objects will change, and thus the outcome will simply be the set {X,Y} (Chomsky 2009: 26).

At a certain point, the derivation reaches Spell Out, which means that the sentence is transferred to PF, and that it is subsequently pronounced in some medium (sound or sign). This is what is captured by postulating that PF has an interface to the articulatory-perceptual systems. The syntactic derivation, which continues after Spell Out, is covert, without consequences for the articulated string. The MP makes a distinction between strong and weak features, arguing that strong ones must be checked or valued before Spell Out, and that weak ones may be valued after Spell Out. All the applications of Internal Merge and External Merge which apply from the time of selection from the lexicon until the derivation reaches LF are called Narrow Syntax. That is to say, Narrow Syntax is a mapping from the lexicon to LF (Chomsky 2000b). Finally, the derivation reaches LF, which is an interface to the conceptual-intentional systems, where the string is interpreted, including the interpretational nuances of covert operations which apply after Narrow Syntax.

A more recent minimalist development is the assumption that derivations are not spelled out all at once, but in smaller chunks. Uriagereka (1999) proposed a model of multiple spell out, and inspired by this work, Chomsky (2001) introduced the notion of phases, arguing that vP and CP are phases. The assumption is that after the completion of a phase, the complement of the phase head is transferred to Spell Out.

Many of the terms that I have introduced above will be used throughout the thesis without any further explanation or discussion. However, it is a goal of the present work not

only to analyse discourse ellipses within an established theory, but also to discuss to what extent the present state of the theory is suitable to provide a satisfactory account of the data, and moreover to discuss which aspects of the theory which need to be rethought in order to obtain the most adequate analytic model. For a more detailed exposition of the minimalist framework, see, e.g., Chomsky (1995, 2000b, 2008), Adger (2003), Hornstein, Nunes & Grohmann (2005) and Boeckx (2006, 2008, 2011).

1.6 The theoretical value of performance data

In linguistic analysis, it is always important to be clear about the status of the empirical data that constitute the basis for the theoretical investigation, and that is especially so when dealing with discourse ellipsis. In this section, I will therefore discuss some fundamental questions related to the potential value that fragmentary linguistic performance data may have for the study of narrow syntax.

1.6.1 E-language versus I-language, grammaticality versus acceptability

Within the generative tradition, a fundamental distinction is established between I-language and E-language.[24] I-language is a language user's mental capacity to use his own language, whereas E-language is the concrete use of language in oral or written text (Chomsky 1986a). The real object of study for a generativist is I-language, not E-language:

> The goal of linguistic theory, under this view, is to describe the knowledge, independent of (and logically prior to) any attempt to describe the role that this knowledge plays in the production, understanding, or judgment of language (Schütze 1996: 20).

Nevertheless, we only have direct access to E-language, and only through E-language can we obtain any insight into I-language.

The distinction between I-language and E-language is relevant for the discussion of grammaticality and acceptability. Within generative grammar, the most common method used to collect data is probably still eliciting acceptability judgments of test sentences. However, this turns out to be problematic for fragmentary speech, because many examples from this register appear to violate standard norms. Such standard norms tend to influence acceptability judgments, and hence discourse ellipses are at risk of being judged as unacceptable by

[24] The distinction between I-language and E-language is reminiscent of the distinction between competence and performance, and the terms are partly overlapping. For reasons of clarity of exposition, I will employ the terms I-language and E-language in this thesis.

informants. Still, discourse ellipses clearly show some degree of acceptability and grammaticality. They must somehow be allowed by the internalized grammar. The I-language *does* produce them. In order to account for this apparent paradox, we need to explore the distinction between grammaticality and acceptability in more depth. This will also be relevant for the discussion of methods for data collection in 1.7.

The classification of relevant versus irrelevant data depends on the research questions. One goal of the present work is to give a descriptive overview of the main types of discourse ellipsis in spoken Norwegian. However, a more important objective is to investigate the syntax of these ellipses and to seek an explanation for how and why language users apply them. What characterizes the I-language producing discourse ellipses?

It is often assumed that introspection and elicitation of acceptability judgments from informants yield a more direct insight into I-language than corpora, which only provide E-linguistic data (Cornips & Poletto 2005). However, this is only a qualified truth:

> In practice, we tend to operate on the assumption, or pretense, that these informant judgments give us "direct evidence" as to the structure of the I-language, but, of course, this is only a tentative and inexact working hypothesis, and any skilled practioner has at his or her disposal an armory of techniques to help compensate for the errors introduced (Chomsky 1986a: 36).

It is generally accepted that elicitation of acceptability judgments alone does not provide direct insight into the I-language of an individual, since the judgments are possibly also influenced by grammar-external factors (Cornips & Poletto 2005). The distinction between *grammaticality* and *acceptability* addresses this issue. Acceptability is a pretheoretical notion, concerning whether a language user, for any reason, will reject a sentence or not. Grammaticality, on the other hand, is a theoretical term (Newmeyer 1983). A sentence is grammatical quite simply if it is generated by the I-linguistic grammar, and ungrammatical if not. Hence, a sentence's grammaticality must be seen in relation to a formal representation of the grammatical competence of an individual (Newmeyer 1983). If a linguistic string is consistent with the I-language system, it is by definition grammatical.

This entails that it will in principle be possible to distinguish between grammatical and ungrammatical discourse ellipses if we can devise a syntactic model which generates grammatical ellipses, but excludes the ungrammatical ones. This is my working hypothesis. Hence, the method for distinguishing between grammatical and ungrammatical ellipses is inextricably linked to the development of the analytical model for this phenomenon.

Acceptability on the other hand, is part of performance, as it describes language users' intuitions on whether concrete utterances are well-formed or not. A sentence can be judged as

unacceptable for a variety of reasons, e.g., adequacy in a certain context, how easy it is to process, and so on.[25] Unacceptability may also be caused by ungrammaticality. In that case, the language user is not able to assign to the string a grammatical structure which is consistent with his internalized grammar. Yet, whether or not a sentence is grammatical is only one of many factors determining the sentence's acceptability (Newmeyer 1983, Chomsky 1965).[26]

Given that grammaticality is defined through I-linguistic competence, grammaticality judgments about concrete sentences are strictly speaking not accessible to the intuition of language users. Hence, while generative linguists sometimes call their data sources 'acceptability judgments' and 'grammaticality judgments' interchangeably, it is a mistake to talk about grammaticality judgments in the first place. Native speakers cannot have intuitions about grammaticality, only about acceptability:

> While *as linguists* we might very well have an intuition (i.e., a hunch based on professional experience) that a sentence is grammatical, just as a chemist, say, might have an intuition that an unanalyzed compound contains zirconium, there is no such thing as a *native speaker's* intuition about grammaticality.
>
> "Acceptability," on the other hand, is the appropriate term for the feelings speakers have about the well-formedness of sentences in their language (Newmeyer 1983: 51).

Schütze (1996) refers to Householder (1973: 365, fn. 1), who calls this the linguistic paradox: "the only possible way of determining whether or not a grammar is correct is by consulting the speaker's intuitions, but they are inaccessible."[27] The distinction between grammaticality and acceptability shows that we cannot be certain of the nature of the data we obtain from eliciting judgments of sentences from informants. The ultimate aim is knowledge about grammaticality, yet the informants may give answers that are based on grammar-external

[25] As a matter of fact, certain unacceptable sentences can still be regarded as grammatical, if their unacceptability depends on grammar-external factors. Recall Chomsky's famous example: "Colorless green ideas sleep furiously", which is syntactically perfect, but which semantically gives no meaning (Chomsky 1957).

[26] According to Newmeyer (1983), the examples cited by people criticizing introspection as a method for data collection are mostly of the same kind. They are sentences which are claimed to be ungrammatical, but which can still be shown to be acceptable when placed in a certain context. Newmeyer explains this by pointing to widespread assumptions among generative linguists in the 1960's and '70s, namely that sentences were not regarded as grammatical in an isolated way, but rather in a given context. However, excluding sentences which are unacceptable for grammar-external reasons is no longer seen as a grammar-internal task: "Rather, generativists see context as one of many factors that *interact* with grammaticality to determine a sentence's acceptability or appropriateness" (Newmeyer 1983: 56). A common claim is that if a sentence is acceptable in a given context, this is in itself evidence for the sentence's grammaticality, i.e., evidence that the sentence can be generated by grammar.

[27] This is reminiscent of the observer's paradox discussed in the sociolinguistic literature.

factors. A methodological challenge is then to peel off as many external factors as possible, in order to come as close as possible to a judgment of grammaticality (Schütze 1996).[28]

The issue of acceptability judgments is currently a topic which is vividly discussed in the literature. I will comment on this debate in more detail in section 1.7.4.

1.6.2 Well-formedness in discourse ellipses

The concept of grammaticality is particularly interesting when it comes to discourse ellipses, since these constructions appear to violate central restrictions in standard Norwegian. For instance, normative grammars of Norwegian prescribe a strict subject requirement in finite main clauses. Yet, in spontaneous speech, the subject is often omitted. Moreover, it is commonly assumed that Norwegian is a verb second language and that all main clauses obligatorily contain a finite verb. Both of these requirements are frequently violated in discourse ellipses.

Based on these observations, we might ask whether the notion of grammaticality is relevant for cases of discourse ellipsis. I will argue that it is. This is obvious from the following comparison of a sample of well-formed and not well-formed discourse ellipses:[29]

(35)	~~Det~~ gikk ikke så veldig bra ~~it~~ went not so very well 'It didn't go very well.'	*versus*	* Det gikk ~~ikke så~~ veldig bra it went ~~not so~~ very well
(36)	~~Vi~~ må vel ha katter. ~~we~~ must well have cats 'You probably need to have cats.'	*versus*	* Vi ~~må vel~~ ha katter. we ~~must well~~ have cats
(37)	~~De har~~ dratt på hyttetur igjen. ~~they have~~ gone on cabin-tour again 'He has gone to the cabin again.'	*versus*	*De har ~~dratt~~ på ~~hyttetur~~ igjen. they have ~~gone~~ on ~~cabin-tour~~ again
(38)	Gikk ikke så veldig bra went not so very well 'It didn't go very well.'	*versus*	* Veldig ikke bra så gikk. very not well so went

[28] This issue is discussed by Schütze (1996: 26), who points out that based on Chomsky's definition it is not possible to give judgments on grammaticality, since grammaticality is not accessible for intuitions. As a consequence, Schütze chooses for practical reasons to regard acceptability and grammaticality as synonymous terms.

[29] The well-formed variants of the examples in (35-40) are all retrieved from the NoTa corpus. The ill-formed variants are constructed for the purposes of exposition and are not attested in the corpus.

(39)	Må vel ha katter. must well have cats 'You probably need to have cats.'	*versus*	* Katter ha vel må. cats have well must
(40)	Dratt på hyttetur igjen. gone on cabin-tour again 'He has gone to the cabin again.'	*versus*	* Igjen på dratt hyttetur. again on gone cabin-tour

These examples display two different ways in which a discourse ellipsis may be ill-formed. Firstly, in (35)-(37) it is the omission of elements that is illicit, demonstrating that ellipsis cannot occur in any random position within a clause. In (38)-(40), the word order is distorted, illustrating the obvious fact that word order is significant also in cases of ellipsis. If the word order changes, the result is not well-formed.[30] This insight may seem naïve, but it is important, because it demonstrates that spoken language does not allow for syntactic anarchy. Neither does it necessitate the postulation of a different syntax. From these two groups of examples, we may conclude that, even though discourse ellipses violate restrictions of standard Norwegian, there are well-formedness criteria specific to these constructions.

These examples also trigger the question of what constitutes relevant linguistic data. How can discourse ellipses, which violate the standard norms for Norwegian, be of any theoretical interest? Within the generative framework, the object of study has traditionally been defined as follows: "Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogenous speech community" (Chomsky 1965: 3). The grammar defined on the basis of such data is called a *core grammar*. It is defined by the setting of UG parameters (Chomsky 1981a). Yet, in addition to core data, language contains peripheral constructions, e.g., imported constructions, historical residues, innovations and so on (Chomsky 1981b). Haegeman (1994: 17) gives this definition of the periphery:

> For instance, we go on learning new words throughout our lives. In addition we also learn certain less usual constructions of the language. These exceptional or marked patterns of the language are not taken to be part of the core grammar of the language, they belong to the marked periphery of the grammar and may be acquired later.

[30] For the sake of the argument in this section, it is primarily the word order type that is relevant. Licensing requirements will be thoroughly investigated in chapter 4.

Following these definitions, it seems logical to define discourse ellipses and fragmentary language in general as peripheral phenomena.[31] Compared to regular, idealized language, discourse ellipses represent exceptions. Ordinarily, a declarative sentence of the core grammar of Norwegian would have a phonologically realized subject, and it would be V2. Still, discourse ellipses may not obey any of these requirements if they belong to the periphery. However, it is no doubt paradoxical to define the spoken register as peripheral. One should think that of all registers, this should be the very core one.[32] Nevertheless, I will not pursue the issue of whether discourse ellipses belong to the core or the periphery, since I believe that this question really overshoots the mark. What is important is not whether these data are peripheral or not, but rather whether they display clear restrictions which can be accounted for. Clearly, they do.[33]

Register variation in Norwegian is discussed in Eide and Åfarli (2007), who argue that the varieties listed below display regularity, i.e., that grammatical and ungrammatical strings can be distinguished within one register:[34]

(41)	The syntax of diaries and headlines	–	frequent subject omission
(42)	The syntax of spoken language	–	frequent sentence initial omissions
(43)	Psalms[35] and Festive syntax	–	SOV word order
(44)	Poetry	–	unusual word order due to ‘poetic liberty’

Following Roeper (1999), Eide & Åfarli (2007) argue that such variation can be understood as a kind of multilingualism. One individual has access to several parallel I-grammars which are activated by ‘contextual triggers’ deciding which grammar will be relevant in different contexts. This theory can thus explain register variation without characterising all data violating standard norms as mistakes or performance errors. When a string from one register violates standard requirements, this may quite simply be the result of a different syntax.

[31] However, to my knowledge, the core/periphery issue with respect to discourse ellipses has not been explicitly discussed in the literature.
[32] According to Chomsky (1981a, 1981b), both core and periphery are parts of the internalized linguistic competence, and peripheral data should therefore not be discounted. The periphery does not contain pure chaos, but may contain regular structures.
[33] Note also that according to Chomsky (1981b), peripheral data can shed light on grammar, and he therefore argues that such data should not be discounted. According to him, both core and periphery are parts of the internalized linguistic competence. We cannot anticipate that the periphery contains only chaos. Rather, regular structures are found also in these varieties (Chomsky 1981b).
[34] See Eide & Åfarli (2007) for illustrative examples for each variety.
[35] See Barstad (2000).

Consequently, peripheral varieties of Norwegian can be assessed as grammatical relative to their specified register. The claim that discourse ellipses are grammatical can thus be upheld.

Nevertheless, the types of non-standard parallel grammars listed in Eide & Åfarli (2007) display one crucial difference. On the one hand, psalms, poetry and festive language display true syntactic differences, since the word order in these varieties differs radically from standard Norwegian. On the other hand, data from spoken language, as well as diaries and headlines, do not display any word order differences. In these registers, the variation is first and foremost due to differences in phonological instantiation. For illustration, compare the following elliptical sentences (all from the NoTa corpus) with their non-elliptical counterparts:

(45)	Tok med seg sånn albinopytonslange.	–	**Han** tok med seg sånn albinopytonslange.
	took with self such albino pyton snake		he took with self such albino pyton snake
	'(He) brought such an albino pyton snake.'		'He brought such an albino pyton snake.'
(46)	Hadde vært gøy.	–	**Det** hadde vært gøy.
	had been fun		it had been fun
	'(It) would have been fun.'		'It would have been fun.'
(47)	Klarer jeg ikke altså.	–	**Det** klarer jeg ikke altså.
	handle I not therefore		That handle I not therefore
	'(That), I just cannot handle.'		'That, I just cannot handle.'

The word order in the elliptical versions is identical to the one found in the corresponding full-fledged sentences, which strongly suggests that the underlying syntax is the same. From this I conclude that it is a mistake to classify discourse ellipsis as an instance of a parallel grammar, as the difference between an elliptical and a corresponding non-elliptical expression is not syntactic, but phonological.

This entails that there are two main well-formedness criteria on discourse ellipses. Firstly, the syntactic structure must be correct, and secondly, the ellipses must obey certain restrictions on realization, i.e., which elements it is possible to elide, and from which positions. Importantly, the word order restrictions in ellipses are equal to the requirements set for full-fledged clauses. It is just the restrictions on phonological realization that are different in the ellipses. For illustration, recall the ill-formed examples in (35)-(40), which were divided into two subclasses. The ellipses in (38)-(40) were illicit due to an incorrect word

order, i.e., they were not well-formed for structural reasons. On the other hand, (35)-(37) are ill-formed because the restrictions on realization of elements are not obeyed. The dividing line between underlying, abstract syntactic structure and phonological instantiation will be an important focal point for the model of analysis that I will develop.

1.7 Method

To be able to provide robust answers to my research questions, I need a reliable method for data collection. Within grammar research, data are most often collected through corpus studies, introspection and elicitation of acceptability judgments from informants. I will discuss advantages and disadvantages of these methods, and I will specify how and why they will or will not be adequate for the present study. Note that each method may be more or less suitable for different purposes or at different stages of the study. My conclusion is therefore that a combination of all three methods is the best strategy. This approach makes it more likely that certain pitfalls are avoided, and moreover it allows the different methods to complement each other (Johannessen 2003, Schütze 2010). Since the drawback of one method is the advantage of another, a combination of methods is advantageous.

1.7.1 Corpus studies

Corpora provide the opportunity to access large amounts of data in a quick and simple way. Also, when using corpora, it is easy to go back and check the data, since the corpus provides a static sample of linguistic data. Moreover, tagged corpora make it possible to search for specific words, something which increases the efficiency of the hunt for relevant data. Yet, for the purposes of this thesis, this is not as straightforward. Tagged corpora do not allow us to search for silent linguistic items.

Since the empirical focus in this study is fragmentary spoken language, both the NoTa corpus[36] and the Big Brother corpus[37] provide good sources of data. Both corpora contain recordings of people entertaining free and spontaneous dialogues, as well as interviews. Another advantage is that both these corpora contain video recordings of the dialogues. Additionally, it is possible to see preceding and subsequent utterances. Hence, both the linguistic and the non-linguistic context are easily accessed.

[36] NoTa-Oslo: Norwegian Speech Corpus – the Oslo part (Tekstlaboratoriet, ILN, Universitetet i Oslo. http://www.tekstlab.uio.no/nota/oslo/index.html).
[37] The BigBrother Corpus is a speech corpus with recordings from the first season of the BigBrother show, broadcast on Norwegian television by TVNorge in the first half of 2001.

Yet another advantage using corpora is that the transcriptions have already been made by a person who is not familiar with my research project. The contents of a corpus do not run the risk of being biased by the researcher (Schütze 2010). The risk of being influenced by my own hypotheses during the data elicitation is therefore reduced, since I do not have the possibility to annotate non-realized elements in cases where they may actually be realized.

However, many theorists are critical of the kind of data that can be obtained from corpus studies:

> Any attempt to restrict oneself to data gleaned from direct observation of performance seems particularly hopeless: "The complexity and resulting rarity of most of the interesting examples, the difficulty of reliably distinguishing slips from normal productions, and the problem of proving nonexistence combine to require a larger corpus than can reasonably be collected." (Carden 1976: 101, quoted in Newmeyer 1983: 61).

In general, a corpus will not be able to give any additional information about the data it contains; for example, we cannot go back and ask the speakers questions about the acceptability of a construction.[38]

Given that corpora cannot provide negative data or assessments of data, this method may be less suitable for the investigation of marginal linguistic phenomena (Cornips & Poletto 2005). Even if a construction is not found in a corpus, we cannot conclude that the construction is unacceptable. It might quite simply be that it is very infrequent. A corpus represents a restricted set of data, quite different from the language itself, which by definition is infinite. The corpus is limited, but still the goal of the researcher is to construct a grammar which can predict an unlimited amount of sentences. This problem will naturally diminish as the corpus grows bigger, but in principle it will always be a problem, given that a corpus will always be finite.[39]

A common critique is that corpora display only E-linguistic data, which may influenced by sloppiness, fatigue and inattentiveness. Hence, it is claimed that these data cannot really tell us anything about I-linguistic competence, which is what we are really interested in (cf. section 1.5.1). Johannessen (2003: 148) acknowledges this paradox:

---

[38] One fact which can give us some information is of course the frequency of a construction type. However, note that frequency can sometimes be an illusory way of measuring the acceptability of a given construction. Some linguistic constructions are very rare, but still without a doubt are highly regular.

[39] A similar methodological problem is found in research on Old Norse, and in research on all dead languages, for that matter. In these cases, the extant written texts constitute some kind of a corpus, which in turn forms the basis for postulating a general grammar of the language. Just as for spoken corpora, this amount of accessible texts is limited, despite the fact that one actually seeks to define a grammar which can generate an unlimited amount of sentences of the language in question. See Faarlund (2003) for a discussion of this issue.

> For at korpusbruk skal forsvares av en i-språksforsker, er det nødvendig med en god porsjon kritisk sans og helst tilleggsundersøkelser med bruk av informanter og introspeksjon.
>
> *In order for a researcher of I-language to be able to defend the use of corpora, it is necessary to have a large degree of critical sense and preferably additional surveys using informants and introspection.*[40]

This problem immediately revives the larger theoretical issue that even though the final goal is to establish a realistic model for an I-language, we can only have direct access to E-linguistic data. The conclusion is unavoidably that performance is our only access path to competence:

> Chomsky (personal communication) views the competence/performance distinction as a simple truism: what we know and what we do are different things. The trick is how to learn about the former on the basis of evidence from the latter (Schütze 1996: 21).

Åfarli (2000) and Giere (1997) discuss such explanations where the explanans, i.e. the real system, in our case the I-language, is hidden. They argue that in these cases, the model of the explanans must be constructed by using indirect evidence. Such models are called hypothetic. In order to investigate whether the model is correct compared to the real underlying system, one must deduce controllable predictions from the model. If these predictions are correct when compared to new, relevant data, the model is strengthened. In the opposite case, the model is weakened. If new predictions are continuously deduced, and these predictions are parallel to new empirical data, the model is corroborated (Åfarli 2000). Then it is often treated as true, and we usually reckon that the model can actually explain the observed data. Hence, hypothetic modelling makes it possible to construct explanations for systems which are originally hidden from our senses. This line of thought is fruitful for researchers aiming to give explanations of I-linguistic phenomena on the basis of corpus data.

1.7.2 Introspection

Chomsky (1957) claimed that introspection is the best source for obtaining knowledge about language, and it has been a widely used method within generative grammar: ”Indeed, personal introspection more often than not represents the *sole* source of data for a linguist doing syntactic work in his or her native language” (Newmeyer 1983: 48). In contrast to corpus studies, introspection makes it possible to assess non-frequent, marginal data. Moreover, one can assess acceptable as well as unacceptable sentences.

[40] My translation of the quote.

Yet, this method has received massive criticism (Schütze 1996). The critics claim that intuition cannot be trusted: "intuitive data has been found increasingly faulty as a support for our theoretical constructions" (Labov 1975: 6). Most of the criticism has come from sociolinguistically-oriented researchers, focussing on the danger that the researcher will be influenced by his own theoretical presumptions (Newmeyer 1983). Introspection can in principle only check the I-language of one person. Hidden behind this method is thus the assumption that it is possible to generalize from a given idiolect to other language users within the same linguistic community. A solid response to the criticism of intuitive data which is put forth by Labov (1975) and others is provided by Sprouse, Schütze & Almeida (forthcoming), who show that the criticism is quite simply on the wrong track.

Using introspection as the only method for data collection will obviously lead to potential methodological challenges. The researcher risks getting on the wrong track and ultimately ignoring relevant data. Furthermore, introspective data are not accessible to control. Still, one obvious advantage is of course the accessibility of the data. Introspection is an excellent starting point for making first hypotheses. Moreover, since the researcher is aware of what kind of assessment he is looking for, he will, compared to an informant, be more capable of providing relevant answers, e.g., distinguishing between grammaticality and acceptability (Schütze 1996).

1.7.3 Informants – experimental data

In order to access more than one person's I-language, data can be collected by eliciting acceptability judgments from informants (Newmeyer 1983). Using informants is of course also a kind of introspection, using the I-language of the informants rather than the researcher. One advantage of this method is the possibility for two-way communication. The researcher may ask questions of clarification if something is unclear or particularly interesting. Also, he can confront the informants with sentences which are assumed to be unacceptable (Johannessen 2003).

However, Newmeyer (1983: 61) points out that a major challenge in using this method is that while the researcher is aiming for the specific answers that the questions are designed to measure, he must still try to avoid influencing the answers. It is a balancing act to trigger the right kind of response without influencing the informants.

Moreover, the researcher is interested in judgments on acceptability, but the informants often tend to give judgments based on other factors (cf. the discussion in 1.5.2).

How can we ensure that the informants' answers are not based on whether the sentence is suitable in a given context, whether it is probable that he would say something like that, or whether it is regarded as a correct way of speaking?

Finally, the informants' opinions on their linguistic behaviour are not always coherent with the way they actually speak (Labov 1996):

> The fact that a native speaker judges a certain form to be completely unacceptable, but can, nevertheless, be recorded using it freely in every-day conversation, is a striking result of elicited introspective judgments (Cornips & Poletto 2005: 942-943) .

The informants may have normative opinions which they do not uphold in everyday conversation. Many people tend to report normative rules taken from written language syntax when they provide acceptability judgments (Cornips 2006, Johannessen 2003). If this is the case, the questions will not address what they are meant to. When dealing with discourse ellipses, this problem is highly relevant. If an informant judges the spoken language data by applying written language norms, the result will most likely be useless for the purpose.

1.7.4 Are traditional methods invalid?

Elicitation of acceptability judgments has been the common method of collecting data within generative grammar. There has not been a tradition of conducting large-scale quantitative judgment studies. Rather, in many cases, research has been based on elicitation from a few informants, among them the linguist himself (introspection), as well as his/her colleagues. Recently, the reliability of this method has been the subject of vivid discussion in the literature. It has been claimed that the scientific results of such data collection are not generalizable because of the small number of informants, the small number of experimental stimuli, and also the potential biases that the researcher brings into the situation (see e.g. Edelman & Christiansen 2003, Featherston 2007, Gibson & Fedorenko 2010a, 2010b and Schütze 2010).

Gibson & Fedorenko (2010a) have argued that the traditional methods of data collection in syntax are invalid, and that in order to obtain valid results, researchers need to conduct large scale quantitative studies. More specifically, considering generative grammar to be a branch of psychology, they believe that syntax research should also adopt the methods from experimental psychology. The claim is that traditional acceptability judgment collection methods, which are relatively informal, have two main negative consequences, making the research less reliable. Firstly, such research entails a high number of *false positive* results,

which occur when there is no difference between conditions, but the experiment falsely indicates that there is. Secondly, it leads to a high number of *false negatives*, which occur when there really is a difference between conditions, but the experiment falsely indicates that there is none. Last, the critics point to the danger of potential cognitive bias that arises from using other linguists as informants.

In response to this criticism, Jon Sprouse and his collegues conducted the following concrete empirical experiments. Sprouse, Schütze & Almeida (forthcoming) carried out a formal acceptability judgment experiment where they tested a random sample of 292 sentence types taken from articles in *Linguistic Inquiry* in the period 2001–2010. Sprouse & Almeida (forthcoming a) conducted a similar experiment, using a linguistic textbook (Adger 2003) as the empirical base. Crucially, they obtained replication rates of 95 % and 98 %, respectively. From these results they concluded that "there is no evidence of a reliability problem for acceptability judgment data in syntax" (Sprouse, Schütze & Almeida forthcoming: 22).

Thus, the results show that for the detection of phenomena of interest to syntacticians, traditional methods are not less powerful than formal experiments.[41] Even though Gibson and Fedorenko (2010a) correctly point out potential problems, it turns out that these are not *de facto* problems (Sprouse & Almeida forthcoming b). This entails that a universal adoption of formal experiments for all syntactic research is not necessary. Traditional methods are not invalid.[42] In defence of the traditional method, note that acceptability judgments are cheap and easy to reduplicate systematically. Also, note that every presentation of syntactic data, e.g., in conference presentations and written papers, can trigger replies from the audiences and readers who test the judgments themselves. This process provides additional quality control.

As for the issue of whether one should worry about cognitive biases when using other linguists as informants, Sprouse & Almeida (forthcoming b) note that if a set of data were affected by cognitive biases, two patterns would be expected to arise. Firstly, linguists would likely report differences between theoretically convenient conditions, but naïve participants would not perceive these differences. Secondly, linguists would most likely report differences between conditions that went in the opposite direction from the differences reported by naïve participants. Yet, importantly, Sprouse & Almeida (forthcoming b) emphasize that that

[41] See also Phillips (2009) for a defense of traditional methods.
[42] Moreover, by testing three case studies, Sprouse & Almeida (forthcoming b) show that blind faith in the reliability or superiority of formal methods can potentially lead to a large number of false negatives, which is precisely what Gibson & Fedorenko (2010a) pointed out as a negative outcome for the traditional methods.

neither of these predictions are borne out, so cognitive bias is not a real problem with the use of linguist-participants.

The conclusion is thus that traditional methods are safe, and that formal experiments are not inherently superior to informal acceptability judgments. However, note that Sprouse and his colleagues do acknowledge that it would also be a mistake to adopt traditional methods universally and forsake formal experiments. Formal experiments are indeed useful for certain studies. They claim that, crucially, we should abandon the idea that there is a single method for every research question: "Science is not a recipe. Syntacticians need to evaluate each methodology based on its costs and benefits to decide which method is most appropriate for their specific research question" (Sprouse, Schütze & Almeida forthcoming: 22). Obviously, there are costs and benefits to every methodology. Therefore, each researcher should consider which methodology that would be best suited for the investigation of the theoretical question he/she is interested in.

1.7.5 Choice of methods

Having compared and considered the respective advantages and drawbacks of these different methods, the choice of method for collecting reliable data for my purposes will be better motivated. The general advantages and disadvantages of each of these methods are for the most part highly relevant for the investigation of discourse ellipses. A corpus provides authentic spoken data, and for this purpose I have therefore used corpus data. Yet, in some cases, the need arises to test types of discourse ellipses which I (by introspection) may suspect to be acceptable or not acceptable, and where such a test would provide important theoretical input. After the first phase of data collection, additional, more fine-grained theoretical questions arise. For instance, if the corpus shows that topicalized subjects can be dropped, it is relevant to find out whether subjects can be dropped from other positions, too, and moreover if other types of constituents can be dropped from [spec,CP]. Also, can several constituents be omitted at once? Which ones, and under which structural circumstances? The corpus may provide some answers to such questions, but not in all cases. In order to investigate such specific questions, it has been necessary to construct possible discourse ellipses and then test them by eliciting judgments from informants. Hence, I have chosen to make use of all the three methods discussed in the previous sections in combination.

The first step in my investigation was to look at spoken data both from corpora and from conversations that I have observed personally. In addition, fragmentary data from other registers have been considered. From this basis emerged a picture of the general patterns of which kinds of elements were most frequently omitted, from which positions in the sentence and so on. I have of course, along the way, considered whether the ellipses in question were acceptable to my ears. Then, I have more systematically looked for data in tagged spoken corpora.[43] Yet, since these corpora are not tagged for ellipsis or for missing constituents, it has not been possible to define the frequency of the different ellipsis types precisely. Neither has it been possible to make a complete account of all types of discourse ellipsis in Norwegian, since I cannot guarantee that there are not more types in the corpus than the ones I have included in my analysis.

1.7.6 Collection of data

My primary source of empirical data has been Norwegian spoken language corpora. More specifically, I have searched for authentic examples in the NoTa-corpus (Norwegian speech corpus – the Oslo part), and in the Nordic Dialect corpus. The NoTa corpus was built during the period 2004-2006, and consists of interviews and conversations from 166 informants who were born and raised in the Oslo area. The Nordic Dialect corpus, on the other hand, contains spoken data from all parts of Norway. Actually, the corpus covers all the Nordic countries,[44] but my investigation has been limited to the Norwegian subpart. Both these corpora consist of recorded dialogues between two persons. In addition to interviews conducted by a research assistant, there are recordings of spontaneous dialogues between two informants.

I have also looked at the Big Brother corpus, which consists of transcriptions of the first Norwegian season of the television show Big Brother in 2001; this corpus also consists of recordings of spontaneous conversations. Additionally, I have searched for data in the TAUS corpora, which consists of spoken data from interviews conducted in 1971-73, but which were digitized, transcribed and tagged in 2006-7.

All these corpora have been orthographically transcribed and grammatically tagged by the Text Laboratory at the University of Oslo.[45] The corpora thus provide both transcriptions of the dialogues, as well as video recordings or in some cases just sound files. Hence, both the

[43] I have utilized spoken corpora developed by Tekstlaboratoriet at the University of Oslo: The NoTa corpus, the Big Brother Corpus and the Nordic Dialect Corpus.
[44] It contains Norwegian, Swedish, Danish, Faroese, Icelandic and Övdalian spoken language.
[45] For additional information about each corpus, see the webpages of the Text Laboratory: www.tekstlab.uio.no.

linguistic and the non-linguistic context are easily accessible. This is a clear advantage for the investigation of discourse ellipses, given that these constructions are highly context-dependent.

When working with the corpora, it has not been my goal to look at variables such as age, gender, dialects, etc. Neither have I conducted any frequency statistics to investigate which types of ellipses are most or less frequent. Hence, except for the first impression one gets from looking through the corpus data, which of course provides some information about which ellipses types are the most frequent, my investigation will not give any specific results with respect to frequency. Rather, my interest has been to pin down different types of discourse ellipses, and to propose a grammatical analysis which can account for them.

In order to find the relevant examples in the corpora, one of the tags provided in the search has been particularly useful, namely the tag *segment initial*. This tag allowed me to search for elements which are the initial ones in an utterance, which has been very useful given that discourse ellipses primarily display omissions sentence-initially. The segment initial tag has allowed me to search for utterances in which the initial element was a finite verb – this led me to examples of topic drop. It also permitted me to search for verb-initial cases containing an anaphor, which led to cases of ellipsis displaying connectivity effects between an elided subject and an anaphor. Moreover, searching for cases in which a verbal participle was segment initial, led to cases where both a subject and a finite auxiliary were omitted.

It has to be mentioned that, in searching the corpus this way, I have obviously been limited by my own creativity, given that I have only been able to search for empirical cases which I have been able to think of myself. My search has thus been hypothesis-driven in this way, since I first established certain issues that I wished to investigate, and then I aimed to find the relevant data. Yet, of course, I have also conducted a less specific search of the relevant corpora, i.e., I have scrolled through large amounts of transcribed speech, in order to assure that I did not overlook important ellipsis types.

Even despite these efforts, it was not possible to find all relevant data types in the corpora. In particular, I encountered this issue after having begun to analyse the data, to test the theoretical predictions of previous analyses as well as my own preliminary hypotheses empirically. The spoken corpora could not provide the necessary data in all these cases. However, as noted in the previous section, not finding a sentence type in a corpus crucially does not imply that this sentence type does not exist in the language. This *may* be the case, but

it may also be an accident that the corpus just does not contain the relevant construction type. That is to say, a corpus can never provide negative data, so it is not possible through corpus investigations to conclude that a certain construction type is ungrammatical.

For this reason, I have run informant tests on a selected set of discourse ellipses, both for cases which I suspected to be to be acceptable, and cases which I suspected to be ungrammatical. For each tested sentence, I collected judgments from at least three informants, who were all at least 16 years old, and who all had Norwegian as their mother tongue.

In order to attempt to prevent informants from providing judgments of how normatively correct the string is, rather than evaluating to what extent it actually occurs, I have tried to ask them: 'How natural does this sound?' rather than 'Do you judge this sentence to be correct?' or 'Would you use this sentence?' (see Featherston 2007: 292 for a discussion of this issue).

Notice that testing discourse ellipses with informants is a quite challenging task. Firstly, such ellipses in general are apparent violations of the standard norm for Norwegian, which will put certain constraints on the informants. Secondly, the discourse ellipses most often require a very specific context in order to be licensed. I have therefore aimed to provide a context for each example that I tested. In most cases, this context is also provided in the running text when the relevant example is cited.

Throughout the dissertation, the example cases that are displayed are marked in the following way: Data found in spoken corpora are marked with a reference to the corpus in which it is found. The Norwegian Speech Corpus (the Oslo part) has been abbreviated to NoTa, and the Nordic Dialect Corpus has been abbreviated to NDC. Authentic data from other sources are also given a reference. Constructed examples are not followed by such a specific marking. For these cases, it can be assumed that they have been checked and approved by at least three informants.

Many of the elliptical examples require a specific context, yet due to space restrictions, I have not included a rich context for the corpus examples in the running text. In the appendix to this dissertation, a richer context is provided for these examples. As for the constructed examples, the context is included in the running text. This is the same context that was given to the informants.

1.8 Fragmentary data from written registers

Discourse ellipsis is a distinct characteristic of spontaneous speech. Yet, similar data are attested also in certain written registers. There are several parallel features characterizing these registers, but there are also some differences. Data from these registers will be included at certain points in the dissertation, when they are theoretically relevant. However, they will not be treated systematically. I therefore give a brief overview of the different types in this section.

Firstly, the omission of topicalized subjects is very frequent in several registers, e.g., in diaries as discussed by Haegeman (1990, 1997), and also in letters, post cards and in written interviews. In all these registers, the linguistic subject is contextually salient and can easily be omitted, probably for this reason. For purposes of illustration, I include an extract from the Bridget Jones Diary (Fielding 1996):[46]

(48) Innser at det er overfladisk og tåpelig av meg å føle at leiligheten er for liten til nitten personer og være forbannet over å kaste bort fødselsdagen min på å lage mat og heller ville pynte seg og bli bedt ut på snobbete restaurant av sexgud med gullkantet kredittkort. Vil i stedet betrakte vennene mine som stor, hjertevarm afrikansk eller muligens tyrkisk familie.

> 'Realize it is shallow and wrong to feel that flat is too small to entertain nineteen, and that cannot be arsed to spend birthday cooking and would rather dress up and be taken to posh restaurant by sex-god with enormous gold credit card. Instead am going to think of my friends as a huge, warm, African, or possibly Turkish, family.'

Har besluttet å servere paien med grillet belgisk sikorisalat, baconrull med roquefort og sprøstekt spansk paprikasalami for å gi den en litt fasjonabel touch (har ikke gjort det før, men det går sikkert greit), fulgt av porsjon med Grand Marnier-sufflé til hver. Har sv. positive tanker om fødselsdag. Regner med å få rykte som strålende kokk og vertinne.

> 'Have decided to serve the shepherds pie with Chargrilled Belgian Endive Salad, Roquefort Lardons and Frizzled Chorizo, to add a fashionable touch (have not tried before but sure it will be easy), followed by individual Grand Marnier soufflés. V. much looking forward to the birthday. Expect to become known as brilliant cook and hostess.'

[46] In the Norwegian edition of the book, the translation was provided by Torleif Sjøgren-Erichsen (Fielding 2001). I here cite his translation.

Also, discourse ellipses are often attested in spoken dialogues in novels. These ellipses are mainly of the same types as in real spontaneous speech, probably since this register seeks to imitate the spoken one. This emphasizes that discourse ellipsis is actually an important hallmark of spoken dialogues. (49) and (50) are taken from a novel (Nesbø 2008), and (51) is from an easy-to-read book for children learning to read (Bross & Ilves 2009).[47]

(49) A: Jeg sov. Hva gjorde du?
'I was sleeping. What were you doing?'

B: ~~Jeg~~ leste i Dyr Du Skulle Ønske Ikke Fantes til batteriet på lommelykta gikk ut."
~~I~~ read in Animals You Should Wish Not Existed till battery-the on flashlight-the went out.
'Reading Animals You Should Wish Didn't Exist until the battery on the flashlight went out.'

(50) A: Hold opp, sånne elefanter finnes ikke!"
'Stop it, such elephants don't exist!'

B: ~~Det~~ gjør de vel!
~~that~~ do they well
'Sure they do!'

(51) A: Vil du sitte på?
'Do you need a ride?'

B: ~~Det~~ kan jeg godt!
~~that~~ can I well
'Yes, I can drive with you.'

Furthermore, discourse ellipses occur frequently in SMS, e-mails, online chatting and Facebook conversations. These media are often said to be semi-oral, which can explain the oral quality of the data:[48]

[47] It is particularly interesting that such an elliptical construction is chosen in a book that has a clear educational objective, and where the target group is small children.
[48] The example in (53) is an authentic sms, received 20.09.2010.

(52) ~~Jeg er~~ ferdig nå. ~~Jeg~~ kjører straks. ~~Jeg er~~ hjemme om 10.
~~I am~~ done now ~~I~~ drive immediately ~~I am~~ home in 10
'I'm done now. I'm getting in the car very soon. I will be home in 10.'

The registers mentioned so far all display very similar characteristics to discourse ellipses in spontaneous speech. I will now present two registers which also exhibit fragments, but in which the fragment types are slightly different. Firstly, headlines are discussed in Straumann (1935) for English, in Fjeldstad (2000), Dyrland (1973) and Gynnild (1988) for Norwegian, and in Sullet-Nylander (1998) and Vinet (1993) for French. Particularly interesting about this register are the concrete economy restrictions imposed by the limited space, which forces the headlines to be short.

Norwegian headline fragments typically fall into one of three groups (Fjeldstad 2000). Firstly, in a large group of headlines we find subjects omitted from active sentences (53). These are parallel to discourse ellipses in spontaneous speech. (53) is posted in an online newspaper next to a photo of the Norwegian minister for foreign affairs, and it thus illustrates how a photo of the intended subject in certain cases can replace the linguistic subject. Secondly, omitted subjects and auxiliaries from passive sentences are also very frequent (54). Finally, the third type of headlines attested are cases where a copula verb is omitted (55). This last case is not often displayed in spoken language discourse ellipses:

(53) Mener Tyskland har en helt spesiell egenskap.[49]
think Germany has a very special quality
'Believes that Germany has a very special quality.'

(54) Intervjuet av Eia.[50]
interviewed by Eia
'Interviewed by Eia.'

(55) Norsk skuespiller etterlyst i Bolovia.[51]
Norwegian actor wanted in Bolivia
'Norwegian actor wanted in Bolivia.'

[49] VG online 23.06.2012: http://www.vg.no/sport/fotball/em/2012/artikkel.php?artid=10066174
[50] Aftenposten, 27.09.2009: http://www.aftenposten.no/meninger/debatt/article3290112.ece#.T-bVU5EWJXg
[51] VG online 28.05.2008: http://www.vg.no/nyheter/utenriks/artikkel.php?artid=511071

Note that occasionally, fragmentary headlines are ambiguous due to uncertainty as to what the underlying sentence would be:

(56) Stoppet med falske skilt.[52]
stopped with false plates
'Stopped with false plates.'

In this example we depend on contextual information to decide whether this is an underlying active clause with an omitted subject (a), or whether it is an underlying passive where both the subject and the auxiliary are unrealized (b). In other words, without any contextual input, we don't know if the verb "stoppet" is a preterite or a participle form syncretism. Of course, the headline is much more newsworthy in the b-version:

a. (Han) stoppet med falske bilskilt.
(he) stopped with false license plates
b. (Han) (ble) stoppet med falske bilskilt.
(he was) stopped with false license plates

Another register displaying ellipsis of a different character is that of recipes. This is discussed in Haegeman (1987). What is specific about this register is that the complements of the verbs, i.e., the direct objects, are often omitted:

(57) Framgangsmåte:[53]
Skyll og skjær av endene av rabarbrastilkene. Skjær (…) i biter.
Ha (…) i kasserolle (ikke aluminium) med snittet vaniljestang, vann og sukker.
Kok opp (…) , og la (…) koke i femten minutter, til rabarbraen "klapper sammen".
La (…) stå i kasserollen til (…) lunt.
Sil av (…), bruk gjerne en øse eller lignende for å presse ut den siste smakfulle saften gjennom silen.
La (…) stå i kjøleskap til (…) kaldt.
(…) Kan serveres som den er.

[52] rb.no, 18.02.2011: http://www.rb.no/lokale_nyheter/article5496214.ece
[53] This example extract was found online (http://www.dinmat.no/Drikke/Drinker/Rabarbrasaft), accessed 20.03.2010.

'Procedure:

Wash and cut off the ends of the rhubarb stems. Cut (…) in pieces.

Put (…) in pan (not aluminum) with sliced vanilla pod, water and sugar.

Make (…) boil, and let (…) boil for fifteen minutes, till the rhubarb "folds down".

Leave (…) in the pan until (…) tepid.

Filter (…), use preferably a scoop or the like to squeeze the last savory juice through the strainer.

Leave (…) in fridge until (…) sold.

(…) may be served as it is.'

Finally, Janda (1985) discusses 'Note-Taking English'[54] and Barton (1998) gives an account of so called *telegraphese*, i.e., the language used in telegrams. The economy restrictions are obviously very concrete in this register, since one must pay for each symbol. Typical for telegraphese is the deletion of first person subjects, as well as deletion of functional categories of different kinds.[55]

1.9 Structure of the dissertation

The overall goal of this dissertation is to propose a grammar model which is capable of explaining fragmentary language, and in which discourse ellipses of different kinds can be analysed. As will become clear, this raises some very fundamental theoretical questions concerning the relations between syntactic, semantic and pragmatic content.

This dissertation contains the following parts. Chapter 2 is devoted to previous research on constructions involving discourse-triggered dropping of constituents. I show how earlier analyses have been centred on dropping from one specific position, namely the specifier of CP. A collective term for this family of related analyses is topic drop-analyses. Several of these proposals are technically advanced, yet I argue that the empirical base upon which they are built is too narrow, as discourse ellipses may also include omission of elements from other positions than [spec,CP]. I therefore conclude that an empirically more adequate model is needed.

---

[54] Major characteristics of this register are shortening of words by abbreviations and symbols, omission of finite copula verbs, omission of articles (definite and indefinite ones), omission of (unstressed) pronouns, in particular personal pronouns, omission of finite 'do', omission of whole phrases, nominalization of verbs and combinations of reduced sentences into topic + comment form.

[55] Tesak & Dittmann (1991) also discuss this register and argue that it should not be treated on a par with the language of aphasics, contrary to what until then often had been suggested in the literature. Tesak & Dittmann (1991) reject the claim that aphasics speak the way they do for reasons of 'economy'.

In chapter 3 I establish the basis for the model of analysis that I will propose. This chapter addresses two main questions. Firstly, I discuss where to draw the line between the syntactic, semantic and pragmatic portions of a derivation. Since this will constitute the basis for the remaining analysis, it is highly important that these lines are drawn correctly. I approach this issue through a comparison of two opposing views, namely a global versus a selective theory of semantics. In the second part of this chapter, I argue in favour of an exoskeletal, separationist theory of syntax, thus rejecting the endoskeletal, lexicalist take which is assumed within most branches of generative grammar. Having reached this conclusion, I propose a clausal skeleton in which each main projection (CP, TP, PrP and VP) is motivated from a non-lexical base.

This clausal skeleton is adopted in the analysis of Norwegian discourse ellipses that I propose in chapter 4. I take as a point of departure that any object of study can be approached with at least two different aims. On the one hand, one could try to characterize the objects as such (*what*-questions). On the other hand, one can aim to discover *why* the objects exist in the first place. This division obviously also concerns an account of discourse ellipses.

Following this line of thought, the analysis in chapter 4 is divided into two main parts. In the first part, I discuss the structural properties of the discourse ellipses. I argue in favour of a full-fledged syntactic structure, and against a truncated structure account. Word order and connectivity effects provide empirical support for this viewpoint. More specifically, I discuss agreement and phi-feature valuation, and I propose an analysis in which feature matrices are not linked to lexical items but rather to syntactic positions. The second part of this chapter focusses on the *why*-questions. More precisely, I address the issue of licensing conditions on the discourse ellipses, i.e., which elements can be omitted from which position, and under which restrictions. I conclude that an adequate account of the licensing restrictions must comprise both structural and semantic conditions. Hence, an overall conclusion of this chapter is that the deletion in the ellipses is phonological (the syntactic structure is intact), yet this phonological deletion obeys both structural and semantic/pragmatic restrictions.

Mörnsjö (2002: 127) raises the issue that even though omissions from [spec,CP] are frequent, they are still less frequent than their instantiated variants. She argues that if economy was the main explanation, either in the guise of pragmatic economy (don't be more informative than necessary) or grammatical economy (e.g., 'avoid pronoun'), we should expect dropping of elements in far more cases. To such a question, one could reply that the speaker has a certain need to explicate, and that ellipsis finds itself on the boundary between

two types of economy – one trying to reduce redundancy and the other trying to be informative. One could also argue that realizing an element such as the subject pronoun is maybe not very uneconomical after all. It seems clear that discourse ellipsis requires other kinds of explanations than economy alone.

I will *not* in this dissertation aim to explain *why* ellipsis is used in some cases and not in others. Rather, I will seek to explain what happens structurally in cases of discourse ellipses, and moreover in which situations we *may* find ellipsis. What are the structural and semantic restrictions governing the possible ellipsis types?

Finally, in chapter 5, I sum up the main empirical and theoretical contributions of this dissertation. I provide some concluding discussion, and I also point out some possible areas of future research within this field.

2 Previous research

2.1 Null arguments in generative theory

Discourse elliptical data clearly demonstrate that there is a strong preference for omitting elements sentence-initially, cf. (1). The phenomenon where a sentence initial argument is omitted has been labelled topic drop, referring to sentences in which a discourse-salient topic stays unrealized:

> As noticed already by Ross (1968) and further developed in Huang (1984), it is possible in many languages to leave out a contextually prominent subject or object in sentence-initial position, but not in other positions (Platzack 2000: 51).

It is generally assumed that topic drop sentences are subject to the restriction that [spec,CP] is not realized. This prevents topic drop in the following contexts. Firstly, it is not possible in subordinate clauses (2). Also, since [spec,CP] can only host one constituent, topic drop is ruled out when another element is fronted (3)-(4).[1] Finally, it is only possible for a single constituent to be dropped, namely the one constituent that occupies [spec,CP] of the matrix clause (5):[2]

(1) ~~Vi~~ fikk ny leieboer med hund. NoTa
~~we~~ got new tenant with dog
'We got a new tenant with a dog.'

(2) *Jeg vet at ~~vi~~ fikk ny leieboer med hund.
I know that ~~we~~ got new tenant with dog
'I know that we got a new tenant with a dog.'

[1] Example 1 is taken from the NoTa corpus. The unacceptable examples in (2-5) are constructed.
[2] Example 5 is unacceptable. Yet, as will be discussed in section 4.4, it sometimes seems to be the case that if an element is sufficiently discourse prominent, it can be elided even if the deletion would apparently violate structural restrictions. For example, one could envision the following context which would make the example much more acceptable:

A: Når var det dere skulle få ny leieboer med hund?
'When was it that you were getting the new tenant with a dog?'
B: ?? ~~Vi~~ fikk ~~ny leieboer med hund~~ forrige helg.
~~we~~ got ~~new tenant with dog~~ last weekend
'We got a new tenant with a dog last weekend.'

(3) *Ny leieboer med hund fikk ~~vi~~.
new tenant with dog got ~~we~~
'A new tenant with a dog, we got.'

(4) *Hva var det ~~vi~~ fikk?
what was it ~~we~~ got
'What was it that we got?'

(5) *~~Vi~~ fikk ~~ny leieboer med hund~~ forrige helg.
~~we~~ got ~~new tenant with dog~~ last weekend
'We got a new tenant with a dog last weekend.'

The last condition is also illustrated in the infelicitous example in (6) (from Mörnsjö 2002), where both the subject and the object, both possible topic constituents, are dropped (B1).[3] Yet, leaving out only a topicalized subject (B2) or a topicalized object (B3) is perfectly acceptable:[4]

(6) A: Har du sett mina nycklar?
have you seen my keys

B1: * Ø La Ø på bordet.
Ø put Ø on table-the

B2: Ø La dem på bordet. (Ø = jag)
Ø put them on table-the (Ø = I)

B3: Ø La jag på bordet. (Ø = dem)
Ø put I on table-the (Ø = them)

The [spec,CP] can host only one constituent, and thus B1 is ill-formed because only one of the null elements is licensed. The well-formed topic drop examples in B2 and B3, displaying subject and object topic drop respectively, support this argument, since in these cases, only one constituent is omitted.

The specifier of CP has been the main focus in the literature on topic drop. More specifically, an important goal has been to demonstrate that topic drop requires [spec,CP] to

[3] Note that my example (5) is structurally parallel to Mörnsjö's example B1. In chapter 5 I will discuss this issue more in depth, but for now, I wish to point out that, at least in Norwegian, there is a clear difference in acceptability between the examples in (1-4) and the one in (5). It is my claim that although this example is not fully acceptable, it is not completely illicit either, as it would be quite acceptable in a very specific context.
[4] The examples in (3) are taken from Mörnsjö (2002).

be empty. The description of topic drop is often made in comparison with silent arguments in pro-drop languages. Ever since Huang's (1984) influential work on null arguments, the discussion of these phenomena has mostly been concerned with the categorization, identification and structural licensing of different null-elements cross-linguistically. Either the empty category is analysed as pro,[5] which is a phonologically null pronoun identified through agreement, or it is analysed as a discourse-identified operator that binds a variable in the argument position (see Huang 1984, Cardinaletti 1990, Haegeman 1990, Sigurðsson 1989, Rizzi 1994, Huang 1995, Rosenkvist 1995, Platzack 1996, 1998a, Mörnsjö 2002).

As will become clear, generative research in this field has generally focused on two main aspects of the phenomenon, namely the non-realization of referential arguments on one hand, and the position [spec,CP] on the other. In what follows, I will present the most important theoretical contributions to this field. I will consider which empirical and theoretical aspects of these analyses will be fruitful for my purposes and which of them will not be. Based on his review I will then, towards the end of this chapter, conclude by specifying which parts of these previous analyses will be included in the model that I will present.

Most generative accounts of null arguments, i.e., pro drop and topic drop, analyse these constructions as containing specific null elements, and the analyses to a large extent seek to define the properties of these null elements. As will become clear towards the end of this chapter, I will instead argue for an approach where there are no such specific null elements in the lexicon. Rather, I will claim that ellipses only differ from their non-elliptical counterparts in that the phonological realization is absent. Otherwise, all features are present. Within minimalist theory, the nature of phonologically unrealized elements has been discussed in relation to the development of Copy Theory (Nunes 1995, 2001, 2011). I will, towards the end of this chapter, argue that Copy Theory provides a fruitful perspective for an account of discourse ellipses.

2.2 Huang (1984): Two parameters: pro drop and zero topic

The analysis in Huang (1984) has been central in the generative research on null arguments (e.g. Cole 1987, Sigurðsson 1989). In this article, Huang proposes a cross-linguistic analysis of the distributional and referential differences of null arguments. He explains these

[5] See Roberts (2007) for an overview of theoretical contributions on pro and the null subject parameter.

differences by introducing two distinct parameters, +/- pro drop and +/- zero topic. The idea is that different values of these parameters lead to different types of null arguments. A language with pro drop may have a silent pronoun in [spec,IP]. In a language which is + zero topic, on the other hand, an empty category can be identified and licensed under A'-binding by a silent topic operator in [spec,CP].

As a starting point, Huang points to Ross' (1982) classification of languages as either *hot* or *cool*. The underlying metaphor is the following: A medium is hot if the communication process involves little or no audience participation, and it is cool if active participation is required. According to Ross, this dichotomy can be extended to languages, and to the explicitness with which they express certain anaphoric elements. English and French are then hot languages, because they generally do not allow for the omission of pronouns and because the information required for understanding is mostly obtainable from overt items within the same sentence. On the other hand, Chinese, Japanese, Korean, Imbabura Quechua and Portuguese are classified as cool languages. Here, pronouns are usually omitted, and the understanding of a sentence requires that the hearer/reader makes an effort which involves inference, context and knowledge of the world. Italian and Spanish are classified as so called *medium-hot* languages, since they allow a zero pronoun in the subject position of both tensed and non-tensed clauses, but still they do not allow for the non-realization of objects or other non-subjects.

Huang seeks to explain why languages differ in this way. One explanation proposed by Taraldsen (1978), among others, is that the distinction between hot languages and medium-hot languages is based on recoverability. A null pronoun is assumed to be recoverable through the inflectional morphology of the verb. Hence, if the agreement is sufficiently rich, then pro drop is available.

However, this theory runs into problems when cool languages like Chinese are considered. In Chinese, there is no agreement system at all, and we would thus expect that null subjects would be illicit. Yet, Chinese allows both null subjects and null objects. To explain this, Huang reformulates the difference between cool and non-cool languages as a difference between allowing a zero topic that binds a variable and not allowing such a topic. Hence, he suggests the following classification (Huang 1984: 546):[6]

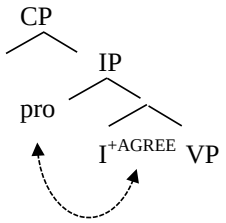
[6] I will have nothing to say about the first row of this table, concerning the distribution of PRO, since this is not relevant for my purposes.

Types of Empty Categories	*Hot* languages (Eng/French)	*Medium* languages (Italian)	*Cool* languages (Chinese)
Zero subject (PRO) in tenseless clauses?	Yes	Yes	Yes
Zero subject (pro) in tensed clauses?	No	Yes	Yes
Zero object (pro)?	No	No	No
Zero topic?	No	No	Yes

Note that none of the languages exhibit true zero objects. Hence, empty object pronouns are prohibited also in Chinese, and the reason that we still find null objects there is explained by the fact that Chinese is + zero topic, i.e., it allows for a silent operator in [spec,CP] to bind a variable in the object position.

Let's look at each language group in turn. Huang (1984) argues that Italian is a + pro drop, - topic drop language. It thus allows for a silent pro subject in [spec,IP], which is identified through the rich agreement morphology on the verb:

(7) Subject drop in Italian:



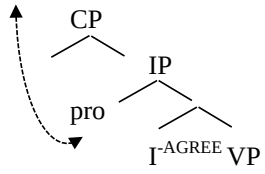
Silent objects are not allowed in Italian, since it is not a zero topic language.

English and French are both - pro drop and - zero topic in Huang's system. Even though both languages display agreement morphology on the verb, Huang argues that this agreement is too weak to be able to identify pro. Hence, null subjects are illicit in English and French. Null objects are also prohibited, since English and French are not + zero topic.

Chinese, on the other hand, is both + pro drop and + topic drop. Note that Chinese does not have any agreement on the verb. Huang proposes that the pro-subject in this case can be identified through linking to a topic in discourse or to an antecedent in a superordinate clause, i.e., through control:

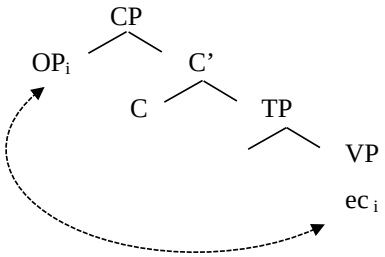
(8) Subject drop in Chinese:

NP/Discourse topic



Chinese also allows for silent objects, under the restriction that the null object is bound by a silent topic operator in [spec,CP]. Huang notes that the null object must refer to the discourse topic:

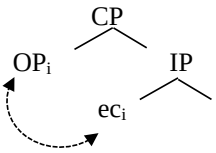
(9) Object drop in Chinese:



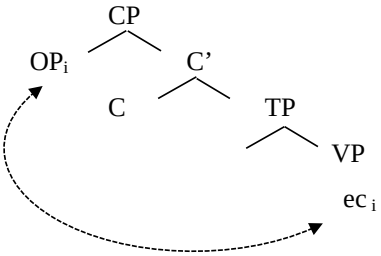
Huang then considers data from German, where either a subject or an object can be dropped. The omission is restricted to the sentence-initial topic position, and only one argument per sentence can be dropped. German is like Chinese in allowing an object NP to stay unrealized, and object drop in German thus receives an analysis that is parallel to the one for Chinese null objects. The empty category in the object position is bound by a zero topic operator in [spec,CP], which in turn is discourse linked. The two languages thus share the property of allowing a variable bound by a zero topic. Still, the evidence for this is 'visible' only in German, because of the verb second requirement, which finds no parallel in Chinese. For German, this operator-variable analysis is extended also to subjects. This explains the distribution of null subjects in German.[7]

[7] At this point, Huang (1989) points to Ross (1982), who labels this 'pronoun zap'.

(10) Subject drop in German:



(11) Object drop in German:



According to Huang (1989), the German data provide support for the above classification. As for English and French, they are neither zero-topic nor pro-drop languages. Italian and Spanish on the other hand are pro-drop, but not zero-topic. If we consider the typological scheme proposed by Huang, German then appears to be an example of a fourth type: a zero-topic but non-pro-drop language. Consequently, it provides important evidence for the theory, since it fills an otherwise peculiar gap (Huang 1989).

To sum up, Huang's analysis of zero pronouns in various languages assumes two distinct parameters. One of them distinguishes zero-topic from non-zero-topic languages, and the other pro-drop from non-pro-drop languages. Moreover, the possibility of allowing a variable bound to a zero-topic can be related to a more general parameter distinguishing discourse-oriented from sentence-oriented languages, responsible for a cluster of properties (Tsao 1977). One of these is Topic NP Deletion, which predicts that a topic can be deleted under identity with a topic in a preceding sentence. Chinese is an example of a discourse oriented language, and English is an example of a sentence oriented one.[8]

The theoretical insights outlined by Huang (1984) provide an important framework for the treatment of discourse ellipses. We need to recognize that silent subjects in Germanic are not instances of pro. Moreover, Huang emphasizes that topics may be null under identity with

[8] Note that in Huang's classification, German would turn out as a discourse oriented language, since it has the property of discourse-bound empty topics.

a topic in a preceding sentence. This property will turn out to be relevant for the treatment of discourse ellipses, where silent elements can be recovered sentence-externally. However, the empirical focus in this article is restricted to silent arguments of the referential type, and Norwegian discourse ellipses are not empirically restricted in that way. Not only referential arguments, but also expletive subjects, may be omitted, and moreover, elements other than arguments may also be silent. Thus, the model needs to cover a broader set of data.

2.3 Cardinaletti (1990): German subject/object asymmetries

The discussion of the categorization of null arguments is continued in Cardinaletti (1990), which deals with null-topic constructions in German, i.e., sentences which are superficially verb first, because [spec,CP] is not lexicalized:[9]

(12)

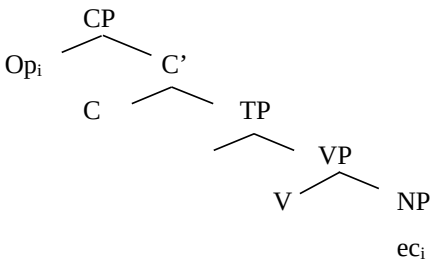
a. ec1$_{OBJ}$ habe ich gestern ec2 gekauft. *object topic drop*
   have I yesterday bought
   'I have bought it yesterday'

b. ec1$_{SU}$ habe ec2 es gestern gekauft. *subject topic drop*
   have it yesterday bought
   'I have bought it yesterday'

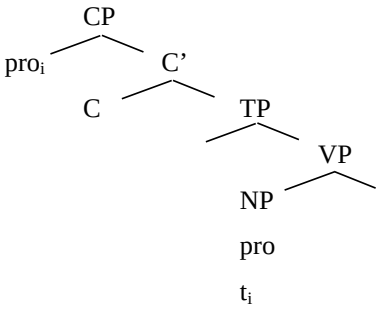
Cardinaletti argues that despite the apparent parallelism in these two examples, they are really different syntactic constructions. (12a) (object drop) involves a base-generated empty operator in [spec,CP] which locally A'-binds a null pronominal variable in object position, whereas (12b) (subject drop) is an instance of pro drop in a non-null-subject language, where a pro subject has moved to [spec,CP]. Note that this analysis of null subjects is different from Huang's (1984) proposal, in which subject drop was also a case of an operator – variable construction.

[9] The examples in (12) are from Cardinaletti (1990).

(13) Null object in [spec,CP]



(14) Null subject in [spec,CP]



Hence, sentences like (12b) are parallel to null subjects in for example Italian. These constructions involve the null pronoun *pro*, which can move to [spec,CP], like any other XP in German. The only difference is that, in Italian, the recovery of the feature content of the null subject depends on the agreement specification on the verb, whereas in German, as well as in colloquial Swedish (Sigurðsson 1989) and also Norwegian, the recovery hinges on the linguistic or pragmatic context. This analysis predicts that expletive subjects cannot be null in German, since they cannot be contextually recovered. According to Cardinaletti (1990), this is a desirable consequence. However, given that expletive subjects are frequently dropped in Norwegian discourse ellipses, this prediction is not correct for Norwegian.

Cardinaletti (1990) shows that the pro-analysis suggested for null subjects cannot be extended to null objects. The main reason for this is that whereas null subjects can be both 1st, 2nd and 3rd person, null objects must be 3rd person. 1st and 2nd person objects cannot be dropped, despite the fact that they are often "very salient in the communicative situation since they refer to the participants in the speech act, hence very easily recoverable" (Cardinaletti

1990: 79). This asymmetry is accounted for by the proposed analysis. As described above, null objects are analysed as null operators in [spec,CP], binding a null pronominal variable in object position. This null Op is a (-pronominal) and (-anaphoric) empty category, which consequently can only be associated with 3rd person NPs, since 1st and 2nd person pronouns are intrinsically (+anaphoric) (+pronominal). Null subjects, on the other hand, are pronouns, which can have any person specification. This categorical difference thus correctly predicts, according to Cardinaletti, that object drop, contrary to subject drop, is restricted to 3rd person. Mörnsjö (2002) argues that the same pattern is found in Swedish. I will argue, however, that the empirical patterns are less clear for Norwegian. Although not very frequent, cases of null 1st and 2nd person null objects are attested. This point will be discussed more thoroughly in chapter 4.

An additional argument against a pro analysis of null objects is, according to Cardinaletti, related to relativized minimality. She argues that in a V2 language, [spec,CP] can be the target of both A-movement and A'-movement. A pronoun which has moved to [spec,CP] creates an A-chain with the base-position. This is what happens when a null subject (pro) is dropped. Yet, for reasons of relativized minimality, the object cannot A-move to [spec,CP], since the subject would then be an intervening category which the object could not cross. This is illustrated by the following two examples (from Cardinaletti 1990), which show that an object analysed as a topicalized pro (15) and a parallel topicalized unstressed lexical counterpart (16) are equally unacceptable:

(15) *pro habe ich gestern t gekauft.
have I yesterday bought

(16) *Es/*Ihn habe ich schon gekauft.
it have I yesterday bought

Importantly, note that the sentence in (15) is not unacceptable as such. Rather, it is the specific analysis of the sentence, with the null object analysed as pro, which is illicit.[10] Accordingly, Cardinaletti argues for an operator – variable analysis of null objects in German.

To sum up, Cardinaletti (1990) proposes that null subjects are instances of topicalized pro drop, in which a pro subject moves to [spec,CP]. Null objects are instances of topic drop

[10] This is a theoretical argument, since it is the particular analysis which is illicit. Speakers cannot observe this difference.

involving null operators in [spec,CP] binding an empty category in object position, and can only be 3rd person. As noted, I will argue that this 3rd person restriction is too strict for the Norwegian data. Moreover, Cardinaletti's analysis excludes expletive null subjects, since they can never be recoverable. However, expletive subjects are among the most frequently dropped elements in Norwegian discourse ellipses. The empirical base assumed by Cardinaletti thus differs from mine, and consequently her analysis also makes the wrong predictions. Finally, just like Huang's (1984) analysis, Cardinaletti's (1990) analysis of Germanic null elements is restricted to the position [spec,CP]. Yet, Norwegian discourse ellipses display silent elements also in other positions. Thus, for our purposes, the empirical base needs to be expanded.

Still, Cardinaletti's point that silent elements need to be recoverable, sentence-internally for Italian and from linguistic or non-linguistic context for Germanic, is an insight that will be built upon in the model that I will propose. Also, the attested asymmetry between topicalized null subjects and null objects is an insight which I will exploit in my proposed analysis.

2.4 Rizzi (1994): Early Null Subjects and Root Null Subjects

Luigi Rizzi's work on null subjects in Italian and other pro drop languages made pioneering theoretical contributions. Rizzi (1982) observed that the null subject property in Italian correlates with rich verbal inflection, and accordingly he proposed that inflection is pronominal, i.e., that when the subject is null, it is identified through the presence of verbal inflection. In Rizzi (1986), the important distinction between identification and licensing of null argument was introduced.[11] This distinction will be relevant for my analysis of licensing restrictions on discourse ellipses in chapter 4.

However, since the main empirical focus in both Rizzi (1982) and (1986) was on the nature of the Italian null subject, and not on null arguments cross-linguistically, as was the case in Huang (1984), I will not elaborate on these analyses in any more detail. Rather, I will discuss a later article, where Rizzi offers an account for root null subjects in non-pro drop languages. Clearly, this is more relevant for the purposes of this dissertation.

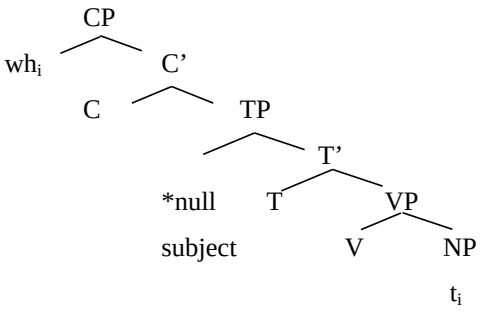
[11] The empirical kernel in Rizzi (1986) was the parametric difference between implicit objects in Italian and English. Rizzi argued that these implicit objects in Italian can be present as null elements (pro) in syntax, whereas in English they cannot, i.e., they must be absent also syntactically. Since this distinction is not of direct relevance for the issue of this thesis, I will not discuss any further. For a discussion of these issues, see Roberts (2007).

2.4.1 Early fixation of the null subject parameter

Rizzi (1994) presents a unified analysis of null subjects in two distinct registers, early child speech and abbreviated diary style. As a point of departure, he notes that at the age of two, children freely drop subjects both in null subject and in non-null subject languages. Still, obligatory objects are not dropped in a parallel way. Rizzi refers to Hyams (1986), who explains this observation by assuming that the initial setting of the null subject parameter is null subject. Hence, under this view, all child language is pro drop. Later on, learners of non-pro drop languages would have to correct this wrong setting of the parameter, in order to stop producing null subjects.

However, Rizzi observes that the properties of early null subjects in non-pro drop languages differ from those of adult null subjects in pro drop languages, suggesting that these are really different phenomena, contra Hyams' (1986) view that all child language is pro drop. Firstly, in non-pro drop languages, early null subjects cannot occur after preposed wh-elements (Valian 1991):

(17)



In a pro drop language, a null subject would be perfectly acceptable in this environment. Note that early null subjects are licit in wh-in-situ constructions; hence, the reason for disallowing a null subject in this context is not that the sentence is a question, but rather the fronted wh-element. Secondly, early null subjects in non-pro drop languages are limited to main clauses. This also differs from the situation in pro drop languages, where a null subject is acceptable in both main and embedded clauses. Thus, early null subjects in non-pro drop languages (e.g. English and Norwegian) obey strict distributional constraints:

1 They are limited to the first position.

2 They rarely occur after a preposed element.

3 They are illicit in embedded clauses.

Crucially, none of these properties hold for null subjects in pro drop languages. Pro subjects freely occur in non-sentence initial positions, after wh-elements and in embedded clauses.

Interestingly, note that the early Italian system is the same as the system for adult Italian. Thus, early null subjects in pro drop languages and non-pro drop languages do not obey the same restrictions.

Next, Rizzi asks whether root null subjects in non-pro drop languages are a special property of the acquisition stage, or if they are also attested in certain adult registers.[12] He postulates that the closest analogue is found in abbreviated varieties of English and other languages, such as the diary style.[13] This type of subject drop obeys the same structural constraints as the early null subjects. It is limited to the first position, it does not occur with a preposed element, and it is illicit in embedded clauses. Rizzi refers to Haegeman (1990), who suggests a topic drop type of analysis for the root null subjects in diaries, involving a discourse-bound null operator in the matrix spec of COMP binding a variable in the subject position. However, she notes that under such a topic drop analysis, it would be expected that both subjects and objects could be dropped in this register. Yet, this is not the case (examples from Haegeman 1990: 156):[14]

(18)

a. _ saw her at the party.

b. * She saw _ at the party.

Mainly null subjects are attested in diaries, and the same restrictions apply also to child language; object topic drop is not allowed.

[12] In that case it could be considered a genuine option of Universal Grammar.

[13] This register has been extensively discussed by Liliane Haegeman, in several publications. I will come back to her analysis shortly.

[14] Regarding example (18b), it is not explicitly pointed out by Rizzi, but it is implicitly assumed that the subject *she* is in [spec,IP], since otherwise there would be no room for the operator in [spec,CP], and the sentence would thus be unacceptable for that reason.

2.4.2 The null constant

Rizzi (1994) notes that null subjects in colloquial German and other Germanic varieties obey the same structural restrictions as early null subjects in non pro drop languages. A main clause subject can be dropped from the specifier of COMP in a V2 configuration, but not in clause-internal position or in embedded clauses. However, in colloquial German, preposed objects can also be dropped, contrary to what is described for English acquisition data:

Early English and diaries:	+ root null subjects
	- topic drop of objects
Colloquial German:	+ root null subjects
	+ topic drop of objects

Because of this subject-object *symmetry* in German, a topic drop analysis with an operator in [spec,CP] binding a subject/object variable has been proposed (Huang 1984, Ross 1982). However, Rizzi objects to this proposal, due to the observed asymmetry between subject and object drop:

> But Cardinaletti (1990) has pointed out that there remains an important asymmetry between subject and object drop: subject drop can involve pronouns with any person specification, provided that the dropped element is sufficiently salient in the context, whereas object drop is restricted to 3rd person (Rizzi 1994: 157).

If operators are intrinsically 3rd person, then the limitations on the object case would follow directly, but then, subject drop could not involve a null operator. Consequently, a different analysis for subject drop would be required. As we have already seen, Cardinaletti (1990) argues that null subjects are instances of pro which move to [spec,CP], whereas null object are variables bound by an operator.

According to Rizzi, however, none of the empty categories currently assumed in the theory have the correct properties. He therefore proposes a new analysis, drawing on insights in Lasnik & Stowell (1991), who observed significant interpretive differences between constructions with null operators (19a) and 'ordinary operator-variable constructions'[15] as found in, e.g., wh-questions (19b) (examples from Rizzi 1994):

[15] The term 'ordinary operator variable construction' is Rizzi's.

(19)

a. John is easy OP_i to please t_i. null operator – variable

b. John wonders who_i to please t_i. ordinary operator – variable

(19b) involves quantification over a possibly non-singleton set, whereas the null element in (19a) has its reference fixed by the antecedent. According to Lasnik & Stowell (1991), this interpretive difference correlates with sensitivity to crossover effects. Both kinds of A'-binding are sensitive to strong crossover, as shown in (20), but only genuine quantification is sensitive to weak crossover (21) (examples from Rizzi 1994: 158-9):

(20)

a. *Who_i did you get him_i to talk to t_i?

b. *$John_i$ is easy for us OP_i to get him_i to talk to t_i?

(21)

a. *Who_i did you get his_i mother to talk to t_i?

b. $John_i$ is easy for us <op_i to get his_i mother to talk to t_i?

As a consequence, Lasnik & Stowell (1991) postulate a split between the two types of A'-bound traces. Only the trace bound by a genuine quantifier is a variable; the trace bound by the empty operator is not. Rizzi proposes that this latter trace type is a *null constant*, which he defines as a non-variable R-expression. In order to be identified, this null constant needs to be A'-bound by a null operator. Rizzi states that weak crossover is a property of variables, which explains why null constants do not obey this restriction. Yet, Principle C of Binding Theory[16] is a property of all R-expressions, and hence, since both types of A'-bound traces in (20) and (21), i.e., both the variable and the null constant, are R-expressions, Binding Theory explains why they both are sensitive to strong crossover.

Rizzi proposes that in addition to the features +/- anaphor and +/- pronominal, empty categories also have a feature +/- variable. This gives rise to eight different cases (table from Rizzi 1994: 159):

[16] Principle C of Binding Theory states that all R-expressions must be free everywhere.

1.	2.	3.	4.
< + a>	< + a>	< + a>	< + a>
< + p> = *	< + p> = PRO	< - p> = *	< - p> = NP-t
< + v>	< - v>	< + v>	< - v>
5.	6.	7.	8.
< - a>	< - a>	< - a>	<- a>
< + p> = *pro* (res)	< + p> = *pro*	< - p> = vbl	<- p> = *nc*
< + v>	< - v>	< + v>	<- v>

The categories 1 and 3 are excluded from attestation, due to the incompatibility of the features <+a>, which requires A-binding, and <+v>, which requires A'-binding. The remaining six types are all attested: 2 is PRO, 4 is the NP-trace, 5 is pro used as a resumptive pronoun, 6 is regular pro, 7 is a variable, and 8 is a null constant. Thus, in addition to the familiar null categories (PRO, trace, pro and variable), this typology generates two new cases, namely the resumptive pro (-a, +p, +v) and the null constant (-a, -p, -v). It is the latter which is of interest here.[17]

Now Rizzi asks: What is it that forces A'-binding of the null constant by a null operator? Why can't the null constant behave like other definite descriptions and pick up its referent directly in discourse? The proposed answer is that, like all other non-pronominal empty categories, the null constant must satisfy the identification requirement stated in the Empty Category Principle (Lasnik & Stowell 1991, Rizzi 1994: 160):

> ECP (identification)
> Empty categories <- p> must be chain-connected to an antecedent.

The point is that an empty category requires a clause-internal antecedent. It cannot be linked directly to an antecedent in the discourse.

Importantly, the empty category found in German topic drop constructions, which is bound by a discourse-identified null operator, is now also defined as a null constant – it is sensitive to strong crossover (22), but not sensitive to weak crossover (23) (examples from Rizzi 1994):

[17] Rizzi proposes that the former category characterizes pro when it is used as a resumptive pronoun.

(22)

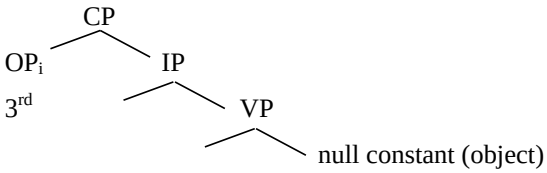
a. *Den Hans$_i$ hat er$_i$ t$_i$ gesehen.
   'Hans has he seen.'
b. *OP$_i$ hat er$_i$ t$_i$ gesehen.

(23)

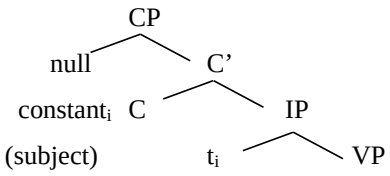
a. Den Hans$_i$ hat (sein Vater) t$_i$ gesehen.
   Hans has his father seen
b. OP$_i$ hat (sein Vater) t$_i$ gesehen.

These are examples of object drop, in which the null constant is bound and thereby licensed by a null OP, with inherent 3rd person singular features. Yet, in examples of subject drop, there is no such person restriction. Null subjects may be 1st, 2nd or 3rd person. To account for this, Rizzi argues that in V2-languages, the [spec,CP] position can occasionally behave as an A-position, when the local subject is moved there.[18] Hence, the null constant subject can be situated in [spec,CP], from where it can bind an NP-trace in [spec,IP]. Thus, in null subject constructions, no null OP is involved.

(24)



(25)



[18] The idea that [spec,CP] may be an A-posisiton in V2 languages is also argued for by Holmberg (1986), Taraldsen (1986) and Rizzi (1991).

However, in such a scenario the null constant subject would crucially lack a clause-internal identifier and would then violate the ECP. To fix this problem, Rizzi (1994: 162) proposes a revision of the ECP:

> ECP (identification):
> Empty categories <- p> must be chain-connected to an antecedent
> … if they can

The effect of the supplement "if they can" is to allow the specifier of the root to be exempt from the identification requirement, and as a consequence leaving it available for discourse identification:

> The specifier of the root then is the only position in which an empty element can fail to have a clause internal identification, and is available for discourse identification. Under this interpretation of (23) [the ECP][19], an unbound null constant can survive in the specifier of the root (…), and receive its referential value in discourse (Rizzi 1994: 162).

Hence, the status of the root is crucial, and it is therefore important to define how the root can be realized. Rizzi (1994: 162) states the following principle:

> Root = CP

As we have seen, Rizzi assumes that in German and other V2 varieties, [spec,CP] can be an A-position when the local subject is moved there. Consequently, the [spec,CP] can host the null constant, and from there it binds the null subject trace in [spec,IP]. Due to the revised ECP, the null constant in [spec,CP] is identified in the discourse. In German, the null constant is also possible in other structural positions, for instance with objects, provided that it is bound by the discourse-identified null operator in [spec,CP] (Rizzi 1994: 163). Thus, for null objects, identification happens through a chain connection with the operator in [spec,CP], which in turn is identified in discourse.

To sum up, Rizzi claims that in null subject constructions, the null constant moves to [spec,CP] and leaves an NP-trace in [spec,IP]. On the other hand, in null object constructions, the null constant is bound by an operator in [spec,CP], which is inherently 3rd person. We clearly see then how his analysis relies on Cardinaletti (1990).

Rizzi then extends this null constant analysis of Germanic to all cases of root null subjects, including early null subjects in non-pro drop languages and also diary style. A question which arises then is why the null subject option is no longer available in adult

[19] My addition.

standard English and French. Rizzi argues that the reason for this is that a root null subject is only possible when the specifier of the root is an A-position. In standard English and French, [spec,CP] cannot be transformed into an A-position, and consequently, root null subjects are prohibited. Being an A'-position, [spec,CP] is not a possible host for the null constant. Also, [spec,IP] is excluded as a host, because it is not the Spec of the root. Only the root is exempt from the identification requirement.

The possibility of null subjects in early English is explained by the hypothesis that English-learning children who produce null subjects have not yet acquired the principle Root=CP. Thus, they will allow roots other than CP, or in other words, CP is optionally not projected. In such cases, [spec,IP], which is an A-specifier, becomes a suitable host for the null constant, and as a consequence the root null subject is allowed. Yet, as soon as the principle Root = CP is acquired, these conditions cease to be met, and the possibility of an early null subject disappears. Rizzi proposes a parallel explanation for null subjects in diaries, postulating that the principle (Root = CP) is weak in these registers, signifying that it may occasionally be 'turned off' in certain contexts, e.g., in these specific registers.

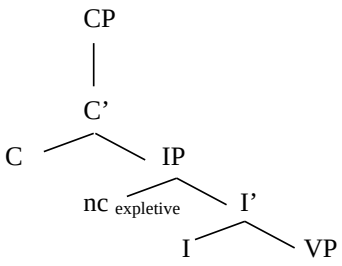
Finally, as noted earlier, neither early nor adult English possess the discourse-identified null operator. Hence, the null constant is not permissible in any position other than the main subject position. The observed subject-object asymmetry then follows. Null subjects are allowed under specific restrictions, yet null objects are prohibited in these registers, as opposed to German, which possesses the discourse-bound null operator and thus permits binding of a null object variable. Hence, both null subjects and null objects are allowed in German.

2.4.3 Root expletive subjects

Until this point, the discussion has revolved around the dropping of referential arguments. Yet, learners of English can also drop non-referential subjects. Rizzi notes that the possibility of expletive dropping is available also in adult Swedish. As we have seen, this is also attested in spoken Norwegian. Some languages, like colloquial French, even allow root null subjects only with a non-referential interpretation (Rizzi 1994). Importantly, sentences with null expletives seem to be genuine cases of root null subjects. The expletives can only be dropped from the initial position, and they cannot be omitted when [spec,CP] is filled. The question is whether Rizzi's null constant analysis can cover also these cases.

Rizzi does not give an exhaustive explanation of null expletives, but he points to the idea that specifiers are optional, unless required by a constraint such as the EPP. This entails that [spec,CP] may be missing, and if so, an unbound null constant in [spec,IP] becomes possible:

(26)



The null constant would then not violate the ECP, since there is no c-commanding maximal projection which may act as its antecedent. Thus, Rizzi argues that the non-referential null constant is possible here, while it remains illicit in embedded contexts or in main contexts where [spec,CP] is present. Still, this proposal contradicts the analysis proposed for referential null constants, which hinges on the assumption that the null constant moves from [spec,IP] to [spec,CP]. Thus, this analysis of null expletives is not compatible with the analysis of referential null subjects. Rizzi (1994: 169) himself also points out this weakness. It is evident that this analytical solution is not satisfactory, and that the problem of null expletives therefore remains a theoretical challenge.

2.4.4 Intermediate conclusion

In a way that is similar to Huang (1984) and Cardinaletti (1990), Rizzi restricts his analysis to referential arguments and to omissions from the position [spec,CP]. As noted earlier, this empirical base is too narrow when it comes to discourse ellipses. Norwegian discourse ellipses display cases where non-arguments are silent, and additionally, cases where elements in other positions than [spec,CP] stay unrealized. Moreover, cases of null expletives are very frequent. Moreover, we have already seen that Rizzi's proposed analysis of null expletives is not fully developed, and it has some problematic predictions.

Rizzi follows Cardinaletti (1990) in arguing that null subjects are arguments, i.e., they can occur in all persons, whereas null objects are bound by an operator, and are thus inherently 3rd person. This restriction does not hold for Norwegian object drop. Norwegian

null objects may occasionally also be 1st and 2nd person in specific contexts. I will discuss this issue in more detail in chapter 4.

An idea which will be drawn upon in my proposed analysis, although only indirectly, is the asymmetry between [spec,CP] as an A-position when it is occupied by the subject and as an A'-position otherwise. In chapter 4, I will propose an analysis of discourse ellipses involving dropping of both a subject and a finite auxiliary, in which the idea that the nature of [spec,CP] changes in case of subject movement will be central.

2.5 Haegeman (1990, 2000): null subjects in abbreviated registers

In various articles over the last two decades, Liliane Haegeman has discussed the phenomenon of null subjects in special registers of English. She has particularly focussed on the register of diaries, but argues that the analysis is valid also for other written registers in which "pressures of economy seem to over-rule the 'core' grammar" (Haegeman 2000: 132). Clearly, economy here points to concrete space restrictions imposed by the registers, not to theoretical economy.

2.5.1 The root null subject is an A'-trace

Haegeman & Ihsane (1999) point out that empty subjects in abbreviated registers of English, i.e., root null subjects, do not fit easily into the traditional generative classification of empty categories: A-traces, PRO, pro and A'-traces. Both PRO and subject A-traces are immediately ruled out, since both these categories are restricted to non-finite clauses, and since none of them alternate with an overt subject. The root null subject, on the other hand, occurs in finite clauses, where it does alternate with an overt subject.

Furthermore, Haegeman argues that a pro-analysis of the root null subject would raise both conceptual and empirical problems. Firstly, it would force the assumption of two parallel grammars of English, with and without pro drop. Moreover, a pro subject is generally identified through rich inflection, as in Italian, but the agreement morphology of English verbs is not similarly rich. Finally, null subjects in abbreviated English are strict root phenomena, whereas null subjects in pro drop languages occur in embedded clauses, wh-clauses and yes/no questions. In general, the registers of English and French that allow a root

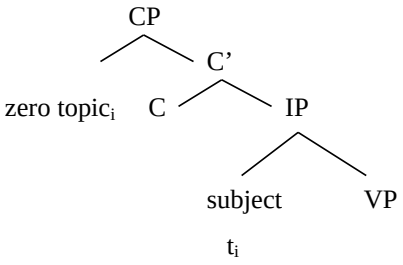
null subject lack other central characteristic of pro drop languages.[20] It is thus safe to conclude that the root null subject is not pro.

This leaves only the wh-trace or A'-trace, defined as a trace of movement to a non-argument position, typically [spec,CP]. Haegeman (1990) observes that the root null subject has similar distributional properties as a wh-trace, and she therefore argues that it belongs to this category. This assumption rests on the characterization of wh-movement and topicalization as parallel syntactic operations. Haegeman (1990) assumes that the root null subject is a trace bound by a discourse topic in the left periphery of the clause (examples from Haegeman 1990: 176).

(27)

a. Left at twelve.
b. TOPIC_i $[_S\, t_i$ left at twelve]

(28)



Roughly the same view is proposed by Bromberg & Wexler (1995) and Weissenborn (1992). Clearly, this analysis builds on the ideas in Huang (1984).

Haegeman (2000: 142) points out that this *topic drop analysis* exploits the incompatibility of the root null subject with wh-movement, and thus it rests on two premises. Firstly, the left periphery of the clause is assumed to consist of a unique projection CP, and secondly wh-preposing and topicalization are assumed to target the same position, namely [spec,CP]. Hence, preposed topics and wh-preposing are in complementary distribution.

[20] These properties include rich agreement inflection, postverbal subjects, and the possibility of subject extraction from an embedded clause across the overt complementizer (*che/that*).

2.5.2 The null subject is an antecedentless empty category

Haegeman (2000) criticizes her own previous analysis (described in the previous section). She argues that a wh-phrase is usually considered to be a focussed element, not a topic. Furthermore, the CP domain (following Rizzi 1997) is actually split into several projections. As a consequence, preposed topics and wh-constituents have distinct landing sites, entailing that preposed wh-phases and topicalized constituents are not in complementary distribution after all. The assumed basis for the topic drop analysis then dissolves, as the left periphery in the revised model no longer consists of one single projection, and wh-preposing and topicalization do not target the same position.

Besides, Haegeman (2000) notes that in these abbreviated registers of English, null subjects are frequently attested, but null objects are never available. Yet, a topic drop analysis should allow for both null subjects and null objects. A last counterargument against a silent topic analysis is that non-referential subjects are frequently omitted, but non-referential subjects cannot generally topicalize in English and French (Haegeman 2000).

From these observations, Haegeman concludes that the root null subject does not fit any of the empty categories postulated in the theory (pro, PRO, A-trace and A'-trace). She therefore proposes an analysis building on the insights of Rizzi (1994), and proposes that the root null subject is an *antecedentless empty category* in the specifier of the root. This category should be seen as a parallel to Rizzi's null constant.

Recall that in its original formulation, the ECP requires all non-overt elements to be identified through a clause-internal, c-commanding antecedent. In the absence of an overt antecedent as well as the absence of rich inflection, the root null subject appears to violate this identification condition. Haegeman therefore adopts Rizzi's (1994: 162) reformulation of the ECP:

> ECP (identification)
> Empty categories <-p> must be chain-connected to an antecedent.
> … if they can

As seen, the essence of this proposal is that when an empty category occupies the highest position of the clause, it may remain antecedentless simply because there is no higher position available. From this highest position, the root null subject can be identified directly from the discourse.

2.5.3 Structural truncation

To account for English and French early null subjects, we saw that Rizzi (1994) postulated that early grammars differ from adult grammars in permitting structural truncation. Unlike clauses in early grammars, root clauses in adult grammars must project to CP (Root = CP). Since early null subjects and adult null subjects in abbreviated registers obey similar distributional constraints, Haegeman (2000) explores the hypothesis that the adult null subjects are antecedentless empty categories in [spec,IP], and that CP is truncated. Structural truncation then becomes a characteristic of the 'abbreviated' styles.

Following the revised ECP (Rizzi 1994), traces are allowed to occur in one position without being identified by an antecedent, namely the highest position in the clause. Accordingly, Haegeman postulates that if one could generate a clause without the CP layer, with a trace in the subject position [spec,IP], such a trace would escape the identification requirement because there is no c-commanding XP position which can identify it. Haegeman therefore assumes a CP-less structure for these cases (both early null subjects in non-pro drop languages and adult null subjects in abbreviated registers).

As soon as the CP level is independently needed, e.g., in wh-questions and subordinate clauses, the option of the non-overt subject automatically disappears. Hence, the existence of these root null subjects depends on the availability of a CP-less structure. Haegeman (2000) follows Rizzi (1994) in assuming that both in early acquisition language and in certain abbreviated registers, the principle Root = CP can be weak.

The idea is thus that the null subjects in abbreviated registers are licensed by virtue of the non-availability of an antecedent position. Their content is then identified directly from the discourse. The hypothesis is that root sentences with null subjects in these special registers have one distinctive property: their CP level is not activated.

But *why* is it that abbreviated registers allow for truncation of the CP layer? In the unmarked variety of English, a finite clause must always project to CP, CP providing the interface between the sentence and the discourse, and being the locus of illocutionary force. One way of conceiving this structural truncation is to interpret it in terms of the requirement of economy, requiring structure to be minimal:

> While in the standard registers the requirement that the root CP be projected is inviolable, and ranks higher than the economy requirement, in abbreviated registers economy prevails and the requirement that structure be minimal ranks higher than the requirement that the root CP be projected (Haegeman & Guéron 1999: 624).

But then, how can a truncated structure with a bare IP be integrated into the discourse? Haegeman (2000) proposes the possibility of a more direct procedure, comparing it to the interpretation of pronouns as being either anaphoric or indexical. By analogy, whenever a bare IP is used as a root clause, the discourse connection is established indexically. However, this suggestion is not developed further, so the question is left unanswered. We will see that Sigurðsson (2011) in his analysis of null arguments postulates that all pronouns, silent or overt, must be linked to features in an active C-domain, i.e., he assumes a non-truncated structure. In what follows, I will also explicitly argue against a truncated structure analysis, primarily because of the attested connectivity effects in the discourse ellipses. Note also that Haegeman (1990) states that the implicit subjects in diaries are syntactically active. Evidence for this is that the empty subjects are assigned the external theta-role of the verb; such an empty subject can bind a reflexive anaphor, control PRO, and also take a predicative adjective which points back to the implicit subject.

To sum up, Haegeman's analysis correctly excludes non-overt subjects from root clauses whose CP level is activated, such as wh-questions or sentences with topicalized elements in [spec,CP]. Also, according to this analysis, the null subject will be the leftmost constituent in the clause, since an antecedentless empty category can only survive in a context where no antecedent position is available, i.e., in the highest position in the clause. Consequently, it is excluded from embedded clauses.

The account also excludes null objects, since null objects occur VP-internally, and thus, whether CP is available or not, there will always be one DP which c-commands the object position, namely the subject. Hence, non-overt objects can always be identified, and if they can be identified, they must be (according to the revised ECP). Null objects will then only be licit if they are identified, for instance as genuine traces with overt antecedents. This exclusion of null objects is correct for these registers of English, according to Haegeman (2000). Yet, in German and spoken Norwegian, topic drop of objects is frequently attested. This means that Haegeman's analysis cannot cover the empirical data in this dissertation.

2.5.4 Intermediate conclusion

Haegeman's approach does not seem applicable for my purposes, for several reasons. Parallel to the analyses presented in the previous sections, her analysis is restricted to the treatment of arguments, and it is restricted to the position [spec,CP]. Yet, Haegeman's analysis excludes topic drop of objects, which is frequently found in my data from spoken discourse, as opposed

to the English diary style. Moreover, Haegeman does not discuss null expletives, which are among the most frequent null elements in Norwegian discourse ellipses. Hence, the empirical base is different. Also, her analyses are developed particularly for English and French, which are not V2-languages. It seems that the patterns are slightly different in German and other V2-languages. Finally, contrary to Haegeman (2000), I will explicitly argue against a truncated structure analysis for discourse ellipses.

2.6 Fundament ellipsis in Swedish

2.6.1 Platzack (1998a, 2010): pro-analysis of topic drop in Swedish

Platzack (1998a, 2010) argues that what he calls fundament ellipsis, i.e., topic drop, in Swedish, is best analysed as a silent pronoun in [spec,CP]. He claims that both subject topic drop and object topic drop are instances of pro drop, where pro is moved from subject or object position to [spec,CP] and is identified in the discourse.[21]

(29) $[_{CP}\ pro_i\ har_v\ [_{TP}\ t_i\ t_v$ funderat på ditt förslag]]
has thought of your proposal
'He/She has considered your proposal.'

(30) $[_{CP}\ pro_i\ tror_v\ [_{TP}$ jag t_v knappast $t_i]]$
think I hardly
'I hardly think that is the case.'

Importantly, Platzack claims that this construction cannot be given an operator-variable analysis in Swedish. Operators are not sensitive to lexical category, and thus, if an operator occupies [spec,CP], it would be expected that elements of any category could be left out. However, according to Platzack (1998a, 2010), this is not the case. He claims that topic drop is restricted to nominals, and lists the following examples from Swedish to support his claim:[22]

[21] The glossing and translation of the examples are mine, but the examples are Platzack's own.

[22] I return to these examples in chapter 4, where I present my analysis. Importantly, I will claim that the reason that these examples (31.b)-(31.c) are unacceptable is not that the elided elements are not nominal. Rather, I will argue that the explanation is that elements which are not semantically recoverable are less easily omitted. A constituent describing an entity (e.g. a DP) is more easily recoverable than a constituent describing a relation (e.g. PP). Note also that topicalized non-nominal elements are attested in discourse ellipses, e.g., topicalized adverbials, given that these constituents are easily identified/recoverable from the discourse. As support for an

(31)

a.	Funderade jag faktisk aldrig på. thought I actually never on 'I never actually thought about that'	cf.	Det funderade jag faktisk aldrig på. that thought I actually never on
b.	*Funderade jag faktisk aldrig. thought I actually never 'I never actually thought about that'	cf.	På det funderade jag faktisk aldrig. on that thought I actually never
c.	*Reste jag aldrig. travelled I never 'I never travelled there.'	cf.	Dit reste jag aldrig. there travelled I never
d.	Har jag aldrig varit. have I never been 'I have never been sick.'	cf.	Sjuk, det har jag aldrig varit. sick that have I never been
e.	Vill jag inte. want I not 'I don't want to help you.'	cf.	Hjälpa dig, det vill jag inte. help you that want I not

In (a), only the complement of the preposition is omitted. This is a nominal element, and therefore the example is fine. However, in (b) the whole PP is omitted, and the result is unacceptable. The same goes for (c), which shows the omission of a topicalized adverbial. Still, Platzack points out that it is acceptable to elide elements which can be pronominalized with *det* 'that', such as the AP in (d) or the VP in (e). From this, he concludes that the omitted element in topic drop constructions must have nominal qualities.

---

explanation based on recoverability, note also that in cases where the context is sufficiently prominent, it *is* possible to non-realize even semantically rich adverbials from [spec,CP]:

1. A: Vi pleide alltid å reise til Danmark i sommerferiene da jeg var liten. Hva med dere?
   'We always travelled to Denmark in the summers when I was a kid. What about you?'
   B: ~~Dit~~ reiste vi aldri.
   ~~there~~ travelled we never
   'We never went there.'
2. A: Jeg har flyttet til Trondheim.
   'I have moved to Trondheim.'
   B: ~~Der~~ bodde jeg før.
   ~~there~~ lived I before
   'I used to live there.'

It is not clear from Platzack's analysis what prevents the postulation of silent adverbials in all cases, since they are licensed in cases of narrative inversion. I will argue that recoverability more readily explains that certain adverbials may be silent in certain contexts, whereas others cannot be.

Moreover, Platzack takes this sensitivity to lexical category as an indication that such deletions are not purely phonological. As is well known, any type of constituent can move to the specifier of CP, but still, according to Platzack (1998a), only nominal elements can be elided. If one were to argue for pure phonological deletion, one would have to assume a phonological rule that is sensitive to the lexical category. According to Platzack, this is unfortunate. He argues that a pro-analysis is more likely. Pro has the same qualities as overt personal pronouns, lacking only phonological form. Since pro has a nominal nature, it can only be identified by other nominal elements, which explains why this ellipsis type only affects nominal categories (Platzack 1998a). In contrast to languages like Spanish and Italian, Swedish (and Norwegian) cannot generally have a pro subject in finite clauses (the subject requirement). Yet, Platzack argues that pro is possible in [spec,CP], where it can be identified in the discourse/context.

However, I will argue that this line of reasoning is founded on the wrong empirical grounds. It is not the case that non-nominal topics can never be dropped. Light adverbials are frequently omitted from [spec,CP]. Such examples are treated in detail by Mörnsjö (2002), and I will also discuss this issue more thoroughly in my analysis (chapter 4). The important point for now is to underline that Platzack's empirical base leads to the wrong theoretical predictions, and hence that the analysis needs to be revised.

Platzack (2010) does discuss such cases where a silent light adverb occupies [spec,CP], and calls them *narrative inversion*. These are cases where a light adverb is omitted sentence initially:

(32) ~~Så~~ kom hon in där, ~~så~~ kände han igen henne…
~~then~~ came she in there ~~then~~ he recognized her

Obviously, for these cases, a pro-analysis is not possible, since the omitted element is not nominal. For these cases Platzack (2010) assumes that there is a silent adverbial in the lexicon, with a meaning similar to *then*. He sees this as a parallel analysis to the silent pro, which is also assumed to be present in the lexicon, in addition to the overt pronouns.

Another negative consequence of Platzack's analysis is that the explanation of the empirical differences between pro drop in Romance languages and null arguments in Germanic, e.g., Swedish, is lost. Recall that Romance pro drop is possible also when [spec,CP] is filled, as in wh-questions and subordinate clauses, contrary to what is the case in

Swedish. In Romance languages, pro is identified by rich agreement. This is not possible in Swedish, since there is no visible agreement inflection on Swedish verbs. Consequently, Platzack has to stipulate an additional difference between the licensing restrictions on pro in Romance languages and in Swedish, even though the silent element is argued to be the same. He is forced to claim that pro in Swedish is only licensed in [spec,CP], and not in lower domains of the clause, unlike pro in Romance languages. Hence, either pro has different characteristics in Swedish and in Romance languages, or the restrictions on pro are not the same in the different languages. In either case, this does not seem like an economical and explanatory solution.

To sum up, Platzack rejects the operator analysis of topic drop since [spec,CP] is restricted to nominals. Yet, in cases of narrative inversion, the position is occupied by a silent adverbial. It is thus implied that narrative inversion is not a case of topic drop.

2.6.2 Mörnsjö (2002): Two types of V1 declaratives

This problem is taken as a point of departure by Mörnsjö (2002), who argues that the pro versus operator discussion really overshoots the mark. Mörnsjö proposes an analysis of V1-declaratives in Swedish, including topic drop of both subjects and objects, but also sentences in which an initial adverbial is dropped (narrative inversion). Hence, her proposal contradicts Platzack's (1998a) claim that topic drop in Swedish is restricted to nominal categories. Moreover, Mörnsjö underlines that previous studies have focussed primarily on structural licensing and identification of null arguments, and that contextual and pragmatic factors have been largely neglected. Her analysis seeks to address this shortcoming. Hence, both empirically and theoretically, Mörnsjö (2002) represents a broadening of the perspective found in previous generative work, as discussed earlier in this chapter.[23]

Mörnsjö distinguishes between two main types of V1 declaratives; OEA (Obligatory Element is Absent) and OEP (Obligatory Elements are Present). OEA covers sentences where a referential or a non-referential argument is omitted, including subjects (33)-(34), direct objects (35), complements of prepositions and predicate objects.[24] Examples of OEP on the other hand, which are equivalent to what Platzack calls narrative inversion, typically have a null connective adverb in [spec,CP]. The examples below are taken from Mörnsjö (2002):

[23] Note that Mörnsjö's (2002) analysis includes syntactic and information structural as well as prosodic perspectives. Most relevant for our purposes are the former two. I will have very little to say about prosody.
[24] Interestingly, indirect objects are never dropped. The reasons for this are discussed in chapter 4.

OEA – Obligatory Element is Absent

(33) Ø Jobbade på Järnia. (Ø = hon)
Ø worked on Jernia (Ø = she)
'She worked at Jernia.'

(34) Ø Finns inte så många sådana som man kan tänka sig att gå omkring med.
Ø exists not so many such which one can think REFL to go around with
'There aren't so many that you could imagine wearing.'

(35) Här är pajen. $Ø_i$ kan du sätta in t_i direkt i micron, om du vil. (Ø = den)
here is pie-the $Ø_i$ can you put in t_i directly in micro-the if you want (Ø = it)
'Here's the pie. You can put it directly in the micro if you want.'

OEP – Obligatory Elements are Present

(36) Ø Får man be konsulatet om hjälp. (Ø = då)
Ø may one ask consulate-the about help (Ø = then)
'Then you have to ask the consulate for help.'

As displayed in (34), expletive null subjects are attested in Swedish, provided that [spec,CP] is not lexicalized. Recall that Cardinaletti (1990) argued that null expletives are prohibited in German. She explained this by arguing that null subjects are instances of pro in [spec,CP], which are identified in the discourse. Since expletive subjects cannot be recoverable in context, they are excluded. From examples like (34), Mörnsjö (2002) concludes that Cardinaletti's analysis cannot apply to Swedish. As we have seen, Norwegian follows the Swedish pattern on this point.

According to Mörnsjö (2002), the pro versus operator distinction introduces unnecessary items into the discussion, since it is dependent on how we consider V2 word order and topicalization as a whole. She claims that the only relevant difference between V1 and V2 declaratives is whether or not the phonological features of [spec,CP] are realized:

> The most economical analysis of V1 declaratives in Swedish would thus be to assume that the semantic and grammatical features of the phonetically non-realised element are present in Spec-CP, in order to feed the interpretation process. Lacking phonological features, this element cannot be spelled out. Consequently, the syntactic licensing of a phonetically non-realised element is identical to its visible alternative (Mörnsjö 2002: 133-134).

Both V1 categories (OEA and OEP) are thus analysed as having a phonetically unrealized element in front of the finite verb, i.e., in [spec,CP]. I believe that, by and large, this insight is correct, and that this provides a more fruitful perspective than the previous generative analyses. The observation that discourse ellipses display connectivity effects lends support to Mörnsjö's view. If syntactic and semantic features are intact, then such effects are expected. In the analysis that I will propose, I will therefore pursue a similar line of thought.

Mörnsjö (2002) highlights the observation that Swedish object topic drop displays a bias in favour of the 3rd person. She refers to Cardinaletti (1990) and Rizzi (1994), who, as already discussed, argue that object topic drop is restricted to 3rd person objects. 1st and 2nd person null objects are not accepted. In their analyses, this difference is explained by the assumption that null subjects are pro, and pro is a pronoun, i.e., it can have all person specifications. Null objects on the other hand are operators, which are inherently 3rd person, and hence cannot appear as 1st or 2nd person. Mörnsjö found no occurrences of dropped 1st and 2nd arguments in her data, yet, according to her, this is probably due to pragmatic conventions rather to structural differences between pro and operators. As support for her view, she points out that irrespective of whether or not the object in [spec,CP] is phonetically realized, the example would be equally inappropriate, so this has nothing to do with the type of empty category in [spec,CP].

Mörnsjö presents two constructed examples of object topic drop, where the first one contains a null 1st person object and the second one contains a 3rd person object. She emphasizes that both of these examples are acceptable, but that there is a pragmatic preference for the null 3rd person object. This means that the second example below is judged to be more acceptable than the first one, even though both of them are grammatical and also pragmatically appropriate:

(37) A: Ni kommer aldrig att få tag på mig!
you come never to get grip on me
B: Jodå. Ø hittar vi alldeles säkert med hjälp av polisen, oroa dig inte!
oh Ø find we completely surely with help by police-the worry you not
'You'll never catch me! Oh, we'll surely find you with a little help from the police, don't you worry!'

(38) A: Ni kommer aldrig att få tag på tjuven!
you come never to get grip on thief-the
B: Jodå. Ø hittar vi alldeles säkert med hjälp av polisen, oroa dig inte!
oh Ø find we completely surely with help by police-the worry you not
'You'll never catch the thief! Oh, we'll surely find him with a little help from the police, don't you worry!'

When I discuss the related empirical pattern for Norwegian discourse ellipses (section 4.7.4), I will take Mörnsjö's argument as a starting point. Norwegian displays a similar distributional pattern, but I will argue that 1st and 2nd person topic drop is not possible in certain contexts. Yet, I believe that Mörnsjö's overall conclusion that this is pragmatically governed, and not due to a pronoun/operator distinction, is correct.

As for OEPs, Mörnsjö specifically argues against a non-[spec,CP] analysis, which has been put forth in earlier analyses of this phenomenon (Rögnvaldson & Thráinsson 1990, Brandt et al. 1992, Platzack 1996, 1998b). All these earlier analyses argue for a missing [spec,CP] in OEPs, and they argue that the presence versus absence of the [spec,CP] is what defines the difference between OEA (topic drop) and OEP (often called *true inversion*). Mörnsjö emphasizes however that an analysis where [spec,CP] is absent would leave no formal means to indicate the specific relation that an OEP sentence has to the preceding discourse. I will follow her view on this point.

Hence, both OEA and OEP are analysed by Mörnsjö as having a phonetically non-realized element in front of the finite verb, i.e., in [spec,CP]. In OEAs, either an argument selected by the verb or a structurally obligatory non-referential subject is omitted. In OEPs, the null element is determined sentence-externally, and is interpreted as a frame topic conveying information about the type of relation (temporal/spatial/logical) that the OEP sentence establishes to the preceding discourse.

Mörnsjö (2002) states that a late insertion model of the type utilized in Distributed Morphology would be the most suitable type of model in which to implement her insights. As seen in the quote, her claim is that the most economical analysis of Swedish V1 declaratives would be that the semantic and morpho-syntactic features of the null elements are present in [spec,CP], in order to feed the interpretation. Yet, since the elements lack phonological features, they cannot be spelled out. In other words, the syntactic licensing of a phonetically non-realized element is identical to its visible alternative (Mörnsjö 2002).

2.6.3 Intermediate conclusion

As opposed to the analyses presented earlier in this chapter, Mörnsjö (2002) represents a widening of both the empirical and the theoretical focus. She explicitly rejects the pro/operator distinction, primarily on the basis of examples where non-arguments such as topicalized adverbials are elided. Also, she includes null expletive subjects in her account, as well as non-nominal silent elements in [spec,CP]. Moreover, she includes pragmatic factors into her explanations. For my purposes, this widening is very welcome, and in the analysis that I will propose, I will explicitly build on her insights.

Still, the narrow theoretical focus on [spec,CP] remains in Mörnsjö's analysis. There is no discussion of discourse ellipsis types which involve other positions of the clause. As discussed earlier, Norwegian discourse ellipses display frequent instances of omissions from positions other than [spec,CP]. Hence, I need to integrate these examples into my analysis. A further widening of the empirical focus from what is proposed by Mörnsjö is thus necessary.

Mörnsjö's (2002) overall analysis is that omitted elements lack phonological features, like in Distributed Morphology (Halle & Marantz 1993, Harley & Noyer 1999), entailing that they are not spelled out, but that they are otherwise identical to their visible alternative versions. Yet, she does not implement this idea into a specific, formal analysis. In the analytical model that I will develop, I will adopt the overall view proposed in Mörnsjö's thesis, claiming that the discourse ellipses give rise to a full-fledged syntactic structure, and that ellipsis is solely due to a lack of realized phonological features. Moreover, taking this as a theoretical primitive, I will aim to specify how these ideas could be integrated into a formal generative analysis.

A last point is that Mörnsjö's analysis does not predict in what cases an element may be silent and under what circumstances it cannot. Although the analysis accounts for cases where [spec,CP] is silent, i.e., V1 constructions, it provides no explanation for cases where it is impossible to not realize this position, i.e., cases which cannot occur as V1. In chapter 4, I present examples which show that such cases do exist, and I will seek to explain why this is so.

2.7 Halldór Sigurðsson's cross-linguistic analysis of argument drop

2.7.1 Towards a uniform approach to null arguments

A recent analysis of null arguments is proposed in Sigurðsson & Maling (2010) and in Sigurðsson (2011), whose overarching goal is to provide a unified analysis of all types of null arguments cross-linguistically. This aim stands in contrast to work by Huang (1984), Cardinaletti (1990), Rizzi (1994) and Haegeman (1990, 2000), who have all focussed on the immanent differences between pro drop and topic drop, as well as differences between topic drop of subjects and objects.

Pointing back to Huang (1989), Sigurðsson (2011: 268) notes that three types of referential null-subjects are often distinguished:

A. The Romance *pro drop* type, conditioned by agreement
B. The Germanic *topic drop* type, conditioned by an empty [spec,CP]
C. The Chinese *discourse drop* type, not clause-internally constrained

The three types are exemplified below (39)-(41), examples from Sigurðsson (2011: 268):

(39)	Parlo/Parli islandese.	*Italian*
	speak. 1sg/2sg Icelandic	- verb agreement
	'I/You speak Icelandic.'	
(40)	Kommer tillbaks imorgon.	*Swedish*
	come.ø-AGR back tomorrow	- empty [spec,CP], but no agreement
	'(I/We/She, etc.) will be back tomorrow.'	
(41)	Kanjian ta le.	*Chinese*
	see.ø-AGR him PERF.Ø-AGR	- no clause-internal restrictions
	'(He/She, etc.) saw him.'	

These three types are subject to different restrictions. Romance null subjects (pro) are conditioned by verb agreement, whereas Germanic null subjects are restricted to clauses with an empty [spec,CP]. Finally, Chinese null subjects are not clause-internally constrained at all.

Additionally, null objects differ with respect to clause-internal restrictions, as illustrated in (42)-(44) (examples from Sigurðsson 2011). Null objects in Pashto agree with

the finite verb.[25] In contrast to this Agr-linked type, null objects in Germanic do not agree, but they demand an empty [spec,CP]. And finally, null objects in Chinese obey no clause-internal restrictions at all:

(42)	mã wexwara	*Pashto*
	me.ERG eaten.3.F.SG	object-verb agreement
	'I ate it.' (e.g. the apple)	
(43)	Såg 'ja igår	*Swedish*
	saw.ø-AGR I yesterday	empty [spec,CP], reduced subject, but no agreement
	'I saw (him/her, etc.) yesterday.'	
(44)	Ta kanjian le.	*Chinese*
	he see.ø-AGR PERF.Ø-AGR	no clause-internal restrictions
	'He saw (him/her, etc.).'	

Hence, parallel to the situation for null subjects, the clause-internal conditions for null objects are either agreement or access to [spec,CP]. Null objects in Pashto are conditioned by verb agreement, parallel to Romance null subjects. Swedish null objects are restricted to clauses with an empty [spec,CP], parallel to Germanic null subjects. Chinese null objects obey no clause internal restrictions, parallel to Chinese null subjects.

The prevailing view on null arguments within Government and Binding theory has to a large extent descended from Huang's (1984, 1989) pioneering contributions. As noted earlier, Huang (1984) drew a sharp distinction between pro drop and topic drop.[26] There were several seemingly good reasons for this. Firstly, whereas Romance pro drop is restricted to subjects, in Germanic both subjects and direct objects can be dropped. Secondly, Germanic topic drop does not depend on verb agreement, unlike Romance pro drop. And thirdly, Germanic topic drop is restricted to clauses with an empty left edge, while pro drop does not obey this restriction.

As seen in previous sections, topic drop has been given the following analysis within GB-theory (Huang 1984, 1989, Cole 1987, Sigurðsson 1989, 1993, Cardinaletti 1990, among

[25] Agr-linked object drop is not very common in the world's languages, but is found in Pashto, Georgian, Swahili and Chichewa (Sigurðsson & Maling 2010).
[26] The Chinese type of discourse drop, in turn, was analysed as involving subject pro or PRO, but zero object topics.

others): either the silent argument has been seen as an empty operator in [spec,CP], binding a variable in [spec,IP] (a), or it has been analysed as a DP that has moved to [spec,CP] and been deleted from there (b):

(45)

a. $[_{CP}\ Op_i \ldots [_{IP}\ e_i \ldots$
b. $[_{CP}\ \sout{DP}_i \ldots [_{IP}\ t_i \ldots$

The underlying idea was that [spec,CP] had to be accessible to the null topic, either by hosting an operator antecedent or by being accessible for movement. Consequently, filling [spec,CP] with another lexical element would block the null topic and the result would be ill-formed.

However, according to Sigurðsson & Maling (2010), the GB account is not satisfactory. Firstly, they point out that GB approaches never explained the fact that silent topics differ from spelled-out ones with respect to their dependency on an accessible [spec,CP]. Overt topics are equally acceptable whether they move to the left edge or not. Sigurðsson & Maling (2010) give the following examples, proposing that *honum* is equally topical in (46b) and (46c):[27]

(46)

a. Þarna kemur Olafur.
   There comes Olaf.
b. Eg vil ekki heilsa honum.
   I want not greet him
c. Honum vil eg ekki heilsa.
   Him want I not greet.

In the GB analysis of topic drop, the subject trace was defined as a variable, i.e., an empty (-pronominal) category, whereas the Italian pro subject was analysed as a pronoun, i.e., an empty (+ pronominal) category. Consequently, the Germanic type of null subjects would fall under binding principle C, like R(eferential)-expressions, whereas Italian pro would be

[27] Note however that this argument presupposes a certain understanding of the term *topic*. Importantly, Sigurðsson & Maling (2010) argue that topicalization does not turn anything into topics. Rather, *topic* is understood as the element in a sentence which is presented as already existing in the discourse and which the rest of the sentence in some sense is 'about' (Trask 1993).

subject to binding principle B (Rizzi 1994). However, Sigurðsson points out that since referential indices are seen as violations of the Inclusiveness Condition (Chomsky 1995), binding theory has been abandoned in most minimalist approaches.[28] From this he concludes that properties of null-argument types cannot be analysed in terms of binding conditions:

> If binding is non-existent in syntax, the different properties of null-argument types cannot be syntactically analysed in terms of binding or the binding conditions (Sigurðsson 2011: 272).

Yet, obviously, the referential conditions on the NPs remain the same, and hence, a novel understanding of referential null-argument types is required. Sigurðsson therefore pursues an alternative approach, namely to seek a uniform approach to null arguments:

> Null-arguments are uniform in the sense that there are no underlying inherent or 'lexical' differences between them. The differences between seemingly different types of null-arguments stem from restrictions in the PF component of language, not from the properties of putative 'lexical zeros' (Sigurðsson & Maling 2010: 66).

In Sigurðsson's model, all null arguments are pronouns, and argument drop is commonly subject to both clause-external and clause-internal conditions. It is these different conditions that explain the apparent differences between the types of null arguments, and not inherent qualities of the null elements themselves. The general clause-external condition relevant for all types of (overt and silent) definite pronouns is that they require identification by so called *context-linking*. The various clause-internal restrictions have already been illustrated. An overview of Sigurðsson's (2011) typology of referential null-arguments is shown below:

Context-linking

/ \

A. Clause-internal restrictions B. No clause-internal restrictions

/ \

A1. Agreement A2. Access to [spec,CP]

Romance pro-drop *Germanic topic drop* *Chinese discourse drop*

Pashto argument drop

[28] This is a radical claim. Note that this rejection of binding theory depends on which understanding of binding theory is assumed. There are scholars, e.g., Reuland (2011), who do offer theories if binding within the frames of the minimalist program, and who make use of the binding principles.

In what follows, I will first outline Sigurðsson's theory of context-linking, i.e., the clause external condition defined for null arguments in all languages. Thereafter, I will discuss clause-internal restrictions, with a particular focus on Germanic.

2.7.2 Common clause-external condition – Context-Linking

According to Sigurðsson, all referential arguments, be they overt or silent, must somehow be linked to the context in order to be successfully interpreted. Germanic null topics and Romance 3rd person pro subjects are linked to a topic, whereas 1st and 2nd person subjects are linked to the speaker or hearer. Sigurðsson (2011) develops a theory of context-linking in terms of silent CP features or operators, claiming that all referential pronouns must match these silent CP-features in order to be successfully interpreted.

In contrast to the GB view (e.g. Huang 1984, Cardinaletti 1990), Sigurðsson assumes that all null arguments are pronouns, and hence in need of being successfully context-linked (identified). He refers to Frascarelli (2007), who presents evidence that all Italian third person null subjects must match an A-Top feature in the CP domain. Sigurðsson adopts the gist of this analysis, adding the assumption that the CP domain also contains silent but probing or syntactically active 'speaker' and 'hearer' features. These features are referred to as the *logophoric agent (Λ_A)* and the *logophoric patient (Λ_P)* (Sigurðsson 2004a, 2004b, 2011). The logophoric features, as well as the Top features, are labelled context-linking features or *context-linkers* (CLn). To describe the required matching relation between the referential pronoun and the silent context-linking feature in the CP domain, Sigurðsson & Maling (2010: 61) propose the Context-Linking Generalization:[29]

> The CONTEXT-LINKING GENERALIZATION
> a) Context-linking features of the C-domain include at least Λ_A, Λ_P and Top
> b) Any referential pronoun, overt or silent, positively matches a context-linking C-feature

This generalization predicts that a 1st person pronoun is (+Λ_A, …), linking to the logophoric agent. A second person pronoun is (+Λ_P, …), linking to the logophoric patient, and a referential 3rd person pronoun is (+Top, …), linking to the topic feature. As Sigurðsson (2011) himself points out, the Context-Linking Generalization is neither very controversial nor innovative. Still, it formalizes the widely accepted truism that referential pronouns, both overt

[29] Sigurðsson (2011: 282) relabels this generalization the C/Edge-Linking Generalization.

and covert ones, link to or match their linguistic and/or deictic context. Furthermore, the generalization states that this linking or matching happens via the CP domain.

In Sigurðsson's model, the relevant feature content of the CP domain will then be:

CP … Λ_A … Λ_P …Top … TP

These context-linking features thus enter into two-directional matching relations. On the one hand, they need to match with clause-internal elements, which may or may not be spelled out. On the other hand, they must match with clause-external topics and/or participants of the speech event. Hence, context-linking is defined as a 'transitive' matching relation (Sigurðsson & Maling 2010: 61):

Context ↔ C-features ↔ TP-internal elements

To sum up, the central claim made is that all types of argument drop, including Romance pro, German null topics, Chinese null subjects, and also Finnish/Hebrew controlled pro, must be successfully context-linked, in accordance with the Context-Linking Generalization. This is relevant both for overt and covert pronouns.

But then, what is it that distinguishes the covert from the overt ones? Sigurðsson argues that overt pronouns can match CLn features when [spec,CP] is filled with phonological content, as opposed to null pronouns. Importantly, he further postulates that pro subjects in Romance (Ø–Iphi in Sigurðsson's terminology) behave just like regular weak pronouns in this respect. On the other hand, 'radically empty' null-argument types, such as the null topics (subjects and objects) in Germanic, require an empty [spec,CP], as illustrated in the Icelandic example in (47). They are uninterpretable in the presence of a phonological intervener in the CP domain, as shown in (48):

(47) _ Kem _ til baka á morgun.
come.1.SG to back on tomorrow
'I'll be back tomorrow.'

(48) * Á morgun kem _ til baka.
on tomorrow come to back.

For Germanic null constituents to be successfully context-linked, they have to move to the CP domain and enter into a local matching relation with the relevant CLn feature (Sigurðsson 2011). Crucially, if [spec,CP] is filled, the null arguments cannot A'-move into this position and locally match the relevant CLn feature. I will investigate this intervention effect in more detail in the next section.

2.7.3 Clause-internal restrictions – the Empty Left Edge Condition

As illustrated in the figure above, Sigurðsson's (2011) analysis predicts that dropping of referential arguments is subject to two types of restrictions:

a. context-linking only, or
b. context-linking *and* some kind of clause-internal restriction

Chinese obeys solely context-linking and no clause-internal restrictions, whereas Germanic, Romance and Pashto null arguments are restricted by some combination of the two.

The best known clause-internal restriction is Agr-linking, as attested for pro subjects in Romance languages and also for null objects in, for instance, Pashto. In Germanic, however, agreement is not obligatory to identify null arguments.[30] Instead, many Germanic varieties obey another salient clause-internal restriction, namely that a lexicalized [spec,CP] renders null arguments ungrammatical. This has traditionally been explained by the assumption that CP cannot host more than one constituent in addition to the finite verb in C. Then, if the [spec,CP] is lexically filled, there is no room for a null argument. Underlying this analysis is the idea that null arguments are equally syntactically active as overt arguments are. Sigurðsson & Maling (2010) formalize this insight in the Empty Left Edge Condition (ELEC), proposed as a restriction on Germanic referential null arguments:

> **The Empty Left Edge Condition**
> The left edge of a clause containing a silent referential argument must be phonetically empty (in language or construction X)

[30] Even though for instance Icelandic display subject–verb agreement, this is completely absent in Mainland Scandinavian, and still null-subjects are equally allowed in these languages. Sigurðsson (2011) points out however, that even though topic drop is not preconditioned by agreement in Germanic, agreement still constrains identification.

In short, ELEC predicts that context-linking of null arguments is blocked in Germanic if [spec,CP] is lexicalized. Sigurðsson works from the hypothesis that Germanic null arguments must be context-linked under strict locality, i.e., they need to move into the CP domain to be able to locally match the relevant CLn. This is illustrated in (49) below (Sigurðsson & Maling 2010). In (a), matching of the null argument and the CLn feature is blocked by the overt specifier of CP. In (b), there is no such overt specifier, and hence, matching between the null argument and the CLn is successful.[31] The two scenarios are illustrated in the Swedish examples of subject and object topic drop in (50)-(51):[32]

(49)

a. *(CP … {CLn}… SPEC … Ø …
b. (CP … {CLn}… ~~SPEC~~ … Ø …

(50)

a. * Iblant talar _ svenska
   Sometimes speak Swedish
b. _ talar _ svenska
   speak Swedish

(51)

a. * Nu känner'ja(g) _ inte.
   now recognize'I (that) not
b. _ känner'ja(g) _ inte.
   recognize I not

The relevant question, then, is why Germanic null topics obey clause-internal restrictions which are not operative in Romance pro drop languages. Sigurðsson argues that the difference between the two types is connected to intervention effects.

It must be said that by the left edge, Sigurðsson means the specifier of CP. However, he points out that this position is not the absolute highest one in the clausal architecture. As shown above, fronted arguments and adverbials lead to the unacceptability of clause-internal

[31] To my understanding, Sigurðsson's (2011) analysis is thus that the context linkers (CLn) are structurally higher in the CP domain than the position [spec,CP] which is targeted by movement. Otherwise it is not clear how this position could intervene for the context linking process.
[32] Note that CLn can represent Λ_A (logophoric agent), Λ_P (logophoric patient) or Top (Topic feature).

null arguments. Still, high discourse particles and left-dislocated elements do not induce similar interventions:

(52)

a. Nei, _ hef _ ekki sed hann.
   no, have 1SG not seen him.
   'No, I have not seen him.'
b. Nei, Johann, _ hef _ ekki sed hann.
   no, John, have 1SG not seen him
   'No, John, I have not seen him.'

(53)

a. * Nei, hann hef _ ekki sed.
   No, him have1SG not seen
b. * Nei, Johann, hann hef _ ekki sed.
   no, John, him have1SG not seen.

Hence, these elements seem to occupy structurally higher positions than (CLn), and consequently they do not intervene between (CLn) and Ø.

Recall that topicalized or fronted constituents do not render overt weak pronouns in Germanic or null subjects in Italian ungrammatical. In all relevant aspects, Sigurðsson concludes that Italian pro-subjects (Ø–Iphi[33] in his terminology) behave like regular weak pronouns in English and Germanic V2 languages (see also Cardinaletti & Starke 1999, Roberts 2010). This means that the nature and behaviour of Italian pro is more parallel to that of overt pronouns than to the nature of the 'true nulls' in Germanic. Consequently, structural licensing does not distinguish between Italian Ø-Iphi and German weak pronouns. Still, Sigurðsson emphasizes that pronouns in all languages must be successfully context-linked. The difference is that the nulls in Germanic must rise into the CP domain in order to fulfil the context-linking requirement (as displayed in (55)-(57), contrary to the nulls in Romance, and the weak pronouns in Germanic (illustrated in (55) for Swedish) which are acceptable both when the [spec,CP] is lexicalized and when it is not 0:

[33] Sigurðsson adopts an analysis where verbal agreement in languages like Italian is a pronoun, incorporated into Infl.

(54) (Tavolta) parliamo islandese.
(sometimes) speak.1.PL Icelandic
'Sometimes we speak Icelandic.'

(55) Ibland talar vi isländska.
sometimes speak.Ø-AGR we Icelandic
'Sometimes we speak Icelandic.'

(56) *Stundum tala _ íslensku.
sometimes speak.1.SG Icelandic

(57) Tala stundum íslensku
speak.1.SG sometimes Icelandic
'I sometimes speak Icelandic.'

Thus, Germanic null arguments display an A'-behaviour which is not parallel to the pattern of overt pronouns and Italian pro. Sigurðsson claims that, plausibly, overtly phi-specified referential pronouns, including Italian pro-subjects, are stronger information identifiers ("information antennas") than the 'radical nulls' found in cases of Germanic topic drop (Sigurðsson & Maling 2010). This entails that overt pronouns in Germanic and Italian null pro subjects can overcome the intervention effect imposed in the Empty Left Edge Condition, in contrast to Germanic null arguments.

Sigurðsson's conclusion is that Germanic 'null topics' are just null arguments, not inherently distinct in type from the Romance null arguments. There are no inherent lexical differences between null arguments cross-linguistically. The differences boil down to intervention effects such as sensitivity to ELEC, which is the most important factor to distinguish pro drop languages from non pro drop languages. More specifically, Sigurðsson emphasizes that the differences do not reside with the lexical items, but rather with the clause-internal and clause-external licensing restrictions imposed in each language.

Sigurðsson argues that all modern V2 varieties that have subject drop of this sort, and obey the Empty Left Edge Condition. The left edge of the clause must be phonetically empty, as illustrated in the following examples (from Sigurðsson & Maling 2010: 64). The open slot indicates the [spec,TP] position:

(58) (Ich) kenne _ das nicht. German
(59) (Jag) känner _ det inte. Swedish
(60) (Ég) pekki _ pad ekki. Icelandic
(I) recognize _ that not)

(61) * Jetzt kenne _ das nicht. German
(62) *Nu känner _ det inte. Swedish
(63) * Núna pekki _ pad ekki. Icelandic
now recognize (I) that not

As illustrated for German, Icelandic and Swedish in the examples below, V2 Germanic object drop also obeys the ELEC. The slots indicate the empty left edge [spec,CP] and the canonical object position. Note that if the first slot was lexicalized, the sentence would be ungrammatical (see ex. (50):

(64) A: Was meinst du über den neuen Hausmeister?
what mean you over the new janitor
'How do you find the new janitor?'
B: _ Weis'ich _ nicht, _ hab'ich _ noch nicht gesehen.
Know'I not, have'I still not seen
'I don't know (*that*), I have still not seen (*him*).'

(65) A: Hvad finnst pér um nýja húsvördinn?
what think you about new janitor.the
B: _ Veit'é(g) _ ekki, _ hef'é(g) ekki séd _ enn.
know'I not, have'I not seen yet

(66) A: Vad tycker du om den nya vaktmästaren?
what think you about the new janitor.the
B: _ Vet'ja(g) _ inte, _har'ja(g) fortfarande inte sett _.
Know'I not, have'I still not seen.

Sigurðsson (2011) points out that also regular Conjunction Reduction obeys the ELEC. This is demonstrated for Swedish in the following examples; ELEC applies when the second conjunct contains a null subject. Hence, the second example is ruled out:

(67) Maria köpte tidningen men _ ville _ inte köpa boken.
Mary bought newspaper-the but wanted not but book.the

(68) * Maria köpte tidningen men boken ville _ inte köpa.
Mary bought newspaper-the but book.the wanted not buy

(69) Maria köpte tidningen men boken ville hon inte köpa boken.
Mary bought newspaper,the but book.the wanted she not buy

Note that these sentences are parallel to the following example, which displays two separate sentences, the latter with a null subject:

(70) Maria köpte tidningen. _ ville _ inte köpa boken.

Another phenomenon mentioned by Sigurðsson & Maling (2010) is Recipe Object Drop, as briefly mentioned in chapter 1. This construction type appears to be restricted by a condition quite similar to the ELEC. More specifically, in sentences with Recipe Object Drop, the subjects can never be spelled out, not even in languages where infinitives or imperatives otherwise allow for overt subjects. This is illustrated below for English and French (examples from Sigurðsson & Maling 2010):

(71) Take three eggs. **(*You)** beat _ well while someone else mixes the flour and the butter.

(72) Prenez trios oeufs. **(*Vous)** déposez _ dans un bol. **(*Vous)** battez _ doucement.
take three eggs. you break into a bowl. you beat gently

Hence, Recipe Object Drop follows what Sigurðsson & Maling (2010) name the Empty Subject Condition, which is very reminiscent of the other left edge phenomena considered.

2.7.4 The emptiness conditions are operative at PF

Sigurðsson & Maling (2010: 64) draw two main conclusions from their work:

> A. There are no inherent or 'lexical' differences between different types of null arguments, such as pro and null topics or null variables (null arguments being universally available). Rather, the differences between, e.g. pro drop in Romance and many Asian languages and so-called topic drop in Germanic boil down to PF intervention.
> B. The computation proceeds after transfer to PF, that is, much of 'syntax' in the traditional sense is actually morphosyntax or 'PF syntax', invisible to the semantic interface. It follows that a crash can arise in the PF derivation even in cases where the narrowly syntactic derivation is flawless. In other words, derivational crashes may occur but that does not mean that they occur in syntax.

The traditional GB approach, also called the A'-A approach, was based on the difference between operators and NP-traces. This approach accounted quite straightforwardly for the fact that Germanic topic drop clauses cannot have [spec,CP] lexicalized by movement. Hence, it is fair to say that Sigurðsson assumes the essence of this approach. Still, he points out that Germanic topic drop appears to obey constraints that are more fine-grained than the constraints observed for overtly moved A'-moved constituents (see also Cardinaletti 1990 and Mörnsjö 2002).

Firstly, Sigurðsson (2011) seeks to cover the omission of pronominal arguments, more precisely subjects, direct objects and complements of prepositions, since according to him, these are the elements which are generally dropped.[34] As most kinds of constituents can move to [spec,CP] in V2 Germanic, this restriction on category, i.e., allowing only pronouns to drop, is not predicted by the A'-A approach, since operators are not lexically specified. Secondly, Sigurðsson points to Mörnsjö, according to whom dropped objects in Swedish are highly preferred to be 3rd person.[35] Most of the dropped objects described in Mörnsjö (2002) do not refer to arguments, but to propositions, and could often be replaced by the overt alternative *det* 'it'. Sigurðsson (2011: 290) underlines the fact that null objects with real nominal reference are found, but it appears that they are constrained by a Relative Specificity Constraint:

RSC: The dropped object *cannot be more specific* than the subject.

[34] Sigurðsson very briefly mentions the possibility of omitting a topicalized adverb, as argued by Mörnsjö (2002), which represents a widening of the empirical focus. As I mentioned, I will argue that a further widening is required, since other types of constituents, from positions other than the [spec,CP], are also readily omitted.
[35] I return to this issue in chapter 4, where I show that Norwegian allows for dropped objects which are not 3rd person, at least in certain cases.

3rd person is under this analysis assumed to be less specific than the 1st and 2nd persons, and -HUMAN is less specified than +HUMAN (Sigurðsson 2011). The Relative Specificity Constraint can be analysed as an intervention effect, since not only the dropped argument, but also the subject, must be context-linked. In cases where the subject is a full pronoun, object drop is often degraded:

(73)

a. _ kan'ja inte veta
   (that) can'I not know
   'That, I cannot know.'
b. ?? _ kan jag inte veta.
   (that) can I not know

The reason for the awkwardness of (73b) is that the (structurally high) subject *jag* is too strong an intervener. If the subject is phonologically cliticized, as in (54a), it becomes 'less visible' as an intervener, and the sentence becomes more acceptable. Note however that the same pattern does not hold for Norwegian, where both the examples below are equally acceptable. (74a) shows the case of a cliticized subject, and (74b) displays a non-cliticized and moreover emphasized subject:

(74)

a. _ kan je-kke (jeg ikke) vite
   (that) can I'not know
b. _ kan ikke JEG vite.
   (that) can not I know

Relativized Feature Minimality accounts nicely for the Relative Specificity Constraint, but not for the ELEC, as any category that moves into the [spec,CP] blocks topic drop, regardless of its featural content (Sigurðsson 2011). ELEC does not take into account what kind of element occupies the [spec,CP]; it is blind to feature content. Recall that null arguments are blocked from moving into the CP domain in the presence of a lexicalized [spec,CP]:

* CP … (CLn) … X … Vfin … Ø-argument …

The following examples (from Sigurðsson 2011) show that *any* category that moves into [spec,CP] will block topic drop:

(75) _ Skulle _ troligen vilja se det ofta, i så fall.
'I would probably want to see it often, in that case.'

(76) Det skulle *(jag) troligen vilja se ofta, i så fall.
'That would *(I) probably want to see often, in that case.'

(77) Troligen skulla *(jag) vilja se det ofta, i så fall.
'Probably *(I) would want to see it often, in that case.'

(78) Varför skulle *(jag) troligen vilja se det ofta, i så fall?
'Why would *(I) probably want to see it often, in that case?'

Regardless of the grammatical content of the constituent in [spec,CP], the spelling out of their phonological matrix blocks context-linking of the null arguments. It thus seems that the intervention effect is simultaneously structural and phonological. This leads directly to another issue raised by Sigurðsson, namely whether the Empty Left Edge Condition should be considered a clear-cut syntactic restriction or not.

If such left edge emptiness conditions are purely syntactic, then it is remarkable that there are no similar conditions constraining overt objects (Sigurðsson & Maling 2010). The Context-Linking Generalization predicts that overt as well as covert 3rd person pronouns must match Top. Yet, overt pronouns are obviously not 'disturbed' by lexicalized left edge elements. Apparently, ELEC is not purely a syntactic restriction, but rather applies at PF.

Context-linking is defined by Sigurðsson as a computational, syntactic phenomenon. Hence, arguments that are context-linked are well-formed with respect to syntax. Yet, 'radically silent' Germanic null topics must fulfil the extra requirement of being *locally* context-linked, meaning that they cannot be context-linked across a lexicalized intervener. Otherwise, they cannot be successfully identified or localized in the PF representation of the clause, thus being impossible to process.

Both the Italian pro subject (Ø–Iphi) and the Swedish weak subject pronoun are successfully context-linked under the same conditions, entailing that there is nothing syntactically wrong with sentences that violate ELEC. Rather, the spelled out [spec,CP] induces a phonological 'disturbance', leading to a breakdown of the processing of radically

silent arguments (i.e., of their context linking), in contrast to overtly phi-specified pronouns. Hence, the phi-specification of silent arguments is unsuccessful in PF rather than in Narrow Syntax.

This is relevant also for issues of grammaticality. More specifically, are sentences violating the ELEC ungrammatical, or does their unacceptability rather stem from phonological reasons? According to Sigurðsson (2011), since grammaticality judgments are based on the final product, and PF disturbances can clearly lead to unacceptability of structures that are actually well-formed in syntax. For instance, the unacceptability of the examples in (79) is not due to narrow syntactic reasons, but rather a PF issue:

(79)

a. * Manchmal spreche _ Schwedisch. *German*
b. * Ibland talar _ svenska. *Swedish*
c. * Stundom tala _ sænsku. *Icelandic*
   sometimes speak Swedish

These sentences are perfectly well-formed with a spelled-out subject, which neatly demonstrates that the problem is not the context-linking of the subject. Rather, the issue concerns the licensing of the null element. If [spec,CP] is available, such that the subject can move across the finite verb, as in (80), the sentences become perfectly acceptable:

(80)

a. _ Spreche _ Schwedisch. *German*
b. _ Talar _ svenska. *Swedish*
c. _ Tala _ sænsku. *Icelandic*
   'I speak Swedish.'

Structurally, these two groups of sentences are identical, despite the fact that the subject is covert in one case, and overt in the other. The only difference is that in the last group the null argument matches CLn locally, leading to acceptability. In the first group, local CLn-matching is blocked at PF, and hence, the sentences are unacceptable. In narrow syntax, however, the example groups in (79) and (80) are non-distinct.

2.7.5 Conditions on sound, not on silence

Finally, I wish to highlight a point made by Sigurðsson (2011) which will be relevant for the model of analysis that I will propose in what follows. An important cornerstone of the model that I will outline is the idea that lexical items are inserted at a late point in the derivation, similar to the Late Insertion view advocated in the Distributed Morphology framework.[36] This is opposed to a model where structure is built from lexical items, which are then deleted at a later point.

Sigurðsson states that in his work, he follows a long tradition within syntactic theory when he focuses on the conditions on silence rather than on the conditions on sound. In other words, the question asked is why elements are omitted or deleted, and not why constituents are phonologically realized at all. However, Sigurðsson & Maling (2010: 82) point out that Sigurðsson's earlier work (2004a: 254, n27) suggests that exactly the opposite view should be taken:

> Lexicalization is arguably the last resort whenever a meaningful feature cannot be conveyed in a message by any other means than the costly means of overtly expressing some item that carries the feature. Thus, instead of looking for a 'license' to stay empty a category is 'happy' with whatever 'excuse' it has not to get lexicalized. This is the general program we should pursue, I believe.

Sigurðsson & Maling (2010: 82) postulate that at some level, it seems as if language is subject to AVOID SPELL-OUT: "Avoid spelling out any feature or element X of language. In other words, do not express X unless you have to (for linguistic or extra-linguistic reasons)." If we take this point seriously, the phenomena studied are not really conditions on silent arguments. Rather, the perspective should be turned upside down, so that the fact that the left edge [spec,CP] is filled forces an argument to be phonologically overt, even if it would otherwise be "happily silent". Under this view, the Empty Left Edge Condition could rather be called The Filled Left Edge Trigger.[37] It is clear that an anti-lexicalist model underlies this view, and this is also made explicit by Sigurðsson & Maling (2010: 68):

[36] However, I will not adopt the details of a Distributed Morphology analysis. The hypothesis of Late Insertion is parallel to this component of Distributed Morphology, though.

[37] Yet, Sigurðsson explicitly notes that he has chosen the term left edge emptiness conditions on null arguments for purely expository purposes.

> We take an ANTI-LEXICALIST APPROACH:
>
> The inventory of non-computed syntactic objects (the syntactic lexicon) contains only abstract features and abstract roots (…), subject to matching and bundling up. These bundles of syntactic information do not have any phonological feature values, but may (or may not) be expressed or represented, more or less accurately, by complex symbols and structures in PF. Thus, the 'lexicon' in the traditional sense is not a syntactic but a phonological lexicon, stored on the PF side, where the syntactic message (the output of the computation) gets its arbitrary phonological form.

One reason to adopt such a perspective is related to the economy of the derivation. Why should the derivation drag along phonological features only to delete them in the end? If the phonological features are not spelled out in any case, it would be more economical not to insert them into narrow syntax in the first place.

2.8 Conclusion

Having presented various generative analyses of null elements, I close this chapter by trying to sort out which parts of these previous theories contribute fruitful perspectives which I will include and develop further in my analysis, and on the other hand which parts will be rejected and excluded. My overall conclusion will be that the 'topic drop family' of generative analyses is empirically too restricted, and that as a consequence it is theoretically on the wrong track. I propose that an account based on the main insight in Mörnsjö (2002), namely that the omissions in discourse ellipses are purely phonological, is to be preferred.

As outlined throughout the chapter, most generative analyses of null elements have been centred on the same main points. They primarily consider the omission of referential arguments, focussing mostly on the inherent differences between the null argument pro in Romance and the operator involved in Germanic topic drop constructions. For Germanic, the analyses have been concerned with topicalized referential subjects and objects (Huang 1984, Cardinaletti 1990, Rizzi 1994, Platzack 1998a, Haegeman 1990, 1997, 2000, 2007, Mörnsjö 2002, Sigurðsson & Maling 2010 and Sigurðsson 2011). Null expletives are for the most part not considered, with the exception of Mörnsjö's (2002) work. Furthermore, for Germanic languages, the specifier of CP is singled out as the one licensing position for null elements, i.e., the one position in which it is possible to find a null constituent. In the analyses presented, the phenomenon of topic drop is equivalent to the non-realization of [spec,CP]. More specifically, the general approach has been to postulate a discourse-bound operator in this position, binding a null variable in the subject or object position (Huang 1984). Alternatively, null objects have been given an operator analysis, whereas Germanic null subjects have been analysed as NPs moving to [spec,CP] (Cardinaletti 1990).

Hence, we may conclude that the following three points are central in this 'topic drop family' of analyses:

1 Argument drop
2 Referential arguments (as opposed to expletives)
3 [spec,CP]

However, if we consider a slightly wider range of discourse elliptical data, it immediately becomes obvious that this strict focus is far too narrow. It is indeed striking that omission of referential arguments from [spec,CP] is very frequent, it is probably the most frequent discourse ellipsis type. But importantly, the phenomenon of discourse ellipsis is not limited to silent topicalized arguments. Other kinds of omissions are not only possible, they are frequently attested. (81) shows an example where a fronted expletive subject is omitted, in (82) both a referential subject and a finite auxiliary are elided, and in (83) an expletive subject and an auxiliary are omitted. (84) displays ellipsis of a referential subject and a copula verb, and (85) shows omission of an expletive subject and a copula verb.[38] Finally, (86) shows a discourse ellipsis in which a topicalized adverbial is elided:

(81) ~~Det~~ sto et eller annet om "rebooting" og sånn på skjermen. NoTa
~~it~~ said something about "rebooting" and such on screen-the
'It said something about "rebooting" and stuff on the screen.'

(82) ~~Jeg har~~ vært i masse slåsskamper på barneskolen. NoTa
~~I have~~ been in lots of fights in primary-school-the
'I have been in lots of fight when I went to primary school.'

(83) ~~Det hadde~~ vært litt artig å holde på med musikk. NDC
~~it had~~ been a little fun to deal with music
'It would be quite fun to work with music.'

(84) ~~Jeg er~~ født i Tromsø og oppvokst her. NDC
~~I am~~ born in Tromsø and grown up here
'I am born and raised in Tromsø.'

[38] The status of the subject in (83) as an expletive, and also the status of the verbs in (84) and (85) as copula verbs, might be a matter of discussion. Some might argue that they should be characterized differently. Yet, I have chosen to label these expletive subjects and copula verbs. In any case, this is not of major importance to my overall analysis.

(85) ~~Det er~~ svært stor forskjell på klientellet tror jeg altså. NoTa
~~it is~~ very large difference on clientele-the think I so
'The clientele is very varied, I really believe.'

(86) ~~Så~~ setter dem seg der og drikker kaffe mens dem liksom setter på karakterene til oss.
~~so sit~~ them self there and drink coffee while they like set on grades-the for us
'Then they just sit down and drink coffee while they like decide our grades.'
NoTa

As these examples demonstrate, not only referential but also expletive subjects can be dropped, as in (81), (83) and (85). In addition, finite verbs, in particular auxiliaries and copula verbs, are frequently left out, as seen in (82)-(85). Yet, the verb is never omitted when the subject is realized; they are always dropped together. Finally, topicalized adverbs are occasionally also dropped (86).[39] It is thus fair to say that the phenomenon *discourse ellipsis* seems to be empirically more wide-ranging than what is assumed in the topic drop family of generative analyses.

From the set of data in (81)-(86), I conclude that the strict focus on [spec,CP] needs to be reconsidered, since discourse ellipses are not restricted to this position. Two alternative strategies are then possible. On the one hand, one could assume that the topic drop branch of analyses is correct. If so, an additional explanation needs to be found for the data presented in (81)-(86). The result of this strategy would be two separate analyses, one for topic drop phenomena and one for these other data. However, from a scientific point of view, this would not be a fortunate solution. Following Occam's razor, one should seek to reduce the explanatory opportunities to a minimum. The choice between two parallel explanations for two groups of related data on the one hand, and on the other hand one overarching explanation for both phenomena, should then be straightforward. One should aim for a common explanation for all discourse ellipsis types. Then the obvious question is, of course, what this overarching explanation should be.

Two proposals which take into account an empirical basis broader than the one found in the topic drop group of analysis are found in Napoli (1982) and in Fitzpatrick (2006). Napoli (1982) argues for a phonological deletion account of various kinds of sentence initial discourse ellipses in English, whereas Fitzpatrick (2006) proposes an analysis of auxiliary

[39] Note also that occasionally, non-sentence initial elements can also be omitted, if the context is sufficiently prominent. Such examples of ellipsis from medial positions are discussed in chapter 4.

drop in English. Thus, both consider data in which other elements than a sentence initial subject or object is omitted. I will present their insights in chapter 4, when I investigate different kinds of restrictions on licensing of discourse ellipses.

The most recent work on discourse ellipsis is found in Sigurðsson (2011).[40] As we have seen, in his analysis, all null arguments must be context-linked. This context-linking happens via [spec,CP], and it is blocked in Germanic if [spec,CP] is lexicalized, as formalized in the Empty Left Edge Condition.

Even though Sigurðsson's analysis is elaborated and precise, it mainly accounts for the same set of data as the previous generative analyses, although within a modern minimalist frame. The empirical range is limited to referential arguments, and furthermore the model is theoretically restricted in that all licensing is tied to the specifier of CP. There is no discussion of ellipsis types in which non-arguments are silent, and in which elements in other positions than [spec,CP], are not phonologically realized. It thus appears that both empirically and theoretically, Sigurðsson's analysis is too narrowly restricted to be able to account for the variety of discourse ellipsis types. We have seen that Mörnsjö (2002) attempted to broaden the empirical focus slightly, as she included in her account dropping of expletives and importantly also dropping of topicalized adverbials. Still, the strict focus on [spec,CP] is indeed upheld in her work. I will argue that this strict empirical focus needs to be reconsidered.

Despite the attested shortcomings of these previous analyses, some of them display fruitful theoretical insights that I will adopt in my proposed analysis of discourse ellipses. This concerns above all the assumption that the omissions are purely phonological, as put forth in Mörnsjö (2002). Rather than focusing solely on the type of empty category in [spec,CP] and the syntactic licensing restrictions on this null argument, as discussed extensively in most generative approaches, Mörnsjö (2002) argues that the pro versus operator

[40] For a critical discussion of Sigurðsson's (2011) analysis, see van Gelderen (2013). She points out that one fact that remains unclear in Sigurðsson's account, is the character of the topic in Germanic and the licensing in English. To clarify these issues she investigates data from Old English and compares them to Modern English. The main conclusion reached is that with respect to null subjects, Old English patterns with Italian (i.e. pro drop licensed by rich agreement), and that Modern English patterns with Germanic, where movement of the null topic to the C-domain is necessary for licensing a null subject: "Once agreement changes, English becomes similar to the other (modern) Germanic languages in only licensing topic drop if the null subject can move to the C-domain to avoid the intervention by C, in accordance with the Edge Linking Condition" (van Gelderen 2013: 25).

Moreover, following Sigurðsson (2011) and Frascarelli & Hinterhölzl (2007), van Gelderen (2013) assumes that three different types of topics can be distinguished: Aboutness-Shift Topic, Contrastive Topic and Familiar Topic. In accordance with Frascarelli (2007) and Sigurðsson (2011), van Gelderen (2013) argues that the topics that license null subjects in Germanic, are aboutness topics that are continued by familiar topics.

Null objects are not discussed in van Gelderen (2013), yet she points out that object drop is not possible in English, contrary to what is the case in other Germanic varieties.

discussion is irrelevant, and that the surface variation is due to differences in phonological realization. I endorse this main conclusion, as I will argue that topic drop is a subtype of discourse ellipsis, or in other words that the ellipsis affects only the phonological component and does not alter the narrow syntax.

Note that even though I will reject the empty categories traditionally assumed to categorize discourse related null arguments, it does not follow that I will reject all kinds of empty categories generally assumed in generative theory, such as pro, PRO, traces (or copies) and variables. My argument specifically concerns the categories proposed for discourse related null arguments in [spec,CP]. This insight follows from my general argument that syntax is intact and ellipsis occurs in phonology. The empty categories mentioned belong to the syntactic component, resulting from processes and restrictions in narrow syntax. The discourse ellipses, on the other hand, occur in PF. At the point of spell out, when the sound is, or is not, turned on, the nature of the syntactically empty categories (pro, PRO, traces/copies and variables) is already defined. This does not hold for discourse ellipses.

My overall view is thus, following Mörnsjö (2002), that all grammatical categories are present precisely as in a sentence with no dropped elements. This view entails that the previous theories discussing the nature of the empty category in [spec,CP] are irrelevant, since there are not any designated empty categories in [spec,CP]. There are only 'ordinary' syntactic derivations, displaying differences in the phonological component. Crucially, Mörnsjö's (2002) theory thus repudiates the very premises for a whole theoretical industry of discussing the nature of the null argument in [spec,CP] (Huang 1984, Cardinaletti 1990, Rizzi 1994, Haegeman 1990, 2000 among others). She argues that there are no designated empty categories, only PF-deletion. I believe this rejection to be correct, and I will follow Mörnsjö's (2002) view that discourse ellipsis is a matter of phonology, more specifically related to the syntax – phonology interface. A discourse ellipsis is structurally parallel to its non-elliptical counterpart; hence, the omission is not structural, but phonological.

Sigurðsson (2011) assumes that lexical items are inserted late into syntax, and along the same line of reasoning, Sigurðsson & Maling (2010) categorizes null arguments as a PF phenomenon. The Empty Left Edge Condition applies at PF, having consequences for which elements that must be spelled out, and which do not need to be. Still, there are some significant differences between Sigurðsson's analysis and the one I will propose.

A central claim in Sigurðsson (2011) is that all types of null arguments are uniform in nature. There are no inherent lexical differences between them:

> Here, I will explore and argue for a unified minimalist approach to referential null arguments, where all types of (overt and silent) definite arguments require C/edge linking[41] (Sigurðsson 2011: 269).

This entails that all differences between lexical elements are due to factors external to the lexical items themselves. However, if all null elements are alike, it is hard to explain why some of them display connectivity effects, whereas others do not. Null subjects typically show agreement with verbs or with anaphorical elements, yet this is not the case for null objects. In this respect, Sigurðsson's claim is diametrically opposed to what I will argue. Rather than lexical uniformity, I will claim that null elements are identical to their overt counterparts, thus exhibiting all relevant syntactic properties, the only difference being that they are not phonologically realized. I will thus adopt the same main idea as argued for by Mörnsjö (2002). This means that just as overt subjects agree with anaphors, null subjects do, too. Objects do not show similar effects, and null objects don't either. Under an analysis in which deletion targets only the phonology of a constituent, this follows directly.

To my understanding, Sigurðsson's 'all null arguments are uniform' analysis entails that these null elements do not carry with them any formal properties when they enter syntax. All properties of empty categories are defined in the structural position, by the structural context, in a way that resembles the analysis proposed in Chomsky (1986b). Importantly, the properties are not contributed by the lexical item itself. This is contrary to what I will assume. In the analysis that I will put forth, null elements are parallel to their non-silent counterpart. They carry with them all relevant properties, just as if they were overt. I will assume that these null arguments have morphosyntactic features as well as phonological features. The morphosyntactic features are realized in the same way that they would be in a non-elliptical sentence, whereas the phonological features are present as a potential, and the structure and the context define whether it is possible for them to be silent.

In this respect, my analysis shares significant elements with the Copy theory of movement, as it has been presented by Nunes (1995, 2004). The displacement aspect of this theory is not relevant for my purposes. What *is* relevant is the assumption that a copy represents a full-fledged version of an element, but a version which is not necessarily realized with sound. Whether or not a copy is phonologically instantiated is decided by factors external to the element itself, but crucially, a silent copy is structurally equal to its realized counterpart.

[41] As noted, C/edge linking is another term for context linking.

More specifically, whereas Sigurðsson's (2011) analysis is, to my understanding, that null elements lack phonological features, and that this is the reason why they are silent,[42] Nunes' Copy Theory instead holds that a silent copy retains all its features, also the phonological ones, all the way through the syntactic derivation. While some copies are pronounced and others are not, this has nothing to do with the internal feature specification of the copy.[43]

Interestingly, in his rejection of trace theory in favour of Copy theory, Nunes (1995, 2004) presents different scenarios for the phonological realization of copies. One is that only the chain head, i.e., the highest copy, is realized; another is that several or all copies are realized at once; a third alternative is that only a lower copy is realized, and a fourth is that part of the copy is realized in one position, and the remaining part of the copy in another position (scattered deletion). However, the way I see it, there is one scenario missing from Nunes' account, namely the one where none of the copies are phonologically realized. This scenario is precisely the one which will be investigated in this thesis. I will assume that a non-realization of all copies in a chain is what happens in the case of discourse ellipsis, and I will investigate what the restrictions for this alternative are.

It appears that the restrictions on phonological realization are influenced both by pragmatic and structural factors. I thus follow Sigurðsson's (2011) conclusion that intervention effects such as the Empty Left Edge Condition (Sigurðsson & Maling 2010) are simultaneously structural and phonological. Hence, even though the deletion in discourse ellipses is phonological, affecting only the phonology of the elided item, the licensing is clearly structurally governed. This entails that defining discourse ellipsis as a non-syntactic phenomenon, i.e., as obeying only restrictions outside narrow syntax, would be a mistake.

In what follows, I will present a model of analysis for discourse ellipses, aiming to cover all the ellipsis types displayed in (81)-(86). The ambition for the model is to account for two main questions: what is the structure of discourse ellipses, and what are the restrictions on licensing of the ellipses? Before outlining the details of the analysis in chapter 4, the next chapter is devoted to settling certain fundamental issues concerning the nature of the model.

---

[42] It thus appears that for Sigurðsson, silence is due to a lack of phonological features. This view seems to contradict Chomsky's (1995: 230) claim that lexical items contain three types of features (semantic, formal and phonological), and that what distinguishes them is that the phonological ones only receive an interpretation at the A-P interface, not at the C-I interface.

[43] One could of course envision an analysis where a copy is defined as a constituent which has some, but not all (i.e., not phonological) features inserted. Then the difference between the two opposite views (Nunes and Sigurðsson) would be neutralized (an analysis which assumes something along these lines is found in Embick & Noyer 2001).

3 Foundations for a grammar model

The overall goal in this chapter is to lay the grounds for the theoretical proposal that I will defend. The relation between form and meaning may appear to be distorted in cases of ellipsis. Furthermore, it is evident that contextual information plays a central part in the interpretation of ellipses. Consequently, it is highly important to discuss both the relation between syntax and semantics and the relation between semantic and pragmatic meaning building in further detail. If the goal is to establish a useful analytic model, it is crucial that the model is not based on an incorrect theoretical foundation. This chapter therefore starts out with a comparison of so-called global and selective theories of semantics. Thereafter, the schism between two types of grammar models is highlighted, namely lexically driven models on the one hand, and exoskeletal models assuming late lexical insertion on the other. I conclude that the latter alternative is to be preferred. This implies that sentence structure is not motivated by lexical items (morphemes). Rather, I will argue that syntactic structure is abstractly motivated. The clausal skeleton that will be proposed is the one that will be adopted in my proposed analysis of discourse ellipsis in chapter 4.

3.1 The syntax – semantics correspondence

The primary focus for theoretical linguistics is to develop theories for the correspondence between sound or signs and meaning (Merchant 2001).[1] In the case of ellipsis, however, this correspondence appears to break down. Ellipses are fragmented utterances, but they represent full-fledged semantic propositions. Pointing back to Saussure's thesis that a sign is an association of form with meaning, the paradox is striking. In ellipses, there is meaning without form, at least at the face of it.

Linguistic theories have diverging views on semantics, and on what belongs to the semantic component, as opposed to the syntactic and pragmatic components. What is meaning, and where is it found? A main distinction can be drawn between two kinds of semantic theories. On the one hand, theories of E-semantics define meaning as a relation

[1] A similar thought is expressed in Chomsky (1995: 2) and also in Chomsky (2000b: 90-91), where it is pointed out that the cognitive systems interact with two external systems: the articulatory-perceptual (A-P) systems and the conceptual-intentional (C-I) systems. Chomsky (1995: 2) states that: "This 'double interface' property is one way to express the traditional description of language as sound with a meaning, traceable at least back to Aristotle."

between language and the world, independently of the language user. Typically, E-semantic theories describe natural language by means of formal logic, aiming at defining the truth conditions of linguistic expressions. On the other hand, I-semantic theories argue that meaning is located in the minds of language users. Language (or anything else for that matter) is meaningful only if it is meaningful to someone. Meaning building is thus part of competence or I-language.

The two theoretical models that I will present in this chapter are both I-semantic theories. Both deal with cognitive representations of meaning. Nevertheless, they diverge radically on one point, namely how the model of the linguistic cognitive architecture should incorporate contextual information. Traditionally, such information has not to a large degree been included in generative grammar (Jackendoff 1997: 3).[2] Yet, context is obviously decisive for the full interpretation of utterances: indexical and deictic elements require contextual antecedents. The question is thus not whether context provides information, but rather where that information is taken into account. More specifically, is contextual information made available at the level of semantics, or does it belong to some other module?

In what follows, I explore whether it is possible to define some principled theoretical distinction between different types of meaning. To outline this discussion, I present two different proposals which give opposing answers to the questions raised. First, I will describe Ray Jackendoff's global semantics view as it is presented in his *Foundations of Language* (2002), but also elsewhere. Secondly, I will present an alternative view, which is the selective semantic theory of Bouchard (1995). There are, obviously, many other theoretical proposals concerning I-semantic meaning, as well as theories dealing with the syntax-semantics relation.[3] The reason for selecting these two is that they represent related, but still opposing views on the issue that I wish to explore. Bouchard (1995) proposes a clearly defined distinction between two types of semantics, one that is relevant for syntactic structure, and on that is only relevant outside syntax. I will argue that this distinction is theoretically very fruitful. Moreover, he explicitly contrasts his view to Jackendoff's global model of semantics.[4] Jackendoff represents Bouchard's anti-thesis, so to say, and thus, through comparing these two models, the theoretical consequences of each of them stand out very

[2] This may be with the exception of cases like anaphora, topic and focus, in which information from context entails grammatical reflexes (Jackendoff 1997).
[3] For that matter, neither Jackendoff nor Bouchard are very representative of the theory of Chomskyan I-meanings. More central in this respect are McGilvray (1998), Chomsky (2000a) and Pietroski (2005).
[4] Obviously, Bouchard (1995) bases his arguments on earlier versions of Jackendoff's theory, e.g., Jackendoff (1983, 1990), but the overall model is very similar to the one proposed in Jackendoff (2002).

clearly and are easily comparable. The theoretical issues which are at stake, become very manifest.

I will use the comparison of these two theories to lay the ground work for my model of analysis, where a central aim will be to specify how the work load is divided between contextually dependent information and strictly linguistic information. Is it plausible to assume a linguistic semantics, isolated from contextual-pragmatic semantics, or is it the case that all construction of meaning is affected by background knowledge and pragmatic considerations? This division line is highly relevant for the analysis of ellipses. Is the silent material linguistically encoded, or does the processing of the silent element only require a conceptual basis?

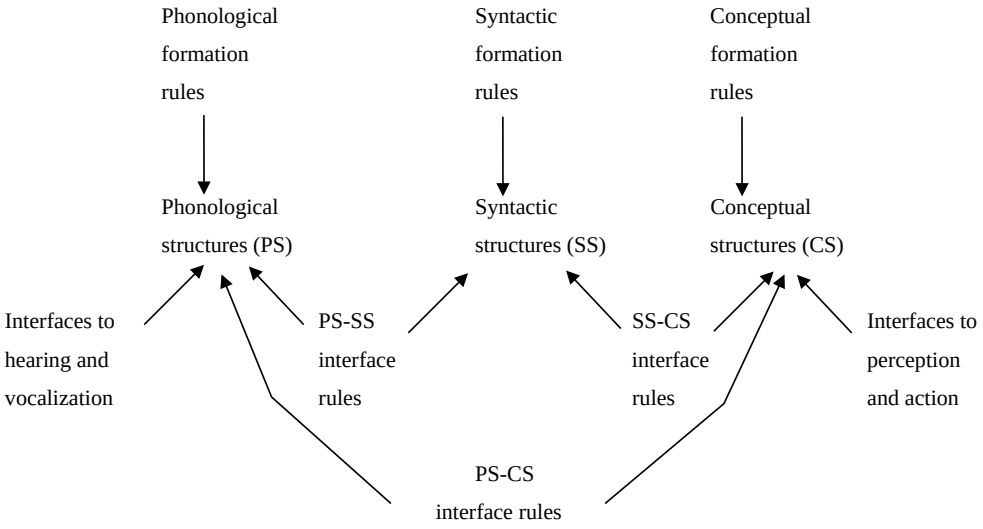
3.2 Ray Jackendoff's Parallel Architecture

3.2.1 The overall model

Generative grammar in general has not to a large degree dealt with aspects of meaning.[5] The models presented have mostly been *syntactocentric*[6], defining syntax as the central (or only) generative capacity. The idea of an autonomous syntax has been strong. According to Jackendoff (2002: 269), this is why researchers in fields such as formal semantics, computational linguistics and Cognitive Grammar have widely rejected generative grammar. Jackendoff aims to remedy this imbalance by establishing an alternative model for language processing and production, in which the boundaries between the different components are reconsidered. Generative models are syntactocentric and derivational, defining the phonological and semantic components as interpretive outputs with no independent significant capacities (Chomsky 1965: 75, Jackendoff 1997: 15, 2002: 180).[7] Jackendoff's model, on the contrary, proposes parallel generative systems:[8]

[5] A reason for this neglect can be found in the reaction to the theory of generative semantics. Generative semanticists interpreted the close relation between Deep Structure and meaning directly, claiming that DS was identical to meaning (Jackendoff 2002: 73). This led to the postulation of a large amount of underlying syntactico-semantic structures. Even though generative semantics was embraced by many theorists outside generative grammar, Chomsky and his followers attacked it strongly (Harris 1993). As a consequence, most generativists turned their backs on semantics as well as the study of meaning.
[6] This is Jackendoff's (2002) own term.
[7] According to Jackendoff (1997: 15-16), this view is due to a conception of grammar as an algorithm generating grammatical sentences, as well as a fear that introducing recursion into the semantic and the phonological component would lead to redundant operations.
[8] The figure is from Jackendoff (2002: 125).

The tripartite parallel architecture



Linguistic structure is seen as a collection of independent but linked modules. Rather than one large derivation which splits into three different outputs, there are three parallel and independent derivations, each with its own set of primitives and combinatorial rules:

> We can regard a full grammatical derivation, then, as three independent and parallel derivations, one in each component, with the derivations imposing mutual constraints through the interfaces. The grammatical structure of a sentence can be regarded as a triple, <PS, SS, CS>. Following Chomsky (1993), we can think of a (narrow) syntactic derivation as "converging" if it can be mapped through the interfaces into a well-formed phonological structure and conceptual structure; it "crashes" if no such mapping can be achieved (Jackendoff 1997: 38-39).

The semantic component is thus a generative system which is independent from syntax,[9] and the syntax-semantics relation is not an isomorphic one. Syntax does not determine semantics, as in generative grammar, but semantics does not determine syntax either, as in cognitive grammar. The parallel architecture is non-directional, implying that a derivation can start in any of the components; the relationship between the three components is not derivational. The model is therefore not biased towards production or perception. Rather, the representations in phonology, semantics and syntax are independent of each other (Jackendoff 1997: 40).

An argument presented for the parallel architecture is economy. Some semantic distinctions, such as singular-plural, are relevant for syntax, whereas others, such as colour

[9] Jackendoff (2002: 123) argues that this hypothesis is supported by the fact that semantics is a combinatorial system far richer than syntax, which has been demonstrated within many approaches to semantics, e.g., cognitive grammar and formal semantics. The same argument is stated for phonology, but I will not go into that here.

distinctions, are not. Each tier is thus far richer than what is transmitted to the other tiers. On these grounds, Jackendoff (2002: 124, 428) proposes to remove all semantic content from syntax,[10] entailing a leaner syntactic component than is traditionally assumed in generative grammar. He argues that this liberates the syntactic component from unnecessary complexity:

> In retrospect, we can see that this complexity has arisen from the demand that syntax be the sole generative component, responsible for all combinatorial structure in semantics. Now that semantics has its own generative organization, syntax needs to share with it only enough structure to get words into the right order for phonology (Jackendoff 2002: 428).

The semantic tier, on the other hand, is rich and includes background knowledge and contextual information. A consequence of this is that syntactic and semantic representations are very different, and that the relation between form and meaning is quite irregular.

When the derivations in the independent tiers are completed, they need to be linked in order for the overall construction to be well-formed. In Jackendoff's (2002) theory, this is handled by 'interface rules'[11], which ensure the correspondence between the parallel tiers and make sure that it is the same linguistic expression that gets represented in syntax, phonology and semantics. If a well-formed syntactic representation can be transferred by interface rules to equally well-formed semantic and phonological structures, and these structures match each other, then the derivation is successful. Otherwise, it crashes. In this model, lexical elements serve as interface rules (Jackendoff 2002: 131). An argument for this is the uneconomical process of lexical insertion, which is seen as an anomaly in generative grammar. The idea of inserting whole lexical items entails that even though syntax cannot access or interpret them, phonological and semantic features of words are dragged around in the syntax until they are interpreted in PF and LF. Instead, it is proposed that a word has different sorts of features, and that these features are 'placed' in the relevant tier or component of the grammar.

> A word like *cat* is not a list of phonological, syntactic, and semantic features that is inserted into syntax and carried around in the course of the derivation. Rather, it is a small-scale interface rule that helps correlate the parallel structures (Jackendoff 2002: 425).

Hence, rather than being inserted into syntax, lexical items establish the correspondence between syntactic, phonological and conceptual structure (Jackendoff 2002: 132).[12]

---

[10] Certain formal syntactic principles, such as language-specific word order, phrase order, functional categories etc. are still necessary, but these principles are not significant for meaning and semantics (Jackendoff 2002: 270).
[11] In earlier versions of the theory, these rules are labelled *correspondence rules* (Jackendoff 1997).
[12] The interface rules mostly obtain between composite units, and not between primitive elements of each of the modules. This accounts for the fact that, for instance, the primitive units of phonology are not visible to syntax and meaning. Speech sounds themselves are not bearers of meaning. Moreover, the syntactic categories of words are not visible to phonology, because phonology only sees linear ordering of words. Mapping between

3.2.2 A unitary Conceptual Structure – no linguistic semantics

Jackendoff's meaning component is divided into a spatial structure (SpS) and a conceptual structure (CS),[13] defined as the organization of the thoughts that language can express:

> It is the locus for the understanding of linguistic utterances in context, incorporating pragmatic considerations and "world knowledge"; it is the cognitive structure in terms of which reasoning and planning takes place. That is, the hypothesized level of conceptual structure is intended as a theoretical counterpart of what common sense calls "meaning" (Jackendoff 2002: 123).

Fundamental to this theory is the claim that construction of meaning is unitary; meaning is the same whether it is grounded in language or not. Linguistic semantics and general conceptualization are not distinct, but are expressed in the same format in CS. Thoughts thus trigger the same mental representations as production of language does. An argument for this is again economy of processing – why should the brain maintain an additional level when it can manage without it? The null hypothesis is thus that there is no specific linguistic semantics. Language is thus meaningful not in itself, but because it connects to conceptual structure. The semantics for language is expressed in CS, which is the locus for understanding linguistic utterances in context: "We must consider the domain of linguistic semantics to be continuous with human conceptualization as a whole" (Jackendoff 2002: 282). Support for this is that reasoning occurs independently of language, i.e., CS can be active even when the other tiers are not. Moreover, it is known that apes are able to reason, even though they lack linguistic abilities.[14]

According to Jackendoff (2002: 283), the wish to define a separate linguistic semantics is due to a desire to restrict the area of research and to a fear that the field of general conceptualization will turn out to be an unmanageable "bottomless pit". However, he argues, such theoretical seams should be determined empirically. The delimitation of a grammatically relevant semantics could possibly be seen as a proper level of cognitive structure distinct from both contextualized meaning and linguistic form (Jackendoff 2002: 282).[15] Then, linguistic semantics would be constructed from decontextualized units of meaning, and a mapping process from semantic to pragmatic interpretation would be required. However, since the semantic features involved in grammatical structure do not form a natural

---

phonology and syntax must preserve linear order, and mapping between syntax and meaning preserves embedding of arguments and modifiers.

[13] Since grammatical aspects only make reference to CS, I will not have anything to say about SpS here.

[14] These animals are assumed to exhibit the same parallel architecture as humans, lacking only the interface to syntax.

[15] Representatives of this view are Chomsky (the theory of LF), and Relevance Theory (Sperber and Wilson 1995).

class, the idea of a separate level for decontextualized meaning is abandoned (Jackendoff 2002: 290). Another alternative is to regard the interface between semantics and pragmatics not as a mapping between two formats, but as a process of enrichment. The grammatically relevant semantic features will then represent a subset of the general semantic features. Jackendoff has no strong counterarguments against this idea; he simply states that there is an alternative way of achieving the same result, which is better than "simply to carve it out within the theory of conceptual structure itself" (Jackendoff 2002: 290). His conclusion is that a niche of linguistic semantics *does* exist, but that this niche is not a separate level of structure. Linguistic semantics is the study of the interface between general conceptualization and linguistic form: "The subset of semantic features relevant to grammar is just the subset that is (or can be) mentioned in phrasal interface rules – the part of conceptualization that is 'visible' to these rules" (Jackendoff 2002: 291). Linguistic theories must therefore specify interface constraints that relate contextualized meaning to linguistic form. As we have seen, Jackendoff places this work load on the lexicon. Still, it must also be specified how whole phrases are mapped onto complex meaning representations.

Lexical items correspond to lexical concepts in CS. These concepts have a compositional structure, and the primitive units are argued to be innate.[16] It is argued that lexical decomposition can account for similarities and differences in verb meanings. For instance, the strings in (1)-(2) give rise to the same conceptual structure, but in (2), the verb incorporates the Path- and Place-functions, whereas these are directly lexically expressed in (1).[17]

(1) John went into the room.
(2) John entered the room.

For phrasal semantics, two different scenarios are distinguished. In a *simple composition*, there is a close correspondence between configurations of lexical items in syntax and conceptual constituents in CS.[18] Word meanings and syntactic structure are then sufficient to determine the relevant semantics. Nevertheless, certain elements in the semantic content of a

[16] Jackendoff claims that the complexity of lexical meaning should not be shrugged off as encyclopaedic meaning, but be included as part of linguistics. This is a consequence of his rejection of a principled division between linguistic and encyclopaedic meaning.
[17] Examples from Jackendoff (2002).
[18] One case of simple composition is variable satisfaction, as for verbs and their arguments, which displays parallel embedding in syntax and semantics (Jackendoff 2002: 381).

phrase may not correspond to anything in syntactic and phonological structure. Such cases are labelled *enriched composition*. Meaning then incorporates elements which are not lexically expressed, but which are present in CS to satisfy pragmatic constraints (Jackendoff 1997: 49).[19] To illustrate this notion, he gives the example in (3), with the intended interpretation in (4):

(3) The ham sandwich in the corner wants more coffee.

(4) The *person* over in the corner *contextually associated with a* ham sandwich wants more coffee.

If only simple composition were possible, the italicized elements in (4) could not be accounted for. There are several analytical possibilities for integrating this contextualized meaning. It could be lexical polysemy, or the extra meaning could be purely pragmatic and not grammatically relevant. Jackendoff's proposal is that such cases of reference transfer include additional pieces of language. The crucial assumption he makes is that such elements have no syntactic or phonological reflexes; they are conventionalized pieces of meaning in CS, with no overt expression (Jackendoff 2002: 389). It is important to underline that this is claimed to be part of the linguistic derivation, since it is included in CS. This is a purely pragmatic distinction, but for Jackendoff there is no division between semantics and pragmatics, since meaning is unitary. The global view of semantics is clear from the following quote:[20]

[19] Such cases show that understanding of sentences requires interaction between grammar, CS and context (Jackendoff 2002: 388).

[20] Jackendoff (1997: 48) claims that a problem in many Chomskyan theories is the underlying hypothesis that all semantic composition is always of the "simple composition" kind: All elements in the meaning of a sentence are found in the lexical conceptual structure (LCSs) of the lexical items composing the sentence. The way the LCSs are combined is a function only of the way the lexical items are combined in syntactic structure (including argument structure). In particular, the internal structure of individual LCSs plays no role in determining how the LCSs are combined; pragmatics plays no role in determining how LCSs are combined. The immediate advantage of such a view is that the interface between syntax and semantics becomes transparent, i.e., it is theoretically elegant. Yet, due to cases of enriched composition, Jackendoff (1997: 49) argues that this hypothesis cannot be sustained.

> This account seems to me to reflect intuition precisely. It says that reference transfer *is* "pragmatics", in the sense that it is part of contextualized interpretation but not part of the utterance. On the other hand, it is also part of language – part of grammar – in the sense that (a) it is conventionalized and (b) it is integrated into conceptual structure just as if it were a word or fixed phrase such as *person who is contextually associated with* (…) only if we insist on an ideologically fixed boundary between semantics and pragmatics is such an account problematic; taken on its own terms it seems to me perfectly satisfactory (Jackendoff 2002: 390).

Still, it is tempting to ask why the understanding of sentences is only subject to enriched composition in specific cases and not all the time. Is there not always a context present to enrich our understanding? It is not obvious how a line can be drawn between cases where an abstract element must be postulated in CS, and where it must not be. Jackendoff's argument hinges on his claim of a global semantics which includes both linguistically and contextually relevant information. Since the context is included in all meaning representation, Jackendoff is forced to operate with a distinction between simple and enriched composition. In other words, this all depends on what should be included in 'elements of content' in the definition cited above. I will return to this issue in the presentation of Bouchard (1995), who argues for a grammar-specific semantics, purged of contextual information and closely related to syntax. Adopting such a view opens the possibility that every sentence can be a case of both simple composition and also enriched composition when the utterance meets the context.

3.2.3 Criticism of the Parallel Architecture

Jackendoff's Parallel Architecture can be criticized in several respects, and I will present some selected criticisms here.[21] To begin with, it is problematic that Jackendoff (2002: 283) presents his own hypothesis as a null hypothesis *a priori*, in particular since he imposes strict requirements on scientific argumentation and empirical evidence for theories that assume a distinction between linguistic meaning and general conceptualization. His main criticism against the idea of a linguistic semantics is that it is based on a fear that the area of general knowledge and thought will turn out to be unmanageable and non-restrictive (Jackendoff 2002: 283). Obviously, scientific claims should preferably not be based on emotions. Yet, one immediate objection is that in the real world, as well as in the human mind, thought and language *do* exist independently of each other. Reflection can occur without linguistic

[21] Other scholars have also presented criticism against Jackendoff's framework; see, e.g., Philips & Lau (2004) and Higginbotham (2003). Pietroski (2005: 271) argues that Jackendoff "underestimates the role of autonomous linguistic constraints on how expressions can(not) be associated with 'conceptual structures'".

structure.[22] The cognitive differences between human beings and animals support the same point. It is commonly assumed that animals have a certain ability of reflection, which in Jackendoff's terms means that they have some kind of conceptual structure. Still, animals lack linguistic abilities. These facts indicate that there are two distinct compartments of meaning in the cognitive architecture.[23]

Jackendoff claims that a division between two such compartments of meaning is not economic. This may be so. Nevertheless, this seems to be how the world looks. Why then should a model of cognitive structure be different? Rather, based on these facts, the null hypothesis should be the opposite of Jackendoff's, namely that linguistic meaning building is fundamentally different from other kinds of meaning building or conceptualization, and that language and thought exist as two separate modules in the human mind. Consequently, they should also be distinguished theoretically, both in analysis and in formats of representation.

On the basis of the observation that not all semantic distinctions have consequences for syntax, Jackendoff proposes to remove all semantic content from syntactic structure. Left in syntax are then only strictly formal relations such as structural case assignment and agreement. Syntactic structures become empty skeletons with no inherent meaningful content. But then, what is the ontology of the syntactic structure; what does it consist of? Moreover, what is the point of such a syntactic component, if it has no content? It is problematic within this model to account for what initiates a syntactic production in the first place. It seems unlikely that the linguistic competence should generate for no particular reason meaningless syntactic structures which 'get' their meaning only when they are eventually related to semantic structures via interface rules.[24] My point is: if the interface rules operate at the end of the derivation, it is problematic to explain what motivates the initiation of a syntactic process to begin with, because the syntax builder would then not yet know which structure to build. If, as in Jackendoff's model, a derivation starts out by generating form, and the interpretation of this form takes place only subsequently, then how is the speaker to know

[22] Note that even Jackendoff (2002: 273) himself also supports this view: "An important aspect of the present view is that thought is independent of language and can take place in the absence of language."
[23] This may also be interpreted as an indication that language has developed through evolution in the human being, taking a general conceptual structure as a starting point.
[24] Note that 'interface rules' are here understood as Jackendoff defines them, and not as they are generally understood in the Minimalist Program.

what should be the meaning of that form, or if the form should be ascribed any meaning at all? And if it should not be ascribed any meaning, why should it be generated?[25]

Another problem concerns the ontology of syntax. The parallel architecture organizes syntactic and semantic-conceptual structures on separate tiers, with the consequence that we end up with two different syntactic systems made out of different kinds of units. There is one syntax type on the narrow syntactic tier, but we find a hierarchical syntactic structure also on the conceptual tier, made out of lexical and phrasal concepts. When we put together two semantic elements, the resulting combination immediately represents some type of structure. Jackendoff (1997: 31) touches upon this point when he proposes a distinction between *narrow syntax* in the syntactic component and a relational *broad syntax* in the conceptual component, where linear order is completely irrelevant. The problem is that the representations on the syntactic tier and the CS tier are radically different. This is unfortunate since the goal of the theory is to account for the connection between syntax and semantics only by pointing to a restricted set of specific interface rules.

Above all, it goes against the principle of compositionality, which brings us to the most severe problem in Jackendoff's global model, as I see it. The principle of compositionality, 'Frege's principle', states that the meaning of the whole is a function of the meaning of the parts and the way they are combined.[26] Hence, the meaning of complex expressions will be obtained from the meaning of the expressions out of which they are combined and the way this combination takes place. In Jackendoff's Parallel Architecture, because the correspondence between syntax and semantic meaning is not direct, the meaning of the whole cannot be directly reduced to the meaning of the components and their way of combination. It is not clear what the relevant parts are, the ones in syntax or in CS, because these parts are not the same. Compositionality is integrated in CS, but this is not connected to compositionality on the syntactic tier. Hence, instead of being a logical consequence of the system itself, compositionality must be stipulated as an external principle. This is, of course, unfortunate.

This discussion leads to the final point of my criticism, namely the interface rules. If the parallel architecture contains independent syntactic, conceptual and phonological structures, an important question is how the system knows which structures to combine. Why

[25] We will see that in the neo-constructionist theory, with the idea of underlying structural frames or templates, this challenge receives a solution. Since the constructional templates are both structural and (G-)semantic, the meaning is present from the outset of the derivation.

[26] The principle was first introduced for linguistics by Katz and Fodor (1963).

don't we witness more faulty derivations? It seems to be necessary to assume some kind of device to assure that the right conceptual structures are combined with the right syntactic and phonological structures. Jackendoff's claim is that this is handled by the interface rules. Consequently, these interface rules must be very powerful, and it seems to me that they are not sufficiently restrictive. This kind of criticism has also been presented earlier, and Jackendoff's (1997: 40) response has been that the rules are conceptually necessary to assure that the transfers between phonology, syntax and CS take place as required. Of course, in such a system, these rules are crucial to make the model work. Still, one could imagine that this is *not* the way the cognitive architecture is construed and consequently that this problem should be solved differently, if one assumed a different overall model to begin with. Precisely such an alternative model is proposed in Bouchard (1995), which will be presented in the next section.

3.3 Denis Bouchard's Grammar Semantics

3.3.1 Global versus selective approaches to meaning

Bouchard (1995) explicitly argues against global theories,[27] claiming that they are representations of general knowledge rather than of meaning:

> The main thesis of this book is that most linguistic theories are based on the wrong semantics. They are GLOBAL approaches to semantics, in that they, to a large extent, incorporate information that is part of the background knowledge shared by speakers. Such theories are "too concrete"; they involve elements that play no explanatory role in grammar (Bouchard 1995: 3).

In contrast, Bouchard proposes a selective approach to semantics, in which background knowledge and situational aspects of meaning are excluded from grammar. Instead, only a small, abstract part of meaning is relevant for grammar (Bouchard 1995: 6). In what follows, I present Bouchard's objections to global approaches, and I discuss his alternative view. This will serve as a follow up to my own critical comments concerning Jackendoff's model. Several problematic sides of the parallel architecture are solved in Bouchard's framework. Still, I will also point out that it has certain shortcomings.

[27] Bouchard claims that a global view underlies most current approaches to linguistics, due to strong influence from formal logic on linguistic theory. Examples given are the Minimalist Program, Jackendoff's parallel architecture, Fillmore's construction grammar, the cognitive grammar of Lakoff (1987) and Langacker (1986), GPSG, HSPG, LFG and model-theoretic formal semantics (Montague Grammar). According to Bouchard (1995: 5), all of these do to some extent make essential use of our knowledge of the world.

Three separate tasks are traditionally attributed to semantics: firstly, the description of the meaning of words, phrases and sentences; secondly, the description of properties such as synonomy, entailment, inconsistency, anomaly, judgments of superordination and subordination etc.; and last, mapping of semantic meaning onto syntactic structures. Bouchard (1995: 4) asks whether these three tasks are accomplished by means of the *same* semantic representation, and states that the radical difference between a global and a selective theory of semantics is found in the answer to this question. Global approaches assume only one kind of semantics for all these tasks, whereas Bouchard argues for a selective approach where the task of representing meaning is allocated to different compartments with different formats. He explicitly rejects Jackendoff's economy argument, claiming that it is theoretically more costly to include knowledge of the world into syntax than to postulate a separate level of linguistic semantics which excludes such irrelevant information. The result is a simpler analysis which still can include a certain degree of semantics. The fact that Jackendoff's CS incorporates situational information makes the semantic representation very complex, entailing three main problems: semantic symbols with no syntactic equivalent, an indirect syntax-semantics correspondence and distortion of some of the dominance relations (Bouchard 1995: 10). Consequently, regularity in the *linking* between semantics and syntax is not predicted:

> If inadequate semantic representations are adopted, then the correspondence between semantics and syntax is impossible to state because one of the elements in the relation does not have the appropriate properties (Bouchard 1995: 8).

Quite to the contrary, to account for linking, an additional mechanism – interface rules in Jackendoff's model – must be stipulated. This is problematic because it makes syntactic and semantic structure so different that they cannot easily be compared (Bouchard 1995: 21).

Another negative consequence concerns polysemy. Including contextual information in semantic representations makes it difficult to relate the same lexical entry to two different uses in two different contexts. This leads to an explosion of semantic representations since each word must be listed with all possible contexts of use. A lexical item with *n* uses will then end up having *n* different semantic representations. This is not restrictive, and it appears that a generalization is lost. A polysemous element, which can be used differently in various situations, will then be treated as several different lexical elements, each with a specific meaning: "Polysemy is dealt with as homonymy" (Bouchard 1995: 11). In addition to this explosive effect, the incorporation of background knowledge into linguistic meaning has the reductive effect that two elements with the same use and the same truth conditions can end up with the same semantic representation, even if they stem from different lexical origins. To

sum up, one element with several uses gets several different representations, and two different elements with the same use may get the same semantic representation (Bouchard 1995: 11). This is problematic both because one linguistic expression can have several contextual interpretations, and because two different expressions with the same contextual interpretation can be based on different linguistic representations. In a global theory which does not distinguish between general conceptual structure and grammatically relevant semantics, every word will be listed with all possible contexts of use, and consequently a common abstract meaning would not be possible to grasp.

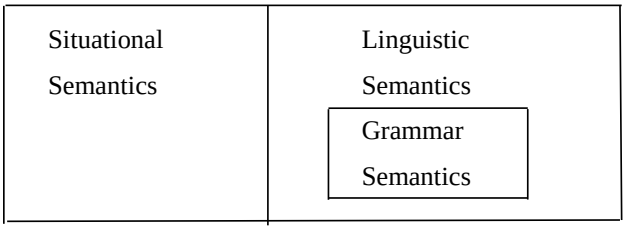
On this background, Bouchard (1995: 21) argues that all situational aspects of meaning should be removed from the study of grammar. Including them would make the system massively redundant. A dividing line is thus drawn between two kinds of semantics:

> My contention is that without a corresponding shift from a global to a selective approach to meaning the transition to a mentalist approach is bound to fail because language does not say anything directly about events, it only provides a very abstract outline of events and we use our shared background knowledge to fill in the details (Bouchard 1995: 8).

If syntactic forms map onto a general conceptual structure, it is expected that certain aspects of syntax will reflect aspects of that general conceptual structure (Bouchard 1995: 28-29). This is actually what Jackendoff (2002) claims when he states that fuzziness is found in grammatical categorization as well as in conceptual categorization. He argues that many words, e.g., RED or BIRD, do not have precise meanings which can be exhaustively decomposed, and concludes from this that fuzziness is widespread in natural language. Hence, it should not be excluded from semantics. Bouchard asks an important question: whether these examples show anything about how aspects of syntax reflect characteristics of elements in the general CS. His answer is that it is not the grammatically relevant properties of the words that are graded, but rather the concepts that are expressed. The distinction between a linguistic semantics and a situational semantics is thus decisive: “Rather, fuzziness is in the web, the background knowledge on which language is woven” (Bouchard 1995: 33).

Fundamental to Bouchard’s selective approach to semantics is that contextual information is not excluded from all meaning building. Language is not used in a vacuum, and precisely since language users have access to context, this information must not be conveyed by language. Consequently, background information provides important information for interpretation; it is just not relevant for the grammatical derivation. Bouchard (1995: 17) proposes the following model for the cognitive representation of meaning, i.e., the Conceptual Structure:

Conceptual Structure



Situational semantics (S-semantics) refers to general cognitive capacities and has no direct bearing on linguistic analysis. This level of meaning concerns conceptual knowledge and background information which is not linguistically relevant (Bouchard 1995: 17). The two linguistically relevant levels are *Linguistic Semantics* (L-semantics)[28], which includes information about logical entailment, and *Grammar Semantics* (G-semantics), which is the level relevant for grammar. G-semantics is abstract, and may be so precisely because the context is always present to ease interpretation. S-semantics, on the other hand, influences only the situation-specific information, and is irrelevant for grammatical structure.[29] The representation of meaning can thus be considered an interface level. It does not in itself include elements of general knowledge, but it interfaces with levels of meaning where such knowledge is present.

Recall Chomsky's famous example sentence *Colorless green ideas sleep furiously*, which is traditionally assumed to be syntactically but not semantically well-formed. Bouchard's (1995: 44) claim is that this sentence is unacceptable at the level of S-semantics, because it is hard to find elements that fit the descriptions. The problem is one of conceptualization/reference, not of meaning. That is to say, the sentence *is* semantically well-formed, but only at the level of G-semantics.

As support for his argument, Bouchard (1995: 68) points to the fact that language evolves at the pace of biological evolution, whereas knowledge of the world progresses at the pace of scientific discoveries. There *is* a relation between language and conceptualization of

[28] I will not have anything more to say about L-semantics apart from Grammar Semantics, as the content of this part of meaning has little significance to the analysis of my data.

[29] The distinction between two kinds of semantics, content and use, has a long tradition within linguistics. Bouchard (1995: 40-42) refers to Strawson (1971) and the old problem of distinguishing sense from reference, Strawson's point being that truth and falsity are characteristics of the uses of a sentence, not of the sentence itself. He also mentions Hjelmslev (1961) as a predecessor of his view. What is important is *how* ideas are expressed by the linguistic system, and not the intuitive interpretations of a situation, or what the situation expressed.

the world, but this relation must be indirect. Language is more abstract and does not refer directly to situations in the world. The reason we still understand linguistic utterances so easily is that we have immediate access to the context, and that we share an enormous amount of knowledge about the world. He gives the following metaphorical illustration:

> When we look at a star that is thousands of light-years away, we see that star as it was thousands of years ago. When we look at our language, we see our conceptualization of the world as it was thousands of years ago. In this way, our language sets a certain frame to what we say about the world. Yet, we can still use our language to express our current conceptualization of the world. The fact that this is possible should not be viewed as a mystery, but as a challenge. In this book, I argue that this is possible because language does not say anything directly about events, but only about the contour of events. We fill in the rest with our shared background knowledge (Bouchard 1995: 71).

Importantly, the different semantic categories interact despite their different formats of representation. Thus, Situational Semantics should not be removed from the study of language, but it should be reserved for language use. It does not interact with grammar globally. The grammatical and the conceptual systems must be studied together, but at the same time they must be kept separate. The encounter between G-semantics and context can be seen as a process of *enrichment*, where situational information contributes to fill in the more rudimentary syntactico-semantic structure. Knowledge that is familiar in the discourse is exploited, yet it is not incorporated into linguistic structure:

> I assume that since the interlocutor is not ignorant of the context and has access to extralinguistic semantics of a general sort, the information conveyed by language does not have to be exhaustive. Language can ignore all details that are not necessary to its immediate means and maximally exploit knowledge common to participants in the discourse. In fact, it would be rather perverse not to take as a working assumption that language is relatively efficient; it does not redundantly encode massive amounts of information that are already accessible to the interlocutors from the context (Bouchard 1995: 72).

Bouchard (1995: 23) gives the example of the French verb *aller*, which can be used to express movement (5), extension (5) or future (6):

(5) Ce nuage va de Montréal à Longueuil.
that cloud goes from Montréal to Longueuil
'That cloud goes from Montréal to Longueuil.'

(6) Bruno va voir Marie.
Bruno is-going-to see Marie
'Bruno is going to see Marie.'

He does not postulate several entries for this verb, but rather argues that *aller* simply expresses "that its subject is oriented toward its being in relation with the antideictic center ω, the complement of the deictic center ME-HERE-NOW" (Bouchard 1995: 23). Information about a movement, extension or temporal interpretation is not expressed in the semantic representation of the primitive *aller*. The verb is semantically constant in all its uses, and the enriched meanings are derived from context.

3.3.2 The semantics of syntax

Bouchard's book bears the title *The Semantics of Syntax*, which refers on the one hand to a selective approach to semantics, i.e., the semantics that is relevant to syntax, excluding other aspects of meaning; and on the other hand to the role of semantics within syntax, i.e., the meaning present in the syntactic representations. Bouchard (1995: 16) maintains that syntactic and G-semantic representations stand in a homomorphic relation, and that the very form of semantic representation has meaning. This form is the syntax. The idea of a purely formal syntax is thus rejected. All linguistic form is meaningful.[30] In a purely formal approach, syntax would consist of structures that are void of content. Syntactic relations would express abstract arbitrary relations between nodes, and structure building mechanisms would be blind construction procedures. Yet, if form has meaning, structural relations express actual relations between specific elements. A syntactic tree is then more than just a formal representation, and all subparts of grammar will express some kind of meaning: "The formalism that I adopt has meaning, as all formalisms do: there is a semantics to syntax" (Bouchard 1995: 68).[31] The relation between syntax and semantics is argued to be homomorphic, meaning that everything present in syntax, must also be present in semantics. This is expressed in the principle of Full Identification (Bouchard 1995: 22):[32]

---

[30] A mathematical analogy is presented as support: David Hilbert attempted to relate mathematical order to a purely formal system (Bouchard 1995: 65), but the attempt failed, and it is now assumed that mathematical objects bear a certain semantic load; they cannot be reduced to simple forms of organization. Mathematics is formal, but not simply formalistic, since the forms studied are derived from human activities and are used to understand those activities. Bouchard proposes a parallel view for natural language.

[31] The idea that syntax cannot be strictly formal is also put forth in Crane (1990), from within the field of philosophy. The main focus of this article is the language of thought, but the general claim remains the same: There can be no syntax if there is no semantics.

[32] At first glance, this principle may look similar to Chomsky's (1986a) principle of Full Interpretation, which requires every element of PF and LF to receive an appropriate interpretation. However, according to Bouchard (1995: 93-94) the two principles differ particularly with respect to one point: "The two principles differ in that in Chomsky's Full Interpretation, it is only the syntactic formatives that must be licensed, whereas Full Identification is a constraint on both syntactic and semantic formatives." Hence, Bouchard's model requires licensing of both syntactic and semantic formatives.

Principle of Full Identification
Every (morpho)-syntactic formative of a sentence must have a corresponding element in the semantic [33] representation. Every formative of a semantic representation must be identified by a (morpho-)syntactic element in the sentence, which is associated with that representation. [my footnote]

G-semantic properties map directly onto syntactic structures, and all compositional properties of syntax are correlated with properties of G-semantics. All structure-building processes are by definition meaningful, and each level in the tree corresponds to a semantic element.

With respect to the relation between syntax and semantics, two parallel shifts have taken place within generative grammar (Bouchard 1995). The first one concerns the role of semantics in syntax. At the outset, generative grammar was a strictly formal approach. Yet, the explanatory role of semantics has increased over the years.[34] Regarding the Minimalist Program, Bouchard (1995: 6) claims that "the representation of meaning takes on such an important role that it is impossible to further postpone the discussion of the specific content of these representations of meaning, if the theory is to be testable."[35] The second shift concerns the form of semantic and syntactic representations. In early generative theory (e.g., Harris 1951), the structure of meaning was different from the structure of form. The reason for this was that meaning incorporated background knowledge. Semantics and syntax were brought closer together in McCawley (1968), who claimed that semantic representations were shaped as labelled trees, expressing aspects of standard logic. This insight was part of Chomsky's LF (1975). The two shifts can be summed up as follows: there is increasingly more semantics in syntax, and there is increasingly more syntax in semantics.

A consequence of Jackendoff's parallel architecture is, as we have seen, that syntax is reduced to structural skeletons void of content, and that CS also exhibits a kind of syntax; this entails the existence of two different syntaxes, one semantic and one strictly formal. This makes the term syntax ambiguous, and it also makes the syntax-semantics correspondence

[33] By semantic representation, Bouchard here intends a G-semantic, not an S-semantic representation. S-semantics have no direct bearing on syntax. On these grounds, theta roles are rejected. They are situational and belong to the wrong semantics, hence they have no grammatical relevance (Bouchard 1995: 41-45).
[34] Throughout the history of the field, different branches of generative grammar have sought to incorporate semantics. McCawley (1976: 6) notes that Chomsky first highlighted the question of semantics within generative grammar in *Aspects* (1965), and then generative semanticists developed this view into a more extreme form. According to Bouchard (1995), such a gradual shift in orientation is seen also in Chomsky's own work. As a starting point, consider the introduction of the level LF in 1975, a standpoint modified in *Lectures of Government and Binding* (1981a), and later in the Minimalist Program, where all properties of syntax are projected from lexical structures.
[35] According to Bouchard (1995: 64), the syntax assumed in generative grammar is not strictly formal. For instance, the Projection Principle (Chomsky 1981a) is responsible for projecting properties of lexical heads into the syntax, entailing a syntax that is not devoid of meaning.

non-transparent. By dividing semantics into separate levels or compartments, Bouchard eliminates these problems. Syntax is the formal tool for expressing the G-semantic relations between different elements. Interestingly, this patterns with a standpoint expressed in Chomsky (2000c: 74): "Most of what's called 'semantics' is, in my opinion, syntax." The representations on the level of S-semantics, however, have a different form. S-semantics cannot be represented in terms of tree structures (Bouchard 1995: 63).[36]

Generative theories generally claim that syntax is autonomous from semantics. However, the arguments for this autonomy are based on a usage-based notion of meaning (Bouchard 1995: 25-26). Recall that in Jackendoff's model, syntax is thus strictly autonomous from CS. In contrast, Bouchard opts for a shift from autonomous syntax to autonomous grammar. The cut-off point for the autonomy of grammar will no longer be between syntax and semantics, but rather between two types of semantics, G-semantics and S-semantics.

> The autonomy of Grammar is usually assumed in terms of the autonomy of syntax from meaning. This is not a possible definition in my approach because the representations themselves have meaning. The nature of autonomy must therefore be reassessed (Bouchard 1995: 4).

The principle of Full Identification dictates that all semantic primitives must be identified by morphosyntactic elements. Bouchard (1995: 75) thus takes a *strong* position with respect to the syntax-semantics correspondence. He explicitly rejects any syntactic node which is not semantically licensed.[37] The semantic relations are given, and syntactic positions are realized only when a semantic relation holds between the elements. All nodes must be semantically motivated and phonologically realized, i.e., all projections and all nodes must correspond to a G-semantic element. This entails that vacuous projections are illicit,[38] since empty nodes have no semantic content, they only function as potential landing sites for movement:[39]

> Consequently, there is no reason to believe that grammar gratuitously produces syntactic structures for their own sake – vacuous projection is unmotivated. I will assume that grammatical structures contain no superfluous material, such as nodes that neither branch nor dominate lexical material (Bouchard 1995: 83).

---

[36] Bouchard (1995: 62) proposes the hypothesis that if a semantic relation is not expressible in a tree structure, but only in a general graph, it belongs to S-semantics and not G-semantics.

[37] Bouchard claims that this is a general development in generative grammar, exemplified by the system in Chomsky (1986b), which has the property that syntactic structure is given. Some nodes and projections are semantically licenced, whereas others are licensed by geometric properties of X'-theory.

[38] This contradicts the long generative tradition of assuming empty elements of various kinds.

[39] By excluding vacuous projections, it appears that Bouchard is also forced to reject the whole notion of movement, because there are no longer any positions which movement can target.

Note that this also entails a rejection of X'-theory.[40] The Principle of Full Identification does not allow for three levels of phrase structure to project from only one single word. There can be no more structure than the lexical elements directly motivate. This view is consistent with the idea of Bare Phrase Structure, as outlined in Chomsky (1995). The number of bar levels is then dependent on the number of bar constituents with which the head and its projections entertain semantic relations.[41] Support for this is that one-element saturation is prominent in natural languages; a constituent that modifies or assigns a property to another element does so by combining with exactly one such element.[42]

Three alternatives are presented for the licensing of semantic formatives. Firstly, *linking* is a direct, one-to-one mapping between a semantic and a syntactic node. Secondly, a semantic node can be identified by another node in the semantic representation by *binding*, and thirdly, a node in the semantic representation can be identified by *chunking*. Recall that Bouchard argues that the syntax-semantics mapping is homomorphic, and not isomorphic. Through *chunking*, a subpart of the semantic representation tree can correspond to one lexical item, i.e., one single lexical item can correspond to several terminal nodes in the semantic representation. Mapping between a syntactic and a semantic representation is isomorphic if all elements map one-to-one, and it is homomorphic if it preserves the relative relations of the elements involved, yet the mapping is not be one-to-one. Isomorphy is untenable since it would make decomposition of words impossible (Bouchard 1995: 94-95). The figures below show the chunking process of the sentence 'The dog frightens the cat':[43]

---

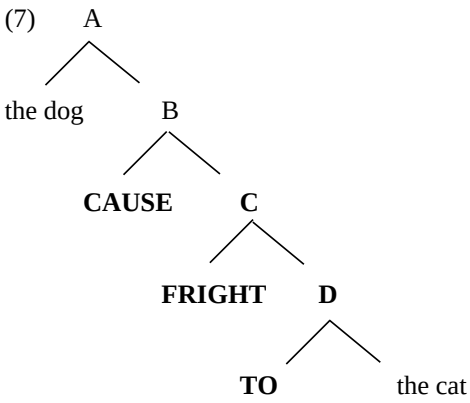
[40] Bouchard rejects all 'uniform level hypotheses', i.e., hypotheses which assume the same number of bar levels for all projections.

[41] The term maximal projection is then not determined from the numbers of bars, but is defined as the highest node of a given projection. There is no upper limit on how many levels the projection can contain. Moreover, the notions Specifier and Complement are taken to be needless complications of the system. They are meant to account for the fact that complements combine with the head before the specifier does. There is no need to attribute special properties to X'-levels, because semantic relations already predict this (Bouchard 1995: 89-90). Note that this is just like the Merge operation that is assumed in the Minimalist Program (Chomsky 1995).

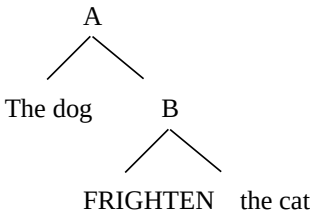
[42] Bouchard claims that one-element saturation is what motivated binarity in syntax, a restriction on syntactic structure for which strong evidence has been presented (Kayne 1984). However, Bouchard emphasizes a difference between Kayne's approach to binarity and his own. Whereas Kayne derives binarity from the need for unambiguous paths, Bouchard motivates it from one-element saturation.

[43] Chunking is claimed to be a defining property of natural language. Language would be unusable without it, because of the complexity of the representations that would have to be processed. By chunking, complex representations are coded by simpler units, which is more economical for processing. The fact that mapping is homomorphic is derived from the fact that chunking is available (Bouchard 1995: 101-103).

(7)



(8) Output of chunking:



Bouchard's theory is economical. It follows Occam's razor in avoiding theoretical assumptions that are not strictly necessary. Bouchard poses the question: How little theoretical apparatus can we use to account for the relationship between form and meaning? Both the levels of syntax and G-semantics are minimal, since Bouchard has eliminated contextual information, empty projections and empty categories. The minimalist strategy is particularly visible in the Principle of Full Identification, which dictates that every node in a syntactico-semantic representation must be filled with phonologically realized linguistic material. Consequently, it is impossible to postulate a richer syntactic structure than the pronounced lexical elements in the utterance directly indicate. In this respect, the system is quite strict. Indeed, it is my claim that in certain respects it is too strict, since it fails to account for certain data.

In the next section, I will discuss this aspect of Bouchard's theory, and I will argue for a weak interpretation of the Principle of Full Identification, where the insight that each syntactic node must have a linguistic context is kept intact but the idea that this linguistic element needs to be phonologically realized is rejected. This redefining of Bouchard's theory

will subsequently lay the grounds for the theoretical proposal that I will put forth for the analysis of discourse ellipses.

3.3.3 A weak interpretation of the Principle of Full Identification

In light of the rejection of vacuous projections, it should be clarified what is implied by the notion 'vacuous'. I adopt Bouchard's idea that a syntactic node cannot be radically empty. A projection must project from something; it must be endocentric (Stowell 1981). However, a syntactic node contains different types of features: phonological, semantic and formal (Kitahara 1997).[44] Contrary to Bouchard, I propose the weaker thesis that phonologically vacuous projections may be postulated as long as they are not G-semantically empty.[45] On the other hand, one might argue that it is more plausible to assume that syntactic structure must be motivated by the phonologically instantiated lexical elements in each sentence. This view would correspond to a strong interpretation of Bouchard's principle of Full Identification.

However, a consequence of this strong view is that very similar and related sentences may end up with quite different syntactic structures. Consider the following group of examples, which show that certain Norwegian sentences can appear both with and without the complementizer *som* 'which'/'that. A parallel situation is found with the complementizer *at* 'that':

(9)

a. Jeg liker den boka som du gav meg til jul.
   I like that book-the which you gave me for Christmas
b. Jeg liker den boka __ du gav meg til jul.
   I like that book-the you gave me for Christmas
   'I like the book that you gave me for Christmas.'

[44] Yet, under Bouchard's view, a purely formal or uninterpretable feature cannot be assumed. In this discussion, I will therefore distinguish between phonological features on the one hand, and syntactic or G-semantic features on the other, this latter category including both Kitahara's formal and semantic features.
[45] Of course, there are also restrictions on which elements need not be phonetically instantiated, but for now I will postpone that discussion.

(10)

a. Jeg ser at hun sliter med leksene.
   I see that she struggles with homework-the
b. Jeg ser __ hun sliter med leksene.
   I see she struggles with homework-the
   'I can see that she is struggling with her homework.'

Obviously, these two pairs of sentences are variants of the same two sentences, the only difference being the presence or absence of *som* 'which'/'that' and *at* 'that'. In the literature, these cases are described as PF-deletion (Åfarli & Eide 2003). Hence, the words are assumed to be present in both sentences, and the underlying syntactic structures are identical.

However, if one were to accept Bouchard's strong understanding of the Principle of Full Identification, syntactic structure would project directly from phonologically instantiated lexical items only, and one would then be forced to ascribe different syntactic representations to these parallel sentences since in this model, all structure must be motivated from phonetically realized elements. In the a-versions, *som* and *at* would then give rise to syntactic structure, whereas in the b-versions, there would be no corresponding structure. The phrase structure of the two variants would thus be distinct. This seems unfortunate in light of the similarity between them. This clearly indicates that Bouchard's principle is too strict. It prevents a simple explanation of the close structural relationship between these sentences.

Åfarli (2001) discusses exactly this aspect of Bouchard's theory, and suggests a distinction between a strong and a weak interpretation of the Principle of Full Identification. The principle as stated by Bouchard predicts a tight homomorphic connection between the grammatically relevant G-semantic representations and the corresponding morpho-syntactic representations. Under a strong interpretation, which is also Bouchard's own interpretation, the principle demands that every morpho-syntactic element is phonologically realized (Åfarli 2001). The weak interpretation proposed by Åfarli states that a morpho-syntactic element may not necessarily be instantiated as a phonologically realized element. With respect to our examples, a weak interpretation entails that *som* and *at* can be present in the syntactic structure without being phonologically realized.

This issue is obviously relevant for the treatment of ellipses. Elliptical constructions can be considered in two different ways. On the one hand, they can be seen as amputations of a richer structure or sentence. In that case, the ellipses are at some level assumed to contain

more information; something is missing. This is the traditional view (Trask 1993). On the other hand, it is a theoretical possibility that the ellipsis does not contain or hide any information or structure other than what is directly indicated by the phonologically instantiated elements: What you see is what you get.[46] Note that under this view, the term ellipsis is misleading since it indicates that something is missing. Bouchard's model must assume this second view, since the principle of Full Identification excludes all structure which is not phonetically motivated. Yet, most ellipses have a non-elliptical counterpart, with what intuitively seems to be a parallel syntactic structure. Under Bouchard's analysis, a parallel structure would not be possible to state for the elliptical and the non-elliptical cases, since only phonologically instantiated elements can give rise to syntactic structure. This point is clearly demonstrated in the following set of data from newspaper headlines, taken from Fjeldstad (2000):

(11) Familien på drapsstedet
family-the on murder-site-the
'The family on the murdersite.'

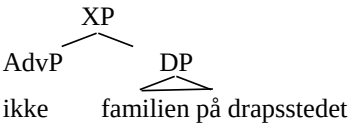
a. DP: Ikke familien på drapsstedet / * Familien ikke på drapsstedet
not family-the on murder-site-the family-the not on murder-site-the

b. Clause: *Ikke familien på drapsstedet / Familien ikke på drapsstedet.
not family-the on murder-site-the family not on murder-site-the

The headline in (11) is ambiguous between a clause interpretation where the verb is elided and a DP interpretation. Relevant for our purposes is the clause interpretation, and the question is whether or not such fragments give rise to full sentence structures. Following Fjeldstad (2000), I will argue that they do. This is clearly manifested through the position of the sentence adverbial of negation. (11a) and (11b) show the distribution of the negation for these two interpretations. Under a DP interpretation, the negation must occur to the left of the whole phrase. In such a structure, the DP is negated:

[46] This is what Culicover & Jackendoff (2005) actually argue.

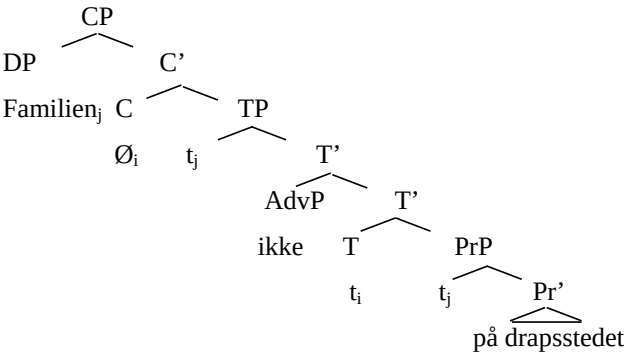
(12)



In contrast, under a clause interpretation the first noun, i.e. the subject, must precede negation. Importantly, the sentence adverbial thus occurs in a position parallel to its position in a regular main clause, and not parallel to its position if this were an independent DP (Åfarli 2001: 186).

This distribution is easily explained if we accept the idea of a full underlying sentence structure for these headlines. Then the distribution in the clausal interpretation (11b) would be explained by assuming that negation is adjoined to T', and that the subject moves across negation when it moves from [spec,PrP][47] to [spec,TP] and further to [spec,CP]. We also assume movement of the elided finite verb from T to C:

(13)



Under a strict interpretation of Bouchard's Principle of Full Identification, implying that no structure can be assumed if it does not correspond to a visible morpho-syntactic element, this explanation would not be possible. The silent verb could not give rise to a structural position, there would then be no reason to assume distinct phrase structures for the two interpretations (DP and clause), and the distribution of the sentence adverbial would remain a mystery. A weak interpretation, on the other hand, provides the possibility that a morpho-syntactic

[47] PrP is a predication projection, which occupies the same syntactic position as little vP. I have chosen PrP because it is semantically motivated. I present this projection in more detail in section 3.8.1.

element may not necessarily be instantiated by a phonetically expressed element (Åfarli 2001), and this interpretation is therefore preferred. In what follows, the weak interpretation of Full Identification will lay the grounds for the model of analysis that I will propose.

3.3.4 Separationism

Adopting a weak interpretation of the Principle of Full Identification, we can keep Bouchard's principle to govern the relation between abstract G-semantic representations and their (equally abstract) syntactic organization, thus between the two sides of the abstract syntactic-semantic representation. However, the principle is not assumed to govern the relation between the syntactic-semantic representation and the visible string instantiating it. A consequence of this argument is that there exist underlying abstract syntactic-semantic representations under the 'outer' phonetic realization of a sentence, an idea which is called separationism (Harley & Noyer 1999, Borer 2003, 2005a,b, Åfarli 2001).

Of course, the assumption that the representation of a sentence can contain phonologically unrealized elements is in itself not revolutionary. Yet, the postulation of empty elements is often met by scepticism, and if a linguistic explanation can manage without such elements, it is often considered to strengthen the theory. According to Nygård, Eide & Åfarli (2008), the motivation for this ideal may be found in the strong influence of the inheritance from de Saussure's notion of the linguistic sign. Following de Saussure, a sign is defined as a conventional association of form and meaning (Sag & Wasow 1999: 356). The notion *sign* thus implies that a sign always has two sides, form and content, and that these two sides are tightly connected to each other. One cannot appear without the other. Bouchard (1995) represents a modern version of the same view. The ideal is homomorphy between meaning and form, semantic content and phonological expression. Culicover and Jackendoff (2005: 537) represent a related point of view. They propose a syntactic component with no movement, no null elements, no projections of functional categories and no other 'excess nodes'. However, as I have demonstrated through the examples above, such strict sign-based models of linguistic structure are insufficient to account for elliptical data of various kinds. Various separationist theories, on the other hand, will be able to deal with such data.

Separationism represents the view that syntactic structure is separated from the phonetic instantiation of the same structure. A fundamental thesis is that the relation between syntax-semantics on one hand, and phonology on the other, is not one-to-one:

> Separationism characterizes theories of morphology in which the mechanisms for producing the form of syntactico-semantically complex expressions are separated from, and not necessarily in a simple correspondence with, the mechanisms which produce the form (”spelling”) of the corresponding phonological expression (Harley & Noyer 1999: 7).

Separationist theories distinguish the mechanisms that produce the syntactico-semantic form of an expression from the mechanisms that produce the phonological form of the same expression (Harley & Noyer 1999). Syntax is not constructed from phonetically realized elements, but rather on the basis of morphemes with abstract syntactic and morphological content. Phonological information is stored in Vocabulary Items, which are inserted late into the abstract syntax.

Separationist theories are attractive because they allow for *multiinsertion* and *multifunctionality*, meaning respectively that different phonological forms can be used to instantiate the same syntactic node, and that the same phonological expression can be inserted into different syntactic nodes with unrelated functions (Harley & Noyer 1999: 7, Åfarli 2001). Multiinsertion is demonstrated (14a)-(14c), where different verbs can be inserted into the same sentence structure, and also in (14d)-(14e), where two distinct complementizers are inserted into otherwise identical structures.

(14)

a. Bestemor *ga* barnebarnet godteri.
   grandma gave grandchild candy
b. Bestemor *tilbød* barnebarnet godteri.
   grandma offered grandchild candy
c. Bestemor *kjøpte* barnebarnet godteri.
   grandma bought grandchild candy
d. Hvem sa du *at* kom?
   who said you that came
e. Hvem sa du *som* kom?
   who said you that came

Multifunctionality is displayed in (15a)-(15e), where the same verb is inserted into distinct sentence structures, and in (15f)-(15g) with the lexical item *som*, used as a question complementizer (15f) or as a predicational operator (15g):

(15)

a. Bestemor *kjørte* av gårde.
   grandma drove off
   'Grandma drove off.'
b. Bestemor *kjørte* bil.
   grandma drove car
   'Grandma drove a car.'
c. Bestemor *kjørte* knyttneven rett i magen på innbruddstyven.
   grandma drive fist-the right in stomach-the on burglar-the
   'Grandma hit the burglar straight in the stomach.'
d. Bestemor *kjørte* på med spørsmål til svigersønnen.
   grandma drove on with questions to son-in-law
   'Grandma bombarded her son in law with questions.'
e. Bestemor *kjørte* i gang vaffeljernet.
   grandma drove in action waffle-iron-the
   'Grandma started up the waffle iron.'
f. Hun vet hvem *som* kom.
   she knows who that came
   'She knows who came.'
g. Hun betrakter bilen sin *som* utrygg.
   she considers car-the hers as unsafe
   'She considers her car not to be safe.'

These two phenomena show that the relation between syntactic-semantic structure and phonological realization is not always direct. Thus, they are arguments for a separationist mode. However, to yield interesting theoretical predictions with respect to the possible degree of variation between syntactic-semantic form and phonological form, it is of course crucial that the analyses postulated are restrictive (Harley & Noyer 1999: 7).

Theories which embrace the idea of separationism include Distributed Morphology (Harley & Noyer 1999, Halle & Marantz 1993) and neo-constructionism (Hale & Keyser 1993, 2002, Borer 2003, 2005a,b, Brøseth 2007, Åfarli 2007, Lohndal 2012). These theories differ in many respects, yet they share one fundamental assumption, namely that syntactic structure does not grow out of phonologically instantiated lexical elements. Rather, the

insertion of these elements happens after syntactic structure is generated. In the Distributed Morphology framework this operation is called Late Insertion. However, note that this term can be interpreted in two different ways. Is it late insertion of lexical elements into an abstract syntactic frame, or is it late phonological instantiation of abstract lexical items in a syntactic frame? If the latter view is assumed, this is really not very different from the mainstream view in minimalist models, in which syntax is not instantiated until Spell Out. The former alternative, on the other hand, suggests that it is the lexical elements which are inserted late into abstract syntactic frames. It is this interpretation which is prevailing in the theoretical models outlined in the next section, and it is also this interpretation which will be adopted in the analytical model I present in the next chapter.

3.4 Endoskeletal versus exoskeletal theories

Borer (2005a,b) establishes a fundamental distinction between two types of grammar models. Whereas endoskeletal models define the lexicon as the central source of syntactic structure, exoskeletal models define syntax as primary and lexical insertion as secondary. In what follows, I will present the endoskeletal view, and I will show why it is problematic in certain respects, before I defend the exoskeletal alternative.

3.4.1 Lexically driven grammars

Both Government & Binding and Minimalism are examples of endoskeletal theories of grammar. In both of these frameworks, syntactic structure is largely lexically driven in that it is derived from the content of the lexical elements. Lexical and functional words or morphemes constitute the base for lexical and functional projections. The roots of the lexicalist view may be traced to Chomsky (1970). The particular focus of this article is the difference between derived and gerundive nominals, for which a lexical rather than a syntactic explanation is proposed. Chomsky (1970) concludes that syntactic structure has its basis in lexical information, and this assumption has had a strong impact on generative theory:

> Within generative theories, the dominant approach to the projection of argument structure crucially links it to information in the lexical entry of argument selecting heads (verbs, adjectives, possibly nouns) (Borer 2003: 31).

In GB-theory, the lexicalist view is clearly manifested in the Projection Principle and the Theta Criterion, which state that the argument structure of a lexical head projects into syntax

(Chomsky 1981a). Information stored in lexical items thus determines syntactic structure: "Syntacticians are accustomed to specifying the theta-grid of a lexical item and to having this grid determine the syntactic structure that the word appears in" (Baker 2003: 95). Aitchison (2003: 125) gives the following description: "Verbs dominate a sentence and dictate its structure." In the GB model, the verbs *kjøpe* 'buy' and *snorke* 'snore' will have the following argument structures:

kjøpe 'buy', V: $\underline{\theta}$, θ
snorke 'snore', V: $\underline{\theta}$

(16) Bestemor kjøper svisker
grandma buys prunes

(17) Bestemor snorker.
grandma snores

Thus, *kjøpe* 'buy' assigns two theta-roles. The Projection Principle dictates that these roles be realized as arguments in the structure, specifically as the subject and direct object, as shown in (16). Moreover, the Theta-Criterion assures that one theta-role can only be assigned to one DP, and vice versa. As for *snorke* 'snore', this verb assigns only one external theta-role, which following the Projection Principle and the Theta-Criterion must be realized as a subject, as shown in (17).

The Minimalist Program takes an even more lexicalist stand, assuming that all information in a syntactic structure is given in the lexical elements. This is manifested in the Inclusiveness Condition, which states that syntactic structure can include no more than what is specified in the numeration. The numeration consists of the selected lexical items or grammatical features for a specific derivation (Kitahara 1997). Mainstream Minimalism (e.g. Chomsky 1995) is lexicalist in that lexical items are ascribed a rich amount of properties, and that these properties are projected into syntax, where they have a number of syntactic effects.[48]

[48] Arguments in favor of a lexicalist view of grammar are found in Levin & Rappaport Hovav (2005) and also Reinhart (2002).

3.4.2 Problematic consequences of endoskeletal models

Lexicalist models of grammar are problematic in certain respects, and I will now explain why. Through the exposition of two main kinds of examples related to the flexibility of verbs, Åfarli (2007) argues that a lexicalist approach to argument structure must be rejected. The first group of examples are so called made-up verbs: "These are verbs that seem to lack a semantic-conceptual content that can trigger the formation of a lexical-semantic argument structure specification" (Åfarli 2007: 6), e.g., verbs constructed on the basis of nouns:

(18) Snart kan du tekste enda raskere.[49]
soon can you text even quicker
'Soon you will be able to write text messages even quicker.'

(19) Elgkalver *flaskes* opp på kumelk.[50]
moose calves are bottled up on cow milk
'Moose calves are fed with cow milk.'

(20) This problem has *dogged* us for a long time (Baker 2003)

(21) Du skal vel bare tante deg i dag, du.[51]
you shall well only aunt you$_{REFL}$ today you.
'You are probably going to do nothing but be an aunty today, aren't you?'

(22) Jeg skal nave et år. Du har trygda, du?[52]
I shall dole one year you have doled you
'I'm going to get money from NAV (Social Security Service) for a year. You have received unemployment benefits, haven't you?'

(23) Det å få noen i regjeringen til å betale for dine næringslivssatsinger, er kjent som å Støre.[53]
that to get someone in government-the to pay for your commercial investments is known as to Støre (name of the Norwegian minister for foreign affairs as of 2012)
'Getting someone in the government to pay for your commercial investments is known as *to Støre*.'

[49] Online headline from Amobil.mo/artikler, accessed 14.06.2011
[50] Online headline from dyreparken.no/Nyheter/Arkiv, 16.08.2008
[51] Authentic sms received 15.04.2012
[52] Example taken from the Norwegian TV-show *Nytt på nytt*¸ 13.04.2012.
[53] Example taken from the Norwegian TV-show *Nytt på nytt*¸ 13.04.2012.

In an endoskeletal model, nouns used as verbs must be listed in the lexicon with a specific theta-grid, in addition to being listed as nouns. This is a severe theoretical drawback, because in principle, *any* proper name/noun can be used as a verb in this way. Consequently, all verbs would have to be specified twice in the lexicon, both as nouns and as verbs. If all these elements should be listed as independent lexemes, this would have an explosive effect. In addition, the theory would miss out on important generalizations, since the relationship between nouns and verbs derived from the same morphological stem would not be expressed. With respect to these examples, the explanatory power of the traditional analysis is reduced to a stipulative description of the syntactic environment of the lexical item.

Related empirical evidence is the fact that the argument structure of a given verb appears to be flexible. As exemplified in (24), a given verb in Norwegian may appear with different argument structures:

(24)

a. Kari handler.
   Kari shops
   'Kari shops.'
b. Kari handler mat.
   Kari shops food
   'Kari shops for food.'
c. Kari handler barna nye klær.
   Kari shops the kids new clothes
   'Kari shops for new clothes for the kids.'
d. Kari handler Visa-kortet varmt.
   Kari shops the Visa card hot
   'Kari shops until her Visa card is hot.'

If one were to assume an endoskeletal approach, which argument structure or theta-grid should be assumed to the verb *handle* 'shop', given the syntactic variation in these sentences?

Brøseth (2007) states that in an endoskeletal model, such optionality can be dealt with in two ways. One alternative is, as we have seen, that the verb posits facultative theta-roles in the lexicon:

hoste ‘cough’, V: <u>θ</u>, (θ)[54]

(25)

a. Per hostet hele natta.
   Per coughed whole night-the
   ‘Per coughed all night.’
b. Per hostet blod i går.
   Per coughed blood yesterday
   ‘Per coughed up blood yesterday.’

This is the common generative solution. An important question remains, however: how can we explain *why* these roles are optional? Another alternative would be to postulate several lexical entries for one verb, each with different argument structures. This would entail that there are several verbs *hoste* ‘cough’. However, this solution produces a massive redundancy in the grammar, since each lexical entry would then give rise to different argument structures correlating with the syntactic variation (Borer 2005a,b, Brøseth 2007: 72). A theory that posits different lexical entries for one unitary concept is problematic because it cannot explain how different argument structures can relate differently to the same concept. Also, this analysis leaves unexplained the fact that the different entries are so closely related, both in phonetic sound and in meaning. Within such an approach, the two versions of *hoste* are not really more related than two radically different verbs. Brøseth (2007) concludes that the endoskeletal mode rests upon a circular explanation, since the argument structures are simply based on the syntactic configurations in which the verb is found. The observed phenomenon and the alleged cause explain each other.

3.4.3 The exoskeletal alternative

Where endoskeletal models assume that the argument structure of a lexical head must be realized in syntax, exoskeletal models turn this upside down, rejecting the idea that syntactic structure grows out of lexical heads. Borer (2003, 2005a,b) rejects the endoskeletal view found in common generative models, and seeks to move some operations ‘back’ to the syntax.

[54] The optional theta-roles are marked with parentheses in the theta-grids.

In exoskeletal models, the generation of syntactic structure is separated from the insertion of lexical items into the same structure:[55]

> In recent years, I have been pursuing an approach which shifts the computational load away from the lexical entry to the syntactic structure, subscribing to the view that an independent linguistic lexicon includes a minimal amount of structural information, and that it is structural constraints which determine traditionally lexical properties such as syntactic category type and argument structure.

The main issue about which endoskeletal and exoskeletal theories disagree is where sentence structures come from. Where does the derivation of a sentence begin, and with what? Exoskeletal theories place the burden on syntax itself, whereas endoskeletal theories place it on the lexicon. Borer (2003: 32) summarizes the two opposite views neatly:

> (1) (Semantics of Lexical item) → Predicate-Argument structure → structure (syntactic or lexical)
> (2) Syntactic Structure → event structure → interpretation of arguments

Relevant here is the distinction between *semantic bootstrapping* and *syntactic bootstrapping*, discussed by Gleitmann (1990). Semantic bootstrapping is what we find in traditional generative approaches, where semantics is assumed to predict syntax. Note that under this view, one really does not need to know anything more about syntactic structure than what is already incorporated into the lexical items (Lasnik 2000: 134). Syntactic bootstrapping, on the other hand, assumes that syntax predicates semantics. Exoskeletal models represent this latter viewpoint.

In the theoretical model that I want to establish, I will follow the exoskeletal view in assuming that syntax is primary and that the syntactic structure is not lexically motivated. Bringing this together with a weak interpretation of Bouchard's Principle of Full Identification, I will assume that the abstract syntactic structures (frames or templates) are inherently meaningful, bearing a G-semantic meaning. Lexical items are then inserted into these structures. The meaning of the inserted items then interacts with and enriches the G-semantic meaning of the structure, but crucially these meanings do not define the structure.

Another way of summarizing my view is that structure is generated first, and lexical elements are inserted into these 'ready-made' structures. Importantly, though, the abstract frames or templates are not like Jackendoff's empty syntactic skeletons. On the contrary, the templates are bearers of G-semantic meaning, entailing that information that was earlier assumed to be inherent in lexical elements is now partly taken to be a property of syntactic

[55] The quote is taken from Borer's webpage: http://www-bcf.usc.edu/~borer/, accessed 31.07.2012.

structure. In addition to the structural meaning of syntax, a lexical-conceptual meaning layer is added when the words are inserted. This perspective facilitates a model of grammar where lexical elements can slip more easily in and out of the stable abstract syntactic representations, a point which is highly relevant for the analysis of ellipses.

To sum up, I adopt a weak interpretation of Bouchard's principle of Full Identification, implying separationism and late lexical insertion, as well as a distinction between a rudimentary G-semantic content in syntax and a richer conceptual S-semantic representation. There are different layers of meaning, starting with a G-semantic structure, which is enriched by lexical insertion, and then subsequently enriched further when it encounters context. The following quote from Åfarli (2001: 181-182) illustrates the theoretical foundation that is adopted:

> Generally, I assume the following relations between representational modes: The visible string *underdetermines* the covert (linguistic) syntactico-semantic representation, which in turn *underdetermines* the general non-linguistic conceptual representation.

The movement towards an exoskeletal grammar model can be interpreted as the movement of a theoretical pendulum. Early in the history of generative grammar, syntactic processes were seen as highly influential. Phrase structure rules operated independently of lexical items. Chomsky's lexicalist hypothesis (1970) and Stowell (1981) were reactions to this view, arguing for moving part of the work load away from syntax and into the lexicon. In many ways, an exoskeletal neo-constructionist model means that the pendulum is turning back.[56] Properties and processes which have for a long time been considered to belong in the lexicon are moved back into syntax. We have gone from an exoskeletal to an endoskeletal view and back again. Harley & Noyer (1999: 3) illustrates this clearly in their slogan: "Syntactic Structure All the Way Down".[57] Obviously, despite these numerous theoretical advantages,

---

[56] Yet, it's important to point out that this is not a general trend within the Minimalist Program, in which a highly lexicalist model is assumed.

[57] Additional support for the assumption that syntactic structure is generated independently of lexical elements, and that the lexical elements are syntactically formed by the syntactic position into which they are inserted, is found in the domain of neuropsychology. Damasio et al. (1996) conducted an experiment of brain lesions where they discovered that if a person has problems with retrieving words, it does not imply that the person lacks access to the relevant concepts. Based on this discovery, they proposed a model for the representation of word knowledge with 3 levels:

1. Conceptual level – preverbal, semantic
2. Lexical level – word form that matches the concept
3. Phonological level

The lexical level is assumed to mediate between conceptual and phonological representations, and involves the abstract categorical organization of words. Crucially, Damasio et al. (1996) argue that this mediating level has a neurological counterpart in the brain. This level has a parallel in cognitive and linguistic models such as the

exoskeletal frameworks do also lead to certain challenging problems. I discuss one of these quite extensively in section 3.8.2.5, namely the problem of harmony, i.e., the observation that not all lexical elements fit equally easily into all syntactic frames. For a more elaborate discussion of motivations for and challenges triggered by exoskeletal frameworks, see Lohndal (2012), who discusses both the syntactic and the semantic sides of this issue.[58]

3.4.4 Five syntactic frames in Norwegian

Borer's work is related to a family of theories which can be called neo-constructional. These theories find their roots in Construction Grammar (Fillmore 1988, Fillmore, Kay and O'Connor 1988, Goldberg 1995, 2006 among others), in which the main thesis is that there are underlying skeletal constructions which exist independently of the actual instantiations of these constructions:

> Put differently, the syntactic structure gives rise to a template, or a series of templates, which, in turn, determine the interpretation of arguments. Within such approaches lexical items do not determine structure, but rather, function as its modifiers (Borer 2003: 32).

Similarly, Åfarli (2007) proposes a 'neo-constructionist' view of argument structure, claiming that argument structure does not grow out of the lexical verbs, but rather is determined syntactically. Related views are advocated recently also by Lohndal (2012) and Platzack (2012).

Åfarli (2007: 3) argues for the existence of five syntactico-semantic frames for Norwegian. He gives the following description of the nature of these frames:

Levelt model, which distinguishes between a conceptual level, a lemma level (grammatical properties) and a lexeme/sound level (Caramazza 1996, Gazzaniga, Ivry & Mangun 2002).

For our purposes, this is relevant because it supports the assumption that syntactic form is independent of conceptual lexical elements. My argument that lexical elements are syntactically formed by being inserted into a structural frame fits well with this proposal.

This perspective also resonates with Avrutin's (2006) proposed distinction between a *frame* and a *heading*, where the frame contains the structural information and the heading provides the information necessary for interpretation. In the DP *a dog*, the frame is supplied by the determiner and the heading by the noun *dog*. Avrutin (2006) bases this assumption on the observation that aphasics have trouble introducing frames, yet the headings may still be intact.

[58] Lohndal (2012) provides arguments against the idea that verbs have thematic arguments (i.e., the endoskeletal view), and argues in favor of an exoskeletal view where thematic arguments are severed from the verb. He presents both arguments and apparent counterarguments for this idea. In particular, Lohndal (2012) examines Kratzer's (1996) argument that themes should not be severed from the verb, an argument made on the basis of the relationship between the verb and the complement in idiomatic expressions. He argues that Kratzer's argument does not hold, and that it therefore does not provide evidence that an exoskeletal theory should be rejected.

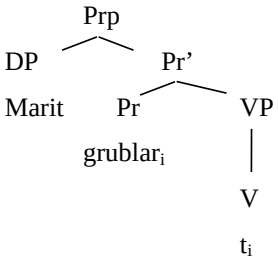
> A syntactico-semantic frame can be seen as a formal representation of semantic and syntactic elements and relations, and in that sense it is of course quite like an ordinary syntactic representation. However, a frame is unlike an ordinary syntactic representation in that it is more abstract. It should be seen as a basic and stable template that constitutes a kind of underlying structural backbone for a class of sentences, namely those sentences that conform to the given frame/template. Moreover, it is generated independently of the lexical elements (words) that the sentence consists of.

The probability that the number of syntactic frames attested for Norwegian is so low can be taken as support for the exoskeletal view. Such homogeneity would not be expected if selectional restrictions on phrase structure were based solely on the different lexical elements. In addition, if there are only five syntactic frames for all Norwegian sentences, one would expect that this restriction would contribute to facilitating parsing. Despite a rich variation in the lexical items entering the frames, the frames themselves are invariant and we would therefore expect them to be easily recognizable. The effectiveness of parsing, even for complex structures, indicates that this expectation is borne out. Pointing in the same direction is the fact that we are able to parse the syntax of sentences even in cases where some of the words are invented. This supports the same argument.

The claim is thus that there are very few frames available for each language, and that all sentences in Norwegian are instances of one of these five templates. There is an intransitive frame (26), a transitive frame (27) and a ditransitive frame (28). (26) and (27) are most likely universal, but (28) is found only in certain languages (Åfarli 2007). The difference between these three is restricted to the internal structure of VP. The position of the subject and the verb remains unaltered. Frames (29) and (30) are constructed by substituting the direct object in (27) and (28) for a predicational resultative structure, such that (29) is a simple resultative frame, whereas (30) is a ditransitive-resultative frame. The examples below are taken from Åfarli (2007). Importantly, even though each frame is here presented with an example of possible phonological instantiation, the frames themselves are really abstract syntactic structures which do not include any lexical items.

Note that PrP, the Predicational Phrase projecting from a predication operator in Pr, is placed between VP and TP, so it is in the same position as vP in mainstream minimalist approaches. Unlike vP, however, PrP is assumed to be present in all clauses. I will present the properties of PrP in more detail in 3.8.1.

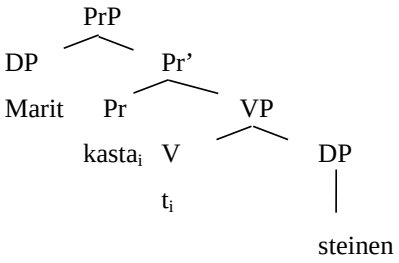
(26) Intransitive frame



Marit grublar

‘Marit ponders’

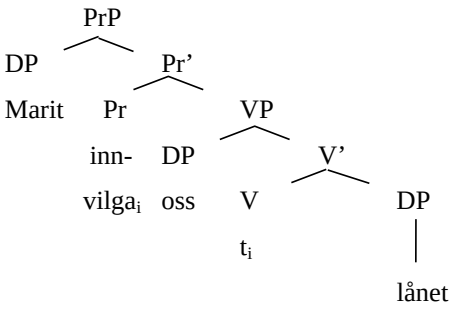
(27) Transitive frame



Marit kasta steinen.

‘Marit threw the stone’

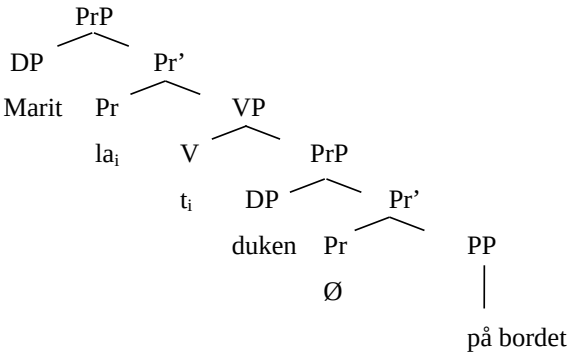
(28) Ditransitive frame



Marit innvilga oss lånet.

‘Marit granted us the loan’

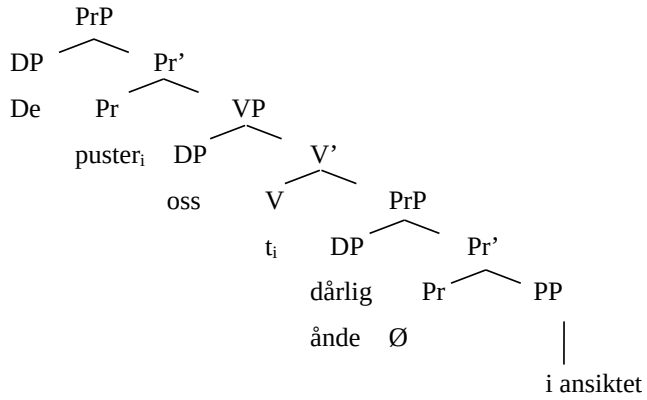
(29) Simple resultative frame



Marit la duken på bordet.

'Marit put the sheet on the table'

(30) Ditransitive-resultative frame



De puster oss dårlig ånde i ansiktet.

'They breathe bad breath into our faces'

Since lexical verbs display many semantic differences, Åfarli (2007) argues that if the endoskeletal approach were on the right track, we would expect the existence of many different VP-configurations (frames), inasmuch as these configurations are taken to be direct consequences of the semantics of the lexical verbs. The fact that the number of possible structural configurations can be reduced to five is thus a strong argument for the claim that the

syntactic argument structure of a particular verb is not decided by the semantic properties of the verb itself.

How can it be explained that Norwegian exhibits exactly five frame types? We could imagine the possibility of a sixth or seventh frame. Note that Norwegian can have ditransitive constructions with two objects, and also ditransitive constructions with a following small clause. However, this is not possible in all languages. Such differences can only be explained by pointing to the conventionalized patterns of each language. The fact that a language manifests a certain number of syntactic templates is not decided by some language-internal selection procedure, but rather is defined through language use which has converged on or fossilized into this particular conventional pattern.

In principle, all verbs can be inserted into all frames. Obviously, though, this does not yield successful results in all cases. Not all verbs sound natural in all frames (see (31)-(35). Notice that the question mark should not be taken to indicate that all these examples are deviant to the same degree, just that most speakers find all of them deviant to some degree:

(31) ?Kari snør.
'Kari snows.'

(32) ?Kari mediterer en drøm.
'Kari meditates a dream.'

(33) ?Kari løser Jens kryssordet.
'Kari solves Jens the crosswords.'

(34) ?Kari står bilen på verksted.
'Kari stands the car to the mechanics.'

(35) ?Kari henter Jens en snøball i nakken.
'Kari gets Jens a snow ball in the neck.'

Åfarli (2007: 14) argues that the main factor governing whether the insertion of a verb (or another lexical element) into a frame is successful or not is what he refers to as *harmony*, more specifically harmony between the G-semantic content of the template [59] and the conceptual semantic content of the elements that are inserted:

[59] I will later argue (section 3.6.6.2) that the positions in VP in PrP contain abstract canonical proto-roles.

> The main factor is that harmony between syntactico-semantic frame type (as to canonical roles) and the verb's semantic-conceptual content (as to implied participants) will be perceived as more "natural" than disharmony in that regard. In addition, the inherent meaning of the arguments plays a role, too.

In most cases there is harmony between the lexical semantic content of the word and the structural semantic content of the frame. However, in certain cases, as in (31)-(35) the semantic content of the lexical word does not match well with the G-semantic content of the syntactic frame into which it is inserted. The reason that the examples above appear strange is therefore that the G-semantics of the underlying templates does not fit well with the inherent semantic-conceptual meaning conveyed by the lexical items. In such examples, the G-semantic content of the frame does not stand in a harmonious relation with the conceptual semantic roles implied by the lexical elements. *To snow* (31) is usually a verb which takes only an expletive subject, but here it is used with a referential one. *To meditate* (32) is semantically an intransitive verb; the activity is something you do on your own. Yet, in this case, it is inserted into a transitive frame. In (33), the verb *løse* 'solve' is used ditransitively, contrary to its more common transitive use. Similar accounts could be given for the remaining examples (34) and (35).

In general, structures will be chosen only to the extent that they fit with the inherent semantics of the lexical items (Gleitmann 1990: 31). Disharmonic examples are not excluded by grammatical restrictions (see also chapter 1 on the distinction between grammaticality and acceptability). Hence, the sentences above are not ungrammatical. If they are excluded or refused as unacceptable, this judgment is grammar-external and belongs, in Bouchard's (1995) terminology, to the level of S-semantics. It is not a grammatical or structural restriction, but rather a restriction based on context or conceptual knowledge. Borer (2005b: 3) makes a similar point, as she states that information provided by the grammatical (i.e., functional) system cannot be overridden by being contextualized, contrary to concepts.[60]

The point is that parsing will be easier if there is a high degree of harmony between the frame type and semantic-conceptual content. Note however that this does not exclude disharmonic examples. It only means that such examples are more difficult to parse, implying that the examples above cannot be seen as ungrammatical. Rather, they are unacceptable due

[60] Borer (2005b) gives the following examples: *Kim* is odd if used as a common noun, and *rabbit* is odd if used as a mass noun. Still, this oddity may to a large degree be overridden. However, one cannot in a parallel manner rescue an expression in which the violations are grammatical. For example, the quantity properties of *three* and *every* cannot be contextualized: "While an expression such as *a round square* can be assigned interpretation by rendering the meanings of *round* and *square* fuzzy and impressionistic, no such fuzziness is available to rescue *one cats, much cats*, or, for that matter, *one pants* or *much scissors*" (Borer 2005b: 3).

to reasons that are grammar-external (cf. the discussion of the grammaticality/acceptability distinction in 1.5.2).

In Ramchand (2008), this process of harmony is implemented by attributing specific features to the lexical elements, and then requiring that these features match. This is a way of formally requiring that a lexical element is in harmony with the features in the syntactic node into which it is inserted. Ramchand argues for a so-called 'first phase syntax', where information which is traditionally assumed to be incorporated into the lexical item is decomposed. At first glance, this analysis thus appears to be a frame-based, constructional approach. Ramchand makes a distinction between stative and dynamic verbs, assuming that all dynamic verbs are decomposed into various combinations of the features init, proc and res (causing event, transition event and result state). These features give rise to the first phase syntactic structure. In this model, matching of verb and position happens in the following way: the verb has certain specifications which allow it to identify the projections in the first phase syntax. Consequently, this means that this matching process hinges heavily on the lexical information in the verb itself. The idea thus resembles the endoskeletal view, and it may therefore be argued that Ramchand (2008) will face the same problems as the endoskeletal models. In this respect Ramchand's model is not a fully frame-based model after all. Brøseth (2007) presents a criticism of Ramchand's model with respect to this point. She argues that, firstly, it appears that the same information must be specified twice, both in the lexical item and in the structural position, and it remains unclear how the verb is tagged with the various features. Secondly, the fusion of verb and construction is characterized by circularity, in that the reason that a verb can be inserted into a certain structure is that the verb is decomposed into a certain set of subevents (init, proc, res). Yet, the reason we know what these subevents are is that the verb in question can be fused with the specific structure.

The main point for my purposes is to state that a certain harmony must occur between the abstract G-semantic content of the frame, on one hand, and the conceptual semantic content of the lexical item that is to be inserted. For the reasons mentioned, I will not adopt a specific decomposition analysis like the one assumed in Ramchand (2008). I will rather assume that the matching is a process involving the abstract syntactico-semantic content of the syntactic frame on the one hand, and the conceptual semantic content of the inserted lexical element on the other. Importantly, harmony is generally preferred, but as we have seen, examples where this harmony is challenged are also attested, giving rise to more marked constructions.

In my analysis, insertion is understood as a process of enrichment. The conceptual semantic content of the lexical items *enrich* the structural semantic content of the frame. In Ramchand's (2008) analysis on the other hand, the inserted lexical elements are true linguistic items with specific linguistic features. Hence, insertion is then not only an enrichment process, but rather a true matching relation between the features of the frame and the features of the inserted elements.

In principle, lexical items could be inserted into structure in the position where they are pronounced, and from there creating chains downwards, with copies or traces in the relevant positions. This would account for the fact that information about the item is found in several positions in the structure, even though it is lexicalized only in one of them. The important information does not lie in which way movement goes, but rather the properties in such chains which are located in the different structural positions. For instance, a subject is always linked to the specifier of PrP, and a tensed verb must have a copy or a trace in the T position. I will leave this issue open, because I believe that it is not crucial to my analysis to specify this process in detail.

The problems outlined for the endoskeletal model are largely avoided in a frame-based model like the one presented above. As for the made-up denominal verbs in (18-23), a constructional analysis would predict that we are really dealing with the same lexical element whether it is used as a noun or as a verb. The only difference is that the element is inserted into different structural positions. Under this view, it is expected that all nouns can in principle be used as verbs, which appears to be empirically correct. Åfarli (2007) argues that ambivalence with respect to category is quite common, and that this may be exploited creatively by language users.[61] Also, for flexible uses of the same verb, the frame based model offers an elegant solution, namely that the same lexical verb is inserted into different syntactic frames, leading to different argument structures. The occurrence of flexible verbs thus strengthens the hypothesis that the structural frames are generated independently of the lexical verb.

[61] Note, however, that not all languages behave like Norwegian and English in allowing zero-derived verbs. In other languages, zero-derivation is not allowed. The process is productive, but it requires the adding of a verbalizing suffix.

3.5 Grammar semantics in a minimalist fashion

We have established an exoskeletal perspective on syntax, which assumes that lexical items are inserted late into abstract structural frames or templates. However, the syntactic structure is not devoid of content, but rather stands in a homomorphic relation to a G-semantic meaning. The next question, then, is how this might be implemented. How is each structural layer, i.e., each phrase structural projection, motivated on a G-semantic basis? In assuming this, the goal is to develop a particular analysis of the syntactic structure of clauses, building on the insights reached in the preceding sections. I will attempt to combine fundamental insights from the Minimalist Program together with Bouchard's view of the syntax-semantics interface, thereby developing a separationist linguistic model of analysis, where all syntax is assumed to have G-semantic content. In the next chapter, I will use that model to analyse fragmentary linguistic data, specifically discourse ellipsis, but it is of course also suitable for non-fragmentary linguistic data.

3.5.1 An abstract sentence structure with G-semantic content

The general approach that I will pursue is the following: a proposition is generated in VP and PrP. This proposition is enriched with tense in TP, and in CP it is given an illocutionary force, which determines the clause type. I follow the idea put forth in Eide & Åfarli (1999a), namely that sentence structure is a layered operator structure. An operator takes an argument and yields a value; in other words, it takes a particular type of item and transforms it into something else. In the clausal structure, this value then feeds the operator in the next projection in the hierarchy. A typical example is negation, which takes a proposition and yields a negated proposition. I will assume that we find a predication operator in Pr, which takes the lexical phrase VP as its argument and turns it into a proposition.[62] The tense operator in T then takes this proposition as an argument, and yields as a value a tensed proposition. Finally, the force operator in C takes the tensed proposition in TP as an argument, and turns it into a basic speech act structure, i.e., a declarative, interrogative or imperative sentence. Hence, the operator in each layer of the clause structure enriches the proposition with a specific abstract G-semantic content. In the following sections, I will discuss this structural enrichment process in more detail, but first I will discuss some more general points.

[62] We will see that the predication operator can also take other lexical projections as arguments, yielding different types of small clauses.

In an exoskeletal model, one question becomes urgent: from where does the structure originate, if it does not have its basis in lexical elements? The exoskeletal view of clause structure appears to be at odds with the operation Merge, the mechanism assumed for the formation of phrase structure in minimalism. In the Minimalist Program, sentence structure hinges heavily on the lexicon – a sentence is constructed by merging the elements in the numeration, including both lexical and functional elements. On the other hand, neo-constructional approaches propose that there are ready-made frames into which lexical elements are inserted, so the question of the origin of these frames naturally arises.

There are two alternative views with respect to this question. The first is to assume that the frames are fixed entities in human cognition, which are generated as ready-made chunks and stored in the mental lexicon. The number of frames are quite limited (presumably only five in Norwegian), and hence, this hypothesis would not lead to a storage overload in the lexicon. The other alternative is that the frames are generated step by step by a phrase structure building operation like Merge. I will assume this latter alternative. Support for this is that the projections which constitute the frames are the same in each frame. The fact that each of these projections may be part of different frames suggests that what is stored in the lexicon is rather the head element of each of these projections, not the entire frame.

This view brings a question of its own: what is subjected to Merge, if lexical items are not inserted before the clause structure is already generated? What are the building blocks of syntactic structure if we assume late lexical insertion? I will assume that what merges are elements with an abstract G-semantic content. Then, lexical items are inserted to enrich the skeletal G-semantic frames thus generated. In mainstream minimalist models, which are endoskeletal in nature, the insertion of lexical items happens bottom-up, since these elements simultaneously build the structure through the Merge operation. The assumption that Merge affects abstract G-semantic units, and that insertion occurs on a separate level, permits us to maintain the view that syntactic structure is constructed in a bottom-up fashion. This construction process involves only abstract units with no lexical items involved. Whether or not lexical items are inserted bottom-up or not is an open question which I will not attempt to answer.[63]

---

[63] I suspect that it may be difficult to settle this issue empirically. It is important to preserve the structural relations between the inserted elements, e.g., chains of movement. Yet, whether an item is inserted low and then moved upwards leaving traces, or if the whole chain is inserted in all relevant position in one swoop, specifying in which position it is pronounces, is not clear.

The issue has been discussed in the literature, and there are arguments in favor of both alternative views. Bresnan (1971) argued on the basis of morphophonological evidence that all lexical insertion must occur

The bottom line is that, in order to preserve endocentricity, something needs to merge. Structure cannot project from nothing. I will propose that instead of one lexicon containing all – both lexical and functional – elements, the lexicon is divided into two sub-lexica, a linguistic lexicon and an encyclopaedic one. In the purely linguistic lexicon, we find abstract G-semantic elements. From this sub-lexicon, elements are selected to merge and thus construct syntactic G-semantic frames. The encyclopaedic lexicon, on the other hand, contains traditional lexical items, which belong to the S-semantics in Bouchard's terms. Elements from this encyclopaedic lexicon are not merged into syntactic structure, but rather are inserted into the G-semantic structure that is then already projected. This late insertion of lexical items from the encyclopaedic lexicon then enriches the meaning of G-semantic clause structure.[64]

In endoskeletal models, selectional restrictions of the lexical items determine which elements can merge. However, in an exoskeletal model, the question of what determines the process of merging syntactic structure is open, since lexical elements are not present at the stage of structure merging. I will propose that the five constructional templates in Norwegian constitute a superior convention for the merging of clause structure. This entails that the language faculty of Norwegian speakers is characterized by the ability to form such abstract templates, according to which phrase structure is built. Hence, Merge proceeds according to an overall construction procedure or language-specific manual, which for Norwegian speakers consists of the five syntactico-semantic frames for sentences. This construction plan predicts which elements can be combined. Thus, Merge does not proceed blindly. Importantly, X'-theory must be assumed to be part of this internalized manual for the construction of templates, since phrase structure obeys X'-theoretic principles.

We might conclude that, instead of selectional restrictions on lexical items, there are selectional restrictions on the abstract syntactic G-semantic nodes or operators, which set restrictions on possible constructional frames. For instance, I will assume that one selectional

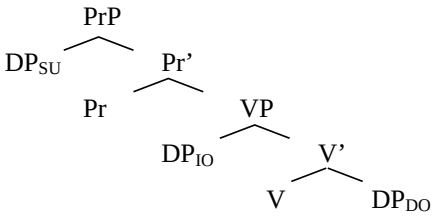
---

before the transformational cycle, i.e. lexical insertion must proceed bottom-up. Embick (2010) assumes a related point of view, stating that lexical items are inserted phase by phase bottom up, and again bottom up within a phase. Hence, Embick argues that lexical insertion is restricted to terminal nodes. Recently, Svenonius (2012) has argued against this assumption, proposing that lexical insertion can target *spans* of functional sequences, still moving bottom up from one span to the next.

[64] It may be tempting to state that this distinction between linguistic and encyclopaedic lexicon is equal to the distinction between merger of functional and lexical elements. Yet, as I will argue in the following sections, there is abstract G-semantic structure also in the lexical domain, into which encyclopaedic lexical items are inserted to instantiate the structure.

restriction is that the predication operator in Pr may select a verbal complement (i.e., VP).[65] The head of VP may select (i) nothing (intransitive frame), (ii) a DP (transitive frame) or (iii) a second PrP (simple and ditransitive resultative frames). For instance, if the language user wants to utter a ditransitive sentence, the first step is to generate the abstract ditransitive template, so PrP selects a VP, opening up available positions for insertion of a subject, an indirect object and a direct object:

(36)



Similarly, in a simple resultative frame, the PrP selects a VP, which again selects a second PrP. There is a certain degree of freedom in what can be selected, but the range of options is restricted, e.g. by X'-theoretic principles, giving rise only to the five possible templates. As for the process of lexical insertion into these frames, I will discuss this in more detail in chapter 4.

Clearly, the five structural frames are not genetically given. A question, then, is what motivates them in the first place. One possible line of thought is that linguistic structure is built on a foundation of general thought structures. The idea would then be that, through evolution, certain central thought structures, such as the subject-predicate relation, binary branching relation and so on, have become fundamental components of sentence structure. Under this view, certain frequent meaning relations have fossilized into a grammatical frame and have thus become structural categories or relations. This entails that linguistic structure has its origins in a more general language of thought, and furthermore that meaning is primary to the formal aspects of the structure. On the other hand, it is also possible to envision an opposite perspective, namely that syntactic form is primary. Carstairs McCarthy (1999) argues for such a view when he claims that syllable structure is fundamental to the human articulatory system, and more specifically that binary syntactic form has developed on the basis of syllable structure (but see Tallerman 2006 for arguments against Carstairs

[65] Alternatively, in non-verbal small clauses, Pr can also select other lexical projections.

McCarthy's view). In his view, syntactic form is primary to meaning. Syntax has not evolved to express semantic relations. Quite to the contrary, semantics makes use of the syntactic forms that are already present, developed as an effect of the physical construction of the human language organ. This mystery of what came first, structure or communication, is fascinating, yet it is an empirically unsolvable problem, and hence it can never lead to more than speculation. I will therefore not pursue it any further.

The main point here is the assumption of an abstract syntactic form with G-semantic content, into which lexical elements are inserted. The next question to be addressed is what this syntactic structure looks like. The next sections will examine this issue, both with respect to lexical and functional projections.

3.5.2 Empty slots for insertion

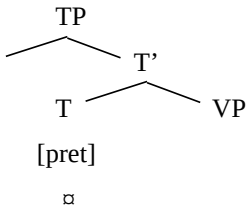
The exoskeletal, frame-based view predicts that syntactic structure is generated independently of lexical elements, and that syntax is present prior to lexical insertion. This indicates that ellipsis does not involve a process of deletion, as in endoskeletal models. Rather, lexical elements are inserted late to instantiate structural positions. In the case of ellipsis, though, this insertion does not happen. Traditionally, in endoskeletal models, restrictions on ellipsis have been formulated as restrictions on possible deletion. This view implies that elements need to be inserted into syntactic structure, and thereafter deleted under ellipsis. This seems quite uneconomical. An exoskeletal model turns this process upside down. Elements are not deleted; instead, they are simply not inserted in the first place. Importantly, this derivation process appears to be far more economical than the endoskeletal analysis. Hence, an exoskeletal theory of ellipsis does not search for conditions on silence, but rather conditions on sound (see also Sigurðsson 2011 for a discussion of this issue).

Since lexical items can no longer motivate syntactic structure in such an approach, I have argued that each projection is motivated from an abstract G-semantic core. In addition, I propose that each node also houses a designated space for lexical insertion, i.e., an empty slot into which lexical elements may be inserted. Insertion happens either through direct lexical insertion or through movement. Note that these two types of elements correspond to the two sub-lexica proposed in the previous section. Structure projects from elements selected from the purely linguistic lexicon, whereas the inserted items are taken from the S-semantic, encyclopaedic lexicon. We will see later that in the case of discourse ellipsis, elements from

discourse may replace these S-semantic lexical items, leading to a non-instantiated position in the clause.

To shed light on the issue of insertion into empty slots, it is fruitful to point to the fundamental distinction between lexical and functional categories in traditional generative theory. On the one hand, lexical categories such as V are generally regarded as 'occupied' if they are filled by a lexical item, i.e. a verb. As a consequence, there would not be room for movement or insertion into this lexical position. On the other hand, functional categories can contain a functional feature, but they can at the same time house an open position into which a lexical item can be inserted. The figure shows how this works for TP, where the head T is traditionally assumed to contain a tense feature [pret],[66] but at the same time to be a host for verbal movement. I have chosen the arbitrary label ¤ for the empty position available to insertion:

(37)



Hence, even if a functional category is filled with a feature, the same functional category can simultaneously have a lexically empty position into which a phonetic matrix from another position can be inserted via movement. Rizzi and Roberts (1996) propose an analysis of such openings or *slots* in the syntactic structure. According to them, the host, i.e., the position into which movement is directed, subcategorizes for the element which is moving. The host generates a structural slot, which is subsequently filled by movement. For example, a finite T can have the subcategorization frame [+V, _], with an opening for the verb moving to T.

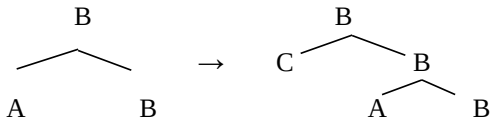
I will argue that lexical elements are inserted into empty slots (¤) in the syntactic structure. Importantly, this substitution process is sensitive to harmony requirements as discussed in section 3.4.4, i.e., the inserted element must fit into the relevant slot.[67]

[66] Note that in section 3.6.4 I explicitly argue against there being a concrete tense affix in T.

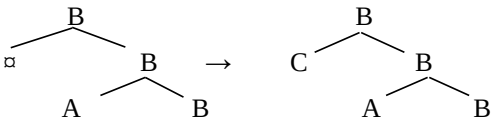
[67] An issue which arises at this point is whether there are empty slots in all positions of the syntactic structure, and whether the slots are always generated, even when nothing is inserted. On the one hand, one could argue that empty slots are only generated in the cases where they are needed. On the other hand, one could also claim that empty slots are always generated, and that they are only filled in certain cases. In my analysis, I will choose the

Technically, this can be described as a process of substitution, defined as the process of replacing one item with another at a particular place in a structure (Crystal 2008). Note that this perspective is opposite to the mainstream minimalist view, which assumes that structure is built through adjunction of lexical elements to the existing structure. The distinction between substitution and adjunction[68] has its roots in early generative theory, where these two operations were seen as two different kinds of transformations or two types of movement. Whereas *adjunction* is structure building, in that it creates new hierarchical structure with respect to the category to which something is adjoined, *substitution* is structure-preserving in that "the hierarchical relationships between the category affected by the substitution and those categories that dominate it remain unchanged" (Freidin 1992: 85).[69] The following figures display the difference, showing adjunction versus substitution of C:

(38) Adjunction



(39) Substitution



This view of structure building resonates with the theory of phrase structure rules (PS rules), which also assumed that syntactic structure was built from non-lexical elements, and that lexical items were then inserted to substitute the syntactic nodes. Freidin (1992) states that PS rules generate constituent structure representations for sentences, and that when these are to be related to actual strings of words in the language, this happens through lexical insertion,

---

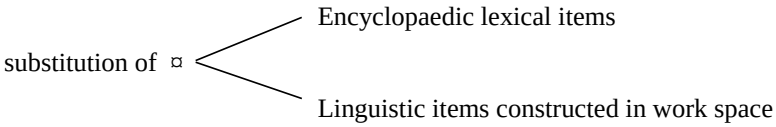
latter alternative. Yet, as this is an issue which is not empirically solvable, I will not insist that this is necessarily the correct option.

[68] Note that I am here referring to the term *adjunction* as a structure building mechanism, as opposed to *substitution*. Importantly, this should not be confounded with the distinction adjuncts and arguments in generative grammar.

[69] Substitution thus adheres to the Structure Preserving Constraint: "A constituent can only be moved by a substitution rule into another category of the same type" (Radford 1981: 190).

which is seen as a substitution transformation. I will adopt this perspective when I argue that the empty slots in the structure are replaced by lexical items through substitution.

Crystal (2008) and Radford (1981) state that in GB theory, substitution was assumed to involve a moved category replacing an empty category. Following this line of thought, I will assume that the first step in a derivation is to generate the abstract syntactic structure, more specifically one of the five structural frames (see section 3.4.4. for a discussion of the frames). Each position in the structure then generates an empty slot, in addition to the G-semantic operator as well as formal features of various kinds. Subsequently, the slot (¤) is substituted. Note that even though I will apply the symbol ¤ for both cases, there are actually two different types of slots, head slots and specifier/complement slots. Hence, there are two different types of elements which may be inserted into the structure, i.e. there are two subtypes of substitution:



On the one hand, the slots in head nodes are substituted by encyclopaedic roots from the lexicon.[70] On the other hand, whole phrases may be inserted to substitute the slots in specifier and complement positions. In that case, I propose that these phrases are constructed in a separate work space, in which structural units are built before insertion into the matrix clause structure. This proposal finds resonance in Chomsky's (1957) term *generalized transformations*, which were assumed to take small structures and combine them. Thus, lexical elements substitute the slot ¤ in head positions, and phrases constructed in work space substitute the slot in specifier and complement positions. However, in the case of ellipsis, both ellipsis of specifiers and heads, the slots remain unfilled. It is then an open question whether the slot is substituted by a conceptual non-linguistic element, or whether a linguistic item is constructed in work space, but not inserted to substitute the slot. As for the specific restrictions on insertion in ellipsis, I will return to this in chapter 4.

[70] Note, however, that not only atomic roots, but also complex words, can be inserted into head positions. Possibly, these complex words are then constructed in a linguistic work space, in a similar manner to phrases in non-head positions.

3.6 A G-semantically motivated clausal architecture

3.6.1 Separationism in the functional domain

I have argued for a separationist view on the lexical domain of the clause, more specifically with respect to argument structure. A central idea in Åfarli (2001), and also in Eide & Åfarli (1999a) and Brøseth (2007), is that separationism is equally relevant for the functional domain of the clause:

> (…) the head of a given functional projection is an abstract syntactico-semantic item, and that insertion of an overt element in that position is not what gives the position its syntactico-semantic identity (Eide & Åfarli 1999a: 119).

To motivate his view, Åfarli (2001) points to the arguments for separationism in the lexical domain, namely multiinsertion and multifunctionality. He argues that if there are parallel examples for the functional part of the clause, the separationist model should be extended to this domain. The first empirical argument is that complementizers and raised verbs occupy the same position in Norwegian conditional clauses. This is an example of multiinsertion:[71]

(40) Hvis/Om/Dersom du raner det postkontoret, havner du i fengsel.
if you rob that post-office-the end-up you in prison
'If you rob that post office, you will end up in prison.'

$[_C$ Hvis/Om/Dersom $[_T$ du_i $raner_j$ $[_{PrP}$ t_i t_j $[_{VP\ tj}$ det postkontoret (…)]]]]

(41) Raner du det postkontoret, havner du i fengsel.
rob you that post-office-the end-up you in prison
'If you rob that post office, you will end up in prison.'

$[_C$ $Raner_j$ $[_T$ du_i t_j $[_{PrP}$ t_i t_j $[_{VP\ tj}$ det postkontoret (…)]]]]

This kind of interchanging is a signal that there exists a common underlying functional position, namely the C position, which is instantiated in different ways, either by verb movement or by insertion of a complementizer (Åfarli 2001). The semantic meaning remains

[71] The two sentences have the same meaning, yet, as seen in the bracketing analyses provided, the meaning is structurally realized in two different ways.

stable through the examples, which indicates that the abstract G-semantic element in C bears much of the semantic content.

Åfarli (2001) also points to an example of multifunctionality in the functional domain, namely the Norwegian verb *gjøre* 'do', which can appear either as a regular main verb, or as a functional proverb marking the C-position:

(42) Hun *gjorde* det hun skulle på jobben.
she did that she should at work
'She did what she was supposed to at work.'

(43) Solgte frimerker, *gjorde* hun.
sold stamps did she
'She sold stamps.'

These examples of multiinsertion and multifunctionality favour a construction-based approach for the functional domain of the clause, parallel to how the corresponding type of data motivates this perspective in the lexical domain (Åfarli 2001).

To demonstrate the idea of a construction-based functional structure, Åfarli (2001: 184) points to the very regular patterns in relative clauses in German, English, Norwegian and Middle English:

antecedent	pronoun etc.	comp	clause
das Mädchen	das	Ø	ich heiraten möchte
die Frau	welche	Ø	das gesagt hat
Im Moment	Ø	dass	die Bombe explodierte
the plan	which	Ø	aroused most enthusiasm
people	whose lawns	Ø	are trimmed
people	Ø	that	live in new houses
mannen	om hvem	Ø	du snakker
mannen	Ø	som	du snakker om
huset	der	som	han bur
a doghter	which	that	called was Sophie

Even though there are holes in the patterns, marked with Ø in the table, there are no cases where the order of the different elements diverges from the prediction in the X'-based schema. Such regularity is hard to explain without assuming an abstract underlying structure. I therefore embrace the idea that there is an underlying structural X'-based template in the

front area of relative clauses, generated independently of the realized string. Note here that every terminal node may not necessarily be instantiated by visible linguistic material. In all these languages, there is an underlying CP which must somehow be instantiated. The nature of this instantiation is not necessarily the same in each language; still, the basic underlying structural order is the same. Interestingly, it seems that in older languages, instantiation of both nodes (specifier and head) of CP was more common. Modern versions of the same languages thus appear to be more efficient, in that they no longer instantiate both nodes.

In sum, these different data provide "strong evidence that there are abstract underlying constructions that are possibly only partially instantiated by visible elements" (Åfarli 2001: 187). Yet, Åfarli does not specify the exact nature of the functional construction. In what follows, I will take the separationist hypothesis as a point of departure, seeking an exoskeletal motivation of the functional domain, based on a weak interpretation of Bouchard's principle of Full Identification.

3.6.2 The main projections of the clause

The number of functional projections has been the subject of vivid debate, not least with respect to the C- and T-domains, and many different projections have been suggested. Chomsky (1995) proposed to reduce the basic functional domain to three projections: CP, TP and vP. In addition to lexical projections within the VP, clauses are then assumed to contain at least these three functional projections: "To first approximation, the clause seems to be of the general form: […C…[…T…[…v…]]]" (Chomsky 2002: 123).

The number and kinds of functional projections can probably vary from language to language, and also between different sentence types. Nevertheless, the main focus here will lay on the projections which are assumed to be present in all sentences: CP, TP, vP and VP. Hence, I will not discuss projections which are present only in certain sentence types, such as aspectual projections, auxiliary projections, negation projections etc. The main point for my argumentation is not the number of projections assumed, but rather the central thesis that each projection is motivated from an abstract G-semantic content.

According to Kitahara (1997), the postulation of functional categories must be justified either by phonological or semantic output conditions, or by theory internal

arguments.[72] Intuitively, the first two options seem most appealing. If one can do without theory-internal argumentation, this is generally preferable. This is Kitahara's (1997: 8-9) justification of the functional categories:[73]

> The categories that concern us include T, D, C, Agr and the light verb *v*. The functional categories T, D and C are arguably justified by their semantic representation: T bears a feature of [finiteness], D bears a feature of [referentiality], and C bears a [mood] feature (e.g., declarative, interrogative). But the functional categories Agr and the light verb *v* each have no interface interpretation, thereby calling for theory-internal arguments.

Kitahara himself points to later developments in the Minimalist Program, where the category Agr is rejected. In current versions of the theory, agreement relations are handled by Probe-Goal relations between nodes in the tree, rather than by agreement projections. If we dispense with Agr, this leaves only little v for theory-internal motivation. I therefore propose to replace vP with PrP, which is a semantically motivated projection, based on predication (Bowers 1993). I will elaborate on this projection shortly. Then, there is no longer any need for theory internal motivation neither of CP, TP nor PrP. What remains is to motivate the assumed projections in an abstract G-semantic fashion, i.e., to find a G-semantic basis for each of them. This will be my main goal in what follows.

The presentation of CP in section 3.6.3 will be quite detailed, compared to the account of TP in section 3.6.4. There are two reasons for this. Firstly, the argumentation for an abstractly motivated CP will serve as an example of my overall view. Secondly, CP is of particular relevance since this is the clausal domain which is most frequently targeted by discourse ellipsis.

3.6.3 CP – Illocutionary force and speech acts

The C-domain is the hierarchically highest domain in the clause structure. It is generally assumed to have a dual function with respect to relating the context – linguistic or non-linguistic – to the propositional content. According to Rizzi (1997), the C-domain can be considered as an interface between the propositional content in TP and a superior structure, be it a superordinate clause or the discourse context. Consequently, CP expresses two kinds of information, one directed outwards, namely the sentence modality, and one directed inwards, namely information about finiteness and properties of the T-domain. Also, Platzack (2000)

[72] Thráinsson (1996) presents a related argument when he states that whether or not a functional category is present in a language should be motivated from visible morphology.
[73] Because my main interest is clause structure, I will not elaborate on the category D.

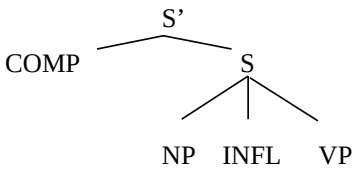
discusses the different kinds of information conveyed by the C-domain, concerning sentence type and finiteness as well as theme/rheme-relations and focus/presupposition. This complex function of the C-domain has led to the hypothesis of a split CP (Rizzi 1997) containing multiple projections such as Force, Focus, and Finiteness, each with simpler functions, which is a widespread view. In what follows, I will nevertheless assume a non-split CP, mostly for expository reasons. As my analysis would not gain any additional insights from assuming a split CP, I will not do so. The question of whether CP is really underlyingly split is left open.[74]

In this section, I will first look briefly at the traditional motivation for the CP. Thereafter I will propose an analysis based on arguments from the philosophy of language, building on the difference between propositional content and illocutionary force. The overall goal is to reach an abstract G-semantic motivation of the CP.

3.6.3.1 Traditional motivation of CP

Chomsky (1981a) proposed the following general sentence structure:

(44)



COMP was then assumed to be filled by a complementizer which could be +/- wh. INFL hosted information about both tense and agreement. Hence, INFL could be +/- tense, or equivalently +/- finite, and it was specified for AGR, i.e., person, gender and number. In Chomsky (1986b), the X'-schema developed for lexical categories, was also applied to functional categories. Hence, the projections TP and CP were introduced for the first time. The traditional motivation for the CP was the complementizer in subordinate clauses. The argument was that if all categories should project to the phrase level, then this should also be the case for complementizers. However, since it is theoretically desirable for the clause structure to be the same in all types of clauses, the null hypothesis was that CP is present also

[74] I return briefly to this issue in chapter 4, section 4.5.1.

in main clauses. The C head is then assumed to be filled by a complementizer in subordinate clauses, and by a finite verb in main clauses (Koster 1975, den Besten 1983).

This is further supported by the distribution of sentence adverbials, which illustrates the need for a landing site for verb movement. In Norwegian, the sentence adverbial precedes the finite verb in subordinate clauses, but follows it in main clauses. As is well known, this distribution can be explained if the verb is assumed to move past the sentence adverbial on its way to C (see e.g. Åfarli & Eide 2003). The finite verb and the complementizer thus compete for the same position.

Assuming that all phrases should be endocentric, and moreover accepting Bouchard's thesis that vacuous projections are not allowed, this motivation of CP in main clauses as a landing site for movement appears unfortunate. I have argued that a node can be phonetically empty, but that it can never be G-semantically empty. A relevant question is therefore: Is there a G-semantic basis for the CP? I base my answer to this question on the idea that properties of the C-domain determine the sentence type: "If C is the head of the clause, then, (…) the properties of C should determine the properties of the clause" (Haegeman and Guéron 1999: 99, see also Rivero & Terzi 1995, Chomsky 1995: 240, 289 and Platzack & Rosengren 1998, among others).[75] CP is commonly assumed to be the designated projection for clause typing.[76] This entails that the sentence type is generated and motivated independently from the rest of the clause. This distinction between sentence type or mood on the one hand, and the descriptive content of the clause on the other, has long roots in philosophical theory.

3.6.3.2 Proposition versus assertion – sentence radical and mood

Influential work within the philosophy of language establishes a distinction between a modal element, which defines the sentence type, and the propositional core of the sentence. Frege (in Beaney 1997: 52) proposes the following figure, where the horizontal stroke is called the 'content stroke' and the vertical stroke is called the 'judgement stroke':

[75] Rizzi (1997) argues that the clause-typing properties of CP are handled by a separate projection, ForceP. Since I will not adopt a split CP analysis, as discussed above, I take the clause-typing property to be a property of CP as such.

[76] See Zanuttini & Portner (2003) for an opposite view. Aiming to give an account of exclamative clauses, Zanuttini & Portner argue that, on the contrary, there is no particular element in the syntax which is responsible for introducing force, i.e., which is responsible for clause typing.

| — p

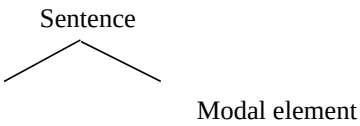
The horizontal stroke represents the propositional core, whereas the vertical stroke corresponds to the speech act or definition of sentence type. Importantly, if the judgement stroke is not present, the sentence cannot be an assertion:

> If the small vertical stroke at the left end of the horizontal one | is *omitted*, then the judgement will be transformed into a *mere complex of ideas*, of which the writer does not state whether he recognizes its truth or not. (…) In this case we *paraphrase* using the words '*the circumstance that*' or '*the proposition that*' " (Beaney 1997: 52-53).

Frege's assertion sign clearly brings out the distinction between assertion and predication (Kenny 1995). Attaching a predicate to a subject does not involve making an assertion about the subject–predicate relation expressed in the proposition. The combination of subject and predicate is handled by the content stroke, which connects the symbols that follow it (Beaney 1997: 53). Seuren (1998) notes that it is a remarkable feature of natural language that it does not allow the expression of a 'pure' proposition without any further anchoring. It is impossible to express only a pure mental picture of a condition such as *John buy house*, because language is not merely a system for representing conditions. All clausal utterances are speech acts through which the language user creates an illocutionary effect with respect to the underlying proposition.

This theoretical issue is treated in Stenius (1967), where it is claimed that all sentences are divided into a sentence radical which is the propositional core, and a modal element expressing the speech act of the utterance:

(45)



In an explanatory comment to Stenius' article, Føllesdal (1967) notes that several philosophers have introduced a parallel distinction. As support for Stenius' argument, Føllesdal points out that there is never one single word in a sentence that defines the sentence as an assertion. This indicates that the assertion element is not expressed as part of the sentence as such. Rather, it is an independent element *sui generis*:

> On the whole, there is, as Frege pointed out, no word in any sentence which makes the sentence an assertion (*Behauptung)*, for the word may occur equally well in an asserted as in an unasserted sentence. The asserting element therefore is not something that is expressed by a part of the sentence; it is something *sui generis*, an element of the assertion's meaning, in a wide sense, which is due to the use we make of the linguistic expression and is not expressed by the expression itself (Føllesdal 1967: 276).

Consider the examples below, which clearly have something in common even if their modalities diverge. More specifically, they express different modes or speech acts:

(46) My son cleans his room.

(47) Clean your room, son!

(48) Does my son clean his room?

Following Stenius, I propose that what is common for these three sentences is the sentence radical. The sentence radical expresses a descriptive content, whereas the modal element expresses whether the sentence is declarative, imperative or interrogative.[77] The modal element is assumed to work as an operator. It takes the sentence radical as an argument and gives as a value a sentence with illocutionary force, or, in other words, a speech act. Depending on which operator interacts with the sentence radical (sr), the result is an assertion, a command or a question:

Decl (sr)	→	declarative sentence, assertion
Interrog (sr)	→	interrogative sentence, question
Imp (sr)	→	imperative sentence, demand

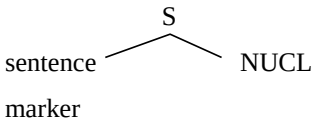
Traditionally, there has been a tendency to regard the mood declarative as an unmarked and privileged mode, and this mode has been seen as equal to the descriptive content. Consequently, many theorists have sought to reduce all other modes to the declarative mode, since declarative sentences 'only describe how things stand'. This is unfortunate, because it would lead to the postulation of different descriptive contents for sentences which only differ with respect to speech act or mode. It is obvious that the examples above have a common semantic basis, even though they express different sentence types.

[77] See Lohndal & Pietroski (2011) for an analysis of interrogatives based on a similar idea: "In particular, we offer a minimalist version of an old thought: the leftmost edge of a sentence permits a kind of abstraction that makes it possible to use a sub-sentential (mood-neutral) expression to ask a question" (Lohndal & Pietroski 2011: 1).

3.6.3.3 Integrating the distinctions into syntax

Stenius (1967) has a semantic focus, and he says nothing about how the modal speech act element can be integrated into syntactic structure. In what follows, I will therefore discuss some proposals concerning the question of which syntactic position hosts the illocutionary force element. The early transformational grammars, such as Chomsky (1957), follow the traditional view that declarative sentences reflect the underlying unmarked syntactic structure. Thus, taking the declarative structure as a point of departure, Chomsky proposes specific transformations to form interrogative and imperative sentences. Declarative structures, however, do not need any transformation because they are considered to be identical to the propositional core. The same view is found in Katz and Postal (1964), who argue for a sentence marker in the deep structure of the clause, in addition to what they call NUCL, which corresponds to the sentence core.

(49)



This sentence marker is Q in questions and I in imperatives. Importantly, though, no marker is postulated for declaratives, since declaratives are seen as identical to the core NUCL.

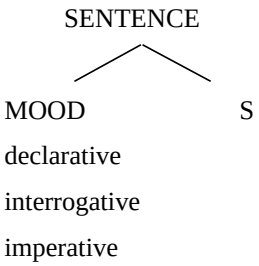
Stenius is clearly at odds with this standpoint when he claims that declaratives contain a modal element which is independent of the sentence radical, parallel to the interrogative and the imperative mode. The sentence radical defines conditions for how things must be for the sentence to be true or false, while an assertion postulates also that the content of the sentence radical actually *is* true or false. Stenius (1967: 259) refers to Wittgenstein's *Tractatus* (1922) on this point: "The sentence shows how things stand, if it is true. And it says that they do so stand."

Lewis (1976) adopts and develops Stenius' ideas when he launches an analysis where all sentences are divided into a sentence radical and a modal element:

> One method of treating non-declaratives is to analyze all sentences, declarative or non-declarative, into two components: a *sentence radical* that specifies a state of affairs and a *mood* that determines whether the speaker is declaring that the state of affairs holds, commanding that it hold, asking whether it holds, or what (Lewis 1976: 37).

This is Lewis' (1976: 38) model of the sentence:

(50)



Together, these two elements express the meaning of the sentence. In Lewis' model, the different modalities lead to different transformations of the sentence radical, which again lead to different sentences.

In my model, I will adopt the fundamental idea from Stenius (1967) and Lewis (1976). Nevertheless, it is necessary for my purposes to incorporate this insight into a more up-to-date sentence schema. I therefore propose that the modal speech act value is incorporated as an operator in the C-position. This idea finds support in the generative literature (Platzack 2000**,** Kitahara 1997, Rizzi 1997, Haegeman & Guéron 1999), here illustrated by a quote from Chomsky (2002: 123):

> To first approximation, the clause seems to be of the general form […C… […T… […V…]]], where V is the verbal head of the configuration in which deep semantic roles are assigned, T is the locus of tense and event structure, and C (complementizer) is a kind of force indicator distinguishing declarative, interrogative, etc.

By claiming that sentence modality should be derived from an operator located in C, it is assured that CP is endocentric also in main clauses. Hence, the projection is no longer vacuous. And moreover, since the operator is located in the topmost projection of the clause structure, it will have scope over the rest of the clause

At this point, we could say that CP is motivated by complementizers in subordinate clauses, and by modal operators in main clauses. Still, one could claim that this is also somewhat problematic, since the consequence is that CP is motivated on different grounds in the two sentence types. A unitary analysis of main and subordinate clauses is central for the analysis of clause structure proposed here. Therefore, it would be desirable for the CP to be motivated on the same grounds in all sentence types. Furthermore, within an exoskeletal model of clause structure, which I am advocating, it is unfortunate that CP in subordinate clauses is motivated by a concrete, visible complementizer. It would be preferable to reach an

abstract G-semantic motivation for CP also in subordinate clauses. I will therefore propose that the C-position should be motivated abstractly in all kinds of clauses. Supporting this standpoint is the fact that most subordinate clauses also possess a certain sentence modality. The examples below illustrate subordinate clauses with declarative (51), interrogative (52) and imperative (53) value:[78]

(51) She knows that he will buy her flowers.
(52) She wonders if he will buy her flowers.
(53) She commands him to buy her flowers.

Thus, subordinate clauses exhibit a certain sentence modality, which makes it plausible to claim that the abstract modality operator is the common G-semantic motivation for CP in both main and subordinate clauses. The force operator in C defines the sentence type in all clauses (see also Rizzi 1997).

3.6.3.4 Some remarks on speech acts

In the ideas discussed above, we have seen that the elements operating on the sentence radical to indicate the *mood* of the sentence, such as declarative, imperative and interrogative, can be called speech acts indicators. This point deserves some clarification. The notion of a speech act has its roots in John Austin's (1962) theory, which introduced three levels of speech acts. A locutionary act is to express a meaningful combination of words. An illocutionary act incorporates the communicative content of the clause, whereas perlocutionary acts are the effects of the speech acts in a given situation, and thus they are not linguistically defined. Hence, the communicated content of an utterance can be divided into a propositional part and an illocutionary part.

Speech acts can be expressed by declarative, interrogative or imperative sentences, but also by using explicit performative verbs, as in the following examples:

[78] From these examples it might at first glance seem that it is the main verb which defines what type of subordinate clause will follow. Clearly, the verb of the main clause does select a specific category of subordinate clause. Yet, assuming an exoskeletal view, I will argue that this is governed by a harmony relation. Rather than assuming a derivational selection process where the verb selects a certain clause type, I will assume a representational kind of selection. A certain verb needs to be inserted together with a specific subordinate clause type, i.e., a clause with a specific operator, as its complement. The relation is governed by harmony between the elements.

(54) I bet my team will win the game.

(55) I ensure you there is enough room for everybody.

One could therefore argue that there are many different illocutionary speech acts, at least as many as there are performative verbs. Wittgenstein (1953: §23) advocates this view: "But how many kinds of sentence are there? Say assertion, question, and command? – There are *countless* kinds."

Several theorists claim, however, that three of these speech acts are fundamental and universal. Sperber and Wilson (1995) call these three saying, telling and asking. According to Blakemore (1992), a language user would not be capable of understanding an utterance if she couldn't be certain of which of these was involved. Also, Lyons (1977) emphasizes that declarative, interrogative and imperative are the three fundamental sentence types in all languages, correlating with the three fundamental speech acts. It thus seems plausible to claim that the reason they have received their proper grammatical expression is precisely that they are fundamental. It is important to notice that an utterance with a performative verb can be said to express a 'double' speech act. The sentences above have an abstract declarative mode even if the performative verb expresses another speech act. This is even more striking in the following sentences:

(56) I *declare* my eternal friendship to you.

(57) I *asked* her if she had already eaten.

(58) I *demand* that you clean the house.

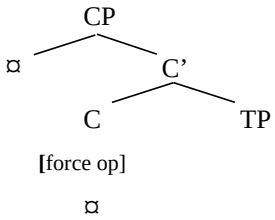
These examples are interesting because they clearly illustrate the two different levels of speech acts: one is directly expressed by a lexical verb, a performative speech act; the other one, an illocutionary speech act, is expressed through the grammatical form of the sentence.

I have argued earlier for Bouchard's distinction between S-semantics and G-semantics, and also for excluding all pragmatic information from the syntactic derivation. However, speech acts can in many ways be considered part of the pragmatic or S-semantic component rather than the G-semantic component. An important question, then, is whether it is fruitful to include pragmatic elements into syntactic analysis anyway. I will still maintain Bouchard's view on this. Pragmatic information has no direct syntactic relevance. The crucial point is that the speech acts in the C-domain are grammaticalized with their own sentence patterns. It is

not accidental that there are specific sentence forms for declaratives, interrogatives and imperatives, whereas there are no such specific patterns for speech acts such as *to promise, to demand, to bet* and so on. Here lies an important dividing line. Declaratives, interrogatives and imperatives are characterized by grammaticalized modality, which is part of the grammatically relevant G-semantics, unlike the verbs *declare*, *ask* and *demand*, which can be used in sentences with all three modalities. The speech act content of these verbs is performative, and it should therefore not be integrated into syntactic structure.

To sum up, I propose that the CP projects from an illocutionary force operator. This is the G-semantic content of this projection. In addition, the C-node contains an empty slot which is available for lexical insertion. Note that the argument that I have made entails that all positions in the tree will contain such an open slot, since syntactic structure is never assumed to project from lexical items. These elements are always inserted late:

(59)



The slot ¤ may, in the case of CP, be filled either through movement, i.e., of the finite verb in main clauses, or through direct lexical insertion of a complementizer, as in subordinate clauses.

3.6.4 TP – a tense operator

In principle, all verbs can be tensed. If tense were to be considered a property of the lexical verb, located in the V, one would expect the possibility of several tensed verbs in a sequence. However, this is not the case. Only one verb in a sequence can be tense marked. This clearly shows that tense is not part of the verb *per se*. If it were, it would be unproblematic to have two tensed verbs in a sequence. The empirical fact that only one verb in a sequence can be tensed, is in generative theory generally explained by assuming that each sentence contains one tense element, which is generated separately from the lexical verb. This was suggested

already in Chomsky (1957). Tense is thus generated outside the V-domain, in an independent T-projection.[79]

T can only house one lexical head, hence only one verb in a sequence can receive tense from T. Moreover, it is always the hierarchically highest verb in a sequence which is the tensed one. The explanation for this is that it is always the hierarchically highest verb in the structure which moves to T. This is ensured by the Head Movement Constraint[80] (Travis 1984), which dictates that heads must always move to the closest head position. A verb generated further down in the structure cannot move directly into the T-position without passing through the other head positions on its way. Movement must be cyclic. Hence, only the hierarchically highest verb can access T without violating the HMC.

3.6.4.1 Tense – concrete affix or abstract operator?

Tense is sometimes regarded as a concrete affix in T, which hooks on to the verbal stem when the verb raises (or alternatively, when the suffix moves down, which is known as affix hopping). However, following a weak interpretation of Bouchard's principle of Full Identification as well as an exoskeletal view of phrase structure, I will motivate TP from an abstract, or more specifically G-semantic, base. Assuming that the underlying tense property is abstract and not a concrete tense affix is not controversial in generative grammar, so the interesting question is rather what the nature of this abstract tense property is.

I will seek an answer to this question in the tradition of formal semantics and in particular tense logic. In formal semantics, like the model developed by Richard Montague, tense is considered an operator which takes a proposition as an argument and gives as a value a tensed proposition that is anchored in time: T (prop(a)) (Dowty, Wall and Peters 1981: 112). In the clause structure, the tense operator must have scope over the proposition, which is achieved by the fact that T c-commands the basic proposition (PrP).

[79] In earlier literature, TP was labelled IP (Inflection Projection), because it was seen as a collection of both tense and agreement features. Pollock (1989) suggested a split of the IP into separate projections, TP and AgrP, on the basis of differences between French and English. Subsequently, Agr projections of different kinds have been proposed in the literature. However, Chomsky (1995) rejects AgrP altogether.

[80] In the Minimalist Program, this is explained by the general principle Shortest Move.

3.6.4.2 Time and tense

The tense operator anchors the proposition or sentence radical to the moment of speech. According to Åfarli (1995), the tense operator is directing the truth conditions of the proposition to a specific point in time. Tense is often called a deictic category, because it points to a concrete time (Dowty, Wall and Peters 1981). The relation between time as a category in the world and tense as a grammatical category illustrates in an interesting way how syntactic or G-semantic structure represents some sort of fossilized *Language of Thought*, a stiffened expression of meaning. What we find in the T-projection is not a contextually relevant, S-semantic, concrete reference to time, but rather the illusion of or the remains of a more lively expression of meaning.

One might argue that tense is an E-semantic notion and thus that it should have no place within a G-semantic sentence frame. However, I want to emphasize that I-semantics and E-semantics will necessarily be related to each other in some manner. I will assume that I-semantics may be seen as a 'fossilized' form of E-semantics. The relation to meanings in the world is present, but only indirectly. This is how I understand the tense operator. It is not directly connected to concrete, E-semantic time, but to the G-semantic expression of time as a stiffened concept.

Some examples illustrating this point come from verbs which can occasionally be used to express references other than the one expected from their grammatical tense. For instance, in English, the difference between *can* and *could* is formally a difference with respect to tense. However, in the following examples the distinction is related to modality rather than tense:

(60) He can go to the party.
(61) He could go to the party.
(62) I shall try to improve my skills.
(63) I should try to improve my skills.

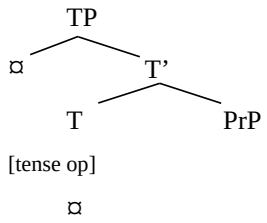
Hence, the relation between tensed verb forms and time anchoring is not one to one. Rather, it seems that in the clausal architecture in T, we find a fossilized G-semantic meaning of time, which is indirectly related to a more lively expression of meaning.

It is fruitful here to point back to the discussion of speech acts and illocutionary force. As I have already mentioned, there are many kinds of speech acts, but only three of them have a proper grammatical expression. Thus, only these three are incorporated into the syntactic structure, specifically as force operators in the C-domain. In a parallel manner, many different time references can be found. However, only two of them have a simple morphological expression in Norwegian, namely the present and the past tense.[81] The point is that the expression of meaning related to time is far richer than what can be expressed within the frames of a G-semantic clause structure. This kind of meaning representation belongs to an S-semantic component in Bouchard's model of the cognitive architecture. But, as Bouchard (1995) argues, because the context is always present to enrich the meaning, the linguistic expression can be sparse.

To sum up, I will assume that tense is generated as an operator in T, and that this operator takes the proposition or sentence radical as an argument and yields an tensed proposition with a truth value as its output. Hence, the projection TP is also G-semantically motivated, not by the S-semantic notion of *time*, but rather by the linguistically relevant notion *tense*.

Parallel to what I proposed for CP, I propose that TP also contains an open slot (¤) which is available for lexical insertion:

(64)



The slot can be filled through movement of the finite verb, or by direct lexical insertion, as in English *do*-support. Also, the specifier position contains an empty slot, which may be substituted through lexical insertion.

[81] In other languages, such as French and Italian, the future form of the verb also has a designated inflection.

3.6.5 A predication operator in PrP

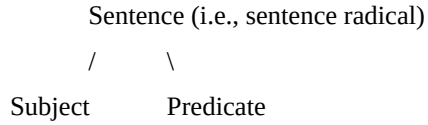
Having motivated the CP and the TP layers from an abstract G-semantic basis, a CP containing an illocutionary force operator and a TP holding a tense operator, I now move on to the structure which corresponds to the propositional content or the sentence radical. In the following two sections I will aim to define an abstract G-semantic core for the two projections PrP and VP.[82]

It is commonly assumed that a functional projection called vP is generated between TP and VP. However, Kitahara (1997) argues that vP does not have an interface interpretation, and hence that it demands theory-internal motivation. On this background, I propose to replace vP with the semantically motivated projection PrP, based on an idea put forth in Bowers (1993). Crucially, PrP is assumed to be present in all clauses. To motivate PrP, I will first briefly discuss two divergent views on the notion predication.

In the following sentence, the verb *spiser* mediates a relation between the subject *Per* and the object *bolle*:

(65) Per spiser en bolle.
'Per eats a bun.'

More specifically, the verb predicates something about the subject. The verb and the object together serve as a predicate which expresses something about the subject. The relation between the subject and the predicate is therefore often understood as a relation of *aboutness* (Åfarli 2010). The 'aboutness view' is found in several approaches to predication, such as Williams (1980). According to this view, sentences will generally have the following structure:

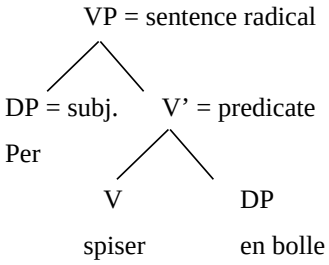
(66)


[82] Note that I have chosen to include the PrP within the lexical domain. This is not a straightforward assumption. This projection is assumed to contain an operator which creates a proposition, which makes it a functional projection. Yet, since the domain of argument structure includes PrP, the subject being generated in [spec,PrP], the PrP really covers the same domain as the VP in earlier models. Thus, it seems that including PrP in the lexical domain is justified. Nevertheless, this is not crucial for the analysis.

A problem with this 'aboutness view' is the existence of expletive subjects (Åfarli 2010). Expletive subjects are traditionally assumed to have no semantic content. The problem is therefore how a predicate can ascribe a property to be about such a semantically empty element. If the subject-predicate relation is defined as an aboutness relation, then the subject is present because the predicate needs to ascribe its property to it. However, as expletive subjects are contentless, they cannot be assigned a property. Towards the end of this section, I will show that Bower's analysis can account for this problem with expletives.

Before PrP/vP was introduced into syntactic theory, the sentence in (65) would have the following structure below TP:

(67)



This analysis shows that the verb transmits a relation between the subject and the object, and that the predicate demands a subject in order to be saturated. However, not only verbs can serve as predicates (Stowell 1981). In non-verbal small clauses, DPs, APs and PPs can also function as predicates:

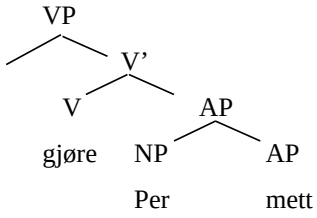
(68) Hun vil gjøre [Per glad].
'She wants to make Per happy.'

(69) Hun vil kalle [Per en nisse].
'She wants to call Per a Santa.'

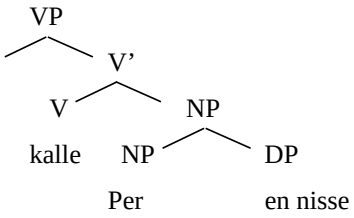
(70) Hun vil sende [Per til rektor].
'She wants to send Per to the principal.'

In a syntactic model which does not include PrP/vP, a probable analysis for these examples would be that the small clause subject is adjoined to the predicate (see (71)-(73). This analysis is proposed in Chomsky (1986b), among others.

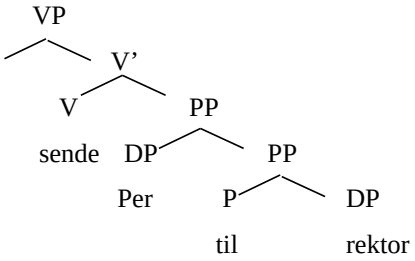
(71)



(72)

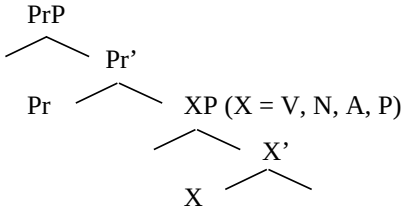


(73)



Note that these three examples display parallel structural patterns, despite the fact that three different lexical categories constitute the predicate in these sentences. The fact that different lexical categories can serve as predicates indicates that there must be something outside the linguistic element itself which turns it into a predicate, i.e., an independent semantic element which mediates the predication relation between the subject and the predicate. Bowers (1993) proposes that what transforms NP, AP, PP and VP into predicates is a predication operator. The operator takes a property XP as input and yields a predicate:

(74)



The idea that a predicate is made from a property XP by means of an operator has precedents in the philosophy of language. As we have already seen, Frege (in Beaney 1997) proposes the following figure to illustrate a judgement. The figure consists of a horizontal content stroke and a vertical judgement stroke:

|—

In regular main clauses, the proposition is a combination of subject and verb, but as discussed earlier, in small clauses other lexical categories can also function as predicates. The vertical judgment stroke has a role to play in relation to CP and illocutionary force. More relevant here is the horizontal content stroke, which according to Frege "binds the symbols that follow it into a whole". In a parallel way to Bower's predicational operator, it thus implies the necessity of an element external to the subject and the verb to mediate between these two and to construct a proposition.

In a parallel manner, Strawson (1974: 25) gives a threefold analysis of predication, presenting the following formula for proposition formation:

ass (i, c)

where *i* stands for particular-specification, *c* stands for concept-specification, and, most importantly, *ass* stands for propositional combination. Thus, Strawson follows Frege in arguing for the necessity of a mediating element to form a proposition:

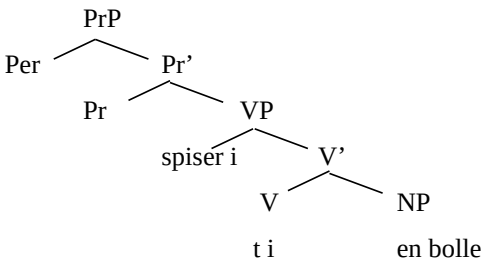
> It is to be remembered that 'ass ( )' merely represents the function of propositional combination; it is not to be thought that 'ass' itself represents a concept-specifying expression, e.g. an expression specifying the concept of assignment or that of exemplification or that of application (Strawson 1974: 26).

This idea of predication as an operation is adopted and developed in Bowers (1993), who proposes that the predication operator gives rise to a predication projection, PrP, with the following properties:

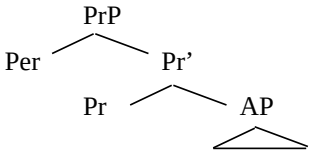
> (a) the canonical D-structure position for external arguments is [Spec, Pr]; (b) Pr^0 F-selects the maximal projection YP of any lexical category; (c) either PrP is selected by I^0, or it can be subcategorized as a complement by V; (d) the semantic function of Pr is predication (Bowers 1993: 595).

PrP can take different lexical projections as its complement, which provides a unitary analysis of main clauses and small clauses. In main clauses, VP is the complement of PrP, whereas in non-verbal small clauses, PrP takes a DP, an AP or a PP as its complement:[83]

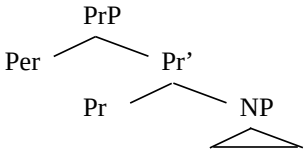
(75)



(76)

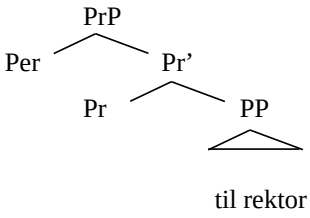


(77)



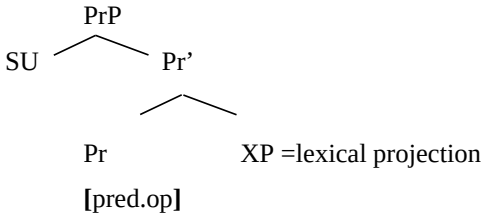
[83] Note that Bowers (1993) proposes a different analysis of the direct object, namely that it is generated in [spec,VP]. I will not adopt this specific part of Bowers' analysis, but rather I will follow the mainstream view on this point, generating the direct object as the complement to V. Then, [spec,VP] can be reserved for the indirect object.

(78)



The head of PrP contains an abstract predication operator, which takes a property element and transforms it into a propositional function. Hence, the predication operator provides the predicative content to the whole projection PrP, independently of the nature of the lexical projection it takes as a property XP.

(79)



The predication operator needs a property XP in order to construct a predicate, and this property can be VP or any other lexical projection, depending on the sentence type – main clause or small clause. Hence, the Pr'-level is actually the true predicate. By this analysis, the parallelism between VP and other XPs functioning as predicates is straightforwardly accounted for.

An important strength in Bowers' (1993) analysis is that it adheres to the principle of compositionality: the meaning of a complex expression is a function of the elements it contains and of the way these elements are combined. Only two elements are combined at a time, resulting in a meaning representation of this particular combination. Subsequently, the new element is combined with another item, following a recursive process. The new elements bear with them the semantic information from the elements they are constructed from. The final proposition is thus a product of these elements and the way they are put together.

Moreover, this analysis solves the problem of expletive subjects. As we have seen, if predication is seen as *aboutness*, then expletive subjects are a problem, since they are semantically empty. But in Bowers' model, predication is rather defined as the ability to make

propositions. Creating propositions is the purpose of the predicational operator. The predicate needs an abstract element (namely, the subject) to be saturated, and this subject might as well be expletive. Its function is to saturate the predicate, hence to signal that the utterance is to be interpreted as a proposition, and not necessarily to attribute a property to the predicate. The expletive serves as this saturating entity; it is thus first inserted in [spec,PrP], as assumed also in Bowers (2001). See Åfarli & Eide (2000) for an analysis of expletives and the EPP from this perspective. See also Richards & Biberauer (2005) for an analysis which assumes low insertion (in [spec,vP]) of the expletive subject.[84]

3.6.5.1 Predication operator as a G-semantic notion

As I have already mentioned, the semantically-motivated PrP is proposed to replace vP. One main difference between them is that PrP is assumed to be present in all clauses, whereas vP is generally only assumed to be present in certain clauses, such as causative constructions (Kitahara 1997).[85] However, for the present purpose, which is to motivate a syntactic structure from an abstract G-semantic foundation, a main reason for the replacement of vP is the semantic anchoring of PrP. Bowers assumes a semantic calculus which is reflected in the syntactic structure, which is to say that syntax and semantics are assumed to operate in tandem. In my analysis, this is a clear theoretical advantage, which is also emphasized by Bowers himself.[86]

> Assuming that these arguments are correct and that the syntactic representations in question are in fact empirically motivated on syntactic grounds, it is all the more remarkable that they appear to be nearly optimal for supporting a simple and general mapping of syntactic structures onto the independently motivated logical representations needed for a formal account of meaning. Surely no one could hope for a better result! Many linguists, I believe, have had the strong intuition that this is the way natural language must be, but until recently the tools that would make it possible to prove the truth of such conjectures were simply not available (Bowers 1993: 647).

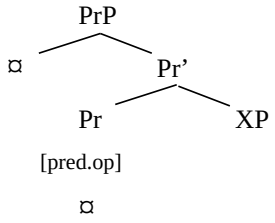
Hence, Bowers' theory is clearly compatible with the homomorphic view of the interface between syntax and G-semantics, which I have argued for earlier (Bouchard 1995). If the semantic function of Pr is predication, then it follows that the relation between syntax and semantics is transparent, as stated in Bouchard's (1995) principle of Full Identification. However, it must be specified that a weak interpretation of the principle must be assumed also

[84] Other relevant references which assume low insertion of the expletive subject are Hoekstra & Mulder (1990), Zwart (1992), den Dikken (1995), Moro (1997), Groat (1999) and Sabel (2000).
[85] However, there are also theories which assume a vP in all sentence types (see Collins 1997, Radford 2004).
[86] Bowers also finds support for his view in language acquisition. He claims that, with respect to acquisition, it is plausible that the principles connecting syntax and semantics are simple and universal.

with respect to PrP, since there are cases where the Pr-operator is not phonetically expressed, as seen in the small clauses above.[87]

Just as I did for CP and TP, I will argue that PrP, in addition to the G-semantic predication operator, contains an empty slot which is available for lexical insertion.

(80)



In full clauses, this slot is filled through movement of the main verb from V to Pr. In small clauses, the slot may remain unfilled, or it may in some cases be lexicalized by *som* 'as', *til* 'to' or *for* 'for':[88]

(81) … gjøre [Jon gal].
… make Jon crazy

(82) … anse [Jon som gal].[89]
… consider Jon as crazy

Hence, in a manner parallel to what we have seen for TP and CP, the empty slot in PrP can be filled either by direct lexical insertion or through movement, or it may remain empty.

---

[87] Following Åfarli (2007), Eide & Åfarli (1999a) and Åfarli & Eide (2001), I will assume that the notion of predication is relevant not only for the PrP level of the clause, but rather that there is a predicational relation present in all functional projections in the clause. The idea has its basis in Heycock (1991), according to which the predication relation is the licensing mechanism for maximal projections. Heycock proposes that every maximal projection of a [+V] category is a syntactic predicate, such that each clause structure contains several layers of predication. Hence, in PrP, TP and CP, there is a predicational relation between the specifier and the X'-level. More specifically, the CP contains a predicational relation between the theme in [spec,CP] and the rheme in C' (Heycock 1991, Rizzi 1997), and the TP holds a predicational relation between the subject in [spec,TP] and T', mediated by a predication operator in T. Last, the PrP houses a relation between the subject in [spec,PrP] and the predicate in Pr'.

I have argued that the functional projections each contain an abstract operator, a force operator in C and a tense operator in T. Adopting the idea of layered predication, I suggest that each layer additionally contains a predication operator. I thus assume that it is possible for a projection to host several operators and features.

This can possibly also shed light on the question of the origin of the structural frames, which was mentioned earlier. Possibly, the frames are generated on the basis of predicational structures. Still, it is not the case that these predicational relations are read off syntactic structure. The relations are themselves G-semantic in nature, which means that predication can be regarded as a backbone of the syntactic structure.

[88] See Eide (1998) and Eide & Åfarli (1999a, 1999b) for a more elaborate discussion of the different disguises of the predicational operator.

[89] The example is taken from Eide & Åfarli (1999a).

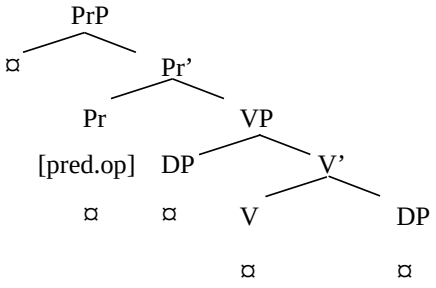
3.6.6 An exoskeletal approach to VP

3.6.6.1 Empty slots in VP

The main issue explored in this section is whether an exoskeletal view of syntax, implying late lexical insertion into an abstract syntactic structure, should be assumed for the lexical domain, just as I have argued for the projections in the functional domain. I will argue for an exoskeletal approach to VP. Support for this view was discussed in section 3.4, through examples of flexible argument structure and the flexibility of lexical verbs.

More specifically, I will propose an analysis with empty slots also for the VP-domain. However, the insertion of lexical items into the VP-internal lexical positions never happens through movement, but rather only through direct insertion from the encyclopaedic lexicon. The exoskeletal view of clause structure is thus extended to the lexical domain. Each position contains an open slot into which a lexical item can be inserted:[90]

(83)



However, I have argued earlier that no syntactic head can be radically empty.[91] Adopting a weak interpretation of Bouchard's principle of Full Identification, I have claimed that a head must have some G-semantic content, and throughout this chapter, such a G-semantic core has been proposed for the head of each main projection (CP, TP and PrP). Yet, if we assume an exoskeletal view also for VP, we need to address the following question: What is the G-semantic content of this projection?

[90] I also include PrP in the figure, since the subject is assumed to be base-generated in the specifier position of this projection (Bowers 1993, Åfarli 2010).

[91] I argue that there is a difference between heads and specifiers/complements on this point. Heads need to project from a G-semantic core, as opposed to specifiers and complements, which project from their own heads. This means that in (82), the heads must have a G-semantic content, whereas the specifiers and complements are phrases projected in work space, and then inserted to fill the specifiers/complements positions.

3.6.6.2 G-semantic protoroles in VP

In endoskeletal models, it is generally assumed that the argument positions in VP are tied to the theta roles assigned by the main verb in V. An agent role is linked to the subject position, a patient role to the direct object position and a recipient role to the indirect object position. A hierarchy for thematic roles has been proposed by several theorists (Grimshaw 1990, Dowty 1991, Jackendoff 1990, 2002), and the general idea is that particular thematic roles map onto particular argument positions. More specifically, agentive arguments come first, followed by experiencer/recipient and patient/theme. The projection principle ensures that the roles project into structural positions. Baker (1988: 46) formalized this idea in the guiding principle UTAH:

> The Uniformity of Theta Assignment Hypothesis (UTAH):
> Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.

Yet, in an exoskeletal model, theta roles are not the source of syntactic structure. Rather, neo-constructionist theories assume that lexical elements are inserted into abstract structural templates. Argument structure is thus syntactically defined by the position into which the lexical items are inserted. If an argument is inserted into the subject position, it will receive a different role interpretation than if the same argument was inserted into an object position:

(84) Ole har slått Kari.
'Ole has hit Kari.'

(85) Kari har slått Ole.
'Kari has hit Ole.'

The two DPs *Ole* and *Kari* can be interchanged, but this will be associated with a change in the interpretation of the arguments. Hence, clearly, the role interpretation is due to something other than information in the lexical item itself.

A related argument is presented in Åfarli (2007), based on the sentences in (86) and (87):

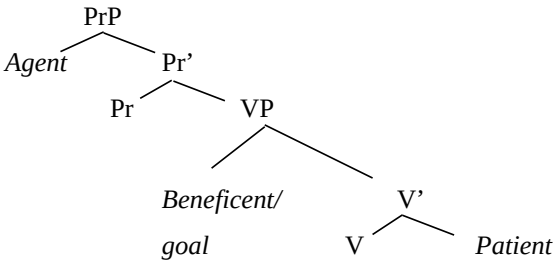
(86) Per dansa Marit.
'Per danced Marit.'

(87) Per dansa med Marit.
'Per danced with Marit.'

According to Åfarli (2007), there is an asymmetry between the subject and the direct object in (86). *Per* is an agent and *Marit* is a patient/theme. This is not the case in (87), where the PP is adjoined to the frame and not generated in the object position. Here, both DPs are conceptually interpreted as agents. These role interpretations cannot be derived from the lexical items themselves, since these are the same in (86) and (87). Åfarli (2007) therefore sees this as an indication that the frame implies certain interpretations of the inserted arguments.

More specifically, he assumes that each argument position determines an abstract *proto-role*.[92] Thus, the subject position in [spec,PrP] denotes an agent proto-role; the position of the indirect object in [spec,VP] denotes a beneficent/goal, and the direct object position in the complement of V denotes a patient-like role:

(88)



Hence, instead of being assigned theta roles by the verb, the nodes in the VP and PrP give rise to canonical role interpretations which are assigned to the inserted lexical elements. Crucially, these abstract roles do not have their roots in lexical verbal concepts.

In light of the hypothesis of canonical roles, it seems plausible that Åfarli's five syntactic frames correspond to five different canonical situations or schematic situation types. A related view is expressed by Goldberg (1995), who argues that argument structure

[92] This argument is also made explicitly by Dowty (1989, 1991), although not tied to syntactic positions. For my analysis, the linking between proto-role and syntactic position is crucial.

constructions designate scenes which are basic to human experience. Goldberg (1995: 39) calls this the Scene Encoding Hypothesis: "Constructions which correspond to basic sentence types encode as their central senses event types that are basic to human experience." Hence, what is expressed in the five structural frames is different types of fossilized situation templates. The grammar model I propose is thus clearly anchored in a neo-constructional approach, where a central idea is that syntactic constructions in a language carry meaning independently of the lexical words.

Brøseth (2007) points to so-called non-sense verbs as empirical support for this view:

(89) Hege snabret Lars.
'Hege *snabered* Lars.'

(90) Lars snabret Tonje Henrik.
'Hege *snabered* Tonje Henrik.'

(91) Henrik snabret.
'Henrik *snabered*.'

The verb *snabre* has no established meaning in Norwegian; it is a made-up verb. Yet, Brøseth (2007) argues that a certain meaning still arises from the verb in these sentences. From this she concludes that the structural positions of the verbs are bearers of a specific meaning, since it appears that, despite the absence of inherent lexical meaning in the verb, the arguments of such non-sense verbs still bear certain meanings. Brøseth (2007) then assumes that this meaning is equal to the canonical role interpretation of the syntactic position.

3.6.6.3 Proto-roles of subject and object

The general view is thus that the lexical items are assigned a role from the position into which they are inserted.[93] Yet, there are cases where the analysis of the correspondence between the thematic properties of a certain syntactic position and the properties of the inserted argument appear to raise problems. Occasionally, it seems that different constituents may occupy the same position, but still exhibit different roles. In (92), the subject is clearly agentive, whereas this cannot be the case the subject in (93):

[93] See also Baker (1997) for a similar claim.

(92) Johan knuste vasen.
Johan broke vase-the
'Johan broke the vase.'

(93) Steinen knuste vasen.
rock-the broke vase-the
'The rock broke the vase.'

From these examples, it appears that the notion of agent is too specific. Not all subjects are agentive. Still, there is indeed a structural asymmetry between the subject and the object positions, and this asymmetry is mirrored on the semantic side, given that syntax and G-semantics stand in a homomorphic relation. I propose that the structural positions do not contain specific thematic roles, but rather abstract proto-roles. These proto-roles associated with the syntactic nodes must be more abstract and less specific than assumed in Åfarli (2007). If a less rigid interpretation of the proto-roles is adopted, the variation in thematic roles can be accounted for.

The proto-roles are thus highly abstract and underspecified, and they are dependent on the conceptual semantic content of the inserted lexical verb and arguments in order to be fully specified as more concrete roles. The inserted lexical items *enrich* the structural frame with conceptual semantic content. Thus, for the examples in (92)-(93), rather than claiming that one of them is agentive and the other is not, I will argue that both subjects share the same abstract proto-role, which I will label cause. The difference in interpretation is due to the conceptual enrichment which occurs when the lexical items are inserted. If the verb implies an agent role, then the subject will be agentive. If it implies a recipient role, the subject will be interpreted as receptive. Each position thus contains a potential proto-role, which is further specified by the conceptual content of the inserted lexical verb, as well as the content of the inserted DP.[94] Note that this enrichment process is assumed to be part of S-semantics (in

[94] The same argument is assumed to apply also to direct and indirect objects. Direct objects can be realized as patients or as themes, and indeed, not all scholars believe that there is a difference between these two. Indirect objects may appear as an experiencer, a recipient or a goal. In the enrichment process, this abstract semantic role then interplays with the semantic content of the inserted verb and DP in order to further specify the thematic role of the indirect object.

Bouchard's terms), and not the G-semantic content of the syntactic structure. Otherwise, the analysis would not be as restrictive as is desirable.[95]

It is this process of conceptual *enrichment* which explains the fact that we may get seemingly different role interpretations for elements situated in the same syntactic node. Again, applying Bouchard's (1995) terminology, I will argue that UTAH governs the G-semantic content of syntax, and not the S-semantic content. The conceptual S-semantics enter to enrich the abstract G-semantic interpretation of the structural frame. Importantly, lexical insertion is understood as one such type of S-semantic enrichment.

Moreover, if thematic relations are assumed to be properties of the frames themselves, as in an exoskeletal approach, and not properties derived from the verb, then one should expect that a particular slot would always assign the same thematic proto-role to the inserted argument. The fact that the thematic roles associated with syntactic nodes are subject to some variation thus represents a potential challenge to the exoskeletal framework. The assumption that different thematic properties could be related to the same position would be a violation of Baker's UTAH. If one is committed to following UTAH strictly, one could argue that the subjects did originate in the same structural position in the D-structure. However, note that there is no motivation for assuming different structural positions for these subjects other than the difference in interpretation. Hence, the argumentation has a certain circular flavour to it.

I will keep the fundamental insight of UTAH, arguing that each syntactic node may house only one thematic proto-role. However, I will argue that UTAH restricts syntax on a highly abstract level, i.e., the roles in the syntactic nodes are abstractly defined. They are proto-roles rather than specific thematic roles.

An apparent challenge for the proto-role hypothesis is the occurrence of expletive subjects:

(94) Det blåser på fjellet.
it blows on mountain-the
'It is windy in the mountains.'

An expletive cannot have agentive properties, as it can hardly have any semantic property at all, and neither can the subject of a copula verb be agentive. The problem is that in the model

[95] By stating that enrichment is S-semantic, one also obtains the desirable consequence that the G-semantic syntax remains compositional. If the conceptual enrichment process was included in the narrow syntactic derivation, the system would no longer be compositional.

of clause structure that I have put forth, both expletive and referential subjects are generated in the same position, namely [spec,PrP], and following Åfarli's (2007) proposal, there is a canonical agent proto-role anchored to this position. In the case of expletive subjects and subjects of copula verbs, the proto-role seems to have disappeared.

On the semantic side, the predicate generally ascribes a property to an entity, i.e., to the subject. Yet, in an expletive construction, the subject does not denote an entity. In this case, the aboutness relation which is usually established between the subject entity and the predicate is not mirrored in the semantics, since the expletive subject is semantically null.

Still, I will argue that the analysis I have proposed can account for examples with expletive subjects. We have seen that proto-roles are present in the G-semantic syntax, and that lexical insertion enriches this syntactic frame. In the case of expletives, however, this enrichment seems to imply a perceived cancellation of the role. Another way to think of this is that the inserted constituent is not capable of filling and enriching the proto-role.

One might argue that the possibility for 'cancelling' a proto-role leads to non-compositionality in the derivational system. I will adopt Åfarli & Eide's (2000, 2001) analysis on this point. They propose that the entity in the subject position is by definition *pro forma*, and that it is enriched by the inserted element. When an expletive subject is inserted, this subject is a non-entity. Yet, its function is to be a necessary placeholder required by the predicate in order to create a proposition. This entails that the expletive subject is the bearer of certain G-semantic content, namely the ability to create a proposition together with the predicate. Åfarli & Eide's (2000) idea is thus that the predication operator is a proposition-builder, and that this builder is operative independently of whether the clause has a semantic subject or not.

By assuming that the subject position, the indirect object position and the direct object position all contain potential proto-roles, I will argue that they are G-semantically motivated. With respect to the G-semantic content of the V node, I will assume that it denotes something proto-verbal, which mediates between and ties together the different arguments in the DP positions. Crucially, this node is also subject to semantic enrichment as a consequence the insertion of a selected lexical verb. Pointing back to Goldberg's (1995) idea of argument structure displaying fossilized situation types, it could be argued that each of Åfarli's (2007) syntactic frames contains a separate kind of proto-verb, each projecting one frame type. This would entail that there is one proto-verb for intransitive sentences, one for transitive and

ditransitive frames, as well as for simple and ditransitive resultative frames. I will not dwell on this issue, since it is not crucial to my analysis.[96]

Expletive subjects are also found in passive constructions, as well as cases where the subject position is filled through movement of an internal argument. Can the idea that the subject position has a potential proto-role be maintained for these cases? The issue of passive construction within a non-lexicalist approach is discussed in Åfarli (2006), who proposes an exoskeletal analysis.

To sum up, the analysis I have proposed keeps the fundamental insight from neo-constructional approaches, namely that lexical items are inserted late in the derivation. I also adopt the overall view expressed by Åfarli (2007), that the syntactic frames are defining the role interpretation of the inserted elements. The assignment of thematic roles is guided by the syntactic frame and the specific node into which the lexical item is inserted. I have shown that the role specification of an argument is determined through a combination of the G-semantic content of the syntactic position and the conceptual, encyclopaedic semantics of the inserted lexical item. Whereas Åfarli proposes that the proto-roles are quite specific, I will instead assume that they are more abstract and less specified. This is why I call them *potential proto-roles*. My hypothesis is that the exact specification of the thematic role happens through an enrichment process when the lexical elements are inserted into their respective positions. Each lexical item carries with it some semantic content, which interacts with the proto-semantic information encapsulated into the structural frame. Thus, through this enrichment process, the proto-role goes from being an abstract potential to being either more specified or, in some cases, cancelled.

3.6.7 The ontology of lexical semantics

The influence of lexical elements on syntax is severely limited in neo-constructionist models of grammar. Instead of constituting the building blocks of syntactic structure, lexical items are inserted into abstract structural templates, where they contribute to the enrichment of the structural frame. A question which then arises is how the lexicon should be defined. I have introduced earlier a distinction between two types of lexica: one purely linguistic lexicon consisting of G-semantic items, which may be merged in syntax, and the other containing

[96] One could also envision that, parallel to the remaining projections, VP also contains an operator, i.e., that the proto-verb takes the form of an operator. This is a theoretical possibility, but I will leave it open, because assuming it or not will not have any theoretical significance for my analysis.

encyclopaedic, conceptual, S-semantic elements, which may be inserted into this structure. The G-semantic lexicon has been explored throughout this chapter, when I have defined a G-semantic core of each projection. More relevant at this point is the encyclopaedic lexicon. How is it best characterized, and what influence do the conceptual lexical items have once they are inserted into the syntactic structure?

Borer (2003) proposes to move large parts of the traditional lexicon into an encyclopedia, which is constituted of so-called EIs – Encyclopedic Items. These items have no category or argument structure. Quite to the contrary, the category and argument structure are defined when the EIs are inserted into syntactic structure. Thus, Borer's lexicon is a true interface with the conceptual system. In a parallel manner, Åfarli (2007: 14) assumes that lexical semantics from a strictly grammatical viewpoint can be characterized as a "structureless amorphous mass", which is given its form once it is inserted into a syntactic frame. Gleitmann (1990: 23) illustrates this with the metaphor of a mental zoom: "the syntax acts as a kind of mental zoom lens for fixing on just the interpretation, among [all the] possible ones, that the speaker is expressing." The five structural frames of Norwegian can fruitfully be interpreted as different settings of Gleitmann's zoom (Åfarli 2007). Hence, lexical and structural meaning combine and form an integrated meaning representation: "In that way, the semantics of the frame (canonical roles) will interact with the inherent semantics of the verb and the arguments that are inserted into the frame" (Åfarli 2007: 15). As mentioned, lexical insertion can be seen as a process of semantic enrichment.

In endoskeletal models, lexical categories are morphological in nature, since they are fully specified before projecting into syntax. The syntactic possibilities of the lexical elements are thus to a large extent defined by their inflection, as manifested in Chomsky's (1970) Lexicalist Hypothesis. Contrary to this, neo-constructional theories launch the idea that categorical identity is defined by the syntax: "The category of the phrase as a whole is then determined by that of the functional category that it is the complement of" (Baker 2003: 266).

Categorization is thus seen as a top-down phenomenon, again contrary to the view in endoskeletal models, where the perspective is bottom-up (Baker 2003: 267). Such a view can easily be reconciled with the proposals of both Borer (2003) and Åfarli (2007), who emphasize the lexical items' close interface with general conceptual structure, S-semantics in Bouchard's framework, and also the idea that syntax gives form to the structureless lexical items or EIs.

Åfarli (2007) refers to Fodor (1998) and Fodor & Lepore (2002) as support for his view on lexical semantics, since lexical meaning is here assumed to be indistinguishable from general encyclopaedic knowledge:

> I, for my part, would rather like to suggest that the lexical elements are tags that we place on segments of our conceptions of the world. The point is that those segments are heterogeneous, fuzzy and holistic, and that a "lexical semantics" that tries to define the semantics of a word, will end trying to define our conceptions of the world, simply because there is no well-defined (or natural) dividing line between the holistic meaning of the word and a putative lexical semantic meaning (Åfarli 2007: 15).

Hence, when Jackendoff claims that semantics consists of a unitary mass of conceptual structure, including background knowledge and situational information, and in which there is no distinction between grammatically relevant and non-relevant information, I will assume that he is right with respect to lexical semantics. Lexical semantics is holistic and in a certain respect non-linguistic, since the lexemes can be seen as tags placed on parts of our conception of the world. However, I still maintain that Jackendoff is on the wrong track when it comes to structural semantics. The problem in traditional endoskeletal approaches is that the lexical semantics slides into structural semantics when lexical items project into syntax and when syntactic argument structure is assumed to be incorporated into lexical verbs. Hence, I believe that a distinction between lexical and structural semantics should undoubtedly be maintained. Applying Bouchard's terminology, lexical semantics have an S-semantic nature, as opposed to the G-semantic nature of the structural frame.

3.7 Conclusion

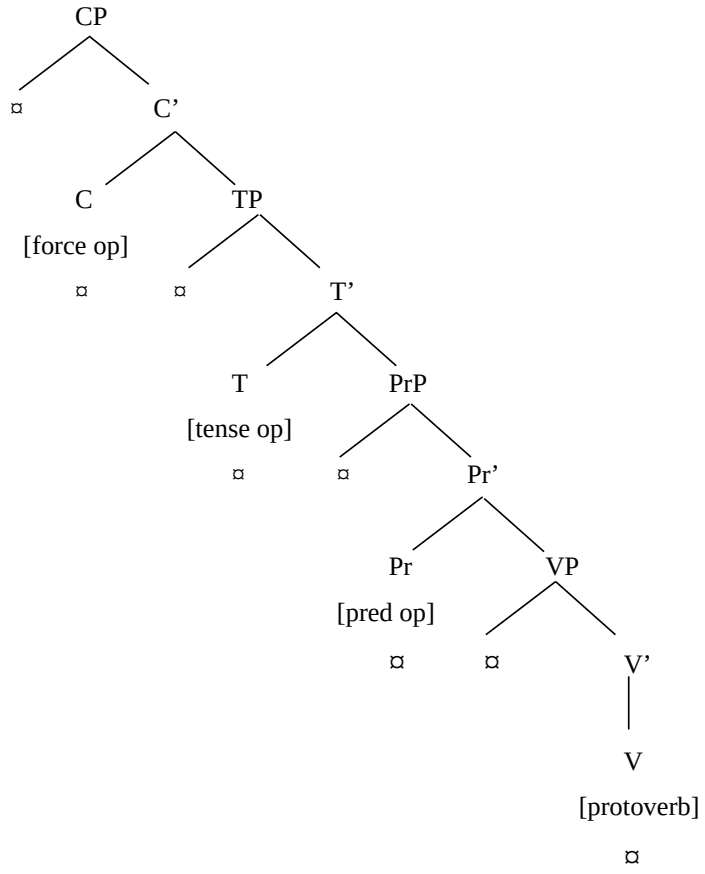
In this chapter, I have argued that syntax stands in a homomorphic relation to semantics, though not globally. Rather, following Bouchard (1995), I have argued for a distinction between situational S-semantics and grammatically relevant G-semantics. Syntax is argued to bear meaning, and to be the formal expression of G-semantics. This was expressed in the principle of Full Identification (1995). Yet, I showed that this principle turned out to be too strict. I therefore, following Åfarli (2001), proposed a weak interpretation of it, implying that a morpho-syntactic element must have G-semantic content, but that it does not have to be phonologically instantiated.

In the continuation of this discussion, I argued in favour of a separationist or exoskeletal view of clause structure, assuming that syntactic structure is abstract, and that it is generated independently of lexical insertion. Lexical items are inserted late.

Given that syntax is assumed to be G-semantic in nature, I have argued for a G-semantic core of each main projection in the clause structure, including both the structural and the lexical domain. CP is projected from an illocutionary force operator, TP from a tense operator and Prp from a predication operator. As for VP, I have proposed that each argument position hosts a potential proto-role, which is further specified by the conceptual content of the inserted verb and the inserted argument itself. The head V is assumed to contain an abstract proto-verb, of which there are 5 main types in Norwegian, giving rise to five alternative frames or templates (Åfarli 2007).

The overall representational template for clause structure which I assume is displayed below. We have seen that there are five different possible argument structure frames in Norwegian. The template below displays a transitive frame:

(95)



Lexical items are inserted into the structural frames. These items are inherently unstructured, and they have no category specification. By means of being inserted, they are structurally shaped. Following Fodor (1998), Fodor & Lepore (2002) and Åfarli (2007), I have stated that lexical semantics is identical to encyclopaedic knowledge. In Bouchard's terms, lexical semantics is categorized as S-semantics. I have further argued that there are two subtypes of lexica: one purely linguistic and G-semantic, and one non-linguistic and encyclopaedic. Elements from the former are merged into syntactic structure. Elements from the latter are inserted into syntactic positions, thereby being linguistically shaped. This shows that there is a clear parallel between lexical insertion and pragmatic enrichment, as found in cases of discourse ellipses, where encyclopaedic, contextual information, though it is without sound, fills the gap which would otherwise occur.

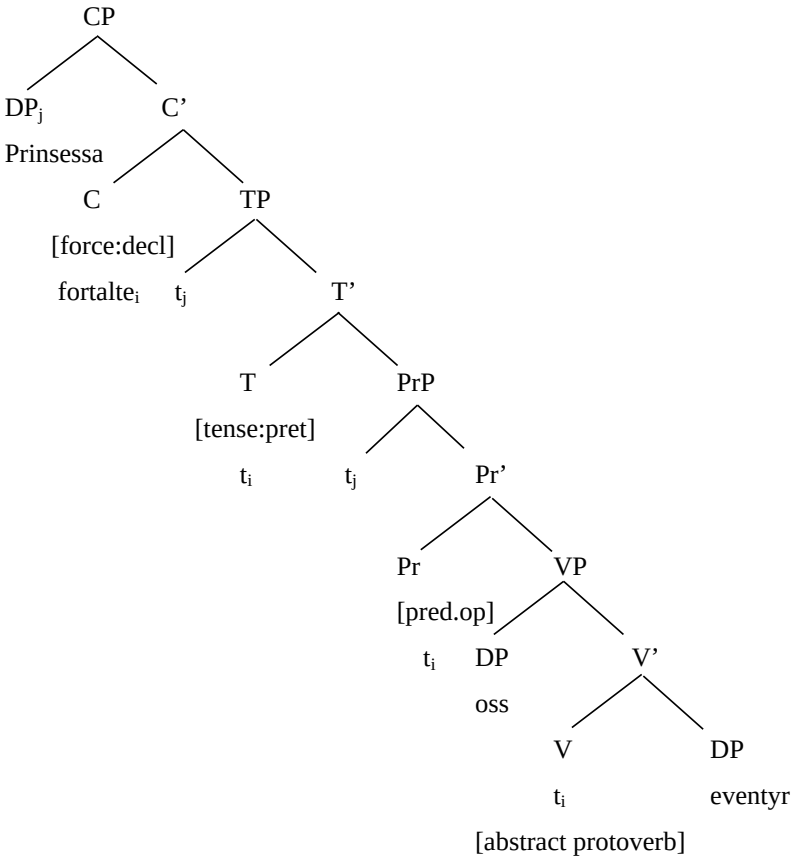
To account for insertion, I have proposed that each syntactic terminal position contains an open slot (¤). These slots may be filled in two ways, either through direct lexical insertion or through movement. This implies that insertion (i.e., External Merge) and movement (Internal Merge) are parallel operations, which is a generally assumed idea within the Minimalist Program. Yet, in case of ellipsis, the slot is not filled at all. The implication of this is that ellipsis is no longer a case of deletion. It is rather a case of non-instantiation.

For purposes of illustration, I include below the presumed representation of the following sentence of the ditransitive frame type (Åfarli 2007):[97]

(96) Prinsessa fortalte oss eventyr.
'The princess told us fairytales.'

[97] This syntactic representation displays the analysis as it has been discussed in this chapter. The content of the structure will be further discussed in the next chapter.

(97)



The analytical model proposed in this chapter is not developed with a particular focus on discourse ellipses. Rather, my aim has been to propose a general model for sentence structure, and to sort out the relation between syntax and semantics. Clearly, this is relevant for ellipses, since it appear that in ellipses, this relation is somehow distorted. There is meaning without form. Hence, even though the model outlined so far is not specific to ellipses, it lays the groundwork for an analysis of this phenomenon. I believe that it is a strength that the model aims to be as general as possible at this point. An analytical model which could only account for one type of linguistic phenomenon would have less explanatory power.

In the next chapter, I will build upon the foundations which have now been presented, when I propose an analysis of discourse ellipses in Norwegian. The analysis will have two main purposes. Firstly, I will discuss the structure question: is there structure in the ellipsis site, and if so, what does this structure contain? Secondly, I investigate semantic and structural licensing restrictions on discourse ellipses. The interplay between syntactic requirements on the one hand and contextual prominence and semantic identity conditions on the other will then constitute important guidelines.

4 Analysis of discourse ellipses

We have now defined a general model of sentence structure, where each projection is motivated abstractly from a G-semantic element. The model sketched up until now is not designed specifically to account for elliptical constructions; it is intended to account for all kinds of sentences. In this chapter, I return to discourse ellipses. My overall goal is to provide an analysis of this phenomenon. This goal is, as I see it, twofold, and this is also reflected in the structure of the chapter. In the first part, sections 4.1 – 4.3, I discuss *the structure question*: what is the structure of discourse ellipses? In the second part of the chapter, sections 4.4 – 4.8, I turn to the issue of licensing restrictions on discourse ellipses. The questions investigated in the second part are as follows: why is this phenomenon possible at all, which elements can and cannot be silent, and under what circumstances?

4.1 Structure in discourse ellipses

One question which needs to be addressed is what it implies to characterize something as a case of ellipsis. Implied in the term is the assumption that something is missing, but in which way? Has the syntactic structure been truncated, such that the implicit elements are present only conceptually, and not structurally? Or is there a silent structure underneath the ellipses? If there is such a silent structure, what does it contain? In what follows, I will present three alternative responses to these questions, and I will show that only one of them is consistent with the model developed in chapter 3.

A first alternative is to assume that the underlying structure is present, but that it is without any content. If all information about features is assumed to be incorporated into the lexical items, the consequence is that when a lexical item is omitted or not inserted, no featural information enters the syntax. This alternative bears certain similarities to the old theory of phrase structure rules, where the rules first generated a syntactic structure into which lexical items were later inserted. However, after Stowell's (1981) critique of phrase structure rules, the idea that every projection had to be projected from a head became influential. In other words, all phrases must be endocentric. A completely bare structure is not possible, given that a projection must project from something. This view is now integrated in the conception of the operation Merge, which applies only if a local asymmetric grammatical

relation can arise between the two elements merged. Such a relation is only possible if the elements have content. If the nodes are completely empty, no grammatical relation will be possible.

A second alternative is to assume that there is no structure underlying the ellipses. Under such a view, the elided items would not be structurally present at all. The syntactic structure would be truncated. An immediate argument against such a proposal is that despite not being instantiated, the elided items tend to be syntactically active, which is obvious inasmuch as they display connectivity effects. Such effects occur when one part of the clause shows a connection to another part, and of course the cases that are of interest here are cases where one of these parts is subject to ellipsis. As will be illustrated shortly, these elided elements can enter into binding and agreement relations, indicating that they are present on some syntactic level, despite having no phonological realization.

Interestingly, Haegeman & Guéron (1999) suggest a truncation analysis for abbreviated registers in English. However, rather than claiming that the elided element is truncated from the syntax, they propose a missing C-projection for sentences with initial subject drop. They point to the fact that in these abbreviated registers, null subjects can only occur in a restricted set of environments. Null subjects are not permitted in embedded clauses, root interrogatives, embedded interrogatives, or sentences with topicalized arguments or with topicalized predicates. In short, they are excluded if the CP layer is filled by an overt element (Haegeman & Guéron 1999: 622). From this they conclude that non-overt subjects generated in [spec,IP][1] must be the leftmost elements in the structure. Note, however, that a truncation analysis like this one might be more plausible for English than for Norwegian, since English, as opposed to Norwegian, is a non-V2 language. I will argue against a truncated CP-analysis, at least for Norwegian.[2]

It is a common assumption that all non-overt elements must be identified. This is formulated as the Empty Category Principle (Chomsky 1981a, 1986b), which is postulated as a universal constraint on the distribution of non-overt elements, following from Full Interpretation (Haegeman & Guéron 1999: 622):

[1] Haegeman & Guéron (1999) apply the term IP. I will, however, apply the term TP for this projection.
[2] Whether or not a truncated CP-analysis would be correct for English is beyond the focus of this dissertation.

The Principle of Full Interpretation: [3]
LF should only contain elements that are legitimate at that level, i.e., elements which contribute to the semantic interpretation.

ECP:
Non-overt elements must be identified.

As seen in chapter 2, in pro-drop languages, pro subjects are assumed to be identified through rich verbal inflection, and traces of movement are identified through their antecedents. However, the null subjects in the abbreviated registers seem to contradict the ECP, because apparently they are not identified at all. Consequently, they should be ruled out. But, evidently, they are not. Since there is no antecedent in ellipses which can identify the elided element, because there are no lexical elements higher up in the structure, it seems that the traditional ECP needs to be modified. Haegeman & Guéron (1999: 622) therefore refer to Rizzi's (1994) modified version of the ECP:

Modified version of the ECP:
Non-overt elements must be identified if they can be.

Let's briefly consider the licensing of traces in order to understand this modification. Traces are identified by a co-indexed c-commanding antecedent. As long as there is such a c-commanding position hosting an antecedent for the trace, the trace can potentially be identified. Then, following both versions of the ECP, the trace *must* be identified. However, the modified version of the ECP loosens the restrictions slightly, allowing certain instances of traces to remain unidentified:

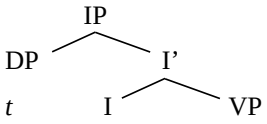
> The reformulation of the identification constraint allows traces to occur in one position without being identified by an antecedent: the one exempted position is the highest position in the clause. If we could generate clauses without the CP layer and which have a trace in their subject position, such traces could escape the identification requirement (Haegeman & Guéron 1999: 622-623).

The idea is that sentences with non-overt subjects in abbreviated registers do not have a CP layer at all. Consequently, the subject trace in [spec,IP] is not identified, which would be ruled out by the original ECP but is permitted by the modified version, on the assumption that it is not possible for the subject trace to be identified if there is no CP layer to house the

[3] The principle of Full Interpretation was first proposed in Chomsky (1986a). This formulation of the principle is taken from Haegeman (1994: 539).

antecedent. Since there is no position above the I-domain which can identify the elided item in [spec,IP], this empty category escapes the identification requirement.[4]

(1)



The claim is thus that in these abbreviated registers, a root sentence need not obligatorily project a full CP, but rather can be truncated or cut down to a bare IP. A question which immediately emerges is why this should be so, since in other variants of English all sentences obligatorily expand to a full CP-structure, CP being the interface between the sentence and the discourse.[5] Why is it that this requirement can be overruled in abbreviated registers? The suggested answer is that in such registers, economy prevails. Hence, the requirement that structure should be minimal ranks higher than the requirement that the root CP be projected (Haegeman & Guéron 1999: 624). To assure that these bare IPs are appropriately integrated into discourse, it is proposed that this happens through some direct procedure, instead of being mediated by the CP layer. A parallel is drawn with the distinction between anaphoric and indexical readings of pronouns, the claim being that when bare IPs are used as root clauses, the discourse connection is established indexically rather than anaphorically.

However, I will reject this analytical possibility. Firstly, the argumentation appears to be circular. The hypothesis is that if the ECP is modified, clauses can be truncated and have no CP layer. On the other hand, if a truncated structure is assumed, this is explained by the modified version of the ECP. Secondly, the distributional patterns of sentence adverbials in main clause subject ellipses in Norwegian display empirical evidence against Haegeman & Guéron's analysis (Nygård 2004, Nygård, Eide & Åfarli 2008), at least for V2 languages:

[4] Structure from Haegeman & Guéron (1999: 623).
[5] Note that some scholars (e.g., Chomsky 1986: 48-52) have assumed a truncated CP in sentences like *Who came?* and *Who likes John?*, i.e., sentences in which the wh-element is the subject. The reason for this assumption is that the movement to a position in CP would not alter the distribution of items in any case: the movement is vacuous and has no visible effect.

(2) Jeg hadde ikke så veldig mye venner.
I had not so very many friends

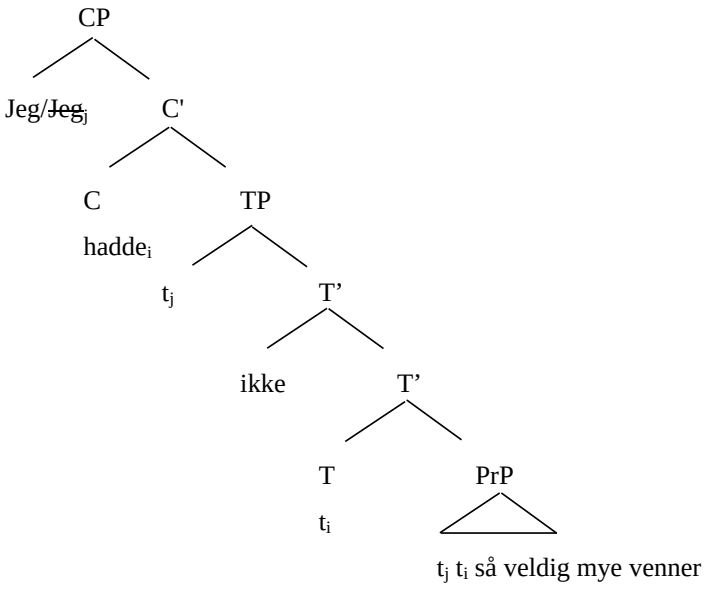
(3) … at jeg ikke hadde så veldig mye venner.
that I not had so very many friends

(4) ~~Jeg~~ hadde ikke så veldig mye venner. NoTa
~~I~~ had not so very many friends

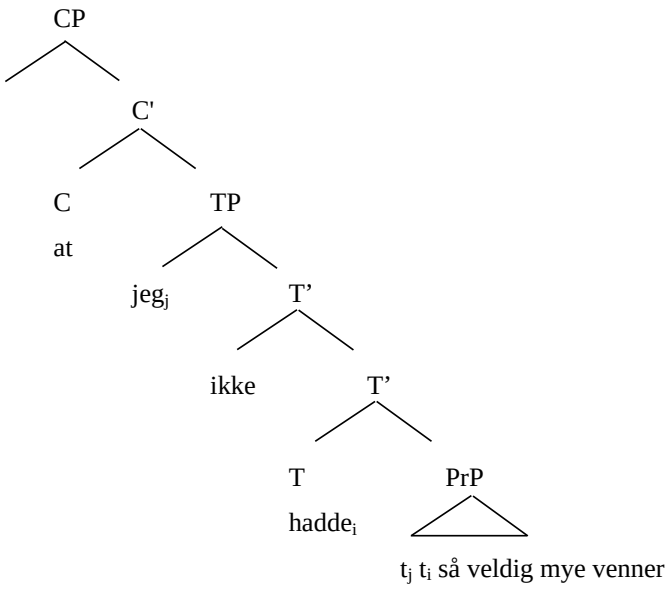
(5) * ~~Jeg~~ ikke hadde så veldig mye venner.
~~I~~ not had so very many friends

In Norwegian, being a V2 language, the finite verb moves to C in main clauses (2), across the sentence adverbial *ikke* 'not', which presumably is adjoined to T'. This is contrary to what happens in subordinate clauses (3), where C is filled by the complementizer. The difference is displayed in the structures in (6) and (7):

(6)



(7)

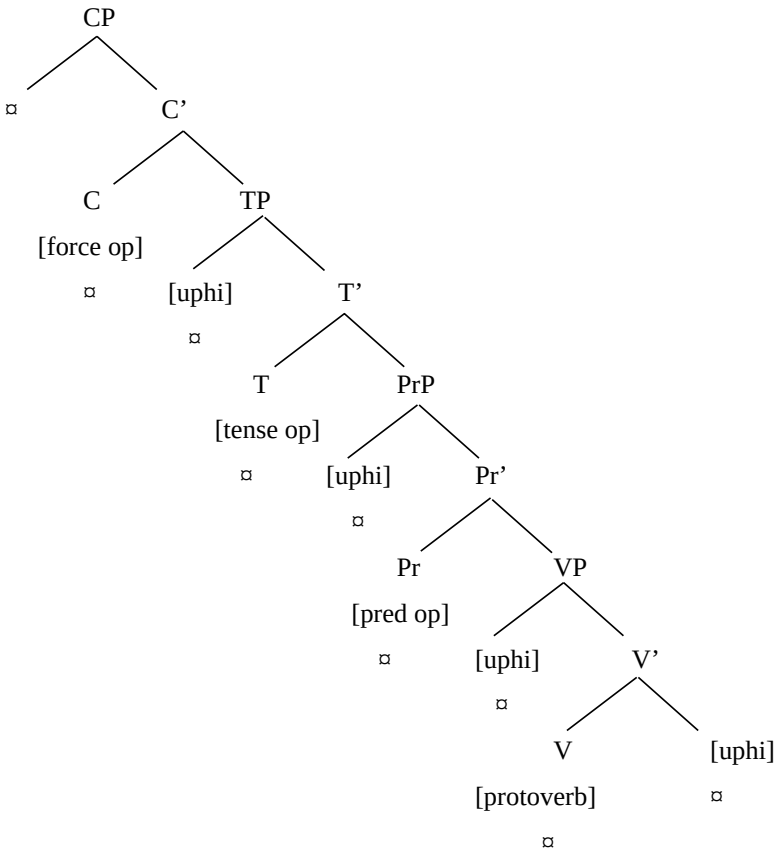


Importantly, the word order difference between main and subordinate clauses is explained by the presence versus absence of verb movement. If we were to adopt a truncated structure analysis, with no CP layer, we would have no way of explaining why the sentence in (5) is not acceptable and why the word order in ellipses must be as in (4). In a truncated structure, there would be no C-position for the finite verb to move into in main clauses like (4), and the obligatory word order would not be predicted. Moreover, a truncated CP analysis would not yield a uniform analysis of V2. However, if we assume a full sentence structure with a CP layer also for the ellipses, all of this follows naturally. Consequently, I reject the truncated structure analysis.

Hence, both alternative analyses – a truncated CP and a CP devoid of content – are rejected. On the basis of this insight, I argue for a third alternative, namely that syntactic structure is present in the ellipsis site, and that grammatical features are present despite the lack of lexical material. Hence, the structure contains formal grammatical features independently of the insertion of lexical items. Moreover, as argued in earlier chapters, I will also assume that the functional part of syntactic structure contains abstract operators in each projection. As seen in chapter 3, PrP contains a predication operator which takes any property (a lexical XP) and forms a proposition. The tense operator in T takes this sentence radical and yields a tensed proposition. Finally, CP contains a speech act operator which contributes illocutionary force to the proposition.

The first example structure below (8) shows the assumed syntactic structure before lexical insertion, and the second one (9) displays a sentence with a silent subject. Note that in the first structure, the phi-features are not valued ([uphi]), whereas in the second structure, the phi-feature sets are valued. I will discuss this valuation process in more detail in what follows.

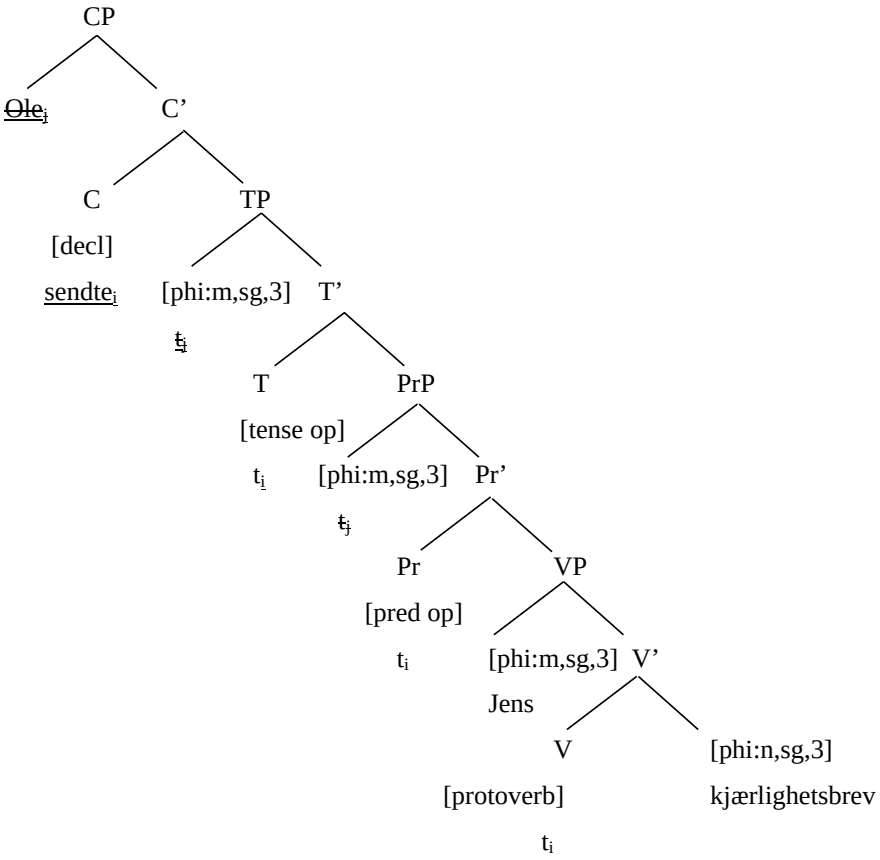
(8)



uphi = unvalued phi-feature

¤ = slot for insertion

(9)



(10) ~~Ole~~ sendte Jens kjærlighetsbrev.
'~~Ole~~ sent Jens love letters.'

In arguing for this analysis, I will limit myself to the treatment of phi-features (gender, number, person), because it is not the main goal here to give a complete analysis for all kinds of features, but rather to present and argue for a plausible line of thought.

In the next section, I will first outline why silent heads in ellipses probably contain phi-features, before I outline the theory of agreement as it is assumed in recent versions of the Minimalist Program. Thereafter I discuss some examples which appear to challenge the minimalist view of agreement, namely cases of semantic agreement. In turn, this discussion will clarify certain issues related to the analysis of discourse ellipses. Towards the end of this

chapter I propose an analysis which can be applied both to cases of semantic agreement and also to agreement in discourse ellipses.

4.2 Agreement and valuation of phi-features

4.2.1 Agreement in discourse ellipses: connectivity effects

There are several reasons to believe that lexically empty nodes can contain grammatical phi-features. Firstly, subject ellipses can contain anaphors, which need to be bound and thereby c-commanded by an antecedent with specific phi-features, triggering agreement on the anaphor. This is illustrated in the following examples:

(11) ~~Han/Hun/De~~ tok med seg sånn albinopytonslange. NoTa
~~he/she/they~~ took with self$_{REFL}$ such albino pyton snake
'He/She/They brought such an albino pyton snake.'

(12) ~~Han~~ trenger ikke å bestemme seg enda. NDC
~~he~~ needs not to decide self$_{REFL}$ yet
'He doesn't need to decide yet.'

(13) Det var tjuefem som søkte og de sa at det var tjuefem plasser, så ~~det~~ sier seg selv.
it was twentyfive which applied and they said that it was twentyfive positions so ~~it~~ says itself$_{REFL}$
'There were twenty-five applicants and they said that there were twenty-five positions, so it's quite obvious.' NoTa

In both (11) and (12), the anaphor *seg* 'self' is 3rd person (either singular or plural), yet there is no visible subject to bind it. The same goes for the anaphor *seg selv* 'itself' in (13). As is well known, anaphoric elements such as *seg* 'self' require an antecedent in order to be well-formed. An unbound anaphor is illicit, as Binding Principle A states: An anaphor must be bound in its governing category (Chomsky 1981a, Haegeman 1994). Thus, even when the subject is missing, the number and person features on the subject must still be present in order to ensure the right agreement morphology on the anaphor. These data indicate that it is not

necessarily the morphologically visible features or affixes of the lexical item which determine agreement.[6]

A well-known example type illustrating this point is the case of Romance pro drop (Haegeman 1994: 450), as shown in the Italian examples in (14)-(15). In (14), the auxiliary has 3rd person singular morphological inflection, and in (15) it has 1st person singular, despite there being no visible subject to agree with:

(14) _ Ha parlato.
Has (3sg) spoken.

(15) _ Ho telefonato.
Have (1sg) telephoned.

It must be pointed out that the idea that these data demonstrate the existence of an underlying, syntactically active subject rests on the common theoretical assumption that it is the verb which agrees with the subject and not the other way around. More specifically, it is widely assumed that agreement morphology on arguments is inherent, while agreement morphology on the verb is not inherent. Rather, the verb receives its morphological features from the argument with which it agrees.

Another group of data supporting the same hypothesis comes from subject ellipses which display agreement morphology on the finite verb. In the examples below, the verb appears to agree in person and number with an invisible subject. (16)-(18) show examples of diary drop from the French translation of *Bridget Jones' Diary* (Fielding 1998)[7], here taken from Haegeman & Ihsane (2001, the glossing and translation of the examples are also theirs). In all the examples below, the verbs *rappelle*, *suis* and *ai*, as well as the reflexive pronoun, are in 1st person singular. This indicates that there must be an underlying structure containing a non-instantiated subject which can enter into an agreement relation with these elements:

[6] Note that not everyone would agree that *seg* 'self' in (11-12) is an anaphor, contrary to *seg selv* 'itself' in (13). Some would argue that *seg* is in these cases rather a reflexive particle, since it does not have argument status and does not realize a theta role. *Seg selv* 'itself', on the other hand, does have argument status. For a more elaborate discussion of anaphors in Norwegian, see Hellan (1988). For my purposes here, the distinction between true anaphors and reflexive particles is not crucial. What is relevant is the fact that both *seg* and *seg selv* are required to be bound and to corefer with a subject, and that this forces the assumption of a silent subject in discourse ellipses.

[7] The French translation was provided by Arlette Stroumza.

(16) Ø me rappelle tout à coup que Ø portais jupe noire Lycra dernière fois.
me remember suddenly that wore skirt black Lycra last time
'I suddenly remember that I was wearing the black Lycra skirt the last time.'

(17) En cherchant le lait Ø me suis aperçue qu'Ø ai laissé filet
while looking (for) the milk myself am become-aware that have left basket
'While looking for the milk I realize that I have left the basket behind.'

(18) Ø suis tellement énervée que Ø me suis assise sur la télécommande.
am so nervous that me am seated on remote control
'I am so nervous that I have just sat down on the remote control.'

Naturally, none of the examples in (16)-(18) can be reproduced in Norwegian, since this language lacks visible subject–verb agreement. There are, however, Norwegian predicative adjectives which agree with omitted subjects, as in (19)-(21). The examples are here taken from headlines, since I was not able to access any examples of this type from spoken corpora:[8]

(19) Slitne etter ferien.[9]
tired (3 pl) after holiday-the
'Tired after the holiday.'

(20) Sultne på Sultan-madrass.[10]
hungry (3 pl) for Sultan mattress
'Eager to get a Sultan mattress.'

(21) Fornøyde etter det første sofastuntet.[11]
content (3 pl) after the first sofa stunt
'Content after the first sofa stunt.'

In all of these examples, the predicative adjectives are morphologically plural, thus pointing back to a phonologically unrealized subject antecedent.

[8] Note that in certain dialects, there may not be a pronunciation difference between the singular and the plural form in the spoken register, i.e., *sliten* 'tired', *sulten* 'hungry' and *fornøyd* 'content' would in some dialects be both the singular and the plural form. Hence, the singular-plural distinction is more easily accessed in written registers.

[9] http://www.aftenposten.no/nyheter/oslo/article1911723.ece, 30.07.2007

[10] Aftenposten Økonomi 8.1.2005

[11] http://laagendalsposten.no/nyheter/fornoyde-etter-det-forste-sofastuntet-1.6614373, 17.11.2011

All these data demonstrate the necessity of assuming that there are underlying phi-features in the syntactic nodes in subject ellipses, despite the lack of lexical insertion. It is hard to see how one could otherwise explain the agreement patterns. I therefore conclude that the syntactic nodes in such ellipses are not radically empty, but rather that they contain a collection of grammatical phi-features which can trigger agreement on other elements in the sentence, such as the finite verb or a predicative adjective. Adopting this argument does of course entail certain consequences for the overall view of phi-features and the general agreement operation, which will be explored in the next section.

4.2.2 Generally on the checking by valuation approach

Since silent elements clearly appear to enter into agreement relations with non-silent elements, it is important to define how this syntactic agreement process is best characterized. A central notion within the Minimalist Program is the notion of features. Adger (2003: 24) defines the term as follows:

> A morphosyntactic feature is a property of words that the syntax is sensitive to and which may determine the particular shape that a word has. Features seem to be the core elements of languages that relate sound and meaning.

A distinction is drawn between interpretable features, which play a role in semantic interpretation, and uninterpretable features, which play no role in semantic interpretation. Hornstein et al. (2005: 291-292) give the following examples to illustrate this difference. The Portuguese DPs in (22)-(25) exhibit DP-internal agreement, whereas the English sentence in (26) demonstrates subject-verb agreement:[12]

(22) o gato bonito
the.MASC.SG cat.MASC.SG beautiful.MASC.SG
'the beautiful tomcat'

(23) a gata bonita
the.FEM.SG cat.FEM.SG beautiful.FEM.SG
'the beautiful cat'

(24) os gatos bonitos
the.MASC.PL cat.MASC.PL beautiful.MASC.PL
'the beautiful tomcats'

[12] Examples from Hornstein et al. (2005: 291-292).

(25) as gatas bonitas
the.FEM.PL cats.FEM.PL beautiful.FEM.PL
'the beautiful cats'

(26) $She_{[3.SG]}$ $is_{[3.SG]}$ nice.

In examples (22)-(25), information about gender and number is specified three times: on the determiner, on the adjective and on the noun. In example (26), which illustrates subject-verb agreement, number and person information is specified twice, both in the DP and in the verb. According to Hornstein et al. (2005), at LF, this information is nevertheless computed only once. This entails that although these features seem to convey the same information, some of the features are interpretable at LF, while others are not. Furthermore, if a given feature is interpretable, considerations regarding the recoverability of deletion will require that such features do not get deleted when they are checked. Thus, checking only deletes uninterpretable features (Hornstein et al. 2005: 295). In other words, just one piece of the repeated feature information should be legible by LF, namely the information from interpretable features.

A plural feature on a noun has an effect on the morphology of the noun, and obviously also on its meaning. The plural feature of a noun thus influences semantic interpretation, and is therefore interpretable. A plural feature on a verb, on the other hand, does not contribute to the meaning interpretation, it only agrees with the number feature of a corresponding noun. Hence, plural features on verbs are uninterpretable. Interestingly, this can be seen as an inheritance from traditional grammars, where it was standardly assumed that it was the predicate that agreed with the subject and not the other way around (Hornstein et al. 2005).

In recent versions of the Minimalist Program (Chomsky 2000b, 2001, 2004, Adger 2003, Radford 2004, Hornstein et al. 2005), agreement is analysed by means of the operation Agree. Through this relation, a probe searches for a relevant goal to agree with (Radford (2004). A distinction is further postulated between two types of features, namely valued and unvalued ones. Through the Agree operation, unvalued features must be valued by a matching valued feature, in order for the derivation to converge. Adger (2003) formalizes the operation Agree as follows, where … = c-command, and uF = unvalued feature:

Agree:

X (F:val) … Y (uF:) → X (F:val) … Y (~~uF~~: val)

Radford (2004) gives this description of the operation:

> Let's suppose that agreement in such structures involves a c-command relation between a probe and a goal in which unvalued phi-features on the probe are valued by the goal, and an unvalued case feature on the goal is valued by the probe (Radford 2004: 285).

Agree is further restricted with respect to locality, such that feature matching can only take place between a feature F and the closest matching feature F that c-commands it (Adger 2003: 222).

An important implication of the Agree relation is that items may enter the syntactic derivation with some of their features already valued and others as yet unvalued. This stands in contrast to earlier versions of the theory, such as the Move F approach, which assumed that all lexical items entered the derivation fully inflected, and that the features were then checked in a spec/head relationship during the derivation (Hornstein et al. 2005).[13]

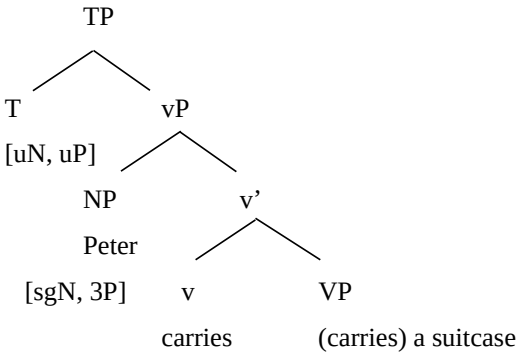
Once we accept that certain features enter the derivation with a value and others do not, it becomes urgent to clarify which features are initially valued, and which ones enter the derivation unvalued. According to Chomsky (2000b), the difference between valued and unvalued grammatical features correlates with the distinction between interpretable and uninterpretable grammatical features. Under this view, only interpretable features are fully valued in the lexicon. Uninterpretable features, on the other hand, enter the derivation unvalued and acquire their value in the course of the derivation. Unvalued uninterpretable features are illegible both to the PF and the LF components. Consequently, every unvalued feature must be valued in the course of the derivation, or the derivation will crash (Radford 2004).

Because the subject-verb relation will be relevant for my purposes, I will present briefly how subject-verb agreement is analysed in the Agree system, based on Adger's (2003) implementation of the operation. Finite T bears unvalued phi-features (gender, number and person), which need to be valued. The subject DP, on the other hand, bears inherently valued phi-features. In the Agree relation, finite T then serves as a probe, whereas the subject DP serves as a goal. Hence, the unvalued features are seeking for a possible goal to agree with. Agree then holds between the valued phi-features of the subject DP and the unvalued phi-features of T, and through this relationship the unvalued phi-features on T are valued. Hence, the phi-features of the subject DP are transmitted to T.

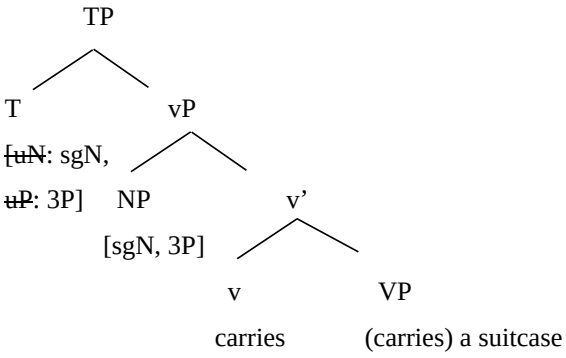
[13] Consequently, it is possible to consider Agree to be a non-lexicalist alternative to MoveF (Hornstein et al. 2005).

Let us see how this proceeds in a simple sentence like "Peter carries a suitcase". The subject DP *Peter* bears the inherent phi-features 3rd person, singular.[14] Finite T bears unvalued phi-features. Through an Agree relation, the features of the subject DP value the features of the probe T, as illustrated below. The tree structures below show the situation before and after the fulfilment of the operation Agree. In these representations, *u* = unvalued, N = number, P = person. ~~uN~~: sgN means that the unvalued number feature has been valued to singular.

(27)



(28)



4.2.3 Problematic examples: semantic agreement

There are, however, certain kinds of data which seem problematic for this analysis. The discussion of these examples will provide guidelines for my analysis of discourse ellipses, and I will therefore present them in detail:

[14] I have not included gender specification in this case, since it is generally assumed that English does not exhibit any specification of grammatical gender on nouns.

(29) Peter and Mary travel to London.

(30) Politiet er redde på jobb.[15]
police-the(sg) are scared (pl) at work
'The police are scared at work.'

(31) Har snakka med fleire, men politiet er framleis interesserte i tips.[16]
have talked to several but police-the (sg) is still interested (pl) in tips
'They have talked to several people, but the police are still interested in tips.'

(32) Flaut at russen er så snille.[17]
embarrassing that the graduates (3 sg) are so nice (pl)
'It is embarrassing that the graduates are so nice.'

(33) The police are right not to remain silent on civil liberties.[18]

(34) The police are a bunch of monkeys.[19]

As we have seen, in the minimalist analysis finite T is assumed to exhibit unvalued phi-features which receive their value through Agree from the inherently valued interpretable features of the subject. However, the examples in (29)-(34) represent a challenge to this analysis. Let us consider how. In (29), the subject *Peter and Mary* consists of two DPs, each of them specified with the feature singular. The verb, on the other hand, has plural morphology. This clearly looks like a mismatch. The problem is thus how two singular DPs can value a plural feature on the verb in T. It appears as if the Agree operation has to include some kind of mathematical adding mechanism, such that 1st person singular + 1st person singular equals 1st person plural. Perhaps even more striking are the sentences in (30), (31) and (32), where the subjects are singular (*politiet* 'the police', *russen* 'the gratuates'), while the predicative elements (*redde* 'scared', *interesserte* 'interested', *snille* 'nice') are plural. The problem is the same: how can a singular subject value a plural predicative? Finally, the English examples in (33) and (34) illustrate the same point. The subject *the police* is singular, while the verb is plural.

[15]Headline from nrk.no: http://www.nrk.no/nyheter/distrikt/hedmark_og_oppland/1.7994871, accessed 13.02.2012
[16] Headline from nrk.no: http://www.nrk.no/nyheter/distrikt/nrk_sogn_og_fjordane/1.7997543, accessed 15.02.2012.
[17] Headline from nrk.no: http://nrk.no/nyheter/distrikt/nordland/1.7627395, accessed 10.05.2011.
[18] Headline from Guardian.o.uk: http://www.guardian.co.uk/commentisfree/libertycentral/2009/dec/08/right-not-to-remain-silent, accessed 8.12.2009.
[19] Headline from The economist.com: http://www.economist.com/node/5436867, accessed 26.01.2006.

The issue is that such data seem to open up the possibility of a mismatch between visible morphology and underlying abstract features triggering agreement. It appears as if it is not the morphologically visible features of the lexical words which trigger agreement and value the unvalued phi-features. The examples thus point to a cleft between visible morphology and agreement valuation. In other words, they point in the same direction as the elliptical examples. Both groups of data demonstrate a separation between visible morphology on lexical items on the one hand, and abstract grammatical features on the other. The ellipses display agreement despite the lack of a lexically instantiated subject. In these examples (29)-(34), the verb seems to agree with something other, maybe more abstract, than the visibly instantiated subject. But if the unvalued phi-features are not valued by visible features on the instantiated lexical words, then how are they valued?

Examples like the ones in (29)-(34) have occasionally been given the label *semantic agreement* (Corbett 2000, Radford 2004, Bosque 2006). This is an issue which has not received much attention within generative linguistics (Sauerland and Elbourne 2002). I will briefly present a couple of different accounts of the phenomenon.

Den Dikken (2001) notes that it is a curious fact about British English verbal agreement that collective noun phrases headed by a formally singular noun can trigger plural agreement with the finite verb. He gives the following examples:

(35) The committee has decided.
(36) The committee have decided.

In his article, these noun phrases are labelled “pluringulars”, which emphasizes precisely the point that these nouns seem to be both singular and plural at the same time. Furthermore, den Dikken points to a general distinction between the singular- and plural-agreeing types of DPs, namely that they are characterized by collectivity in the case of the plural-agreeing type or individuality in the case of the singular-agreeing type. When a DP is conceived of as several people or things, a plural verb is used. When it denotes a unit, a singular verb is chosen. This insight is equally noted in Quirk et al. (1985: 758): “The choice between singular and plural verbs depends in BrE on whether the group is being considered as a single undivided body, or as a collection of individuals.” The technical analysis proposed by Den Dikken is that pluringulars are pro-headed noun phrases; they are NPs which are headed by a plural null

pronoun, as in (37). He further proposes that this structure instantiates an apposition-type structure corresponding to the apposition of elements in (38):

(37) [DP_1 pro $_{[+PLUR]}$ [DP_2 the committee $_{[- PLUR]}$]

(38) The agreement facts, the biggest pain in the neck, have eluded many linguists for centuries.

This analysis thus captures the main idea that a pluringular DP manifests the amalgamation of a singular and a plural DP. For further technical details on the analysis, see Den Dikken (2001).

Also, Sauerland and Elbourne (2002) discuss the issue that these DPs denoting groups can take either singular or plural verbal agreement, as in the following examples:

(39) The Government is ruining this country.

(40) The Government are ruining this country.

The authors give a list of nouns which follow this pattern: "cabinet, committee, platoon, (political) party, pride, hive, team, regiment, battalion, bank, government, group, family, faculty, Senate, House (of …) set, squad." These nouns behave as if they were plural, but simultaneously they display signs of being morphologically and semantically singular:

> They are morphologically singular in terms of overt morphology: *committee*, not *committees*, and so on. They are semantically singular in that it is still clear (…), that only one committee, battalion, or set is being referred to (Sauerland and Elbourne 2002: 289).

Despite these clear characteristics of singularity, the nouns are thus interpreted as plural, and this has certain consequences in the syntax. The plural behaviour is apparent using several diagnostics (Sauerland and Elbourne 2002). The nouns can be used with the determiner *each* (41), they can license plural anaphors (42)-(43), they can bind plural pronouns (44) and they can, as we have already seen, be used with plural verb agreement (45), all these facts being indications of plurality:

(41) The committee each received a pay-rise.

(42) I want the battalion to get themselves under cover.

(43) The Labour Party scare each other.

(44) The rugby team like their coach and the football team do too.

(45) {3,5,7,9} This set are all odd.

A curious fact is also that these nouns, as well as being able to bind plural pronouns, can actually bind singular pronouns when used with plural verb agreement:

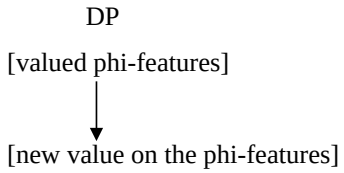
(46) All the rugby team are carrying its mascots and all the football team are too.

The analysis proposed by Sauerland and Elbourne (2002) is that British English DPs have, instead of one number feature, two distinct feature categories that have as values [singular] and [plural]. One of them is the traditional Number feature, which for any nominal indicates how many things are being referred to. The other feature is called Mereology, which indicates "whether or not the entity under discussion is being conceived of as consisting of more than one member" (Sauerland and Elbourne 2002: 291). The proposal is thus that certain processes, like verbal agreement and the licensing of singular and plural anaphors and pronouns, can refer to either the Number feature or the Mereology feature. For subject-verb agreement in the cases demonstrated above, Sauerland and Elbourne (2002) propose that:

> (…) there are uninterpretable Person, Number, and Mereology features on T that are checked by the φ-features of the subject. The morphological operation that copies φ-features from T and manifests them in overt verb endings copies the Person feature and one of the Number and Mereology features.

Hence, in Sauerland and Elbourne's (2002) analysis, we are forced to introduce a new feature into the derivation to account for the apparent agreement mismatch. This illustrates the consequence of attempting to analyse examples of semantic agreement within the established frames of the Minimalist Program. To account for semantic agreement data in a lexicalist Merge-based model, one would either have to introduce an additional feature, as Sauerland & Elbourne (2002) do, or one could argue that the phi-features of the lexical element undergo change in course of the derivation:

(47)



In an example like *The police are nice*, where the subject has a morphological singular phi-feature but is conceived of as plural, one would then have to argue that the phi-feature matrix itself was changed. This is not plausible. It would violate the Inclusiveness Condition (Chomsky 1995) since it would predict that the output of the derivation would contain elements which are not present in the input.[20] In the alternative analysis that I propose, I will argue that this problem is solved, and that the Inclusiveness Condition is obeyed.

In any case, it appears that the minimalist framework does not offer an immediate analytical solution to these data. In what follows, I will propose an alternative analysis, which can also account for agreement in discourse ellipses.

4.2.4 An alternative analysis

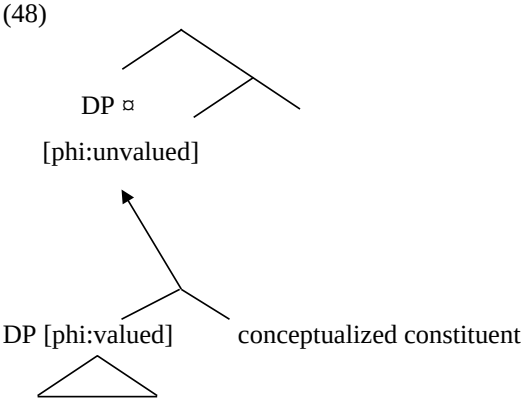
The two articles examined above propose slightly different analytical solutions to the issue of semantic verbal agreement. Whereas den Dikken (2001) points to a fusion of collectivity and individuality in the 'pluringulars', formalized in an apposition-type, pro-headed noun phrase, Sauerland and Elbourne (2002) propose an additional Mereology feature to indicate roughly the same distinction. Nevertheless, the underlying insight remains the same, namely that the agreement process appears to be sensitive to semantic information about plurality or collectivity of the subject DP. More generally, information from the conceptual-intentional interface seems to influence the feature specification of the subject, or maybe rather the agreement process. The analysis that I suggest builds on this insight. I propose that the valuation of phi-features may be dependent upon how the referent in question is semantically conceived. Hence, I will follow the basic insight in den Dikken (2001), although I will propose a different formal analysis. Importantly, the overarching analysis that I will propose is developed with special attention to semantic agreement and to discourse ellipses, aiming to

[20] The Inclusiveness Condition was proposed in Chomsky (1995: 225). The principle dictates that the output of a system cannot contain anything beyond its input.

develop an overarching analysis which can account for both cases, as well as for regular non-elliptical cases with no semantic mismatch.[21]

Adopting a non-lexicalist perspective, I will argue that feature matrices are not directly tied to the nominal, or, more generally, to lexical elements. If they were, the semantic agreement examples would be hard to account for, as discussed in the previous section. Instead, I propose that there are underspecified feature matrices linked to the syntactic positions. These feature matrices of the main structure are specified depending on what lexical items are inserted into the structure, or depending on the properties of the complex phrase constructed in the work space. Alternatively, in ellipses, they are specified depending on the conceptualized silent constituent, as illustrated in the figure below:

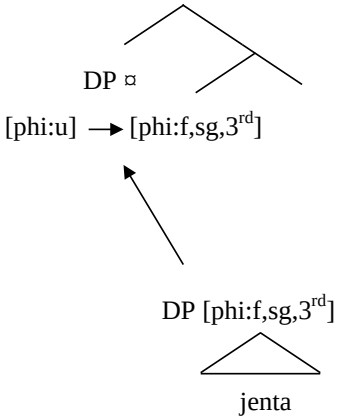
(48)



In most cases, what is conceived as being singular corresponds to morphological singular, as in the example below (the structures display only the insertion and valuation of the DP position), and the valuation process is then straightforward. The features of the inserted DP value the features of the syntactic position directly:

[21] At first glance, this idea might appear to contradict the 'neo-Bouchardian' analysis that I have put forth. Yet, recall Bouchard's decisive distinction between G-semantics, i.e., the semantics of the syntactic structure, and S-semantics, i.e., the conceptual meaning. The rudimentary G-semantic structure is in all cases subject to semantic enrichment, i.e., S-semantic content enriches the G-semantic meaning of the clause. This is what I will assume happens in the case of semantic agreement.

(49) Jenta er pen
Girl-the is pretty
'The girl is pretty.'



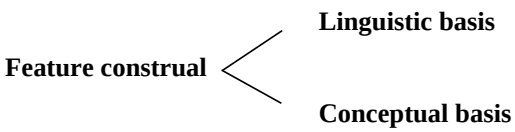
However, the semantic agreement examples display exceptions in which it appears that a DP can provide a different set of feature values than the one that is indicated by the morphologically visible DP. The instantiated morphological set of phi-features then seems to be overridden. To account for these cases, I propose that a process of *feature construal* occurs at the point of insertion into the main structure.

This requires a more detailed explanation. The first step of the process is that the inserted DP is generated in the derivational work space, where its features are valued. Then, at the point when the DP is to be inserted into the main structure, two options are available. Either the process of feature construal takes as its basis the actual feature values of the inserted DP, or, as in semantic agreement cases, it takes as its basis a conceptualized item which may trigger a different set of phi-feature values in the DP position of the main structure. Alternatively, in cases of discourse ellipsis, lexical insertion does not occur, and feature construal is based on conceptual information about the non-inserted element. I will return to the analysis of ellipses in the next section.

At first glance, it may appear that this feature construal process may trigger a change of feature values from the inserted DP to the DP in the subject position of the clause, and hence violate the Inclusiveness Condition. However, this is not what really happens. Rather, the situation is the following. There are two possible alternative bases for the fixation of the feature values of the syntactic node in the main structure. Either the valuation takes as its

basis the instantiated features of the linguistic DP (as in regular cases with no semantic mismatch), or it takes as its basis a conceptual item (as in the semantic agreement cases):

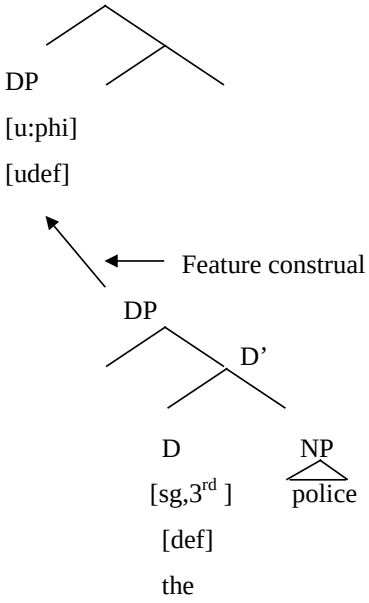
(50)



It must be specified that the process of feature construal influences the valuation process rather than the shape of the lexical DP itself. All the examples show clearly that the subject DP itself retains its phi-features. Even if it is conceptualized as a collective plural, the subject cannot appear as *the polices*, *the governments* or *the peoples*. I will therefore assume that the DP is merged separately as a proper sub-tree in a separate work space, stored in the derivational working memory. Subsequently, the constructed DP is inserted as a whole into the subject slot in the sentence structure. The view is parallel to the analysis proposed in Uriagereka (1999), where it is proposed that it is only a placeholder of the constructed DP which is merged with the sentential structure:[22]

[22] I will assume a late lexical insertion account also for the first merger of the inserted DP. I will not assume that the DP is constructed in a lexicalist manner, with lexical items directly projecting syntactic structure. Rather, I will argue the derivation at this point is parallel to the analysis for which I have now argued. Hence, I will assume that the structure of the DP is merged first, with unvalued feature sets in in the relevant positions. Thereafter, items from the lexicon are inserted to fill these positions. The merging process internal to the inserted DP is not crucial for the purposes here, and I will therefore not pursue it any further.

(51)



This idea of first constructing a syntactic substructure (the DP) and then inserting this whole substructure into the overall structure resonates with Chomsky's early ideas of generalized transformations (Chomsky 1957), which were assumed to take small structures and combine them.

Importantly, this means that the features of the inserted items themselves remain stable.[23] The process of feature construal affects only the features of the position, and not the features of the inserted elements.

---

[23] In general, the analysis proposed here is unproblematic with respect to the feature types number and person. If an elided subject is conceptualized as plural, it generally triggers plural features on the verb or the anaphor. Likewise, in languages displaying person agreement, an elided 1st person subject will trigger 1st person morphology on the corresponding verb. However, when it comes to gender agreement, the picture is slightly more complicated. As is well known, there is a distinction between grammatical and semantic gender. It is not mandatory that the grammatical gender of a lexical item directly reflects the semantic gender of the same item. For instance, the grammatical gender for the Norwegian word *kvinne* (woman) is masculine, and the grammatical gender for *barn* (child) is neuter, while the grammatical genders for *seter* (summer mountain farm) and *bygd* (village) are feminine. Undoubtedly, the grammatical gender in these cases has nothing to do with the semantic substance of the lexical items in questions. The same situation is found in the German word *Mädchen* (girl), which is neuter. Since German is more illustrative than Norwegian, displaying richer agreement, I will use a German example to illustrate my point. Imagine a situation in which there is a picture of a little girl. Someone is talking about the girl, referring to the picture. Doing so, he uses a discourse ellipsis, where the subject is left out.

1. (pointing to the picture of a girl): ~~Das Mädchen~~/~~Sie~~ sieht sehr schön aus.
   ~~That girl~~ / ~~She~~ looks very cute (neuter/*feminine)
   'That girl/She looks very cute.'

The apparent change of feature values does not then really imply a change, but rather a fixation of feature values which are different from the phi-feature set of the instantiated inserted DP. This is what may lead to the apparent agreement mismatch in the cases of semantic agreement. Feature construal in these cases produces a situation where the feature values of the instantiated inserted DP are different from the values of the DP in the subject position, the latter being the ones that enters a probe/goal agreement relation with the verb.

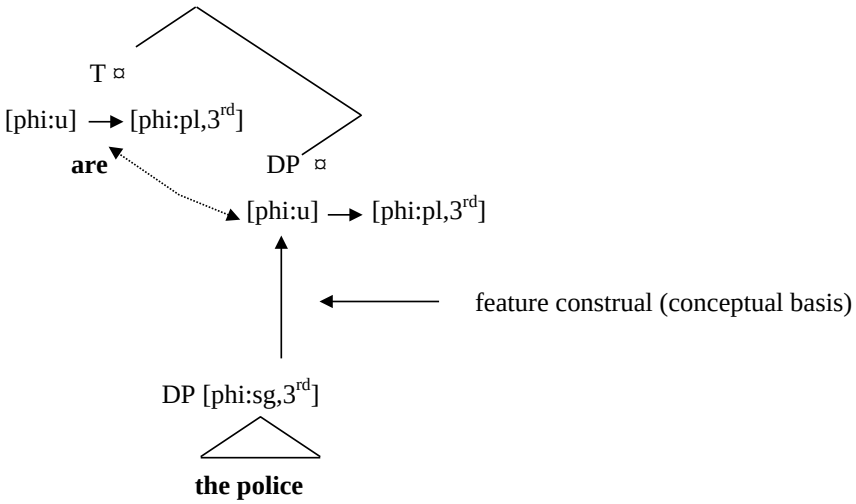
Note that this analysis does not entail a violation of the Inclusiveness Condition, since the features of the items constructed in the derivational work space are not altered, nor are any new features inserted into the derivation. What happens is rather that a set of unvalued feature matrices receive their values in course of the derivation.

In (49) we saw an example with no semantic mismatch. The figure in (52) shows an example with semantic agreement. Here, the feature construal process takes as its basis a conceptual element rather than the linguistic DP, and thus the features of the inserted DP and the features of the structural subject position will not have the same value. Moreover, an Agree relationship is established between the probe (T) and the goal (subject). Importantly, it is the features of the position, and not the features of the inserted DP, which enter this Agree relation, and which thus influence the feature values of the tensed verb. Thus, the feature construal process takes place at the point of insertion. The Agree relation then remains a purely structural relation between phi-features of the probe and the goal.[24] More specifically, in an example like *The police are nice*, the subject DP is first merged independently in a proper subtree in the derivational work space, and the morphological phi-features are then valued. Hence, the visible DP results as singular, and not plural (**The polices*). Then, when the DP is to be inserted into its slot in the sentence structure, there are unvalued feature matrices in the node, waiting to be valued. The figure below does not display the full derivation, but only the relevant processes of insertion, feature construal and agreement between the T-probe and the DP-goal.

The null subject will trigger neuter rather than feminine agreement on the predicative adjective. This entails that the process of feature construal cannot in this case be based on a purely conceptual image of the item omitted, because if so, the feminine features would be triggered. Rather, feature valuation is based on the grammatical gender of the omitted item, in this case neuter. Hence, it appears in this example that the logical gender cannot override the grammatical gender. Conceptual valuation of gender thus appears to be impossible, as opposed to the case for number, as seen in the semantic agreement examples.

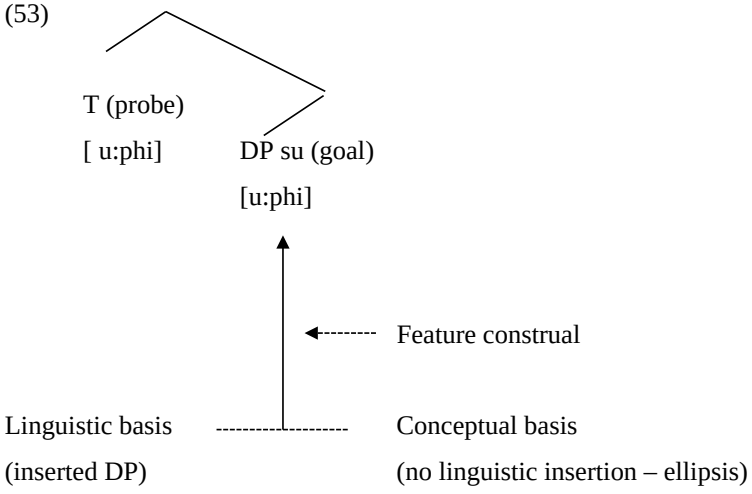
[24] See also Josefsson (2006) for a similar Late Insertion-account of semantic and grammatical gender in Swedish.

(52) The police are nice.



The figure in (53) summarizes the different alternatives with respect to valuation of the features of the DP position in the main structure. Hence, it is meant to cover both regular cases and cases of semantic agreement. Feature construal is thus assumed to occur in all cases. What differs is what this process takes as its basis for the fixation of features in the matrix structure:

(53)



The different alternatives can be read off this figure. In the regular case, a linguistic element is constructed in the derivational work space, and is then inserted. Feature construal then takes as its basis the instantiated linguistic features of the inserted item. In the case of semantic agreement, a DP is also constructed in the work space and inserted, but still, feature construal takes a conceptual basis when the features of the main structure are valued.[25] This option is available also for the case of ellipsis, where there is no insertion. For the case of ellipsis of phrases, there are two possible derivations. Either feature construal takes a pure conceptual basis, in which case no linguistic element is constructed in the work space. Alternatively, the silent element *is* constructed in the work space, it is just not inserted. Which one of these alternatives is correct, is an open question. [26]

It needs to be pointed out that even though the figure juxtaposes the linguistic and the conceptual basis of feature construal, there is really an asymmetry of status between these two alternatives. More specifically, all, both linguistic and purely conceptual, phrases are assumed to pass through a conceptual filter. As seen, in the regular case, the linguistic phrase passes through the filter without leading to any change in feature construal. Yet, in semantic agreement cases, when the phrase hits the conceptual filter, the consequence is that feature construal takes a conceptual rather than a linguistic basis. As noted, for ellipsis of phrases, both possibilities are available.

This analysis entails that there are actually no inherently valued features in the clausal backbone, since the traditionally inherent features must also be valued externally, namely by the insertion of lexical items or XP constructed in the work space. Hence, phi-features can be valued in two different ways: One is external, from inserted lexical items/XPs or more specifically the feature construal which happens on the basis of these items. The other way is internal, via the operation Agree, from the feature specifications of one structural position to another one inside the same sentence structure.

It is important, though, to point out that my analysis does not open the door to an anarchistic system where feature specification becomes random and without any connection to formal categories. This exceptional valuation can only be assumed to be active in cases where it is natural that a notion is conceived in a differently way from what morphology

[25] Note that behind a linguistic phrase, there is always a concept. The difference between a regular case and a case of semantic agreement is that in the former, there is no mismatch between the instantiated features and the conceptual information. In cases of semantic agreement, we find precisely such a mismatch.

[26] We have discussed in chapter 3 that insertion into the main structure is governed by harmony. Following this line of thought, I will argue that the two types of feature construal represent two types of harmony. Either direct linguistic or conceptual linguistic harmony is required to restrict insertion.

indicates, i.e., in cases of semantic agreement. My point is that by tearing the specification of features apart from the morphological form of the single word *in principle*, it becomes possible to account for "exceptions" from the norm, as in these examples.

This analysis implies the assumption of two separate sets of features for the subject, one set for the subject DP which is actually pronounced, and another set for the subject position, which is relevant for valuing the features of the verb. This was illustrated in (52). It is the features of the position which enter into probe-goal relations, as seen clearly in the examples displaying semantic agreement, where the verb shows agreement which is at odds with the pronounced subject.

A parallel example is the case of the verb alternation *can* and *could*, which formally is a difference in tense, but which rather encodes modality. More specifically, *could* is past tense, but its usage often indicates present, with a modality effect. This shows another case where valuation of formal features of the pronounced phrase appears to be separate from the grammatical effect this item has in the clause. Hence, in this case too, there is a need to separate two sets of features, one for the clausal position and one for the inserted, pronounced phrase.

We can conclude that it is the features of the structural position which trigger agreement. This view corresponds well with the connectivity effect observed in cases of discourse ellipsis, which are also triggered by the features of the position, and not by the features of the lexical item occupying the position.

This insight is not very surprising if we consider what is really intended by the notion of features. A feature is not identical to the actual morpho-phonological realization of the same feature. A feature in itself is an abstract entity, but it can yield concrete morphological consequences on lexical items (Adger 2003). From this perspective, the idea of tearing features apart from the morpho-phonological form is not actually revolutionary. Rather, it is a matter of taking seriously the abstractness of features.[27]

---

[27] Notice that my proposal bears certain similarities to the theory of Distributed Morphology (Halle & Marantz 1993, Harley & Noyer 1999), and in particular to the DM thesis of *separationism*:

> Separationism characterizes theories of morphology in which the mechanisms for producing the form of syntactico-semantically complex expressions are separated from, and not necessarily in a simple correspondence with, the mechanisms which produce the form ("spelling") of the corresponding phonological expressions (Harley & Noyer 1999: 7).

In Distributional Morphology, syntax is not assumed to manipulate lexical items, but rather it generates structures by combining abstract morpho-syntactic features. As we have seen, I also endorse DM's view on Late Insertion of lexical elements, according to which the phonologically expressed Vocabulary Items are inserted

Note that this is a possible account in a model assuming late lexical insertion. However, in a lexicalist merge-based model, this would be more problematic to explain, since one would then be forced to assume a change in the features of the element in the position. Recall that in my analysis, there is no feature change. The fixed features of the inserted elements remain unaltered, and the features of the structural position which were unspecified at the outset go on to receive their value in course of the derivation. Hence, we may conclude that the analysis that I propose does not only imply late lexical insertion, but also late fixation of features.

Such a separationist view also makes it more straightforward to explain optionality with respect to phonetic realization, as in (54)-(59).

pro (in Italian)

(54) _ vado a scuola.
go (1sg) to school

(55) Io vado a scuola.
I go to school.

PRO

(56) Gjør _ det!
do that

(57) Gjør du det!
do you that

Ellipses

(58) _ funker litt dårlig. NoTa
works quite badly

(59) Det funker litt dårlig.
it works quite badly

If grammatical features are incorporated inseparably within lexical items, it is difficult to explain that the subjects in (54)-(59) are sometimes realized, sometimes not, even if the same agreement patterns occur in the sentences independently of this instantiation. On the other

---

into syntax at a point late in the derivation. However, in my analysis, I will not apply the entire DM model of grammar.

side, if the features are present in the structure independently of lexical insertion and can be valued from a conceptual item, it follows naturally that lexical insertion is not so restrictive.

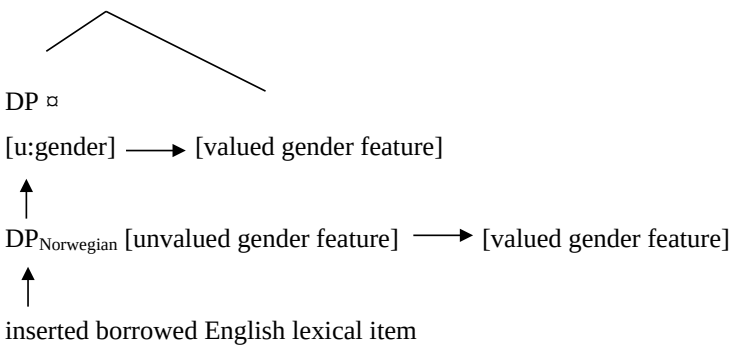
One group of data which would fall out neatly under the proposed analysis is the case of loan words, more specifically English loan words in Norwegian. For instance, English nouns borrowed into Norwegian need to receive a grammatical gender despite there being no gender specification in English:

(60)

a.	a manager	–	en/*et manager	(masc/*neut)
b.	a party	–	et/*en party	(neut/*masc)
c.	a shopping bag	–	en/*et shopping bag	(masc/*neut)

These data can easily be accounted for within the late insertion analysis proposed here. It is a parametric difference between English and Norwegian that all Norwegian nouns must be specified for gender. In English, there is no such gender specification. Hence, in an English sentence structure, there is no slot for a gender feature in DP positions. However, in Norwegian, all DPs are generated with an unvalued gender feature, waiting to be specified by lexical insertion. Consequently, when an English noun without gender specification is borrowed into Norwegian, this noun must be assigned a gender. More specifically, the unvalued gender feature of the Norwegian DP structure requires valuation even when it is filled by an English lexical item. Importantly, I will assume that the DP is Norwegian in its structure already before it is inserted into the structure of the main clause. Hence, a gender specification is assigned to the English noun as it is incorporated into the Norwegian language by being merged in a Norwegian DP:

(61)



Furthermore, note that in certain cases, the same word can actually have two different genders in Norwegian.

(62)

a. en/et image (masc/neut)
   an image
b. en/et design (masc/neut)
   a design
c. en/et eple (masc/neut)
   an apple

This may receive a straightforward explanation in my analysis. Informally speaking, these examples show that the connection between a lexical word and formal phi-features is looser than assumed in endoskeletal models, where the features of lexical items are projected into syntax. One would then, for these cases, have to assume two different words for each example, even though it is really the same word only with a different gender feature. In my analysis, one could account for these examples by arguing that gender specification is not a property of the lexical item, but rather a structural property of the DP. Some speakers insert the lexical item into a DP-frame specified for masculine, and others in a DP-frame specified for neuter. This gives rise to the attested variation without ascribing the difference directly to the lexical items.[28]

4.2.5 The analysis applied to discourse ellipses

We have seen that in non-elliptical cases, the feature matrices are generally valued through feature construal, and that this process can take two alternative bases. In regular cases (i.e., no semantic mismatch), the process of feature construal triggers no other feature specification in the node compared to the features of the inserted DP. Yet, in cases of semantic agreement, feature construal takes as its basis a conceptual element, and this leads to a fixation of feature values which are different from the values of the features of the inserted DP.

[28] However, notice that despite the pattern of these examples, it appears that the gender feature is less flexible than, e.g., number or definiteness. Any noun can occur as singular or plural, or as definite or indefinite, yet the gender of a noun does not switch in this way. Gender is in general specified for the noun once and for all.

Most importantly for my purposes, this overall analysis promises a fruitful account of elliptical data. In ellipses, there is no inserted DP. Is the consequence then that the features in the node will not be valued, and that the derivation will crash? No, the data show that the derivation does not crash in these cases. On the contrary, discourse ellipses are perfectly acceptable. In my analysis, grammatical features are torn apart from their lexical concepts. The relevant features are then assumed to be present independently of lexical insertion. They are all unvalued at the outset, but require being valued in course of the derivation. Given that there are two possible bases for the process of feature construal, both are in principle available for the derivation of ellipsis. One could argue that in ellipses, the features in the structural position are valued from a non-linguistic conceptual item. Under this view, there is no lexical insertion in ellipses. Alternatively, one could argue that a linguistic but silent item is inserted, more specifically that a fully defined DP is constructed in the work space and inserted, and that the only thing missing in this DP is the sound, i.e., phonological features. Which of these alternatives is correct, non-insertion or insertion of a silent linguistic element, probably belongs to the group of unsolvable issues. For reasons of derivational and theoretical economy, I will assume the first alternative. Hence, I will argue that there is no insertion in ellipses, and that there is a pure conceptual item filling the silent gap.[29]

The examples discussed earlier concerning binding of anaphors (ex. (11)-(13), subject/verb-agreement (ex. (15)-(16) and predicatives agreeing with omitted subjects (ex. (19)-(21) will now receive the following analysis. Firstly, the grammatical relations and restrictions within the main sentence structure are operative just as they are in a complete sentence. I have argued that the syntactic nodes of the main structure contain underspecified feature matrices, which are valued through feature construal in course of the derivation. Thus, when they are valued, the phi-specified goals may enter into an Agree relation with unvalued probes elsewhere in the structure, in a manner that is parallel to the functioning of Agree in full-fledged non-elliptical clauses. Importantly, the difference between ellipsis and a non-ellipsis is defined at the point of insertion. In a non-elliptical sentence, a linguistic element is inserted, but in a case of ellipsis, it is not. Still, the features of the structural position are valued in any case.

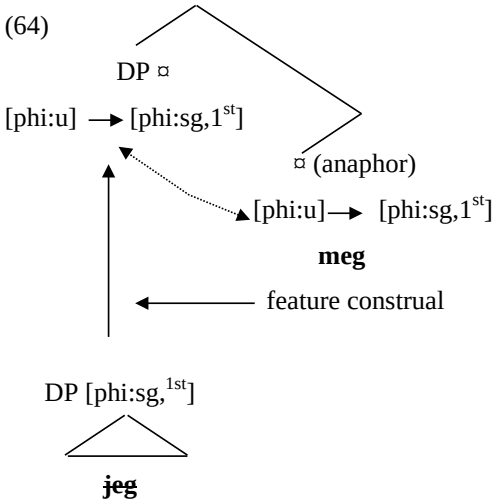
To illustrate my view, let's look at an example (63):

[29] We might conclude that the issue boils down to the following question: what does it imply to be a silent or elided element (marked with a strikethrough in my notation)? This issue was discussed also in section 2.8, when I discussed Copy Theory (Nunes 1995, 2001, 2011). The present discussion may be seen as an elaboration of what a silent copy really is.

(63) ~~Jeg~~ bekymrer meg ikke, jeg liksom. NoTa
~~I~~ worry me$_{REFL}$ not I like
'I don't worry, I don't.'

Following my argumentation, I propose that the subject position contains abstract unvalued phi-features, and that these features are valued through the process of feature construal, either from a pure conceptual basis or from a linguistic DP that is constructed in work space, but not inserted. Next, through internal Agree, these phi-features of the subject value the features on the anaphor *meg*:[30]

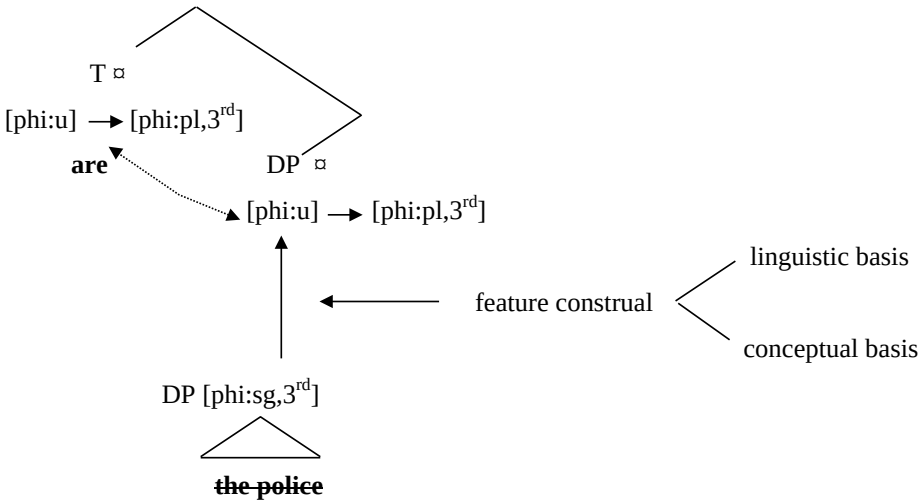
(64)



Moreover, if we turn the example in (52) into a case of subject ellipsis, the analysis will remain the same as for the non-elliptical case, with the one exception that the inserted DP subject is not inserted. Feature construal has a conceptual basis in any case:

[30] Note that this presupposes a specific analysis of anaphor binding (see Reuland 2011 for more discussion on this). Since binding of anaphor is not my primary interest in this thesis, I will not discuss these mechanisms any further. I have not included a full analysis of the sentence structure, since what is of primary interest here is the agreement relation between the subject and the anaphor.

(65) ~~The police~~ are nice.



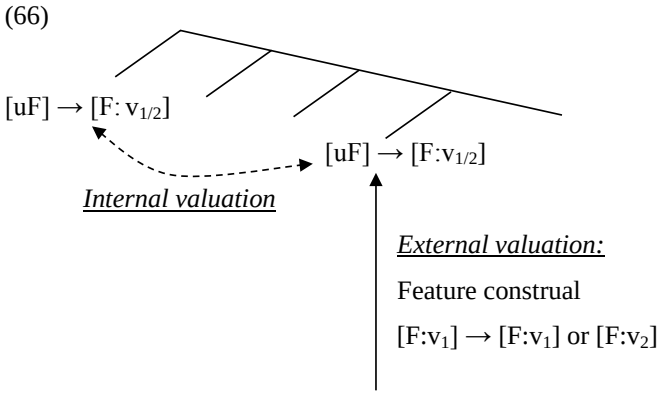
Note that expletive subjects can be zero in discourse ellipses. As opposed to cases of semantic agreement or ellipses of referential arguments, one can hardly postulate that it is a conceptual element that influences the phi-feature valuation in the case of null expletives. For expletives I propose the following account. The syntactic system forces a feature construal for all null elements, since otherwise the derivation will crash. Hence, a null expletive must be assumed, or at least the features must be valued as if an expletive were inserted. Thus, the fact that feature construal must occur forces you to assume null expletives. Hence, I will assume that the insertion of expletives is like a last resort condition, applied to the process of feature construal. The argument that expletives are inserted as last resort to satisfy the EPP is presented also in Marantz (1991).

To sum up, the analytical model adopted here is one where syntactic structure contains unvalued feature matrices prior to the insertion of lexical items, or more specifically, insertion of structure chunks from the derivational work space. All features must be valued in the course of the derivation. This can be formulated as a well-formedness criterion on syntax; in order for the derivation not to crash, all features must be valued. I have argued that the valuation of features happens through the process of feature construal, and that this process may start from one of two bases, a linguistic or a conceptual one:

a. from an inserted lexical item
    a. with no feature mismatch
    b. with feature mismatch – feature construal (as in the case of semantic agreement)
b. from the discourse – through feature construal (as in the case of discourse ellipses)
c. sentence internally – through a probe-goal relation.

The processes are illustrated in the figure below:

(66)



Inserted lexical item or non-insertion/contextual enrichment

4.3 Licensing restrictions on discourse ellipses

In the previous sections, I have discussed what Merchant (forthcoming) has labelled *the structure question*: is there structure in the ellipsis site, and if there is, what kind of structure is it and what is its content? I also aimed to establish a model for treating discourse ellipses. From this section on, I turn from the structure question to asking *why* these elliptical constructions are at all possible. What kinds of elements can be non-realized, from which positions and under which conditions? Why is it that some ellipses are acceptable and frequently attested, while others are clearly unacceptable? What are the restrictions governing discourse ellipses? I will argue that we need to integrate both structural and semantic/pragmatic factors in order to account adequately for the data that are attested. To

recapitulate, the phenomenon of discourse ellipsis ranges over a variety of different subtypes, and the most frequent kinds that are attested are the following:[31]

Omitted referential subject

(67) ~~Jeg~~ husker litt fra jeg var åtte. NoTa[32]
~~I~~ remember some from I was eight
'I remember a little bit from the time I was eight.'

Omitted expletive subject

(68) ~~Det~~ sto et eller annet om "rebooting" og sånn på skjermen. NoTa
~~it~~ said something about "rebooting" and such on screen-the
'It said something about "rebooting" and stuff on the screen.'

Omitted referential subject and auxiliary verb

(69) ~~Jeg har~~ vært i masse slåsskamper på barneskolen. NoTa
~~I have~~ been in lots of fights in primary school
'I have been in lots of fights when I went to primary school.'

Omitted expletive subject and auxiliary verb

(70) ~~Det hadde~~ vært litt artig å holde på med musikk. NDC
~~it had~~ been a little fun to deal with music
'It would be quite fun to work with music.'

Omitted referential subject and copula verb

(71) ~~Jeg er~~ født i Tromsø og oppvokst her. NDC
~~I am~~ born in Tromsø and grown up here
'I am born and raised in Tromsø.'

Omitted expletive subject and copula verb

(72) ~~Det er~~ svært stor forskjell på klientellet tror jeg altså. NoTa
~~it is~~ very large difference on clientele-the think I so
'The clientele is very varied, I really believe.'

---

[31] This list of frequent ellipsis types is of course a brute simplification of the empirical facts. As will become clear throughout this chapter, there is a rich variety of subtypes, where the degree of discourse prominence will correlate with the range of possible ellipsis types. Furthermore, one must also be aware that the phenomenon of regular discourse ellipses must be distinguished from so called slips of the tongue. Still, this theoretically crucial distinction is empirically not always self-evident.

[32] NoTa stands for Norwegian Speech Corpus – the Oslo part. See section 1.7.1 for more information.

Omitted adverbial

(73) ~~Så~~ setter dem seg der og drikker kaffe mens dem liksom setter på karakterene til oss.
~~so~~ sit them self there and drink coffee while they like set on grades for us
'Then they just sit down and drink coffee while they like decide our grades.'
NoTa

We have seen that discourse ellipses display a structural asymmetry. Sentence-initial elements are more easily elided than elements in other positions of the clause, and the position [spec,CP] seems particularly vulnerable. Yet, the data show that occasionally elements in other positions can also be non-instantiated. In particular, this concerns elements in the C-position. In chapter 2, we therefore concluded that the topic drop branch of analyses (Huang 1984, Sigurðsson 2011 among others) needs to be revised in order to cover the attested empirical patterns. There have been certain proposals attempting to account for discourse ellipses that display silent elements in positions other than [spec,CP]. In what follows, I will first discuss a purely phonological approach to deletion, and then I discuss an analysis of the restricted phenomenon auxiliary drop. I will argue that these two accounts are unsatisfactory. I will propose that discourse ellipses are governed by both structural and semantic/pragmatic licensing conditions. This will be discussed in section 4.3.3.

4.3.1 Phonological deletion (Napoli 1982)

It is striking from the empirical data that the omissions primarily occur sentence-initially. This has led to proposals that the deletion is purely phonological, targeting the linear string from left to right (Napoli 1982, de Clercq 2009). These analyses stand in contrast to accounts in which the omission of elements is sensitive to syntactic restrictions of different kinds.

Napoli (1982) gives a phonological deletion account for English data. An overall goal for Napoli is to treat deletion of initial material of different kinds as a unitary phenomenon. She claims that there are general phonological rules in English which can delete lightly stressed initial material. The material in question can be highly diverse, ranging from whole phrases to single words or even parts of words.

> English has phonological rules which delete initial lightly stressed material of words and phrases. In this article it is shown that a similar rule exists at the sentence level, deleting strings which may consist of one or more words, parts of words and combinations of these (Napoli 1982: 85).

The main point in this analysis is that the deleted elements are always utterance-initial. In addition, if several items are omitted at once, they must be linearly adjacent. The following examples are taken from Napoli (1982):

(74)

a. Wish Tom were here. (I wish …)
b. You seen Tom? (Have you …)
c. Seen Tom? (Have you seen …)
d. Fine friend you turned out to be! (A fine …)
e. Paper boy's here. (The paper …)
f. Cat got your tongue? (Has the cat …)
g. 'Fessor you expected is here. (The professor…)
h. 'Fessor arrived yet? (Has the professor …)
i. Soon as your mother arrives, I'm leaving. (As soon …)
j. 'Sgusting as John is, I still love him. (As disgusting …)
k. 'Spect you're waiting for your mum, huh? (I expect …)
l. 'Splains it very well. (She explains …)
m. Hair's too long! (Your hair …)
n. Good thing you decided to come along. (It's a good …)
o. You want me to leave, just tell me. (If you …)
p. Want me to leave, just tell me. (If you want …)

For Napoli, it is fundamental that the deletion is purely phonological, and not syntactic or syntax-sensitive. She claims that this is clearly demonstrated in the empirical data. One argument for this is that there is a rich variety of missing initial parts. Both deletion of constituents and non-constituents is found. A phonological deletion rule would be able to account for all kinds, unlike a purely syntactic rule. As seen, even parts of words can be deleted, which cannot be easily explained with a syntactic rule.

> Items such as subjects, auxiliaries, determiners, possessive pronouns, clause introducers, initial syllables or parts of syllables of words, and combinations of these can be missing (Napoli 1982: 86).

It does appear that such a phonological deletion analysis can account for a wide range of data. Still, if this analysis were correct, then it should be possible to delete any constituent, any part of a constituent or even several constituents arbitrarily, as long as the deletion is sentence-

initial and takes place from left to right in the linear string. The simple unacceptable examples below clearly demonstrate that this cannot be correct. The examples are Norwegian, but the point remains the same:

(75) * ~~Jeg misliker~~ sterkt at Viktor liker fisk til middag.
~~I dislike~~ strongly that Viktor likes fish for dinner
'I strongly dislike the fact that Viktor likes fish for dinner.'

(76) * ~~Viktor liker laks~~ med poteter til middag.
~~Viktor likes salmon~~ with potatoes for dinner
'Viktor likes salmon with potatoes for dinner.'

(77) * ~~Til~~ middag spiste hun fisk.
~~For~~ dinner ate she fish
'For dinner she ate fish.'

In (75), the subject and the finite main verb are unrealized, and the result is ill-formed. In (76), the subject, the finite verb and the object are left out, with the deletion occurring from left to right in the linear string, but the result is unacceptable. In (77) only a preposition is left out, hence not a full constituent. These cases are all unacceptable. Common for all the examples in (75)-(77) is that the omitted elements are sentence-initial. A purely phonological rule like this one is just not plausible, quite simply because it would over-generate.

Moreover, non-subject initial discourse ellipses provide further evidence against a phonological deletion account à la Napoli (1982). Notice that in subject-initial ellipses, it is possible (modulo recoverability) to omit the subject alone or alternatively both the subject and the finite auxiliary in C can be omitted. This is seen in (78).[33] Yet, in sentences where a non-subject is topicalized, only the first constituent can be omitted, and not the first and the second one together. This is displayed in (79):[34]

(78) Jeg har /~~Jeg har~~/ * Jeg ~~har~~ bodd et år i London. NoTa
I have lived one year in London
'I have lived in London for a year.'

[33] Lexical main verbs can occasionally also be omitted, if they are strongly discourse prominent. Still, ellipsis of auxiliaries is far more frequent.
[34] The acceptable elliptical variants in (74) and (75) are taken from the NoTa corpus. The unacceptable variants are constructed.

(79) A: Vi tenkte vi skulle prøve det reisebyrå som heter Nazar
'We thought we should try that travelling agency called Nazar.'
B: ~~Det~~ har /* Det ~~har~~ / * ~~Det har~~ jeg sett i katalogen ja. NoTa
that have I seen in catalogue-the yes.
'Yes, I have seen it in the catalogue.'

This empirical pattern represents clear counterevidence against Napoli's (1982) view. I will propose an alternative analysis of these data in section 4.5.

To sum up, the deletion of elements in discourse ellipses cannot be purely linear and phonological. Hence, an analysis which predicts free deletion from left to right in the linear string is not satisfactory.

4.3.2 Deletion through movement (Fitzpatrick 2006)

Fitzpatrick (2006) investigates the phenomenon of auxiliary drop, i.e., questions where a fronted auxiliary is not pronounced:[35]

(80) (Does) anybody want a hot dog?
(81) (Has) anyone seen John today?
(82) (Is) anybody going to the game?
(83) (Do) you have a pen?
(84) (Are) you ok?
(85) (Has) anyone told Mary we're leaving?

In aux-drop sentences the raised tensed auxiliary, though present early in the derivation, is interpreted neither phonologically (it is not pronounced) nor semantically (it does not contribute to the tense interpretation of the sentence). Fitzpatrick's (2006) argument is that even though these constructions may look like deletions, they should rather be analysed as syntactic movement out of a phonologically and semantically interpreted domain.

Since English aux-drop questions behave syntactically very much like their full-fledged versions, it is argued that they cannot be bare VPs, but rather that they contain higher functional material.[36]

[35] As shown in these examples, in Fitzpatrick's account the term auxiliary covers both *have* and *be* as well as the dummy verb *do*.

Fitzpatrick (2006) argues that an explanation based only on recoverability would fail, since aux-drop is only licit when the missing auxiliary has been raised to the root level and would be the left-most constituent in the pronounced structure.[37] The auxiliary is thus merged and then deleted.[38] The question is then what characterizes the deletion process. On the one hand, a purely phonological deletion rule would leave unexplained the restricted set of tense and modal interpretations possible under aux-drop, and moreover such a rule should in principle apply to any auxiliary, even modals. Yet, dropping of semantically content-bearing modals is not possible. On the other hand, a brute-force syntactic aux-deletion rule provides no explanation for the restricted context in which auxiliary drop can apply (raised, root-level, initial auxiliaries), and Fitzpatrick therefore concludes that a syntactic deletion analysis of aux drop is also problematic.

Instead, he explores an approach building on insights from the theory of cyclic spell-out (Chomsky 2000b, 2001). When a phase is spelled out, the complement of the phase head is sent to PF and LF for interpretation (Fitzpatrick 2006). This entails that when the phase headed by C is spelled out, only TP is interpreted. The left periphery is not affected. It is generally assumed that matrix questions are root CPs. Hence, to assure that the root CP is also interpreted, an extra stipulation is needed, stating that the remaining part of the clause, i.e., C and [spec,CP], is spelled out and transmitted to the interfaces. Fitzpatrick's proposal is that this additional operation does not necessarily apply in all cases. Importantly, one case where it fails to apply is in aux-drop questions. Under this analysis, aux-drop questions would be derived as follows: Merge TP (with auxiliary) with C, and move the aux to C. CP is then

---

[36] Various arguments against truncation are presented. Firstly, high adverbs and negation are possible in aux-drop sentences. Such elements are generally assumed to be situated above the VP, which entails that aux-drop questions cannot be derived from bare VPs. Secondly, if we assume that the interrogative meanings of these questions are due to a particular structural component, situated in the left periphery, then the mere fact that aux-drop sentences are questions is evidence that this component is structurally present. Moreover, Fitzpatrick argues that aux-drop questions do not behave like Default Case environments. In English, such environments give rise to accusative case, contrary to what is the case in aux-drop questions, where nominative subjects are preferred.

[37] If recoverability was a sufficient explanation, aux-drop should be permitted in 1, since the future meaning is expressed by the adverbial *tomorrow*, and in 2, where the auxiliary *has* is recoverable from the morphology of the participle *been*. Yet, this is not the case:

1. Someone *(will) go tomorrow.
2. Someone *(has) been in my office

[38] However, he claims that one might not "recover" the content of the auxiliary at all, since a structure containing no explicit tense specification might still be interpretable on its own terms. Certain languages (Haitian Creole & Fòngbè) allow for tenseless main clauses. Fitzpatrick argues that the tense interpretation in these languages seems to be determined by the inherent aspect of the predicate and the specificity of the object.[38] This is known as *the factative effect* (Fitzpatrick 2006), entailing that tense interpretation of aux-drop questions is not free.

The next question then is why factativity is attested in English aux-drop questions, but not elsewhere in the English language. Fitzpatrick explains this by stipulating that the tense-marked auxiliary, although present at some point in the derivation to ensure the proper phrase structure and case marking, is not present in the representation that is submitted to phonological and semantic interpretation.

spelled out, but only TP is interpreted (sent to LF and PF). Fitzpatrick (2006) further assumes that since matrix questions are root CPs, it must be additionally stipulated that the root (i.e., the CP) is also interpreted. He proposes that this extra operation is not obligatory in all cases, and that aux-drop is one case where it fails to apply.

Fitzpatrick (2006) emphasizes that this analysis predicts the three relevant conditions: *aux-raising*, *root-level* and *initiality*. Firstly, raising is required to remove the auxiliary from the domain that is sent to PF and LF for further computation. Secondly, aux-drop can only occur in matrix clauses. An embedded clause will necessarily be contained in an interpreted domain, and thus it will be interpreted. Finally, a non-initial auxiliary would lead to a similar result. To sum up, Fitzpatrick's deletion-through-movement analysis states that omission of an initial auxiliary in questions is thus the result of an auxiliary moving outside the domain where it would otherwise be phonologically and semantically interpreted.

I will, however, not adopt this proposal in my analysis of Norwegian discourse ellipses. There are several reasons for this, theoretical as well as empirical. As we have seen, it is claimed that aux-drop is possible only when the auxiliary is raised to the root level and when it would be the left-most element in the pronounced structure. Yet, Norwegian data display cases of auxiliary drop both in questions and in declaratives:

(86) ~~Har du~~ kjørt mye skuter i påska? NDC
~~have you~~ driven much scooter in Easter
'Have you been driving scooter a lot during Easter?'

(87) ~~Jeg har~~ bodd der hele livet mitt egentlig. NoTa
~~I have~~ lived there whole life-the mine really
'I have lived there for all my life, really.'

In the interrogative, the auxiliary would be the leftmost element, but in the declarative it would not. In both cases, the subject is easily dropped together with the auxiliary. The overarching problem is that Fitzpatrick provides an analysis only for a selected set of data. Discourse ellipses cover a broader set of ellipsis types, and it is not clear how Fitzpatrick's analysis could be generalized to cover these cases.

Fitzpatrick's approach rests on purely structural mechanisms, and places the explanatory load on syntactic processes. I do adhere to the rejection of a purely phonological deletion, as shown in the preceding section. Yet, I do not adopt the claim that recoverability

conditions are irrelevant. It will be demonstrated in the following section that recoverability does indeed influence on the licensing of discourse ellipses. I argue that in order to provide an adequate account for discourse ellipses, it is necessary to integrate both structural and semantic aspects into an integrated explanation. This will be attempted in what follows.

4.3.3 Restrictions on discourse ellipses: semantic identity and structural licensing

The distinction between semantic and structural criteria is manifest in the literature on structural ellipses, where two kinds of well-formedness conditions are generally distinguished (see Merchant 2001, Lobeck 1995, among others). On the one hand, *recoverability conditions* require that it must be possible to reconstruct the semantic content of a silent constituent; otherwise, it leaves a hole in the semantic representation of the sentence. An identity relation is therefore established between the ellipsis site and its antecedent, i.e., the constituent which the elided element points back to. On the other hand, ellipses are also restricted by formal conditions. Such *licensing conditions* restrict the syntactic environment in which an ellipsis is allowed. With respect to discourse ellipsis, a preliminary structural licensing condition could be the following: 'Only sentence initial elements can be silent, and only complete constituents in the C-domain can be elided.'

Recoverability and structural licensing conditions work together to determine whether an ellipsis is well-formed or not. The overall goal of this chapter is to pin down the relevant conditions in the case of discourse ellipses. Conditions of both kinds will be described, and I will discuss how they work, both separately and together. A characteristic of the discourse ellipsis phenomenon is that it can hardly be fully described by completely clear cut restrictions. There are cases where recoverability and licensing conditions point in different directions and it is then particularly interesting to see which of the requirements are primary in each case.

The structural restrictions can in some cases be overruled by contextual factors which come into play. More specifically, it appears that if something is sufficiently discourse prominent, it can most likely be elided even if the structural restrictions would predict it to be otherwise, as shown in the examples below:

(88) Noen ganger har jeg noe å lese på, andre ganger setter Ø meg og strikker litt.
NoTa
sometimes have I something to read other times sit myself$_{REFL}$ and knit a little
'Sometimes I have something to read, other times I sit down an knit for a while.'

(89) # Spiser Ø til jul.
Ø eat Ø for Christmas
'I eat it for Christmas.'

(90) A: Spiser du ribbe, eller?
eat you rib or
'Do you eat pork rib, or what?'
B: Ø Spiser Ø til jul.
Ø eat Ø for Christmas
'I eat it for Christmas'

The example sentences in (88) and (90) display the unusual case of dropping elements sentence-medially, and not from the left periphery, which would be the expected case. Hence, the hypothesized structural restriction, 'delete only from the C-domain', is violated. Yet, if the sentence in (89) is uttered as a response to the questions in (90), where the elided element is made discourse-active, then the ellipsis sounds acceptable.

The property of being dependent on a specific context is a common feature for most discourse ellipses. Most discourse ellipses are unacceptable in out-of–the-blue contexts, as illustrated in example (91). In (92), when the context is more prominent the acceptability of the ellipsis is significantly improved:

(91) # Ø Leste jeg i fjor.
read I last year
'I read Ø last year.'

(92) A: Skal du lese Hamsuns Sult i sommer?
shall you read Hamsun's Sult this summer
'Will you read Hamun's *Sult* this summer?'
B: Ø leste jeg i fjor.
read I last year
'I read Ø last year.'

Even though it is [spec,CP] that has undergone ellipsis in this case, a position which is structurally expected to license ellipsis, the fact remains that if this sentence is uttered without any preceding discourse, it would sound odd. Yet, if it is uttered as an answer to the question in (92), then it is acceptable, since the semantic content of the elided object is then identified.

Common to all these examples is that they sound odd if they are uttered out of any preceding context. Yet, they are perfectly acceptable if the null constituent is contextually given and activated as a referent. In some cases, discourse prominence overrules the structural requirements, leading to structurally unexpected ellipsis types. It thus appears that the influence of contextual information blurs the empirical pattern. But, crucially, this *is* the empirical picture – the data *are* sometimes quite messy. Pretending that the empirical pattern is more clear-cut than what is actually the case would be dishonest and detrimental to the analysis.

Hence, contextual influence can occasionally overrule structural requirements. But note that there are also examples of the opposite situation. There are examples of infelicitous ellipses, where the unacceptability is not due to semantic restrictions, but only to structural factors. A group of such examples will be discussed in the last part of this chapter.

Occasionally, the different types of restrictions may be conflicting, with the result that the empirical patterns to some degree conceal the underlying restrictions. Because of this complexity of the licensing patterns, it is most likely not possible to establish a complete, predictive explanation for the totality of these data. The aim of this chapter is to propose possible explanations for some selected patterns. Some aspects of the empirical patterns will be explained by structural factors, while other data require discourse related, pragmatic explanations.

In order to account adequately for the empirical variation that is displayed, it is thus evident that we need an analysis which incorporates the right interaction between formal conditions and contextual conditions, and which anticipates that these components interact. Building an exhaustive analysis in narrow grammar is not possible. Insights and restrictions from other parts of the linguistic system must also be integrated.

4.3.4 Recoverability of deletion

Let us take a step back and raise a naïve question: Why is it that we cannot elide everything? How come we need to utter anything at all? The answer is obvious, of course. When we communicate, we seek to convey a certain chunk of information to the person we are talking to. Since people cannot communicate through telepathy, they must make use of instantiated lexical elements to get the message through. Yet, in ellipses, words and phrases which ought to be obligatorily represented in the linguistic signal are missing. According to Merchant (2001: 1), this is possible because the phenomenon of ellipsis is "parasitic on redundancy". It utilizes the fact that some information is superfluous in certain contexts.

Ellipsis is often explained by economy. Omitting linguistic elements which are not essential for conveying the meaning makes it possible to communicate with fewer words. This begs the question: for whom is it economical, the speaker or the hearer? There will always be some competition between the speaker's economical "least effort" principles on the one hand, and on the other the requirement that the utterance must be interpretable for the recipient (Merchant 2001). The use of ellipsis is clearly most economical from the speaker's point of view. If only the speaker's economy mattered, an optimal situation could be a vocabulary of only one word referring to all conceivable nuances of meaning. The economy from the perspective of the recipient has an opposite effect. It requires the linguistic expression to be richly specified, so that the intended meaning is easily accessible. For the recipient, the interpretation of an ellipsis requires a larger work load, since the meaning must be derived from an invisible or silent linguistic signal.

When it comes to ellipses, speaker's and hearer's economy are reconciled so that ellipsis is only possible in cases where the recipient can easily reconstruct the missing parts. Hence, ellipsis exploits the redundancies of the system, but not at the expense of usability and comprehensibility (Merchant forthcoming). This insight is incorporated into the principle of recoverability, which has often been proposed as an explanation in work on elliptical constructions. This principle dictates that any elided semantic content must somehow be recoverable, such that the overall meaning of the sentence remains the same. In other words, the meaning of the elliptical sentence must be identical to the meaning of the non-elliptical variant of the same sentence. Moreover, in order for the recipient to understand the communicated utterance, the semantic content must be rendered sufficiently visible, meaning that the parts of the utterance which are not conveyed to the hearer by other means cannot be

elided. This insight displays clear parallels to Grice's Maxim of quantity, which postulates (Sperber & Wilson 1995: 33):

> *Maxims of quantity*
>
> 1 Make your contribution as informative as is required (for the current purposes of the exchange).
> 2 Do not make your contribution more informative than is required.

One must utter a sufficient amount to get the right meaning through, but on the other hand, information that is already familiar is superfluous.[39]

4.3.4.1 The original principle

The principle of recoverability of deletion was first introduced as a restriction governing syntactic deletion. At this stage of generative theory, four possible transformation types were assumed in the transition from deep structure to surface structure: movement, copying, insertion and deletion (Akmajian & Heny 1975: 230). An immediate consequence of assuming an operation 'deletion' is the need to establish some restrictions, since obviously, deletion cannot apply freely. One such restriction which was postulated was the Katz-Postal Hypothesis (Katz & Postal 1964), stating that all transformations are meaning-preserving. More specifically, if two surface structures have their origin in the same deep structure, and the only thing distinguishing them is that one, but not the other, has undergone an optional transformation, then they must have the same meaning (Akmajian & Heny 1975). Hence, a transformation is not allowed to change the semantic content of a sentence.

Moreover, if a deletion transformation is to preserve the meaning of a sentence, it must be possible to determine from the deletion rule and from the output tree, i.e., the surface structure, what is deleted. In other words, it must be possible to reconstruct the meaning of the deleted element. Otherwise, there would be a change of meaning, which would contradict the Katz-Postal Hypothesis. Hence, a constituent is recoverable if it can be identified even if it has undergone deletion. A motivation for the principle of recoverability is thus the observation that sentences which contain deleted elements are generally not ambiguous. This follows directly from the recoverable status of the deleted element.

---

[39] A fact that supports the argument made in this section, is that prosodically, even when it *is* present, familiar material is often unstressed, or at least it shows reduced stress compared to new material.

The first definition of the principle is found in Chomsky (1964: 41), where it is stated that an element can be deleted under the following conditions:

> In other words, a transformation can delete an element only if this element is the designated representation of a category, or if the structural condition that defines this transformation states that the deleted element is structurally identical to another element of the transformed string. A deleted element is, therefore, always recoverable.

Another frequently quoted definition of the principle is found in Chomsky (1965: 144-145):

> A deletion operation can eliminate only a dummy element, or a formative explicitly mentioned in the structure index (for example, *you* in imperatives), or the designated representative of a category (for example, the wh-question transformations that delete Noun Phrases are in fact limited to indefinite Pronouns – cf. Chomsky, 1964, 2.2), or an element that is otherwise represented in the sentence in a fixed position.

From these two quotations we may conclude that syntactic deletions are permitted in the following cases: If the deleted element is a dummy element, if the deleted element is explicitly mentioned in the structure index, if the deleted element is identical to the designated representation of a category, or if the deleted element is identical to another element in the string.[40] Chomsky (1964: 40-41) defines the 'designated representation of a category' as follows:

> Each major category has associated with it a "designated element" as a member. This designated element may actually be realized (e.g. *it* for abstract Nouns, *some (one,thing)*), or it may be a dummy element. It is this designated representative of the category that must appear in the underlying strings for those transformations that do not preserve, in the transform, a specification of the actual terminal representative of the category in question.

A designated representation of a category thus represents a fixed category, which is specified in the system of rules, and not only in the lexicon. The assumption made was that certain elements had a specific theoretical status by being mentioned directly in the transformation rule (Chomsky 1964, 1965).[41] These elements were thus assumed to be present independently of whether they were lexicalized. Each category was assumed to have such a designated abstract member. Chomsky's (1964, 1965) idea was that a lexical element can be deleted if

[40] The principle stated in the last quote above (Chomsky 1965) was formulated at an early stage of generative theory. The overall model assumed was then quite different from the one which is generally adopted nowadays. A couple of these cases require some clarification. Firstly, a 'dummy element' is a constituent which does not contribute any semantic meaning to the string. Consequently, deleting such an element does not alter the overall meaning of the string, which is precisely why it is easily deleted. Secondly, the *structure index* or *structural description* can be defined as the input to a transformation rule, which yields the final construction as its output (Akmajian and Heny 1975, Bach 1964).

[41] Note that at this stage of generative theory, the rules assumed were more construction specific than in later versions of the theory. For instance, a rule could specify a concrete word.

this element *is* the designated representative of a category. The deleted constituent will then be recoverable since it has an abstract equivalent in the same structure.

The argument is that if an element is mentioned in the rule that is applied to the construction, then this element can be deleted, or in our terms, it is not necessary to realize it phonetically. Yet, importantly, if the lexical element in question contributes semantic content which exceeds the content specified by the designated representation, then this additional semantic meaning is not recoverable, and thus the element cannot be deleted. This strict identity restriction is formulated in Chomsky (1965: 182):

> The general principle for erasure operations, then, is this: *a term X of the proper analysis can be used to erase a term Y of the proper analysis just in case the inherent part of the formative X is not distinct from the inherent part of the formative Y.*

The overall purpose of the principle of recoverability was to prevent the grammar machinery from freely deleting constituents. Then, one could only end up with structures where bits of semantic content were lost, which would violate the Katz-Postal Hypothesis. Worse, the ultimate consequence of this could be a structure where nothing was phonetically expressed, i.e., a syntactic structure without sound. This was of course undesirable, since people cannot transfer whole linguistic structures to each other without utilizing sound or other forms of sign.

The reason that I have chosen to include these early formulations of the recoverability condition is that they will turn out to be relevant for the discussion concerning licensing restrictions. To recapitulate, the relevant insights in this section are that a deleted element can be a dummy element, it can be identical to another element in the structure, it can be a designated abstract representation of the same element, or it can be constant element directly specified in the deletion rule.

4.3.4.2 Expanded use of the principle – recoverability in context

In the original use of the notion of recoverability, the principle was understood as a sentence-internal condition. It was required that the deleted material be recoverable from the surface structure of the same sentence. Yet, later, this view has been expanded to cover also sentence-external recoverability, meaning that elided elements can be recoverable from outside of the sentence, either by an instantiated lexical item from another sentence, or from the non-linguistic context. Such an expanded use of the notion is found in recent theories on ellipses, here from Albrecht (2010: 10): “Recoverability on the one hand, means that the missing

material has to be recoverable semantically from the context." This view is also expressed in McShane (2005: 16): "Referents for syntactically elided categories can be recovered from the linguistic context (…), the extralinguistic context (…), or one's world knowledge in conjunction with the semantics of the overt categories." McShane (2005) gives the following examples for the three different scenarios of recoverability:

(93) If you're going to **procrastinate**, I will Ø, too.
(94) (The speaker, eyeing two slabs of chocolate cake) Shall we Ø?
(95) By midnight Joan **had finished** her term paper and Jason Ø his math homework.

(93) and (95) illustrate recovery from the linguistic context, from the verb *procrastinate* in (93) and from the verbal complex *had finished* in (95). (94) is an example of recovery from the extra-linguistic context, where the null element refers to consuming the chocolate cake.[42] For our purposes, this is obviously a welcome expansion of the notion of recoverability, since in discourse ellipses, the antecedents for the elided constituent are not always to be found within the boundaries of the same sentence. Often, the antecedent is only present in the non-linguistic context:

(96) ~~Det~~ husker jeg var så gøy da jeg var liten. NoTa
~~that~~ remember I was so fun when I was little
'I remember being so much fun when I was little.'
(97) ~~Jeg~~ fikk jo litt næringsrik mat hjemme da. NoTa
~~I~~ got yes some nutritious food at home then
'I got some nutritious food at home, you know.'
(98) ~~En~~ skulle tro det. NoTa
~~one~~ should think that
'One should think so.'
(99) ~~Det~~ tror jeg også ja. NoTa
~~that~~ think I also yes
'I think so too.'

[42] Relevant here is also Chao (1987), who proposes that ellipses need not always have syntactic antecedents; they may also have pragmatic or discourse antecedents (Lobeck 1995: 25).

To sum up, the main insight to be gained from the recoverability condition can be formulated as follows: If a constituent is not recoverable either from the linguistic context or from the non-linguistic context, then the sentence cannot be interpreted. Hence, recoverability concerns the interpretability of the sentence. Merchant (2001: 2) refers to this insight as a question of 'identity',[43] stating that silent elements cannot appear when we are not able to fix their meaning:

> Identification refers to the recovery of the information that would have otherwise been expressed if the structures had been overt. (…) The problem of identification seems at first sight to be the more intractable one, since we come directly to the puzzle of generating meanings from silence.

4.3.4.3 Strategies for identification

We have seen that the recoverability condition demands that the semantic content of the intended proposition must somehow be expressed. Otherwise the sentence cannot be appropriately interpreted by the recipient. Hence, to ensure understanding, it must be possible to trace deleted elements either sentence-internally or sentence-externally. Elements that are recoverable in the linguistic or non-linguistic context are more easily omitted than elements referring to new information.

This point can also be approached from a slightly different angle. Let us turn the issue upside down, and say that any intended, communicated proposition has a certain semantic content which needs to be identified.[44] This corresponds well with the argument made in chapter 3, where I rejected an endoskeletal deletion approach in favour of an exoskeletal analysis assuming late lexical insertion into empty structural slots (¤). I propose that this identification process can be resolved in alternative ways. The example sentences in (100)-(103) illustrate each of the alternatives listed:

---

[43] In addition to these four (a-d) types, there is also the type of ellipsis which could be characterized by structural identification, i.e., cases where the elided elements are recoverable by virtue of being identical to elements in the same period, but in these cases, not in the same clause. Generally, such ellipses are found in a coordinated (gapping) or subordinated (sluicing) sentence. In these cases, the elided part of the sentence is structurally as well as semantically identical to a part of the instantiated sentence. As discussed in chapter 1, such types of structural ellipses (VP ellipses, sluicing, etc.) are beyond the focus of this dissertation, and I will therefore not discuss them any further. See Jackendoff (1971) for a discussion of gapping constructions.

[44] The term *identity* requires some further clarification. It has been extensively discussed in the literature on ellipses whether the relation between the antecedent and the ellipsis site is necessarily characterized by strict identity, or whether a more sloppy interpretation of the term identity should be applied. Is the identity relation semantic (identity of meaning) or structural (identity of syntax/morphology/phonology), or both? For instance, ellipses sometimes display cases of so-called sloppy identity, where the meaning of the elided item differs slightly from the meaning of the antecedent (see, e.g., Fiengo & May 1994, Johnson 2001 and Merchant forthcoming for a discussion of identity in ellipsis).

a. direct linguistic identification
b. indirect linguistic identification – through an anaphor/verbal participle, etc.
c. sentence externally – by linguistic context, but outside the sentence limits.
d. non-linguistic identification – recoverable only by context, no linguistic trace of the elided element.[45]

(100) Jeg spiste meg mett på dessert.
I ate myself$_{REFL}$ full on dessert
'I was full from eating dessert.'

(101)

a. ~~Du~~ må nesten bare kaste deg i det. NoTa
~~you~~ must almost only throw yourself$_{REFL}$ in it
'You just have to throw yourself in.'

b. ~~Jeg har~~ prøvd å øve meg litt ned Bogstadveien. NoTa
~~I have~~ tried to practice myself$_{REFL}$ a little down Bogstadveien
'I have tried to practice down Bogstadveien.'

(102)

a. A: Så jeg liker at maten smaker litt spesielt. ~~Jeg~~ er ikke så veldig glad i sånn vanlig norsk mat egentlig.
'So I like that the food tastes a little special. ~~I~~ am not really that fond of regular Norwegian food.'
B: Mmm.
A: ~~Det~~ syns jeg er litt kjedelig. NDC
~~That~~ think I is a little boring
'I think that is quite boring.'

[45] Note that types (c) and (d) are really instances of the same, or at least closely related, kinds.

b. A: stakkar ilderen hennes er ikke der mer da.
'Her poor ferret is no longer here.'
B: nei er n avliva?
'Oh no is it put to sleep?'
A: den daua
'It died.'
B: daua?
'Died?'
A: ja
'yes'
B: ~~Det~~ har ikke jeg fått med meg # seriøst er… NoTa
~~that~~ have not I got with me seriously er
'I did not pick that up. Seriously.'

(103)

a. ~~Det~~ har jeg sett i katalogen. NoTa
~~that~~ have I seen in the catalogue
'That, I have seen in the catalogue.'
b. ~~Jeg har~~ feriert i Frankrike og snakker fransk. NoTa
~~I have~~ been on holiday in France and speak French
'I have spent my holiday in France, and I speak French.'
c. ~~Jeg~~ trener opp kondisen til fotballsesongen. NDC
~~I~~ train my condition for the football season
'I am exercising to improve my condition before the football season.'

The example in (100) represents a standard non-elliptical case where each of the elements in the communicated proposition is instantiated by a visible lexical item. I have therefore labelled this 'direct linguistic identification'. There are no non-realized elements which need to be recovered.

In (101a) and (101b), the subject is non-realized, but the features (person and number) of this subject are indirectly identified through the anaphors *deg* 'you' and *meg* 'me'. The identification happens through an instantiated lexical element, but yet the subject is not directly identified. A parallel situation is seen in (101b), where the features of the omitted

perfective auxiliary are indirectly identified through the form of the participle *prøvd* 'tried'. The fact that this is a perfect participle indicates that the silent auxiliary is perfective.

The null object in (102a) has no sentence-internal antecedent through which the semantic content is identifiable. Yet, in the preceding sentence, the referent is activated by the constituent *sånn vanlig norsk mat* 'such regular Norwegian food'. (102b) displays a parallel case. The null object here points back to the statement that the ferret died. Hence, in both these cases, the elided items are identified through sentence-external antecedents. A similar case is seen in the examples in (103), where the silent elements have neither a sentence-internal nor a sentence-external linguistic antecedent. In order to be acceptable, these examples require a specific context, where the elided element is somehow made discourse-prominent, for instance through direct pointing. They are less felicitous in out-of-the-blue contexts. Importantly, these examples do require the elided elements to have a non-linguistic antecedent, yet there is no linguistic trace of the silent constituent.

I propose that various kinds of identification are ways to make an element discourse-prominent.[46] In the case of direct linguistic identification, the element is made prominent by being lexicalized. More interesting for our purposes are the example types in (b-d), in which the silent elements need to be identified somehow, in order for the recipient to be able to interpret them. As we have seen, identification may be sentence-internal or sentence-external. Yet, common to the example types in (b-d) is the insight that the more discourse-prominent an element is, the easier it is to elide it. In relation to this, note that an interesting characteristic of discourse ellipses is that gestures of different kinds – such as nodding, pointing etc. – often contribute to increasing the discourse prominence of certain elements. Pointing to something in the non-linguistic context may fill the same function as lexically instantiating the element, and can thus be seen as an example of sentence-external recoverability, as in the following Norwegian examples:

---

[46] A crucial point in my analysis is the assumption that elements from the context can substitute for the phonological realization of lexical elements in the syntax. Interestingly, Avrutin (2006) suggests that in the language of aphasics, as well as in certain unimpaired registers, elements from the context may take over the function of functional categories. Importantly, he points to a distinction between tense and agreement, namely that aphasics make more errors related to tense than to agreement. Whereas agreement is present in a clause only due to narrow syntactic requirements, tense is required to be anchored to the linguistic discourse, i.e., it is part of the context. From this he concludes that reliance on context is only possible in cases where the requirements of the information structure are at stake. Avrutin (2006: 54) argues that this is the reason why tense is more easily omitted than agreement: "If the speaker has provided such a point [a temporal anchoring point] in the linguistic discourse, it will be part of the context. The encoding of the temporal information by morphosyntax thus becomes unnecessary." The point is thus not that tense is completely missing, but rather that it is not explicated. A parallel scenario is seen in the case of discourse ellipses. Elements may stay unrealized if their semantic content is recoverable.

(104) *pointing to a poster of a movie.* Ø skal jeg jammen få med meg.
'Ø I will certainly go see.'

(105) *pointing to a poster for a concert.* Ø skal vi på.
'Ø I am going to see.'

In these examples, the pointing makes the silent element sufficiently discourse-prominent, and consequently, it overrules the normal structural requirement of having an instantiated element in this position.

Interestingly, Jouitteau (2004) discusses similar examples from Atlantic French, a language which generally requires an overt, phonologically realized subject to fulfil the subject requirement (EPP). Jouitteau argues that this preverbal subject position can be filled by either a DP subject, or alternatively a sound or a gesture. More specifically, she proposes that movements of the upper body and ostensive facial expressions can function as preverbal phonological material to fulfil the subject requirement. The preverbal sound or gesture is analysed as an expletive satisfying the PF side of the EPP (Jouitteau 2004: 102).

(106) *Context:* *J'te prends en voiture à la gare si tu loupes ton train?*
Do you want me to fetch you with the car if you miss your train ?
($DP_{subject}$/sound/gesture) prendra le train d'après et py c'est tout.
will.take the train of after and then it is all
'I'll take the next train and that's all.'

(107) *Context:* entering *a room where children are playing…*
($DP_{subject}$/sound/gesture) feriez bien de ranger!
would.do good P clean up
'You (really!) should clean up!'

Alternative instantiations of a preverbal sound can be either an intake of breath or a minimal vocalic production. A preverbal gesture can take the form of a facial expression or movement (nod, head dip, head shake, raising of eyebrows etc.), or a movement of other body parts (shrug, movement of the hand, head scratch, slap of the knee or of the hand, shake of the finger, snap of the fingers etc.). Importantly, according to Jouitteau (2004), gestures or sounds that are unintentional cannot fill this function. It must be an intentional act of the speaker.

Examples with pointing, as in (104) and (105) above, can include sentences with topic drop of both subjects and objects. Yet, note that topic-dropped subjects are often more easily recoverable without any direct pointing, in particular when the subject is 1st person, i.e., is co-referent with the speaker, probably because the speaker is inherently discourse-prominent through the act of speaking.

Hence, we may conclude that context, in the form of general information or specific gestures, constitutes an important background for the interpretation and processing of ellipses. In many cases, contextual information can contribute to disambiguating utterances which otherwise could have had several interpretations, as in the following example:[47]

(108) Skal du til helgen da? NoTa
shall you this weekend then

a. ~~Hva~~ skal du til helgen da?
'What are you doing this weekend, then?'

b. Skal du Ø til helgen da?
'Are you doing Ø this weekend, then?'

Depending on what is the non-elliptic underlying sentence here, (108) may be interpreted as a wh-question, as in (a), or alternatively as a yes/no question, as in (b). In (a), where the wh-element in [spec,CP] is null, the question is about *what* you are doing that weekend, whereas in (b), where the elided constituent is in a VP-internal complement position, the question is rather whether or not you are doing a specific activity. In other words, (108) is an acceptable utterance with two possible interpretations, but we need contextual as well as intonational hints to decide which of the alternative interpretations is intended.

4.3.5 Shortcomings of the recoverability condition

Contextual prominence facilitates the possibility of a constituent remaining silent. From this one could be led to believe that discourse ellipses are conditioned exclusively by communicative and pragmatic principles, and moreover that if only the semantic content of a proposition is sufficiently identified, this would correctly rule out unacceptable ellipses and include the acceptable ones.

[47] Obviously, the intonation patterns will in such cases also provide important clues for reaching the correct interpretation.

However, recoverability conditions alone do not provide an exhaustive account of the data. There are two main arguments for this. Firstly, dropping of topicalized expletive subjects and dropping of copula verbs are both highly frequent in spontaneous speech. Being semantically empty or at least very light elements, they can hardly be recoverable from context. Secondly, if recoverability was sufficient to account for well-formedness of discourse ellipses, why should the position of the elided elements matter? But we have seen from the data that it clearly does.

In what follows, I will treat these challenges in turn. I want to emphasize that it is not my aim to reject the principle of recoverability. Rather, it is my claim that other interacting kinds of explanations are required, since recoverability alone cannot account for the entire set of data.

4.3.5.1 Expletive subjects and copula verbs

In order for a silent element to be semantically identified or recovered, the element needs to have semantic content. Otherwise, there is nothing to recover, since no semantic meaning has gone missing in the first place. Yet, among the elements which are frequently silent, we find expletive subjects and copula verbs:

(109) ~~Var det~~ mye folk? NoTa
~~were there~~ much people
'Were there many people?'

(110) ~~Det er~~ litt dårlig tilbud til den aldersgruppen NoTa
~~it is~~ little poor service for that age-group-the
'There is quite poor service for that age group.'

(111) ~~Det var~~ veldig lett å samle alle det var bare å løpe ut og banke på naboene liksom m så # samlet man en gjeng NoTa
~~it was~~ very easy to gather everyone it was only to run out and knock on neighbours like so gathered one a group
'It was very easy to gather everyone, it was just to run out and knock on the neighbours so one gathered a group.'

(112) ~~Det er~~ svært stor forskjell på klientellet # tror jeg altså NoTa
~~it is~~ very big difference on clientele think I so
'There is very big differences among the clientele I think.'

(113) ~~Det er~~ vanskelig å si NoTa
~~it is~~ difficult to say
'It is difficult to say.'

Firstly, notice that copula verbs may be argued to bear certain semantic content after all. Copula verbs may have finite tense, and I have argued that tense is a semantic category, specifically that it is the G-semantic content of the T-head. Moreover, the copula verb is a reflex of the combination of a subject and a property. A copula verb is what makes visible the predication relation, which clearly is a relation bearing semantic content. Thus, we could claim that elided copula verbs are recoverable through predication and also through the unexpressed yet interpretable tense of the ellipsis.

As for expletive subjects, what characterizes these elements is precisely that they are purely formal constituents which make no semantic contributions to the sentence. Hence, one can hardly claim that they are implied by context. Rather, they are placeholders in the syntax, due to structural requirements demanding that the positions in question shall not be empty. Consequently, the fact that these elements are often elided is a challenge to the recoverability condition as an explanation for discourse ellipses. Cardinaletti (1990) argues that in German, expletive subjects (non-arguments and quasi-arguments) cannot be phonetically non-realized exactly for this reason. They are non-referential and hence not contextually recoverable (the examples below are Cardinaletti's own):

(114) * *pro* wurde *t* viel getanzt.
was much danced
'There was much dancing.'

(115) * *pro* ist *t* ein Mann da.
is a man there
'There is a man there.'

(116) * *pro* regnet *t* gerade. / * *pro* hat *t* den genzen Tag geregnet.
rains now / has the whole day rained
'It is raining now. It has been raining all day.'

Yet, the examples of discourse ellipsis that I have presented earlier, clearly demonstrate that this is not the case for spoken Norwegian. According to Mörnsjö (2002), the Norwegian pattern also holds for Swedish.[48]

How can the Norwegian data be accounted for? Intuitively, it is obvious that these items do not need to be recovered in the first place, since they do not contribute to the semantic content of the sentence in any case. Radford (1981: 266) gives the following interpretation of the recoverability condition, which is illustrative here: "Only elements which do not have semantic content can be deleted." If we adopt his interpretation, the dropping of expletives and copula verbs is expected. Precisely because these elements are semantically empty/light, they are easily elided without any need to be recovered.

I propose that to account for these types of ellipses, the theory of constructional syntactic frames, as argued for in chapter 3, provides a fruitful perspective. To briefly summarize the proposal, I have proposed a syntactic model where a G-semantic syntactic structure is abstractly generated, and into which lexical items are inserted late. I have adopted Åfarli's (2007) proposal that Norwegian exhibits five constructional frames, which are constant and unalterable, and that all Norwegian sentences are instances of one of these frames.

Why is this of importance with respect to ellipses of expletive subjects and copula verbs? Note again that the primary function of these elements is to be placeholders in the syntax. Generally, when a lexical item is inserted into the syntax, the lexical meaning will

---

[48] Mörnsjö (2002) presents the distinction between the subject *det* in Swedish as a quasi-argument, as applied in, for instance, weather constructions, and *det* as a pure expletive subject, as seen in impersonal passives and existential clauses (Chomsky 1981, Rizzi 1986, Cardinaletti 1990, Vikner 1995 among others). This distinction corresponds to the distinction between the subjects *it* and *there* in English, but in Swedish, as in Norwegian, the lexeme *det* covers both uses. The conclusion in Mörnsjö (2002) is that both types of subjects are readily omitted in Swedish. The same conclusion also holds for Norwegian.

1. Ø blåser friskt i dag. (Weather construction)
   '~~It~~ is very windy today.'

2. Ø spises altfor mye karbohydrater nå til dags. (Impersonal passive)
   '~~There~~ is eaten far too many carbohydrates nowadays.'

3. Ø kom masse folk på premieren. (Existential construction)
   '~~There~~ came lots of people to the opening night.'

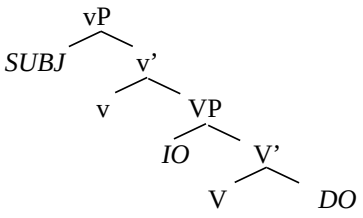
Since this distinction does not seem to be of relevance to the data, I will not implement it in the analysis proposed. Hence, I will not make a distinction between quasi-arguments and pure expletives, but rather make use of the term expletive for both types.

interact with the G-semantic meaning of the structure to yield an integrated semantic interpretation. However, since expletive subjects and copula verbs do not make any semantic contribution, only the G-semantic meaning needs to be transferred. In these kinds of ellipses, this structural meaning will very easily be conveyed anyway. Hence, expletive subjects and copula verbs do not need to be instantiated, because the structure is recoverable in any case. I therefore propose an extension of the recoverability condition to cover recoverability of syntactic structure. If the structure is sufficiently recoverable, and in addition the full semantics of the elided elements is identified, then ellipsis is possible.

If we turn the issue upside down, aiming to define conditions on phonological realization rather than restrictions on deletion, we may state that the primary function of expletive subjects and copula verbs is to render the syntax visible. These elements do not contribute any semantic meaning beyond the one already specified in the structure. Thus, the elements can be dropped if it is sufficiently clear which structure that is underlying the ellipsis, i.e., if the elements that are realized identify the right underlying structure anyway. Hence, the assumption that the syntactic frame is present independently of lexical insertion is then what makes ellipsis possible, because the frame carries G-semantic, structural content independently of the items inserted. In the case of expletive subjects and copula verbs, it appears that this structural meaning is exhaustive, since these elements do not contribute any further semantic content.

Moreover, this argument resonates with the early formulations of the principle of recoverability and the restrictions on syntactic deletion, as discussed earlier. Firstly, we saw that Chomsky (1965) stated that an element can be deleted if it is a dummy element. Obviously, expletive subjects and copula verbs easily fit this characterization. Secondly, and more important here, it was proposed that an element could be deleted if it was identical to the designated representation of a category (Chomsky 1964, 1965). I propose that the logic of this argument is parallel to the argument that an expletive subject is recoverable from the structural frame. In the model outlined in this dissertation, constructional frames are argued to be generated independently of lexical insertion. Furthermore, each position in the lexical domain has a designated type of member, such as subject, object etc., as well as some unspecified features:

(117)



When an expletive subject is inserted into the subject position, it contributes no more than the semantics which is already present in the structural position. Similarly, a designated representation of a category can be understood as a unit contributing a minimal amount of information, hence parallel to the underlying structural position. The proposal that an element can be deleted because it is identical to the designated representation of the category can be translated into a statement that an element can only be deleted if it is identical to the structural position into which it was supposed to be inserted. It is then fully recoverable within the sentence structure, because the semantic content of the elements doesn't exceed the semantic content present in the syntactic structure. This is precisely the case for expletive subjects.

For other, more semantically loaded subject types, the meaning of the subject exceeds the content of the structural position, or in other terms, it exceeds the content of the designated representation of the category. In this case, the meaning of the subject is no longer fully recoverable from the sentence structure, since the subject then contributes more meaning than what is found in the structural frame. Consequently, non-expletive subjects are not easily elided, unless they are recoverable through another element in the sentence, or in the context.

We may thus conclude that ellipsis of expletive subjects is possible since the structural frame already specifies their full content. An immediate question arising from this argument is of course why expletives are inserted in the first place, since it appears that they contribute no independent meaning to the sentence. To this I propose two answers. Firstly, expletives appear to play a role in distinguishing between yes/no questions and declaratives. More specifically, if the expletive occupies [spec,CP], as in (118a), then the sentence must be declarative. However, if the expletive occupies [spec,TP], as in (118b), then the sentence is a yes/no question:

(118) Fint å bo i gården her. NoTa
nice to live in the building here
a. Er det fint å bo i gården her?
'Is it nice to live here in the building?'
b. Det er fint å bo i gården her.
'It is nice to live here in the building.'

A second, rather naïve answer is quite simply that this is how the language works. Sometimes it is not economical. It is a fact that semantically empty elements such as expletives and copula verbs are part of the linguistic landscape in many languages, as pure syntactic placeholders.

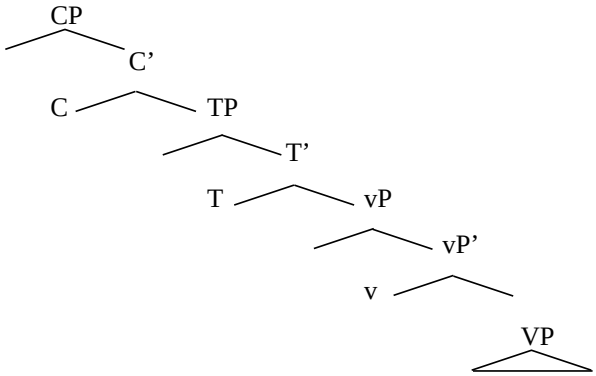
For purposes of illustration, I briefly outline the proposed analysis of a sentence with a null expletive subject:

(119) ~~Det~~ kommer lyder hele tiden. NoTa
~~there~~ comes noises all time-the
'There are noises constantly.'

Following the argument presented in previous chapters, I will assume that the first step is abstract merge of the G-semantic structure. We then need to be aware of which of the five constructional frames is chosen, in this case the transitive frame, since we need room for two argument positions:[49]

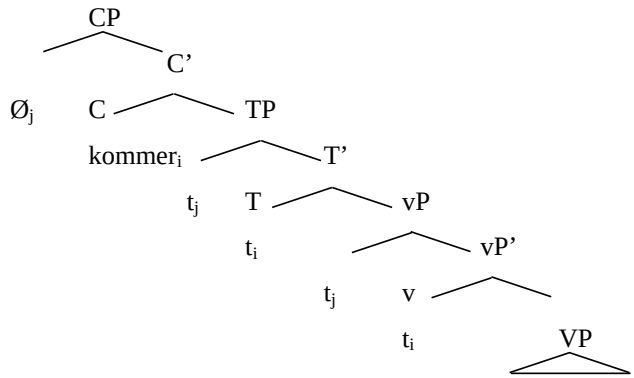
[49] It is arguable whether the expletive subject should be characterized as an argument; probably it should not. Yet, it is unquestionably the case that the syntax must posit a structural position for this expletive subject, i.e., the [spec,vP].

(120)



When the G-semantic frame is merged, lexical items are inserted into the relevant positions. Whether heads of chains are inserted low and then moved upwards, or if the whole chain is inserted at once, with traces or silent copies in relevant positions, is not of importance here, and I will therefore leave this question open. The figure below shows the structure after lexical insertion and movement:

(121)



ti lyder hele tiden

There is no realized subject, and hence the uttered sentence is verb-initial. Following the proposed analysis, I argue that the expletive subject need not be instantiated since the underlying syntactic frame is sufficiently instantiated in any case; furthermore, the expletive does not contribute any meaning which needs to be recovered. I have marked the element Ø in the analysis, but note that this should be understood not as a null lexical element, but rather as

a bundle of features. More specifically, following the proposed analysis, unvalued feature matrices are merged in the main structure, and they are valued when the DP is inserted from the derivational work space. This understanding is reminiscent of Chomsky's (1995) idea that features can move. In this case, the feature bundle which equals the expletive subject moves upwards in order to value the underspecified feature matrices in the relevant structural positions.

Note that in order for this analysis to make sense, it is crucial that an exoskeletal approach to syntax is adopted. In an endoskeletal, lexicalist model, the lexical items constitute the building blocks of the structure. In an exoskeletal model, however, the structure is built separately from lexical insertion, and hence the structure building does not hinge on these elements (Borer 2005a,b). Another consequence of moving from an endoskeletal to an exoskeletal model of grammar is that rather than explaining when and why something can be deleted, one must figure out which positions need or need not be instantiated, under which restrictions, and why. This is an important change of perspective. Rather than asking 'what can be deleted?' the question must be: 'how little can you instantiate and still get the message across?'

The principle of recoverability was originally formulated as a condition on deletion. This clearly implies an endoskeletal analysis. I want to keep the fundamental insight found in this principle, even though the perspective is to be inverted. In an exoskeletal approach, what happens in ellipses is that the instantiation of certain positions is not necessary, and as a consequence, these positions remain silent. Hence, the term deletion must be substituted with non-instantiation. Moreover, rather than searching for restrictions on what can be deleted, I will seek to pin down the restrictions for identification of the abstract syntax. As discussed in chapter 3, this change of perspective triggers a more economical analysis of ellipses. Rather than inserting an element with its features fully specified and then deleting it in case of ellipsis, as in an endoskeletal model, the element is in an exoskeletal model of grammar simply not inserted in the first place.

4.3.5.2 Structural licensing

A second shortcoming of the recoverability condition is illustrated by the following observation. If discourse ellipses were restricted only by recoverability, then it would be expected that elements in any position of the clause could be non-realized, as long as they were semantically identified. Yet, clearly, this is not the case:

(122) # Jeg spiste ~~meg~~ mett på dessert.

I ate ~~myself~~ full on dessert

(123) # Skal du se den nye Harry Potter-filmen? Den ~~har~~ jeg allerede sett.

shall you see the new Harry Potter film that ~~have~~ I already seen

(124)

a. # Den ~~leste jeg~~ i fjor.

that ~~read I~~ last year

b. # ~~Jeg spiser~~ ribbe til jul.

~~I eat~~ pork rib for Christmas

c. # Han ~~trener~~ på Sats.

He ~~exercises~~ at Sats

These examples illustrate that even though the silent constituents are semantically recoverable, so that the full meaning of the sentence can be identified, the ellipses are infelicitous.[50]

---

[50] Note however that also for these infelicitous examples, it is possible to envision a context where the same sentences would not be so unacceptable after all:

1. A: Du spiser jo alltid pinnekjøtt på nyttårsaften, men hva pleier du å spise til jul?
   'You always have ribs of mutton on New Years Eve, but what do you usually have for Christmas?'
   B: ~~Jeg spiser~~ ribbe til jul.
   ~~I eat~~ pork rib for Christmas
   'I have pork rib for Christmas.'
2. A: Hvilke treningsstudio er det dere går på, egentlig?
   'Which fitness studios are you attending. Really?'
   B: Han ~~trener~~ på Sats. Jeg ~~trener~~ på Elixia.
   he ~~exercises~~ at Sats I ~~exercise~~ at Elixia.
   ' He exercises at Sats, I exercise at Elixia.'

This is an important point to make with respect to discourse ellipses in general. As shown in several places throughout this thesis, it appears to be the case that a sufficiently prominent context can make otherwise infelicitous ellipses quite acceptable. Hence, I propose that we need to distinguish between normal contexts, in which elements are activated in the discourse, and contexts like the ones sketched in the examples, in which the discourse presence of the elements is extremely prominent. In this latter case, it is obviously much easier to drop elements. This issue touches upon the more general issue of givenness, and more specifically the idea that there are degrees of givenness, which has been discussed in the literature (Prince 1981, Gundel 1974 among others).

Note that, importantly, the fact that a prominent context can make many of the ellipses acceptable is really a prediction in my analysis. I have argued that contextual enrichment is a last resort strategy which may apply in cases where an element is elided to recover the meaning of the constituent. Hence, we should expect that contextual information can 'save' elliptical examples which would otherwise not be interpretable. Yet, as we will see shortly, certain structural constraints cannot be violated despite the strength of the context.

We can thus conclude that the principle of recoverability does not give a complete explanation of discourse ellipses. There must be additional restrictions at work. McShane (2005: 24) asserts that: "The fact that speakers may be able to recover a category if it is elided does not mean that ellipsis of that category is grammatical." She illustrates her point with the following examples:

(125)

a. *Mom accidentally let out the bird, but Dima caught.
b. Mom accidentally let out the bird, but Dima caught it.

The point is that if a non-native speaker of English would utter (5a), he would probably be understood. But still, (5b) would be the more acceptable alternative. That is to say, (5a) is interpretable, but not structurally acceptable (McShane 2005). From this we can conclude that even though recoverability of an elided item is imperative for the case of ellipsis, it is not a sufficient condition. The ellipsis must also be structurally acceptable in the given configuration.

Furthermore, if recoverability were the only relevant explanation for ellipses, then one would expect that the restrictions on possible ellipsis were precisely the same in all languages. Merchant (2001: 2) points out that on the contrary, languages differ radically in "how they allow redundancies to be reduced by the grammar".[51] Moreover, these differences are systematic, and they are both language- and structure-specific. Merchant therefore concludes that that the possibility of ellipsis "cannot solely be attributed to general principles of information redundancy, and must be encoded in some way in the grammar."[52]

As mentioned in the beginning of this chapter, the distinction between structural and semantic restrictions on ellipses is generally referred to as the distinction between *licensing* and *recoverability* or *identity* (Lobeck 1995, Merchant 2001, McShane 2005, among others):

[51] As seen in chapter 2, van Gelderen (2013) points out that even though Modern English patterns with Germanic with respect to licensing of null subjects, null objects are impossible in English, contrary to what is the case in other Germanic varieties. This fact clearly demonstrates that recoverability and discourse prominence alone is not sufficient to license ellipsis. Language specific structural restrictions are also at play.

[52] In Merchant's analysis of ellipsis, both these two types of restrictions, *licensing* and *identification*, are proposed to be integrated by an e-feature, which is given a local feature-matching requirement in addition to a semantics defining identification by what Merchant labels e-GIVENness. This linking of the two restrictions into one feature is the first proposal of this kind in the literature on ellipsis.

> Licensing refers to local conditions on the omissibility of structures, while identification refers to the recovery of the information that would have otherwise been expressed if the structures had been overt (Merchant 2001: 2).

This distinction was originally proposed by Rizzi (1986), for the treatment of pro subjects. Rizzi emphasized the need to separate formal licensing of null elements from the process of recovering the semantic content of the null element:

> The minimal contribution that is to be expected from a theory of a null element is that it should specify (a) the conditions that formally license the null element (the conditions that allow it to occur in a given environment) and (b) the way in which the content of the null element (minimally, its φ-features) is determined, or "recovered", from the phonetically realized environment (Rizzi 1986: 518).

McShane (2005) states that the most common strategies for licensing in ellipses, are licensing by a particular type of lexical category and licensing by syntactic parallelism. Yet, her empirical base is quite different from the one that I am concerned with. McShane's analysis is restricted to so-called syntactic ellipses[53]; it does not include instances of discourse ellipses. In the literature on structural ellipses, specific positions or words are often pointed out as licensors. Obviously, the structural licensing conditions for discourse ellipses will be different. Therefore, the specific restrictions that are proposed by McShane (2005) and others are not relevant for my purposes. Nevertheless, the overarching insight that there are structural licensing conditions at play, in addition to conditions on semantic recoverability, must clearly be integrated also in the analysis of discourse ellipses.

To sum up, in order for an ellipsis to be legible, two conditions must be met. Firstly, the content of the elided category must be recoverable, which is to say it must be understandable. This is the identity side of the question. Secondly, the language in question must license or permit ellipses in the particular configuration at hand. This second requirement is structural. Hence, there are semantic restrictions on discourse ellipses, connected to recoverability conditions, and there are also structural licensing restrictions which dictate that ellipsis is not possible from all positions of the clause. The hunt for structural licensing mechanisms has been quite intense in the field of structural ellipses of different kinds. The specific licensing restrictions for discourse ellipses in spontaneous speech will be treated in more detail in the following section.

[53] Syntactic ellipsis is defined by McShane (2005: 15) as "the nonexpression of a syntactically obligatory category whose referent can be recovered by syntactic rules or discourse cues".

4.4 The vulnerability of the C-domain

We have now established that recoverability alone does not provide a sufficient explanation for the empirical patterns in Norwegian discourse ellipses. Two types of shortcomings have been discussed, namely inability to deal with dropping of expletive subjects and copula verbs, and inability to deal with the unacceptability of ellipsis from certain positions, regardless of whether the content is recoverable or not. This line of thought is continued in the following two sections, where I discuss two striking empirical observations which also require an explanation that goes beyond recoverability conditions.

Firstly, in 4.4, I will discuss the fact that ellipses involving the C-domain are particularly frequent. Why is it the case that elements are more easily elided from the sentence initial position than elsewhere? What is it that characterizes the C-domain which makes it so vulnerable to ellipsis? Secondly, in 4.5, I will look into a robust structural pattern showing a case where ellipsis is not well-formed even if recoverability conditions may be fulfilled. These cases appear to require a structural explanation, which is precisely what I propose.

4.4.1 The C-domain as an interface to discourse

Norwegian discourse ellipses display a structural asymmetry in that omissions are by far most frequent in the left periphery of the clause. More specifically, the most typical discourse ellipses involve non-instantiated positions in the C-domain: cases of empty [spec,CP] (topic drop), as in (126)-(127), or sentences where the whole C-complex is silent, as in (128)-(129):

(126) ~~Du~~ skal liksom være glad i familien din. NoTa
~~you~~ shall like be fond of family-the yours
'You are like supposed to love your family.'

(127) ~~Det~~ kan jeg ikke erindre. NoTa
~~that~~ can I not recall
'That, I cannot recall.'

(128) ~~Jeg har~~ lyst til å reise til em# Italia. NoTa
~~I have~~ desire to travel to (…) Italy
'I want to go to Italy.'

(129) ~~Det har~~ blitt større sentrum og stadig # bygget ut her så. NDC
~~It has~~ become bigger centre and constantly (…) expanded here so
'The centre has grown and there is constant building here so.'

Why should it be easier to recover elements in some positions compared to others? If that is the case, it requires an additional explanation. Notice that the theory of constructional frames (Åfarli 2007) cannot explain this tendency towards initial deletion. With respect to ellipses, the only restriction imposed by this theory is that the underlying structure must be sufficiently instantiated. Ellipsis from certain positions should thus not be more easily licensed than ellipses from other positions, as long as the meaning of the elided elements is recoverable. In light of this particular frequency of discourse ellipses in the left periphery of the clause, and more specifically in the CP, how can we explain that this domain is particularly vulnerable to ellipsis?

The structure of a sentence is commonly assumed to consist of three main layers. The V-domain deals with argument structure and theta-relations. The I-domain or T-domain contains grammatical information about tense and inflection. The complementizer layer, i.e., the C-domain, is often assumed to have a dual function, as it interacts both with sentence-internal structure (IP/TP and below) and also with higher structures or discourse context (Rizzi 1997).

Chomsky (2002) suggests that C is a force indicator and furthermore that the left periphery also includes positions for at least topic and focus. According to Chomsky (2002: 113-114), the semantics of expressions are of two main kinds, those tied to thematic relations and those tied to discourse relations. The semantics found in the C-domain is of the second type:

> There's the kind that have to do with what are often called Thematic Relations, such as Patient, Experiencer, etc.; and there's the kind that look discourse related, such as new/old information, specificity, Topic, things like that (Chomsky 2002: 113-114).

Hence, the C-domain is characterized as discourse-related, i.e., as an interface between syntactic structure and context. Adger (2003: 329) illustrates this by pointing to two movement operations which both target the C-domain, namely verb movement to C (V2) and syntactic topicalization, which is movement to [spec,CP]. Importantly, he observes that in both cases, the basic, theta-related meaning of the sentence stays unaltered. The following group of examples displays this clearly:

(130) Jeg spiste middag tidligere i dag.
I ate dinner earlier today.

(131) Middag spiste jeg tidligere i dag.
dinner ate I earlier today

(132) Tidligere i dag spiste jeg middag.
earlier today ate I dinner

There is a difference in meaning between these sentences. However, this difference is related to the presentation or structuring of information rather than to argument structure and theta relations. From this we can conclude that processes of movement into the C-domain in declarative main clauses mainly concern pragmatic information structuring, and not theta-related semantic information.

The dual function of the C-domain is clearly implemented in Rizzi's (1997) proposal that the CP should be split into at least two functional projections, ForceP and FinP. ForceP points outwards to the discourse or to a higher clause, and is responsible for clause typing and for linking the sentence to discourse. FinP, on the other hand, faces inwards to the I-domain, relating to tense. Rizzi (1997) concludes that the complementizer system is to be regarded as an interface between the propositional content expressed by IP and the superordinate structure expressed either in a higher clause or in the discourse.

In addition to these two obligatory projections, Rizzi (1997) argues that the C-domain optionally includes two other projections: TopP (topic) and FocP (focus). Whereas the force-finiteness system expresses selectional relations between the C-system and the immediately higher and lower structural projections, the topic-focus system is not dependent on selectional constraints, but rather has other functions. When the topic-focus field is activated, it will be merged between force and finiteness.[54] Then, according to Rizzi (1997), the structure of the C-domain will be:

… Force … (Topic) … (Focus) … Fin IP

Rizzi's (1997) split-CP analysis was motivated by the fact that more than one constituent can be fronted, and moreover that these various fronted constituents display a hierarchical

[54] ForceP and FinP must encapsulate the C system in order to meet the different selectional requirements (downwards) and to properly insert the C system in the structure (upwards).

ordering. As for the first of these arguments, it is less relevant for a V2 language like Norwegian, where only one constituent is allowed before the finite verb in any case. However, as for the second point, the splitting of the CP clearly shows and disentangles the semantic properties of the domain. This is obviously relevant for my purposes. Yet, assuming four structural positions is not necessary to account for the empirical data in this thesis. Hence, for ease of exposition, I will assume only one projection in the C-domain, which is assumed to function as an interface between the sentence-internal proposition and the discourse context. The question of whether there are actually several projections is left open. In my analysis, I will not make use of distinct topic and focus projections, but rather I will assume that these occupy the same position.

This non-split CP-analysis implies that all constituents which move into the left periphery target the same specifier position, namely [spec,CP]. Fronted topic and focus phrases will then compete for the same position. Only one constituent can occur before the finite verb in C, which is a desirable consequence for a V2 language like Norwegian. Under a split-CP analysis, additional syntactic operations would have to be postulated to account for V2 (see e.g. Westergaard & Vangsnes 2005). Under a non-split CP analysis this falls out directly.

The discourse relevance of the C-domain is also manifest in the analysis of null arguments found in Sigurðsson and Maling (2010) and Sigurðsson (2011). Here, the insight that the C-domain is an interface between sentence structure and context is implemented in a model where the C-domain contains silent but syntactically active context-linkers (CLn). These context-linkers include Top(ic) features, as well as logophoric 'speaker' and 'hearer' features, ΛA and ΛP (Sigurðsson 2011). The function of these features is stated in the Context-Linking Generalization (Sigurðsson & Maling 2010: 61):

The CONTEXT-LINKING GENERALIZATION
A Context-linking features of the C-domain include at least Λ_A, Λ_P and Top
B Any referential pronoun, overt or silent, positively matches a context-linking C-feature

This generalization formalizes the insight from Rizzi (1997) that the C-domain is twofold, pointing upwards and downwards. Sigurðsson (2011) further proposes that context-linking is a transitive matching relation where the context-linking features in CP enter into two-directional matching relations, one with clause-internal elements and one with clause-external topics and/or participants of the speech event:

Context ↔ CP features ↔ IP-internal elements[55]

The insight that pronouns – overt or silent – need to match linguistic and/or deictic context is not new, but Sigurðsson's (2011) context linking generalization formalizes this insight, and moreover, the assumption is that this matching happens via the C-domain of the clause. Hence, context-linking becomes a syntactic matter located within the syntactic structure, rather than being purely pragmatic or extra-syntactic, as is often assumed (e.g. Huang 2007).

The goal of this section has been to establish the C-domain as an interface between sentence-internal processes and the discourse context. Considering that the elided elements tend to be given and activated in the context, it is not surprising that this domain is the most vulnerable to discourse ellipsis. Yet, clearly, the picture is more complex. We have already seen that certain elements, i.e., expletives and copula verbs, cannot be characterized as discourse-active or recoverable. Nevertheless, they are frequently dropped. Moreover, it is not the case that any element in the C-domain can be elided in any context. There appears to be more fine-grained pragmatic and structural restrictions governing these processes. We will first turn to the pragmatic side of the matter.

4.4.2 Preposed elements in [spec,CP]: topic and focus

In general, information on the sentence level may be divided into two main parts. One part refers to some information given in the previous discourse or in the context. The remaining part of the sentence is predicated of the first part, and often introduces new information. Different labels have been given to these pairs of information structuring units: for the first part, *topic, theme, point of departure, given information, presupposition, background*, and for the other, *comment, rheme, focus, new information* etc. Constituents belonging to the first of these groups are more vulnerable to being elided, since they are semantically or pragmatically recoverable, as opposed to constituents belonging to the second group. The definitions of these concepts are not unitary in the literature, and since the precise definition of these terms and the distinctions between them are not relevant for the analysis proposed in this thesis, I will not give an in-depth discussion of them.[56] The important point for my purposes is rather to establish the existence of such an information structural division within the sentence.

[55] If A ↔ B, this means that 'A is matched by B' or that 'B is interpreted in relation to A'.
[56] The issue is discussed by Prince (1981), who proposes that different definitions of givenness in the literature can be split into three distinct notions:

In this section, I will discuss the specifier position of C in more detail. [Spec,CP] is the position that is non-instantiated in topic drop constructions, or more generally in declarative V1 constructions in typical V2 languages. I propose that the constituents found in [spec,CP] in declarative main clauses can be of two main types. [Spec,CP] can on the one hand be filled by elements which represent given, activated information, and on the other hand elements which introduce new information into the discourse. Whereas the first type is already activated in the discourse by being familiar and given, the latter type of element is made discourse-prominent at the moment of utterance, by being fronted into the left periphery. The two different types are illustrated in the examples below:

Given information in [spec,CP]

(133) A: Liker du fotball?
'Do you like football?'
B: Fotball liker jeg godt.
football like I very much
'Football, I like a lot.'

New information in [spec,CP]

(134) A: Skal du gjøre noe spesielt i helga?
'Are you doing anything in particular this weekend?'
B: Fest på lørdag kunne jeg godt tenkt meg.
party on Saturday could I well think me
'A party on Saturday, I would very much like.'

- Givenness as Predictability/Recoverability: The speaker assumes that the hearer can predict or could have predicted that a particular linguistic item will or would occur in a particular position within a sentence.
- Givenness as Saliency: The speaker assumes that the hearer has or could appropriately have some particular thing/entity/ … in his/her consciousness at the time of hearing the utterance.
- Givenness as "Shared knowledge": The speaker assumes that the hearer "knows", assumes, or can infer a particular thing (but is not necessarily thinking about it).

Obviously, these degrees of givenness will correlate with the possibility to leave a constituent unrealized. It is easier to omit a constituent which is predictable or recoverable (1), and also a constituent which is salient, than it is to omit a constituent that is only part of a shared knowledge without being made specifically discourse-prominent. A related discussion is found in Lambrecht (1994: 93 ff), who, inspired by Chafe (1987), states that referents may have three alternative statuses. They can be active, semi-active or inactive.

The terms which have generally been applied in the generative literature for given and new information respectively are *topic* and *focus*. According to Radford (2004) and Rizzi (1997), topics and focussed elements constitute the two main kinds of preposed constituents in declarative main clauses. The remaining parts of the sentence are characterized respectively as *comment* and *presupposition*. Following this line of thought, I propose that [spec,CP] in a declarative clause can be filled either by a topic (as in (133)) or by a focussed element (as in (134)).[57] A topic is defined by Rizzi as a preposed element which is set off from the rest of the clause by "comma intonation". It normally expresses old information, and is available and salient in previous discourse. The comment is predicated of the topic and introduces new information:[58]

(135) Your book (topic), you should give t to Paul (not to Bill) (comment).

As for the focus-presupposition distinction, it is structurally similar but interpretively different. The focussed element introduces new information, and the predicated presupposition expresses information which is given and taken to be familiar to both speaker and hearer:

(136) YOUR BOOK (focus) you should give t to Paul (not mine) (presupposition).

In her seminal paper on sentence topics, Reinhart (1981) emphasizes that, unlike other relational terms such as subjects, topics cannot be syntactically defined. Depending on the context of utterance, different phrases in the same sentence can be topics, albeit only one at the time. Consequently, topichood must be defined as a pragmatic rather than a semantic relation.

Importantly, Reinhart (1981) rejects the widespread view[59] that information status is the only relevant factor for defining topichood. The topic cannot be seen as equivalent to 'old information'' since not all referring expressions which represent given information can simultaneously be sentence-topics. The sentence can only be about one topic at the time.

[57] As noted earlier, it is not relevant for my purposes to assume a split CP. Rather than assuming that topic and focus target different projections in the C-domain, these elements will compete for the position [spec,CP]. Hence, [spec,CP] can host a topic or a focussed element, not both.
[58] The examples in (135) and (136) are taken from Rizzi (1997).
[59] Examples given of such theories are Gundel (1974), Chafe (1976), Clark & Havinland (1977) and Clark & Clark (1977).

Reinhart therefore bases her analysis on Strawson's (1964) definition of topichood based on *pragmatic aboutness*. Strawson proposes two main principles, and argues that both of them must be fulfilled if a constituent is to be characterized as a topic:

- the principle of the presumption of knowledge states that a sentence is not an independent, self-sufficient unit, but rather is always related to earlier discourse. More specifically, it is about something that is already in our presumed knowledge.
- the principle of relevance states that what is of importance is not only what can be assumed to be already known, but rather the purpose of the utterance. What is the utterance about?

Note that the insight that topics typically express old information is upheld in Strawson's (1964) theory. The main point for Reinhart (1981) is that givenness cannot constitute an exhaustive definition of topichood. As for defining licensing restrictions on discourse ellipses, topichood is relevant, and it is also highly relevant that topics generally express given information, since given information appears to be easily elided. When the term topic is used below, the following two main characteristics are adopted, along the lines of Strawson's criteria:

1. The topic is what the rest of the sentence is *about*.
2. The topic represents *given or old information*.[60]

In syntactic theory, the term topicalization is most often understood to imply quite simply the movement of a constituent into [spec,CP]. Contrary to the pragmatic definition of a sentence topic (Reinhart 1981), this is a purely syntactic understanding of the term, implying that in declarative clauses, all elements which move to [spec,CP], are topics. However, for our purposes, it is crucial to keep these two kinds of topichood apart. The purely syntactic understanding of topichood is not what we are aiming to pin down here. On the contrary, we have established that [spec,CP] can be filled by either a topic or a focussed constituent. In

[60] McShane (2005) adds to this that topics are also often defined as the elements which the remaining discourse is about. Also Reinhart (1981) contrasts the term *sentence topic* with the notion of *discourse topic*, arguing that discourse topics are topics of larger units and can be more abstract, whereas sentence topics must correspond to an expression in the sentence. The notion of a discourse topic is irrelevant for our purposes here.

other words, we need to distinguish between sentence topics, defined in pragmatic terms, and syntactic topics understood as the elements filling [spec,CP] in main declarative clauses.

Even if the syntactic topic is very often equivalent to the sentence topic, this is not always the case. Reinhart (1981) argues that sentence topics may not necessarily be situated in [spec,CP]. This does of course also mean that the element occupying [spec,CP] in a declarative main clause is not necessarily a topic, which is the insight seen also in Rizzi (1997). Reinhart gives the following example:

(137) Max saw Rosa yesterday.
   a. Max_{TOP} saw $Rosa_{FOC}$ yesterday.
   b. Max_{FOC} saw $Rosa_{TOP}$ yesterday.

The point is that this sentence could be uttered as the answer to different questions. Which question the utterance is a response to determines which constituent constitutes the topic. For instance, if (137) is the answer to "Who did Max see yesterday?", then Max would be the obvious topic. But if (137) was the answer to "Has anybody seen Rosa yesterday?", then Rosa and not Max would be the topic. Obviously, the intonation would also be different in the two cases. Note that the same pattern applies also to the parallel Norwegian sentence:

(138) A: Hvem var det Max så i går?
'Who was it that Max saw yesterday?'
B: Max_{TOP} så $Rosa_{FOC}$ i går.
Max_{TOP} saw $Rosa_{FOC}$ yesterday

(139) A: Var det noen som så Rosa i går?
'Did anybody see Rosa yesterday?'
B: Max_{FOC} så $Rosa_{TOP}$ i går.
Max_{FOC} saw $Rosa_{TOP}$ yesterday

This pattern is highly relevant for the purpose of defining licensing restrictions on discourse ellipses. The relevant insight concerning main declarative clauses can be summed up in two main points:

1. [Spec,CP] can contain elements other than topics. A focussed element can also occupy [spec,CP].
2. Topics need not be in [spec,CP].

I will come back to the empirical consequences of the second point in the next section. As for the first point, we can conclude that discourse ellipses are only licit when the element occupying [spec,CP] is a topic, and not a focus. Hence, an empty [spec,CP] is only possible when Max is interpreted as a topic, i.e., as an answer to the question in (141) above. Under the interpretation that Max is a focussed constituent, i.e., as a response to the question in (139) above, an empty [spec,CP] is completely unacceptable:

Topic interpretation:

(140) A: Hvem var det Max så i går?
'Who was it Max saw yesterday?'
B: ~~Max~~$_{TOP}$ så Rosa i går.
~~Max~~$_{TOP}$ saw Rosa yesterday

Focus interpretation:

(141) A: Var det noen som så Rosa i går?
'Did anybody see Rosa yesterday?'
B: * ~~Max~~$_{FOC}$ så Rosa i går.
* ~~Max~~$_{FOC}$ saw Rosa yesterday

Thus, generally, fronted elements of the category focus cannot be dropped in the same way as topics can be. This is also demonstrated in the following examples, in which a topic-comment structure where the fronted element is easily omitted is contrasted to a focus-presupposition structure, where the fronted element cannot be silent:

Topic-comment structures:

(142) A: Hva skal jeg gjøre med denne gamle stolen?
'What am I to do with this old chair?'
B: ~~Den gamle stolen/Den~~ kan du sende på loppis.
~~that old chair/that~~ can you send to the flea market
'That old chair/that one, you can send to the flea market.'

(143) A: Jeg vurderer å kjøpe en Ford Focus. Vet du noe om den?
'I am considering buying a Ford Focus. Do you know anything about it?'
B: ~~Den~~ har jeg elendige erfaringer med.
~~it~~ have I very bad experience with
'I have very bad experiences with it.'
B: ~~Den~~ har vel ikke noe særlig stor motor.
~~it~~ has well not any large motor
'It doesn't have a very large motor.'

Focus-presupposition structures:

(144) A: Alt dette skrotet, hva skal jeg gjøre med det?
'All this trash, what am I to do with it?'
B: * ~~Den gamle stolen~~ kan du sende på loppis.
~~that old chair/that~~ can you send to the flea market
'That old chair/that one, you can send to the flea market.'

(145) A: Jeg skal kjøpe ny bil, kanskje en Ford.
'I am buying a new car, maybe a Ford.'
B: * ~~Ford Focus~~ burde du i hvert fall ikke kjøpe.
~~Ford Focus~~ should you at least not buy
'You should at least not buy a Ford Focus.'

A more general conclusion that can be drawn from this is that a purely structural explanation of the phenomenon of discourse ellipsis is not sufficient. The licensing restrictions are not only structural, they are also discourse-related. It does not suffice to conclude that elements can be elided from [spec,CP]. The information-structural status of the element is equally decisive. We can therefore conclude that both types of restrictions, meaning related identity

conditions and structural licensing conditions, are necessary to account for the data. Importantly, none of these restriction types alone can constitute an exhaustive explanation.

Topics of different syntactic categories (subjects, objects, complements of prepositions) can be elided from [spec,CP]:[61]

(146) ~~Du~~ kan sende den gamle stolen på loppis. *Omitted subject*
'You can send that old chair to the flea market.'

(147) ~~Den gamle stolen~~ kan du sende på loppis. *Omitted direct object*
~~that old chair~~ can you send to the flea market

(148) A: Skal du bli med på statistikkurset i neste uke?
'Are you participating in the statistics course next week?
B: ~~Det kurset~~ har jeg allerede vært med på. *Omitted complement of preposition*
~~that course~~ have I already participated in

Note that indirect objects are rarely elided. Mörnsjö (2002: 76) explains this with the fact that indirect objects are less likely to be topics at all, compared to subjects and direct objects.

By pointing to topichood as an explanation of discourse ellipsis, we face a challenge with respect to expletive subjects. We concluded earlier that expletive subjects cannot be recoverable from context, since they do not contribute semantically. Obviously, for the same reason, expletive subjects cannot be topics either. Stating that the sentence is *about* an expletive subject seems odd, and moreover, expletive subjects cannot be said to represent old information. Nevertheless, sentence-initial expletive subjects are among the constituents which are most frequently dropped. How can this puzzle be explained? I propose that despite these apparent challenges, discourse ellipsis of expletive subjects does undoubtedly fit within the same logic as the rest of the data. Precisely because they are semantically empty, the need to recover their content does not arise. The semantic meaning of the sentence is intact despite the omission of the expletive subject, and hence the recoverability condition is fulfilled in any

[61] The most frequent type of omitted object from [spec,CP], is an omitted *det* 'that' referring to a previously uttered sentence:

1. Du skal ha fri på lørdagen, du. ~~Det~~ skal ikke jeg.
you shall have free on Saturday you ~~that~~ shall not I
'You're having the day off work on Saturday, aren't you? I am not.'

Examples of dropped referential objects are less frequent in the corpus, but they are attested in other contexts, and moreover, they are judged to be acceptable by my informants.

case. Furthermore, as already argued, the syntactic structure, i.e., the underlying constructional frame of the sentence, is equally subject to recoverability, implying that through the instantiated elements, it must be possible to infer which of the constructional frames the sentence is an instance of. More specifically, there is no variation when it comes to the subject position in the different frames. This position is present and identical in all the five frames. Hence, the structural subject position is easily recoverable, and in the case of expletive subjects the semantic content does not need to be recovered.

The examples seen so far display cases of omitted topicalized referential arguments. These represent by far the most frequent types of discourse ellipses. Yet, occasionally, the silent element in [spec,CP] can also be a light adverbial. The Swedish examples in (149)-(150) are taken from Mörnsjö (2002), but (151)-(153) show that this phenomenon is also possible in Norwegian:

(149) Ø Får man be konsulatet om hjälp.
Ø may one ask consulate-the about help
'Then you have to ask the consulate for help.'

(150) Ø Sitter han där och säger då att det här är ju inte mäningen för att kolla er eller nånting, då.
Ø sits he there and says then that DEM is yes not intention-the for to control you or something then
'Then he sits there and says that the point isn't to check up on you or anything.'

(151) Ø Fløy vi rundt og tok bilder da så kom det en vakt… NoTa
'Ø we flew around and took photos then a guard came.'

(152) Ø Syns jeg man bare skulle lese halve boken... NoTa
'Ø I think one should only read half the book.'

(153) Ø Sitter jeg hjemme og venter på at han skal komme hjem så bare "ja nei # hva gjorde du på den lørdagen?" NoTa
'Ø I sit at home and wait for him to come home, and then "yes no (...) what did you do that Saturday?"'

According to Mörnsjö (2002), these silent adverbs are challenging to the topic drop analysis, since the adverbs do not represent given information and since the sentences are not *about*

these adverbs. It is my claim, though, that the nature of this problem is not dramatic, since after all, one could easily argue that in the sentences in (149)-(153), the elided elements are given in the context, and furthermore that this temporal or locative adverb represents what the remaining sentence is concerned with. Hence, one could argue that in some sense, the sentences are *about* the adverbs, or at least they are about the temporal or locative situation referred to by the adverbs.

Mörnsjö (2002) further notes that the question of whether non-argumental adverbials can be topics has been debated. Kiss (1994) accepts only referential arguments as topics, whereas Chafe (1976) on the other hand states that "real topics" (in topic-prominent languages) should be defined as constituting a frame for the predication. Following Chafe (1976), and also Molnàr (1991), Mörnsjö (2002) adopts a view that includes both aboutness topics and frame topics. She argues that phonetically non-realized connective adverbs are frame topics, which indicate the frame within which the predication holds: "When placed sentence-initially, these adverbs denote a specific relation, more specifically a temporal or logical relation that the sentence establishes to the preceding discourse" (Mörnsjö 2002: 20).

I will adopt an understanding of topichood as including topics as "frames" as well as conveyors of aboutness. This extension of the term then covers silent connective adverbs as well as silent referential expressions.

4.4.3 Non-sentence initial discourse ellipses

Earlier, we stated two important insights with respect to CP and topichood, namely that [spec,CP] can contain elements other than topics, and that topics can be located outside [spec,CP]. The assumption that sentence topics need not be located in [spec,CP], is stated in Reinhart (1981), and immediately triggers the following question: Is it possible for a sentence topic outside of [spec,CP], to undergo discourse ellipsis? I will argue that indeed, this is possible.

For instance, even though the C-domain, and in particular [spec,CP], is particularly vulnerable to discourse ellipsis, topical elements are occasionally omitted sentence-medially as well. It appears that when referential elements are elided from within the clause, they are characterized by topichood. The following authentic examples illustrate this:

(154) (Pointing to a valuable book and handing it to a child):
Færra fint med Ø, da!
deal nice with Ø then
'Treat it well, then!'

(155) A: Har du fått tak i billetter til juleforestillinga?
'Did you get tickets to the Christmas show?'
B: Ja, jeg kjøpte Ø i går.
'Yes, I bought Ø yesterday.'

In (154), the complement of the preposition *med* 'with' is left out, and this is possible precisely because the elided constituent is a topic. It represents given information, and it is most certainly what the sentence is about. The same can be said for (155). The elided object must also here be considered a topic.

On this background, let's reconsider the examples in (137), repeated below as (156)-(158), to see how this would turn out for sentence-medial topics. We see that if Max is interpreted as having focus, and Rosa is a topic/presupposition, then omitting the topic Rosa would be quite acceptable.[62] Yet, if Rosa is a focussed element, this is highly unacceptable:

(156) Max saw Rosa today.

(157) A: Var det noen som så Rosa i går?
'Did anybody see Rosa yesterday?'
B: Max_{FOC} så ~~Rosa_{TOP}~~ i går.
Max_{FOC} saw ~~Rosa_{TOP}~~ yesterday

(158) A: Hvem var det Max så i går?
'Who was it Max saw yesterday?'
B: * Max_{TOP} så ~~Rosa_{FOC}~~ i går.
Max_{TOP} saw ~~Rosa_{FOC}~~ yesterday

It must be emphasized that even though leaving out the topic from a sentence-medial position can be acceptable in the right context, this construction type is clearly not as frequent and not as natural as sentences where a sentence-initial topic is omitted. Furthermore, such examples require a very specific context where the topic is made highly prominent. Still, I believe that it

[62] This is, obviously, an ellipsis which requires very strong contextual presence in order to be acceptable.

is important to comment on the striking difference in acceptability between an omitted sentence-medial focussed element and an omitted sentence-medial topic. The first one is completely ruled out and cannot be accepted at all, whereas the latter can pass given the right context.

This shows clearly that discourse-related restrictions are important, and that the degree of givenness or discourse prominence influences the possibility of ellipsis. The C-domain is particularly exposed, but ellipsis can also occur elsewhere if the context is sufficiently rich. Given information is most easily elided in [spec,CP], but can occasionally also be elided in other positions. Non-given information, on the other hand, such as focussed constituents, can never be elided. Hence, in this case, discourse-related restrictions clearly overrule the structural constraints tied to the C-domain.

4.4.4 Person restrictions on topic drop

If the context leaves all options of person open, the most salient reading of null subjects in discourse ellipses is 1st person, more specifically 1st person singular. This is what we find in so-called diary drop (Haegeman 1990, Haegeman & Ihsane 2001). However, given the right context, null subjects can easily be interpreted as 1st, 2nd or 3rd person, singular or plural. Null objects, on the other hand, appear to be governed by stronger restrictions when it comes to the person features. Apparently, 3rd person objects are more easily omitted than objects in the 1st or 2nd person. In her corpus study of Swedish, Mörnsjö (2002) concluded that topic drop of 1st and 2nd person objects were difficult to find; she found none of either kind in her data. According to Cardinaletti (1990: 79), German does not allow object topic drop when the object is a 1st or 2nd person pronoun; 3rd person object topic drop is fine, however. Cardinaletti (1990) gives the following infelicitous example of a silent 1st person object:

(159) A: Habe ich dich gestört?
Have I you disturbed
'Did I disturb you?'

B: * ~~Mich~~ hast du sehr gestört.
~~Me~~ have you much disturbed
'You disturbed me a lot.'

This restriction is unexpected with respect to recoverability, since both the speaker and hearer are easily identifiable in the discourse situation. Cardinaletti (1990) explains this restriction by pointing to the pro versus operator distinction, claiming that in cases of object topic drop, an operator occupies [spec,CP], and that these operators, unlike pro-subjects, are inherently 3rd person. Hence, this automatically rules out 1st and 2nd person null objects.

Yet, Mörnsjö (2002) rejects the pro/operator explanation for Swedish data, and instead argues in favour of a pragmatic explanation to account for the acceptability problems with 1st and 2nd person objects. She points to general differences with respect to the type of element placed in [spec,CP], and shows that there is a correlation between choice of person for overt objects and covert ones. More specifically, the construction with a topicalized 1st or 2nd person object is pragmatically inappropriate irrespective of whether the object in [spec,CP] is phonetically realized or not. Hence, the following examples (from Mörnsjö 2002), with respectively a pronounced and a silent topicalized object, are equally odd:

(160) Störde jag dig?
Disturbed I you
'Did I disturb you?'

a. # Mig störde du faktisk.
me disturbed you actually
'Actually, you did disturb me.'

b. # ~~Mig~~ störde du faktisk.
~~me~~ disturbed you actually
'Actually, you did disturb me.'

It is pointed out that this sentence would be acceptable if the object *mig* was assigned stress, but then, of course, it could no longer be silent (Mörnsjö 2002). This implies that this construction with a fronted 1st person object is only acceptable if the fronted constituent is a focussed constituent, and as we concluded earlier, a focussed constituent in [spec,CP] cannot be silent.

Mörnsjö (2002) thus proposes that for object topic drop in Swedish, there is a bias in favour of the 3rd person. According to her, this is pragmatically rather than grammatically determined. More specifically, a speaker will generally choose a less marked construction over a more marked one. An example of an unmarked structure would be a subject-initial

clause or a sentence with a null 3rd person object. In most constructions with a null 3rd person object, the object points back to a whole verb construction or proposition rather than a single referent. Propositions are evidently 3rd person. A sentence with a null 1st or 2nd person object would be more marked. Hence, Mörnsjö (2002) states the speaker's choice does not primarily stand between a silent and an overt 1st or 2nd person object in [spec,CP], but rather between marked and unmarked structures. She gives the following illustrating examples, where (161) (with a null 2nd person object), is marked; (162) (null 3rd person object), (163) (null 3rd person propositional) object and (164) (null 1st person subject) are unmarked variants, which consequently are more easily chosen by the speaker:[63]

(161) A: Ni kommer aldrig att få tag på mig!
you come never to get grip on me
B_1: Jodå, Ø hittar vi alldeles säkert med hjälp av polisen, oroa dig inte!
oh Ø find we completely surely with help from police-the worry you not!
'You'll never catch me! Oh, we'll find you surely with a little help from the police, don't you worry!'

(162) A: Ni kommer aldrig att få tag på tjuven!
you come never to get grip on thief-the
B_2: Jodå, Ø hittar vi alldeles säkert med hjälp av polisen, oroa dig inte!
oh Ø find we completely surely with help from police-the worry you not!
'You'll never catch the thief! Oh, we'll find him surely with a little help from the police, don't you worry!'

(163) A: Ni kommer aldrig att få tag på mig!
you come never to get grip on me
B_3: Jodå, Ø gör vi alldeles säkert med hjälp av polisen, oroa dig inte!
oh Ø do we completely surely with help from police-the worry you not!
'You'll never catch me! Oh, we surely will with a little help from the police, don't you worry!'

[63] The examples in (161-164) are all taken from Mörnsjö (2002).

(164) A: Ni kommer aldrig att få tag på mig!
you come never to get grip on me
B_4: Jodå, Ø hittar dig alldeles säkert med hjälp av polisen, oroa dig inte!
oh Ø find you completely surely with help from police-the worry you not!
'You'll never catch me! Oh, we'll find you surely with a little help from the police, don't you worry!'

Sigurðsson (2011: 290) follows Mörnsjö when he states that there are no absolute grammatical constraints on the types of referents of null objects. Rather, he proposes that this is governed by the Relative Specificity Constraint:

> Relative Specificity Constraint:
> The dropped object *cannot be more specific* than the subject.

3rd person is then understood to be less specific than the 1st and 2nd persons, and –HUMAN is less specific than +HUMAN.

Crucially, however, I want to point out that in Norwegian, given the right context, the following examples would be perfectly acceptable. Moreover, they would not be pragmatically odd:

(165) A: De finner meg aldri.
'They will never find me.'
B: ~~Deg~~ finner de lett, ja.
~~you~~ find they easily yes
'You, they will find easily.'

(166) (Pointing to oneself): ~~Meg~~ vil de vel ikke ha med på laget.
~~me~~ want they well not have with on the team
'They wouldn't want me on the team.'

(167) Ja, kongen ja. ~~Han~~ kan nok dokumentaren ikke si noe om.
'Yes, the king. ~~Him~~ cannot probably the documentary tell us anything about.'

Examples (165) and (166) go against Mörnsjö's (2002) claim that topicalized 1st and 2nd person objects cannot be dropped. Furthermore, the three examples contradict Sigurðsson's (2011) RSC. In (165), the topicalized object (2nd person) is more specific than the subject (3rd person). The same can be said for example (166), where the object is 1st person, and hence

more specific than the subject, which is 3rd person. Example (167) demonstrates a case where the elided topicalized object is +HUMAN, but where the subject is –HUMAN. Hence, this example also goes against Sigurðsson's RSC.

The observation that such ellipses as (165)-(167) are possible at all implies that the null objects in these cases must be topics, not focussed elements.[64] It is therefore my claim that objects of all persons which occupy [spec,CP] can be either topic or focussed constituents. As focussed constituents, they clearly cannot be omitted, for pragmatic/information structural reasons. Yet, if they are topics, as the examples above have shown that they occasionally are, they may be elided.

4.4.5 Interacting restrictions: structural and semantic

Let's recapitulate the empirical facts. We have established that the C-domain, and in particular the specifier of C, is the domain that is most frequently subject to discourse ellipsis. The C-domain has been established as particularly discourse relevant. Yet, we have also seen that when the element in [spec,CP] bears focus, which means it represents information that is new to the discourse, it cannot be elided. Topical elements, on the other hand, are very easily omitted in this position. This difference can hardly be explained by anything other than differences in discourse prominence. Focus elements represent new information, and cannot be deleted. Topic elements represent given information, which can be omitted without any loss of meaning. That is, topics are semantically recoverable, while focussed elements are not.

Actually, concerning these empirical differences, it appears that the discourse-related restrictions are more influential than the structural restriction related to the C-domain. This assumption is strengthened by the examples of medial ellipses. The fact that such medial discourse ellipses occur at all clearly shows that licensing conditions based on given information and discourse prominence are indeed very influential, and more so than purely structural restrictions. What happens in sentences with medial ellipsis is that the elided element is sufficiently discourse-prominent to be able to remain silent even though it is not placed in the inherently discourse-related C-domain.

---

[64] Note, however, that in the non-elliptical version of these examples, the fronted constituents must be focussed elements, not topics. This observation is somewhat odd, and it contradicts what we have now established, namely that focussed elements cannot be omitted. A possible explanation could be that in these cases, the constituents in question are so strongly present in the discourse that they can be silent despite being focus constituents. In (169), for instance, one could argue, along the lines of Jouitteau (2004), that the pointing gesture instantiates the [spec,CP] position.

In conclusion, I propose that the general pattern is that elements in the C-domain are more easily elided than elements elsewhere in the clause, due to the fact that the C-domain is inherently discourse-related. Silent elements in the specifier of C are particularly frequent. Yet, elements which represent new information (focussed elements) cannot be elided from this position, due to recoverability conditions. Hence, elements that are not recoverable cannot be elided even when they are situated in [spec,CP]. Elements which are not located in the C-domain are harder to omit, because they are not located in the inherently discourse-related domain. Nevertheless, if an element is sufficiently prominent in the context and thus recoverable, it can be silent anyway. Discourse-related licensing conditions thus overrule structural licensing conditions. Yet, in the next section, I will turn to a robust empirical pattern displayed in the C-domain, where the situation appears to be the opposite, namely that structural requirements overrule the semantic ones.

4.5 The CP–TP connection

As argued earlier, data from spontaneous speech clearly show that the previous topic drop analyses are empirically limited, since in fact not only [spec,CP] is subject to discourse ellipsis. Rather, in sentences where C is occupied by a non-main verb, the whole C-domain can be silent. In what follows, I will describe the structural restrictions which are operative in the C-domain. The set of data investigated here constitutes only a subset of the totality of discourse ellipsis types, but this particular subset concerns the domain which appears to be most vulnerable to discourse ellipsis, and there are indeed some interesting empirical patterns to be unravelled. In order to explain these patterns, I will explore an analysis based on the assumed tight connection between the C-domain and the T-domain, as proposed in recent work by Chomsky. Hence, in this section, structural licensing mechanisms will be explored, rather than semantic recoverability conditions.

I will first present the relevant data, before I introduce the theoretical background which concerns the C-T connection. Finally, I propose an analysis of the empirical patterns.

4.5.1 Empirical patterns

4.5.1.1 Omitted subject and auxiliary or copula verb

We have seen earlier that a sentence-initial finite auxiliary is often left non-realized if the subject is also phonologically null (168a). In addition, the subject can be omitted on its own, when the auxiliary is realized (168b). However, if the subject is realized, then the auxiliary cannot be null (168c):

(168)

a. ~~Jeg har~~ bodd ett år i Mexico. NoTa
   ~~I have~~ lived one year in Mexico.
b. ~~Jeg~~ har bodd ett år i Mexico.
   ~~I~~ have lived one year in Mexico.
c. * Jeg ~~har~~ bodd ett år i Mexico.
   * I ~~have~~ lived one year in Mexico.

The same restriction applies to the omission of expletive subjects and copula verbs, as illustrated in (169), and to referential subjects and copula verbs, as shown in (170):

(169)

a. ~~Det er~~ vanskelig å si. NoTa
   ~~It is~~ difficult to say.
b. ~~Det~~ er vanskelig å si.
   ~~It~~ is difficult to say.
c. * Det ~~er~~ vanskelig å si.
   It ~~is~~ difficult to say.

(170)

a. ~~Jeg er~~ født i Tromsø og oppvokst her. NDC
   ~~I am~~ born in Tromsø and brought up here.
b. ~~Jeg~~ er født i Tromsø og oppvokst her.
   ~~I~~ am born in Tromsø and brought up here.
c. *Jeg ~~er~~ født i Tromsø og oppvokst her.
   ~~I am~~ born in Tromsø and brought up here.

Hence, it appears that in all cases, it is acceptable to leave out the subject by itself, and also the subject and the verb together. Yet, leaving out only the finite verb leads to unacceptability.

A tentative descriptive generalization which could be drawn from this set of data is that it is generally possible to leave out only constituent number one in the linear string, or alternatively constituent number one and two together. However, leaving out only constituent number two when constituent number one is phonologically realized is not acceptable. Thus, considering only this subset of the data, a linear model of analysis in which deletion occurs from left to right would be a plausible alternative. However, as will become clear, this conclusion must be rejected in light of other data.

4.5.1.2 Omitted initial object and verb is impossible

Common to all the sentences in (168)-(170) is that they are subject-initial. In other words, the subject occupies the specifier of CP. Importantly though, sentences where the subject is not the fronted constituent display a different licensing pattern. The sentences in (171a-c) all have topicalized direct objects. In a way parallel to the subject initial examples, the topicalized constituent, i.e., the object, can be omitted by itself, as illustrated in (171a). This is what we have described earlier as topic drop. Moreover, also parallel to the subject-initial sentences, the finite auxiliary cannot be omitted by itself when the object in [spec,CP] is phonologically realized. This is seen in (171b). However, in contrast to the examples in (168)-(170), omitting a topicalized object together with a finite auxiliary verb in C is not possible either, as illustrated in (171c):

(171) A: Vi tenkte vi skulle prøve det derre det er et reisebyrå som heter Nazar.
'We thought we should try that (…) travelling agency called Nazar.'

a. B: ~~Det~~ har jeg sett i katalogen ja. NoTa
~~it~~ have I seen in the catalogue yes

b. B: * Det ~~har~~ jeg sett i katalogen ja.
it ~~have~~ I seen in the catalogue yes

c. B: * ~~Det har~~ jeg sett i katalogen ja.
~~it have~~ I seen in the catalogue yes

To sum up, the general pattern seems to be that it is acceptable to leave out a fronted subject, or alternatively both the subject and a non-main verb – either an auxiliary or a copula verb. However, if an object is topicalized, it can only be omitted on its own, and not together with the finite non-main verb.

The licensing patterns displayed in (168)-(171) are meant to describe discourse ellipses in spoken Norwegian. As mentioned in chapter 1, there are other registers which also display sentence fragments or ellipses. One of them is newspaper headlines. Note that the licensing restrictions on such headlines appear to be somehow different from the ones displayed in spontaneous speech. In a headline, the main verb is often omitted, even when the sentence-initial subject is not elided. Most often, it is a copula verb that is silent:

(172) Kredittkrisen ~~er~~ snart over
Credit crisis-the ~~is~~ soon over

This observation could be seen as contradicting the analysis that I will propose. Yet, I want to emphasize that these are two distinct linguistic registers, and that it is therefore not surprising that the licensing restrictions differ. Crucially, in headlines, substantial information must be highlighted; this is the reason why the element is part of the headline in the first place. Discourse ellipses follow the general given/new composition of sentences. You take as an outset something given, and you seek to say something new about it. The given part is then easily omitted. Headlines do not seem to be composed based on this given/new principle. Rather, headlines seek to include only substantial information, excluding elements which are only linguistically mediating, such as the copula verb.

The problem is of course how to account for and analyse the patterns in (168)-(171) within my model. In what follows, I will first consider an analysis based on a proposal made by Travis (1984), namely that the CP layer is absent in subject-initial clauses in general. Travis' analysis was not developed to account for ellipsis specifically, but I will consider the consequences of applying such a theory to the case of discourse ellipsis. I will demonstrate why this analysis cannot be correct, and thereafter I will propose an alternative analysis based on the agreement relation between C and T.

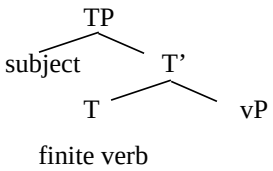
4.5.2 No CP in subject-initial clauses?

The empirical patterns that are presented above, show a striking difference between discourse ellipses which are subject-initial and those in which [spec,CP] is filled by a non-subject. There appears to be an asymmetry between subject initial and non-subject initial clauses. The general distinction between subject and non-subject initial main clauses has been discussed in the literature on Germanic, and it has been proposed (Travis 1984, Zwart 1997) that unlike non-subject initial clauses, which are CPs, subject-initial main clauses are bare TPs, i.e., the CP layer is truncated or alternatively not formed in the first place. The motivation for such an assumption is that in subject initial main clauses, movement to the C-domain is vacuous, i.e. the C-domain reduplicates the T-domain, and thus the C-domain is superfluous in these cases. This is contrary to what we find in non-subject initial clauses. When a non-subject fills [spec,CP], the movement is no longer vacuous. Travis (1984) and Zwart (1997) thus postulate a structural asymmetry between subject initial and non-subject initial clauses. Given the attested asymmetry in discourse ellipses, this seems to be a promising path. I will therefore explore whether this analysis can account for the empirical patterns attested.

Zwart (1997) argues that the CP level is reserved for A'-phenomena, and that subject-initial main clauses have no A' syntax. Nor is there in these clauses a need for a CP to link the clause to a matrix clause. The minimalist assumption is therefore, according to Zwart (1997), that the CP is absent in these cases.[65]

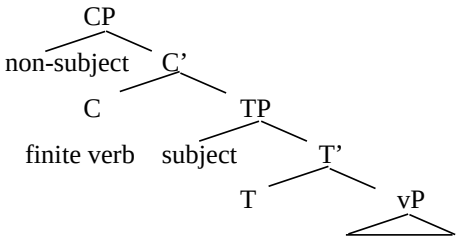
According to this view, the analysis of subject-initial and non-subject initial clauses would be as follows:

(173) **Subject-initial clause**



[65] Moreover, whereas movement to [spec,CP] is triggered by a wh-feature or a topic feature in inversion cases, i.e., non-subject initial cases, there is no feature triggering subject movement to [spec,CP] in subject-initial main clauses. Zwart (1997) also points to evidence against generalized V-to-C movement from double agreement phenomena in Dutch, and from observed asymmetries between subject clitics and objects clitics observed in Travis (1984, 1991), but I will not go into this here.

(174) **Non-subject initial clause**

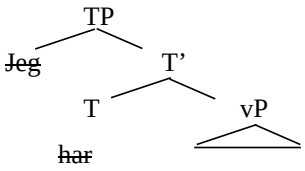


The hypothesis is thus that non-subject initial sentences are CPs, whereas subject initial sentences are TPs.

For our purposes, this is relevant because it implies that the C-domain is not always obligatory, it is present only when motivated by topicalization, i.e. in non-subject initial cases. If we apply this idea to discourse ellipses, the analysis would be as follows: In subject initial ellipses, the movement to CP would be vacuous, and there is thus no need to project the CP, alternatively the CP may easily be truncated. Both the subject and the finite auxiliary can then be dropped, i.e. under this analysis the whole TP can be silent. In non-subject initial ellipses, the CP must be projected because the movement is not vacuous, and then, only [spec,CP] can be silent, not the whole projection.

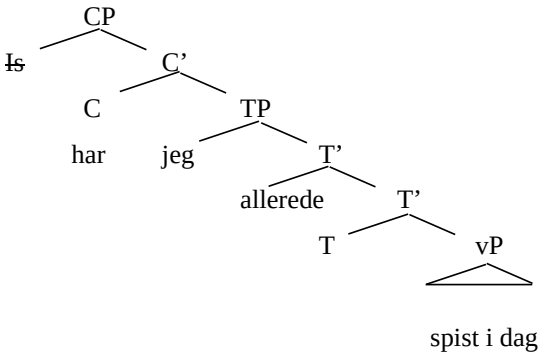
In other words, under this analysis the observed empirical asymmetry between the two types of ellipses boils down to the assumption that ellipsis targets different projections in the two cases. The elided elements occupy distinct structural positions. The rule would be something along these lines: If CP is projected for reasons of topicalization, you cannot delete the whole projection. Then, only [spec,CP] can be silent. But, if CP is not projected in the first place, as in subject-initial cases, then you may leave the whole TP silent (subject and auxiliary).

(175) **Subject-initial ellipsis**



bodd ett år i Mexico

(176) **Non-subject initial ellipsis**



Under this view, the two cases thus receive two distinct analyses. At first sight, this may seem to be a plausible and promising way of reasoning. I will however argue that a full CP-TP analysis is to be preferred for both types of ellipses, both subject-initial and non-subject initial ones. Firstly, note that under an analysis of subject-initial ellipses as bare TPs, we would be forced to state that either [spec,TP] alone or the whole T-projection could be non-realized, since as we have seen, the subject is frequently omitted on its own. We would then need to assume specific properties for [spec,TP], parallel to the properties which are generally assumed for [spec,CP] and which make topic drop possible. If subject-initial ellipses were bare TPs, then [spec,TP] would have to allow topic drop of the subject. We would thus be forced to assume two topic positions, one in TP for subjects and one in CP for non-subjects. This seems counterintuitive and inelegant. On these grounds, I assume that the CP-TP analysis is preferred compared to an analysis where subject-initial ellipses are TPs and non-subject initial ellipses are CPs, as proposed by Travis (1984).

There are also other independent arguments for including the C-domain also for subject initial main clauses. Without this domain, it would be unclear how to account for the verb second requirement. In the CP-TP model, the finite verb always targets the same position, namely C. If a non-CP analysis were to be adopted, the finite verb would have to be placed in different positions depending on the clause type. It would then occupy C in non-subject initial main clauses, and T in subject initial main clauses. I will argue that it is not desirable to assume two distinct positions for the finite verb in V2 languages. It appears that by doing so, we would lose an important generalization. Hence I will assume that the CP layer is present also in subject-initial main clauses.

Another argument for keeping the CP in subject-initial clauses, i.e., against a Travis-based analysis, is that the C-domain is crucial in order to account for the distribution of sentence adverbials in Norwegian. As is well known, in subordinate clauses the sentence adverbial is placed before the finite verb, as opposed to main clauses, where it follows the finite verb:

(177) Du vet at jeg aldri drikker kaffe.
you know that I never drink coffee

(178) Jeg drikker aldri kaffe.
I drink never coffee

(179) Kaffe drikker jeg aldri.
coffee drink I never

Adopting the assumption that sentence adverbials are adjoined to TP,[66] the distribution of these elements is difficult to account for without assuming a CP layer in subject-initial clauses. In non-subject initial cases (as in (179)), the analysis is straightforward, since CP here projects as usual. Yet, in subject-initial cases (as in (178)), if there is no CP, then the finite verb cannot move across the sentence adverbial, because there is no position available as a target for this movement. I therefore conclude that the bare TP analysis of subject-initial clauses (and the corresponding discourse ellipses) must be rejected. Note that in a full CP-TP analysis of these clause types, the distributional pattern is easily accounted for. Moreover, the analysis that I propose, will provide a common analysis for both types of ellipsis (subject initial and non-subject initial). Clearly, this is a theoretical advantage.

4.5.3 An alternative analysis

Having rejected the truncated-CP analysis, I will now propose an alternative view. I believe that it is fruitful to examine the empirical patterns of subject-initial versus non-subject initial discourse ellipses in light of certain insights from recent work by Chomsky, where the close relation between the C-domain and the T-domain has been emphasized (Chomsky 2000b, 2001, 2004). However, in order to present this argument properly, it is first necessary to briefly introduce the notion of phases, and furthermore, to motivate that vP and CP, and not

[66] It is quite standardly assumed that Norwegian sentence adverbials are adjoined somewhere in the T domain (Åfarli & Eide 2003).

TP, are assumed to be the relevant phases in the clausal architecture. For the purposes of the analysis that I propose, the theory of phases is in itself not decisive. What is important is rather the connection between C and T, and in particular Chomsky's hypothesis that T inherits its features from C. Hence, when I now introduce the notion of phases and the theoretical background for this idea, the reason for this is mainly to provide a background for certain important assumptions about the C/T relation upon which I build my analysis.

The theory of phases has been presented by Chomsky in several articles (2000b, 2001, 2004, 2008). The motivation for this refinement of the generative model was the idea that the Language Faculty can only hold a limited amount of structure in its 'active memory' (Chomsky 2001: 9). Because convergent derivations are compared for economy, Chomsky, partly inspired by Uriagereka (1999), searched for a more local way to determine the convergence of derivations. The assumption he made was that syntactic structures are constructed one phase at a time. At the end of each phase, one chunk of structure is transferred to Spell Out and sent to LF and PF to be checked at the C-I and the A-P interfaces. Once a syntactic object is spelled out, it is no longer accessible for further derivation. This is expressed in the Phase Impenetrability Condition (PIC):

> In a phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge are accessible to such operations (Chomsky 2000b: 108).[67]

The next step is then to pin down when the derivation undergoes Spell Out. What are the phases assumed?[68] According to Chomsky (2001: 9), phases are propositional in nature. He proposes that there are two phases, vP and CP,[69] arguing that CP represents a complete clausal complex including a specification of force, and that vP represents a complete thematic (argument structure) complex including an external argument (Radford 2004). This means that once vP is constructed, Spell Out applies to the complement of its head, namely VP. Then the semantic and phonological components inspect the material to check for convergence. The same process applies after the construction of CP. Then, the TP is spelled out and checked for convergence.

---

[67] I here cite the version of the PIC found in Chomsky (2000). The principle has been slightly reformulated in more recent work.

[68] One could envision a system in which there was a phase associated with every application of the operation Merge. In that case, the derivation would be sent off to Spell Out after every application of Merge (see, e.g., Epstein & Seely 2002 and Müller 2009). However, the result would be problematic (Chomsky 2007). For instance, VP cannot be a phase, since at this point of the derivation, we don't have information about whether the complement of V will be spelled out *in situ* or whether it will be raised, and we also don't know what its structural Case will ultimately be.

[69] The possibility that DP is a phase, too, has also been proposed (e.g., in Svenonius 2004), but will not be explored here, since this is not of relevance to the empirical issue at hand.

Note, however, that this perspective still leaves one unresolved issue. When we reach the end of the derivation, i.e., the last CP phase, the TP is spelled out. However, at this point, neither C nor the specifier of CP is spelled out and transferred to the semantic and phonological component. The additional assumption is therefore made that at the end of the overall derivation, all remaining constituents undergo transfer to the interfaces, and hence are spelled out (Radford 2004: 184). As we have already seen in section 4.3.2, Fitzpatrick (2006) makes use of this aspect of phase theory to account for English aux-drop questions. His analysis is that in such questions, the last spell out of the remaining constituents, i.e., CP, fails to apply. Only TP is interpreted and transferred to LF and PF.

4.5.4 Feature inheritance from C to T

CP and vP are the phases of the clause. TP on the other hand is not a phase, according to Chomsky. Rather, it is a derived phase, which inherits its features from C:

> From elementary conceptual considerations then, plausibly traceable to S[trong] M[inimalist] T[hesis], we conclude that v*P and CP are the phases of the clausal skeleton, and that the uninterpretable features of C are assigned to T, which does not head a phase (Chomsky 2007: 19).

It may seem peculiar that T does not constitute a phase head in a manner parallel to C and v. For instance, it appears that on the surface, the phi-features involved in nominative agreement are placed in T and not in C. Also, raising of the subject targets the specifier of T, and not [spec,CP] (Chomsky 2008). However, there is empirical motivation for the hypothesis that T lacks phi-features and tense features in the lexicon, and that these features are derivative from C. One of the arguments that have been proposed is based on the assumption that T manifests these features only when it is selected by C. In other words, there is always a C projection in finite sentences, whereas non-finite sentences can be bare TPs, with no CP layer:

> The antecedent reason is that for T, phi-features and Tense appear to be derivative, not inherent: basic tense and also tenselike properties (e.g., irrealis) are determined by C (in which they are inherent (…)) In the lexicon, T lacks these features. T manifests the basic tense features if and only if it is selected by C (default agreement aside); if not, it is a raising (or ECM) infinitival, lacking phi-features and basic tense. So it makes sense to assume that Agree and Tense-features are inherited from C, the phase head (Chomsky 2008: 143-144).

I will however not adopt this analysis for Norwegian. Rather, I will assume that all finite and non-finite Norwegian clauses (with the exception of small clauses) are CPs. Contrary to the case for English, it is standardly assumed for Norwegian that the complementizer in infinitive clauses occupies C, and consequently that infinite clauses are CPs.

Miyagawa (2010) presents both conceptual and empirical motivation for the assumption that agreement is associated with a head higher than T. He gives the conceptual argument that the assumption that agreement features are merged in C has as a consequence that grammatical features responsible for computation such as movement will be manifested only on phase heads, i.e., C, v, and possibly D:

> Given that any operation beyond initial Merge takes place within phases, it makes sense that the elements triggering these operations are merged on phase heads, phi-feature agreement being one such element (Miyagawa 2010: 16).

Empirical facts also support this idea (Miyagawa 2010). Firstly, in English, environments where agreement (and Case) is not assigned, such as ECM[70] constructions, involve a "bare" TP with no CP layer (Chomsky 2008). A simple way to view this is that C provides the agreement, and that in its absence, T cannot bear agreement (or Case). A second piece of empirical evidence is that agreement is occasionally seen on C. In some languages, for instance West Flemish, complementizers have visible phi-features (Haegeman 1992, Shlonsky 1994). Evidently, such empirical facts support the idea that there are agreement features in C.[71]

To sum up, it is assumed that T has no Agree features or tense features in the lexicon. Rather, T inherits these features from C (Chomsky 2007, 2008, Richards 2007):[72]

---

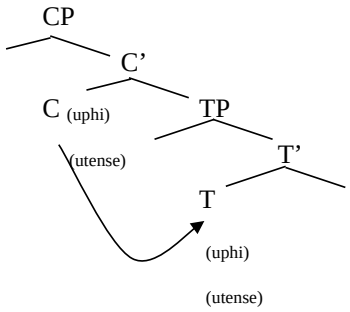
[70] ECM = Exceptional Case Marking

[71] Yet, note that there is more recent work on this issue suggesting that the picture is more complicated. Haegeman & van Koppen (2012) discuss complementizer agreement in two Dutch dialects and show that the phi-features of C cannot be simply an additional reflex of the agreement relation between T and the subject. They state that complementizer agreement is not the result of a sharing of phi-features between T and C, and moreover that complementizer agreement cannot be taken as evidence for the claim that there is a phi-feature dependency between T and C. Despite this, however, I will still employ the C-T-relation as a theoretical foundation for my analysis. The fact that these issues may be more fine-grained, as argued by Haegeman & van Koppen (2012), is not counterevidence against my analysis.

[72] Still, one issue which remains unanswered under this analysis is the content of the T projection. It is proposed that both tense and agreement features are merged in C, and then inherited by T. But what is then merged in T in the first place? It seems peculiar to merge T only as a recipient of features. In particular, this is at odds with the arguments I have made earlier, namely that all functional and lexical projections have an abstract G-semantic core. What is the G-semantic core of T, if all features are inherited from C? This issue has been discussed by Kidwai (2010), who states that a consequence of Chomsky's understanding that all of T's features are inherited from C is that T will be a radically empty head, which is unlistable in the lexicon. Chomsky (2007: 20) discusses the same matter, and proposes the following solution:

> What is true of agreement features appears to hold as well for tense: in clear cases, T has this feature if and only if it is selected by C, though C never (to my knowledge) manifests Tense in the manner of phi-features in some languages. If that is basically accurate, then there are two possibilities. One is that Tense is a property of C, and is inherited by T. The other is that Tense is a property of T, but receives only some residual interpretation unless selected by C (…) One advantage of the latter option is that T will then have at least some feature in the lexicon, and it is not clear what would be the status of an LI with no features (one of the problems with postulating AGR or other null elements).

(180)



Importantly, this feature inheritance relation implies that there exists a kind of agreement relation between C and T, or that the two projections in some sense duplicate each other. It appears that the proposition is recreated in the C-domain.

4.5.5 Tentative phase-based analysis of discourse ellipses

Building directly on the insight reached in the previous section, I will explore an analysis of the licensing patterns seen in subject-initial and non-subject initial discourse ellipses. The sentences below summarize the relevant empirical patterns:

(181) Jeg har drukket morgenkaffen allerede.
I have drunk the morning coffee already.

(182) ~~Jeg~~ har drukket morgenkaffen allerede. Omitted topicalized subject
~~I~~ have drunk the morning coffee already.

(183) ~~Jeg har~~ drukket morgenkaffen allerede. Omitted initial subject and
~~I have~~ drunk the morning coffee already auxiliary

(184) Morgenkaffen har jeg drukket allerede.
The morning coffee have I drunk already.

(185) ~~Morgenkaffen~~ har jeg drukket allerede. Omitted topicalized object
~~The morning coffee~~ have I drunk already.

(186) * ~~Morgenkaffen har~~ jeg drukket allerede. Omitted initial object and
* ~~The morning coffee have~~ I drunk already. auxiliary

In what follows, I will propose an overarching analysis which can predict the patterns that are attested. I will argue that discourse ellipses in the C-domain are governed by the following principle, which will be discussed in more depth in what follows:

> **When all elements in the C-T complex are part of the same Agreement relation, then all these elements can be phonologically unrealized. If the constituent in [spec,CP] is not part of this agreement system, ellipsis of the whole domain is not possible. Ellipsis of only [spec,CP] is possible in any case, given that the semantic identity criteria are fulfilled.**

I will now examine and analyse each example type in turn, and I will show how the proposed principle can explain the empirical patterns attested. Firstly, examples in which only [spec,CP] is empty (subject drop and object drop) are discussed, and thereafter sentences in which the whole C-complex is silent.

4.5.5.1 Omitted topicalized subject

Leaving out a topicalized subject is, as we have seen, very frequent:

(187) ~~Jeg~~ har drukket morgenkaffen allerede.
I have drunk the morning coffee already.

The elided subject is here semantically recoverable from the context; there is no linguistic trace of it within the sentence boundaries. The subject is defined as a pragmatic topic, representing given information, and hence ellipsis of this element is not unexpected. Note also here that not only referential subjects, as in (187), but also expletive subjects can undergo ellipsis from [spec,CP]. As argued earlier, the semantic content of expletive subjects does not need to be recovered. The structural restrictions are the same for expletive subjects as for the referential ones.

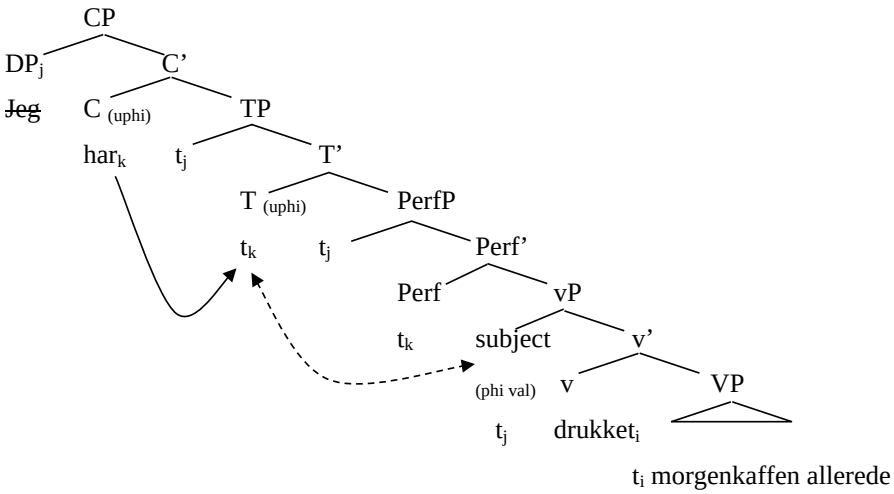
How would this be analysed in the theory I have outlined? Most important for our purposes is the part of the analysis which involves the last phase, i.e., TP and CP. T inherits its unvalued agreement and tense features from C. The subject in [spec,vP] then enters into an Agree relation with T, and thus the relevant features of T are valued. As a consequence, the same values are transferred also to C, from which T originally inherited the same features. The subject, in turn, moves from [spec,vP] through [spec,PerfP][73] and [spec,TP], and in this

[73] I have chosen the label PerfP for the projection of the auxiliary, to unambiguously indicate that this is a projection of a perfective auxiliary. An alternative would be the label $vP_{aux.}$ I leave this question of labeling open.

case all the way up to [spec,CP]. An Agree relation will consequently be established between C and [spec,CP], as an extension of the agreement relation between the subject and the verb. Importantly, in this case, the features of the subject thus influence all positions in the C-T complex, including [spec,CP], either through Agree (head positions) or by movement (specifier positions).

Note, however, that in the silent positions, in this case all of the positions occupied by the subject and its traces, I will argue that nothing is really inserted. This was discussed also earlier in this chapter. This means that the strikethrough notation I have used throughout this work is only a notational device. My analysis is that the relevant unvalued features are present in the structure from the outset, and that in ellipses, these features are valued on the basis of a silent conceptual element. Hence, it is not a silent linguistic item which is inserted and which moves upwards in the structure, but rather a bundle of features.[74]

(188)



– = feature inheritance

--- = Agree between probe and goal

[74] More specifically, I will assume that each syntactic node contains a bundle of unvalued features. The positions in a chain of copies can then be valued all in one swipe, or alternative one may assume that the features of the lowest position are valued first, and that these features then move upwards in the structure.

In this example, the fronted subject is not phonologically realized. Structurally, this ellipsis type is licensed because it involves the left edge of the clause, more specifically [spec,CP], which, as argued previously, is an inherently discourse-related position vulnerable to ellipsis. We have also seen that ellipsis most often occurs from the top of the sentence structure. This condition is also fulfilled in this case.

Note that dropping of subjects is restricted to subjects in [spec,CP] in declarative main clauses. A silent subject would not be possible in other positions:

(189) *Morgenkaffen har ~~jeg~~ drukket allerede.
(190) * Har ~~jeg~~ drukket morgenkaffen allerede?

Subject drop thus requires an empty [spec,CP], and is illicit when [spec,CP] is lexicalized. This is the insight from previous topic drop analyses, and which is formalized in the Empty Left Edge Condition (Sigurðsson & Maling 2010). Furthermore, note that even if the subject is not inserted, the underlying structural frame is unambiguously retrieved.

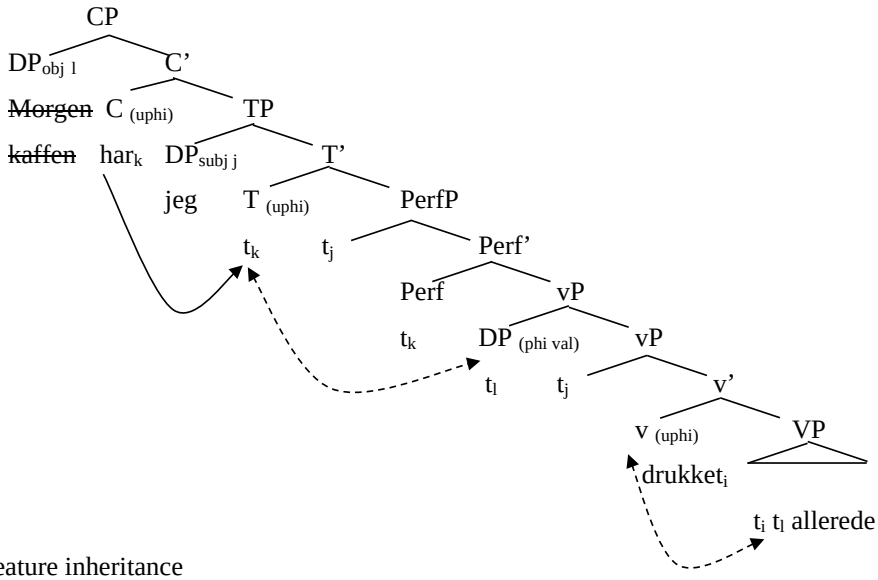
4.5.5.2 Omitted topicalized object

Topic drop includes not only omission of subjects; we have seen that objects and complements of prepositions can be omitted from the position [spec,CP] as well. Example (191) shows an occurrence of object topic drop:

(191) ~~Morgenkaffen~~ har jeg drukket allerede.
~~The morning coffee~~ have I drunk already.

Assuming the model introduced above, I propose the following analysis for this sentence:

(192)



– = feature inheritance

--- = Agree between probe and goal

The first step in this derivation is that the vP is assembled. The head v acts as a probe and enters into an agreement relation with the object *in situ*. At the end of this phase, the complement of the phase head v, i.e., VP, is spelled out. However, there is one important difference in this derivation compared to the subject-initial sentence discussed in the previous section. In order for the features of the object to be accessible to further movement, in this case topicalization, it cannot stay *in situ* inside the VP. If it did, it would be spelled out together with the rest of the VP. It would then be transferred to the interfaces, and would not be accessible to further movement. Hence, to ensure that it is accessible for further derivation, the object is moved to an outer specifier of vP, triggered by an edge feature (Chomsky 2008).

After spell out of the first phase (vP), the perfective auxiliary is merged, forming a separate phrase PerfP, and then the TP is merged. In a manner parallel to the derivation of the subject-initial sentence, the unvalued features in T that were originally inherited from C probe the subject in [spec,vP] and enter into an Agree relation with it. Consequently, the phi-features in T are valued, and thus also the phi-features in C. The subject in this sentence is first merged in [spec,vP], and is then moved through [spec,PerfP], ending up in [spec,TP]. The finite auxiliary moves from Perf through T and finally targets C, Norwegian being a V2 language.

How is this ellipsis licensed? On the semantic side of the matter, dropping the object is in this case licensed because the object is a sentence topic which represents given information, and which is defined as the element that the remaining part of the sentence is about. The semantic content of the object is thus recoverable, sentence-externally, since there is no linguistic trace of the object within the sentence boundaries.

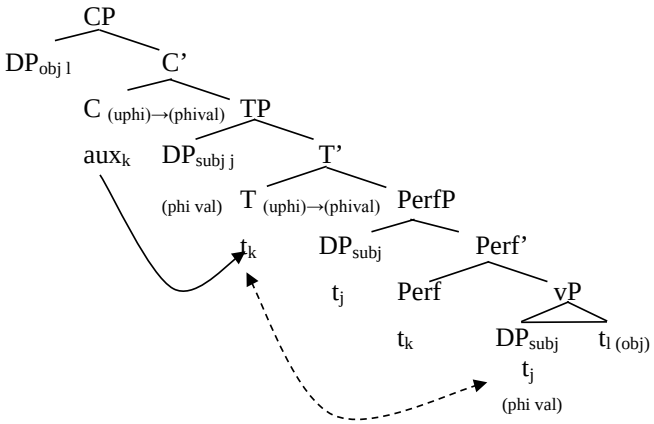
Turning to the structural side of the story, this ellipsis is licensed since the underlying structural frame is sufficiently instantiated. Moreover, unlike the subject initial example, in this case the object moves into the specifier of CP, where it undergoes topic drop. To be more precise, in the overall model proposed here, we do not assume that an object is inserted, moved to [spec,CP] and then deleted. Rather, the object is not inserted in the first place. The reason that this is possible is of course that [spec,CP] is not occupied by another constituent (cf. the Empty Left Edge Condition of Sigurðsson and Maling (2010). As discussed in the previous section, it is not a silent linguistic item which is inserted, but rather a bundle of features which are valued and which by movement value the underspecified feature matrices in the relevant positions.

4.5.5.3 Omitted topicalized subject and auxiliary

Intriguing at this point are sentences in which discourse ellipsis not only affects the specifier of CP, but also finite auxiliaries or copula verbs. These example types are not explicable by traditional topic drop analyses, since they involve more than the constituent in [spec,CP].

A note regarding the agreement relations is necessary in this case. The unvalued phi- and tense-features in T are inherited from C, and when T enters an agreement relation with the subject in [spec,vP], and later [spec,TP], then all the three positions C, [spec,TP] and T are part of the same agreement relation:

(193)



– = feature inheritance

--- = Agree between probe and goal

Importantly, however, the topicalized object in [spec,CP] is not part of this agreement system. Why is that so? In the minimalist program, the spec/head relation is taken to have little import. Rather, in our example the C head agrees with the elements in TP.

[Spec,CP] is an A'-position, which means its content is variable depending on the element moving into it. When the moved element is the subject, the [spec,CP] is included in the subject/verb agreement relation. When it is a non-subject, the subject/verb agreement relation is not extended into [spec,CP]. The abstract spec/head agreement internal to a phrase can thus be regarded as a potential agreement relation, which is only operative in the cases where agreeing elements are inserted into the relevant positions.

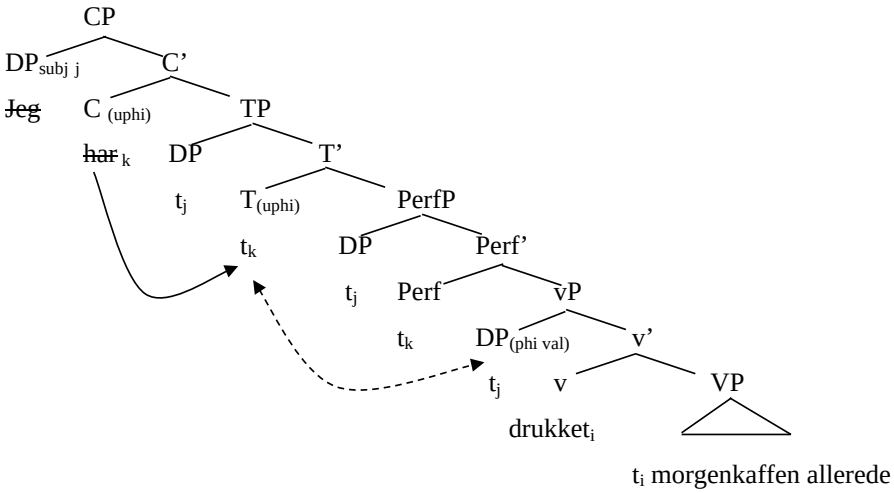
Empirically, it is also quite evident that [spec,CP] does not inherently agree with the subject and verb in the C-T domain. In languages with subject-verb agreement, a topicalized object or another topicalized constituent does not enter into an agreement relation with the subject and the verb. Hence, the hypothesis that [spec,CP] does not inherently take part of the same agreement relations its head appears to be very well grounded. It can obviously be made part of this relation, but only if the element moving into [spec,CP] is also part of the agreement group, i.e., if this element is the subject.

Sentences where both the topicalized subject and the finite auxiliary have a null realization are quite frequently attested in the register of spontaneous speech:

(194) ~~Jeg har~~ drukket morgenkaffen allerede.
~~I have~~ drunk the morning coffee already

The derivation is parallel to the one we saw for ellipses with only a silent subject in [spec,CP], with the one difference that in this case, the finite auxiliary in C is also null:

(195)



--- = Agree between probe and goal

– = feature inheritance

Thus, in sentences with topicalized subjects, it appears that the whole CP-TP complex can be phonologically uninstantiated. How can this be explained? Why is it that we can easily drop both the subject and the finite verb?

I will argue that in examples where the subject fills [spec,CP], the potential agreement relation between [spec,CP] and C is activated, and hence, the whole phrase can potentially be silent. Yet, in cases where a non-subject moves into [spec,CP], the abstract agreement constellation is not activated. Despite the underlying abstract agreement relation between C and [spec,CP], the fronted non-subject leads to a non-realization of this agreement relation, and thus the whole phrase cannot be silent, but only the element in [spec,CP].

More generally, it appears to be the case that it is possible to non-realize elements starting from the top of the structure, continuing downwards as long as the elements in question belong to the same agreement relation. As soon as the omission mechanism encounters an element belonging to an agree relation other than one with the constituent situated in [spec,CP], ellipsis is no longer possible.

Firstly, regarding the semantic restrictions, note that both the silent constituents are semantically identified. The subject is sentence-externally recoverable, and furthermore, it is a sentence topic representing given information. The perfective auxiliary, on the other hand, is recoverable sentence-internally through the verbal participle. The assumption is thus that perfective auxiliaries only contribute perfectivity, which is also expressed through the participle. Hence, the auxiliary is fully identified through the participle, and is therefore easily elided.

Turning to the structural side of the matter, the null realization of the whole phase (CP and TP) is by assumption possible since both the constituents in question are part of the same agreement relation, namely the one that is established between the C- and the T-projections. This is explicitly displayed in the structure above. To recapitulate, T inherits unvalued phi-features from C and these features are valued through Agree by the subject in [spec,vP], after which they expand all the way up to C. When the subject moves to [spec,CP], the features of the subject are also transferred into this position. Apparently, this facilitates the deletion of the whole complex. When the subject and the finite auxiliary are deleted, it is a whole chunk of related and agreeing structure that is not instantiated.

The overall assumption is thus that the whole C/T complex can be silent when the subject occupies [spec,CP], because the whole domain will then be part of the same agreement relation. Hence, when the subject is in [spec,CP], one can either omit only the topicalized object ([spec,CP] being an A'-position) or alternatively the subject and a semantically recoverable auxiliary in C.

4.5.5.4 Omission of topicalized object and auxiliary is impossible

Crucially, in sentences with a topicalized object in [spec,CP], the restrictions are not parallel to the ones for sentences with a topicalized subject:

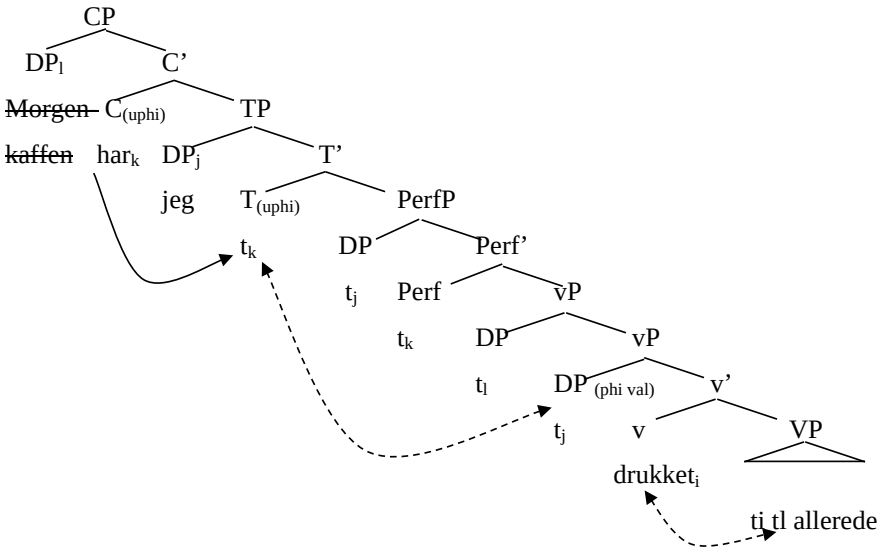
(196) * ~~Morgenkaffen har~~ jeg drukket allerede.
* ~~The morning coffee have~~ I drunk already.

As this example illustrates, it is not possible to omit the finite auxiliary together with a topicalized object, which contrasts with the state of affairs when the subject is topicalized. This asymmetry is striking and calls for an explanation.

In this example, both the elided object and auxiliary are semantically recoverable. The object is a topic, given in the context and hence identified sentence-externally, whereas the perfective auxiliary is recoverable through the verbal participle. Consequently, there is nothing on the semantic side of this sentence that would predict this ellipsis to be unacceptable. We have earlier seen examples where semantic restrictions appeared to overrule the structural ones. In this case, it appears to be the other way round; there are strong structural restrictions contradicting the semantic ones, and which define these ellipses as unacceptable.

Let us first outline the assumed structural analysis of this class of examples. The object originates within the VP, where an Agree relation is established between the unvalued phi-features in v and the object *in situ*. The object then moves to the outer [spec,vP] and further by A'-movement up to [spec,CP].

(197)



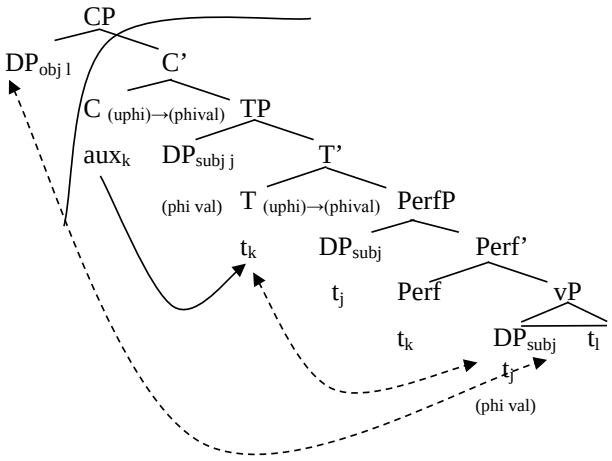
--- = Agree between probe and goal

– = feature inheritance

Parallel to the analyses above, T probes the subject in [spec,vP] and hence the features in T and consequently also C are valued. The subject and verb are as a result connected through a mutual agreement relation, and they instantiate the positions of the C/T domain which (whether by movement or agreement) are part of this relation, namely T and C as well as the specifier of T.

However, in this case, the object in [spec,CP] is not part of this related chunk of elements, contrary to what was the case in the subject-initial ellipsis type. The object is A'-moved directly from [spec,vP] to [spec,CP], without involving the intermediate positions at all. Hence, the topic is not part of the same agreement group as the remaining C-T complex, and the result seems to be that only [spec,CP] can be uninstantiated, not the whole C-T complex. The analysis that I propose is thus that this ellipsis type is impossible because [spec,CP] is in this case not part of the same agreement relation as the remaining C/T domain, i.e., the agreement relation established between the subject and the verb. The topicalized object agrees with v, further down in the sentence structure.

(198)



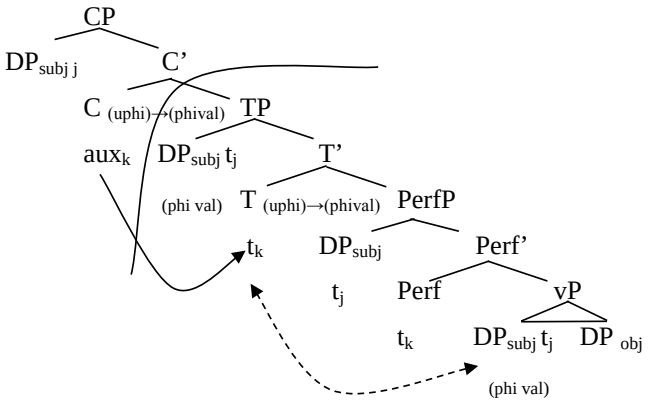
– = feature inheritance

--- = Agree between probe and goal

As stated earlier, the process of ellipsis starts from the top of the structure and continues downwards as long as the elements in the relevant positions are part of the same agreement

relation. As soon as the omission mechanism encounters an element which belongs to an agree relation other than the constituent situated in [spec,CP], ellipsis is no longer possible. In the case of (196), where an object is fronted in [spec,CP], the boundary between agreement domains is drawn between [spec,CP] and C, as illustrated in the structure above. However, as we have seen, in subject-initial ellipsis, the parallel agreement domain also comprises [spec,CP], i.e., the whole CP and the whole TP, since the subject and the finite auxiliary fill all the relevant positions. Thus, in that case, the boundary for possible non-realization is drawn further down, between CP and TP:

(199)



– = feature inheritance

--- = Agree between probe and goal

Note that one could argue that since also the TP is included in the same agreement domain, the boundary for possible non-realization should be drawn even further down, below the TP. Then, the whole agreement domain would be deleted. Yet, I will argue that discourse ellipsis only targets the C-domain. Evidence for this claim is found in cases of discourse ellipsis with sentence adverbials. I have argued that in subject-initial cases, the whole C-T domain can be silent. Yet, sentence adverbials are assumed to be adjoined in the T-domain, and as shown in (200), it is impossible to elide a sentence adverbial together with the subject and the verb:

(200) * ~~Jeg har sjelden~~ drukket morgenkaffen allerede da.

* ~~I have rarely~~ drunk the morning coffee already then

(201) ~~Jeg har~~ sjelden drukket morgenkaffen allerede da.
~~I have~~ rarely drunk the morning coffee already then

Firstly, the sentence adverbial is obviously not part of the agreement relation which is established between the subject and the finite auxiliary. Since I have argued that only elements agreeing with the topicalized subject may be elided, the fact that sentence adverbials cannot be null, is expected. Moreover, I will point to the semantic side of my analysis. I will argue that in these cases, the reason that the sentence adverbial cannot be elided is that its semantic content is not recoverable. By definition, the function of sentence adverbials is to modify the semantic content of the whole sentence, and thus they cannot be omitted.

Hence, I will maintain the argument that the ellipsis domain in subject-initial cases actually comprises only the C domain, and not the T domain. This would provide a structural explanation of the examples in (200)-(201). The point is this: given that the positions of the T domain are really only duplicates of the positions in the C domain, as is the case for subject-initial sentences, then the issue of whether the domain of ellipsis includes only CP or both CP and TP is hard to answer. Yet, the examples with sentence adverbials provide suggestive evidence towards the first alternative. In the next section, I will show how the empirical patterns of discourse ellipsis in yes/no questions may be easily explained under this assumption.

4.5.5.5 Ellipsis in yes/no questions

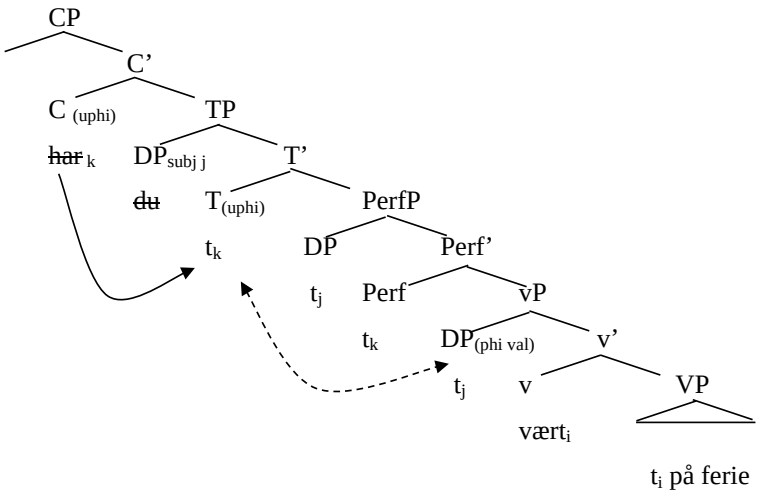
Until this point, we have been focussing on ellipsis in declarative sentences. In this section, I will discuss discourse ellipses in yes/no questions, as in (202):

(202) ~~Har du~~ vært på ferie da? NoTa
~~Have you~~ been on holiday then?

Recall that my general analysis is that if all the elements in the C-T complex belong to the same agreement relation, i.e., if the subject and the finite verb occupy all relevant positions, then the whole C-domain may be silent. Importantly, I have argued that discourse ellipsis is

restricted to the C-domain, and that ellipsis cannot target e.g. the T-domain.[75] In this respect, examples like in (202) may at first sight appear to represent clear counterevidence to my analysis, since the subject in this case is situated in [spec,TP], but still is elided. The following structure shows how these elliptical questions would be analysed:[76]

(203)



--- = Agree between probe and goal

– = feature inheritance

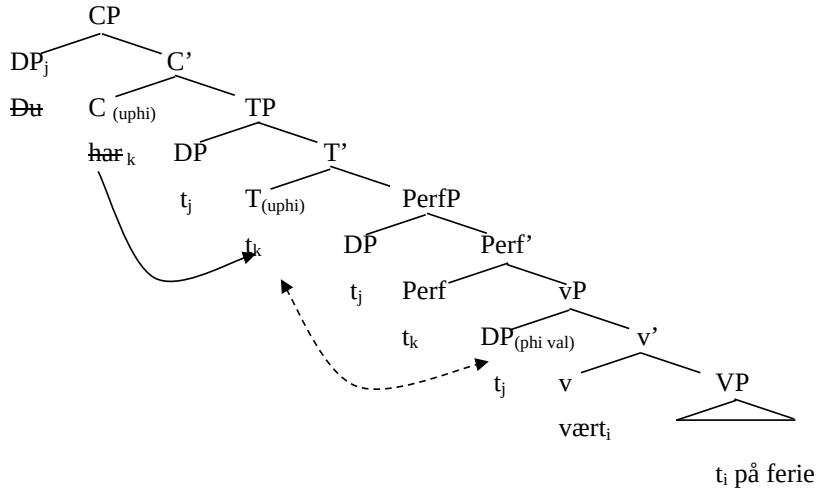
According to this analysis, in order to account for the ellipsis type in (202), which shows omission of both the subject and auxiliary in a yes/no question, one would have to assume that the whole TP-CP complex is elided. Theoretically, this is not a desirable consequence, since for the declarative sentences we have seen that discourse ellipsis is restricted to the C domain. If we could similarly delimit ellipsis in yes/no questions to the C domain, this would be preferable.

I will argue that ellipses in yes/no question can be integrated and accounted for within the analysis that I have developed. I will argue that the hypothesis that discourse ellipsis is restricted to the C-domain, is correct. In order to account for examples as in (202), I will explore the possibility that in reality, these are not structural yes/no questions. Rather, they are structural declaratives with an interrogative intonation. The structural analysis would then be as in (204):

[75] Exceptions from this claim is found in so called medial ellipses, as discussed in section 4.4.3, where elements may be omitted non-sentence initially, yet only in very specific and strong contexts.

[76] I have chosen to exclude the discourse particle *da* 'then' from the structural analysis.

(204)



--- = Agree between probe and goal

– = feature inheritance

Importantly, note that the underlying structure of these questions cannot be unambiguously defined. As illustrated below, from the elliptical forms of these questions it is unclear whether these sentences are underlyingly structural yes/no questions (205) or underlyingly declaratives with an interrogative intonation (206):

(205) ~~Har du~~ vært på ferie da?
~~Have you~~ been on holiday then?

(206) ~~Du har~~ vært på ferie da?
~~You have~~ been on holiday then?

Now, look at two varieties of the same example. First, (207) shows that the finite auxiliary may be omitted, when the subject is phonologically realized. As indicated by the question mark, this ellipsis type is not fully regular, but it is not completely unacceptable:

(207) ? Du vært på ferie da?
you been on holiday then
a. ~~Har~~ du vært på ferie da?
~~have~~ you been on holiday then?
b. Har ~~du~~ vært på ferie da?
have ~~you~~ been on holiday then?

Following my hypothesis that discourse ellipsis is limited to the C-domain, and that ellipsis targets from the top of the structure and moves downwards, this is best analysed as a structural yes/no question, as suggested in (207a). As noted, the structure of these questions cannot be unambiguously defined. Under an interrogative structure analysis, the auxiliary is situated in C, and the subject is in [spec,TP]. If this ellipsis was analysed as a structural declarative (as in (207b), it would be a mystery why one could instantiate the auxiliary in C, but still delete the subject in [spec,TP].

Finally, note that it is equally possible to omit the subject, but to realize the auxiliary. As in (207), the ellipsis in (208) is not fully regular, but it is still quite acceptable.

(208) ? Har vært på ferie da?
have been on holiday then
a. Har ~~du~~ vært på ferie da?
have ~~you~~ been on holiday then
b. ~~Du~~ har vært på ferie da?
~~you~~ have been on holiday then

In this case, we must assume that the ellipsis is an underlying structural declarative sentence with interrogative intonation. If so, the hypothesis that ellipsis is restricted to the C-domain and that it targets from the top and downwards, can be upheld.

From this I will conclude that elliptical yes/no questions may be structural yes/no questions or structural declaratives with interrogative intonation. In any case, the crucial point is that discourse ellipsis is not allowed outside the C-domain. As shown, when this hypothesis is adopted, the empirical patterns fall out neatly.

4.5.5.6 Lexical verbs versus modal and perfective auxiliaries

We have seen that a perfective auxiliary in C can be dropped if the subject is also silent. Yet, we have seen no cases where a finite lexical verb is omitted from the same position, in sentences where there is no auxiliary. A question which needs to be posed is therefore whether a finite lexical verb can be deleted from the C-position at all. It does appear that ellipsis of lexical verbs is very seldom, if ever, attested. Why is this so? The most obvious explanation for this is the principle of recoverability – only elements whose semantics are recoverable can remain silent. The semantic contribution of a lexical verb is heavy, and furthermore, it is rarely directly recoverable from discourse. As a consequence, it is rarely elided. But then again, from this two other questions arise. Firstly, why is the semantic import of an auxiliary immediately recoverable? And secondly, what happens in cases where the lexical content of a lexical verb is actually discourse-activated and hence recoverable? Can the verb then be deleted?

As for the first question, there is a clear difference between an auxiliary and a lexical verb. The auxiliary is a grammatical formative, or in other words a member of a closed category. As noted earlier, from the form of the non-elided main verb (a past participle), the elided auxiliary is fully and unambiguously recoverable. However, recovering a lexical verb from the auxiliary is obviously not possible (the auxiliary and the main lexical verb are underscored in the examples below):

(209) ~~Jeg~~ ~~har~~ bodd der hele livet mitt egentlig. NoTa
~~I have~~ lived there my whole life really

(210) * Jeg har ~~bodd~~ der hele livet mitt egentlig.
I have ~~lived~~ there my whole life really

A lexical verb, on the other hand, is a member of an open category which contributes a major part of the clause's meaning. Consequently, pointing to recoverability to account for the difference between discourse ellipsis of auxiliaries and lexical verbs is a probable explanation.

We have argued that lexical verbs are most often not semantically recoverable, whereas auxiliaries generally are. Note however that this explanation is only valid for perfective auxiliaries. As regards the possibility of discourse ellipsis, there is a clear empirical difference between modal and perfective auxiliaries. Perfective auxiliaries can be omitted, whereas modal auxiliaries cannot:

(211) ~~Jeg har~~ gått på Sofienberg skole. NoTa
~~I have~~ gone to Sofienberg school

(212) ?? ~~Jeg vil/kan/skal/må~~ gå på Sofienberg skole.
I will/can/shall/must go to Sofienberg school

This difference is probably also governed by recoverability conditions. Compared to perfective auxiliaries, modal auxiliaries contribute stronger semantic content to the clause, and hence they are not that easily elided.[77] Moreover, as seen from the example, a modal is

[77] However, a search in spoken corpora of Norwegian actually revealed quite a few of the following ellipsis types, displaying a sentence-initial verbal infinitive:

1. Sende bort litt vann? NoTa
send over some water
'Can you send over some water?'
2. Snakke litt om skolen eller? NoTa
talk little about school-the or
'Should we talk a little bit about school?'
3. Bli i Norge? Jeg digger Oslo jeg jeg har lyst til å bli i Oslo. NoTa
stay in Norway I dig Oslo I I want to stay in Oslo
'Will I stay in Norway? I really like Oslo, I want to stay in Oslo.'
4. Investere i lydisolasjon i hele leiligheten da. NoTa
invest in sound isolation in whole apartment- the then
'Invest in sound isolation for the whole apartment then.'
5. Dra på helgetur og gå tur i fjellet. NoTa
go on weekend trip and walk in mountain
'Go on weekend trips and go mountain hiking.'

Since infinitive verbs are generally triggered by modal auxiliaries, it is a plausible assumption that there is a silent modal auxiliary in front of the main verb in these kinds of examples. Hence, this appears to contradict the generalization that only perfective auxiliaries can be dropped, since they are fully recoverable through the verbal participle. I will argue that with respect to semantic recoverability, modal auxiliaries are in an intermediate position between lexical verbs and perfective auxiliaries. They have certain semantic content, but this content is still more restricted than what is found for lexical verbs. The class of modal verbs is very restricted compared to the lexical verbs, and from this is not unexpected that modals may be omitted in certain cases. Note that it is not possible to identify exactly which modal auxiliary that has been elided in these examples. We can only conclude that it is some modal auxiliary requiring an infinitive main verb. Hence, it may seem as if it is the general modality which is recoverable and which licenses ellipsis. The more specific semantics of each modal verb is not recoverable in the same way.

In order for ellipsis of a modal auxiliary to be licit, the context needs to be highly specific. Interestingly, the example in (211), repeated below, which I have categorized as illicit, is actually quite acceptable if the context is sufficiently prominent:

6. A: Hvilken skole vil/skal du gå på til høsten da?
'To which school are you going next autumn?'
B: ?? ~~Jeg vil/skal~~ gå på Sofienberg skole.
?? ~~I will/shall~~ go to Sofienberg school

This pattern may appear to contradict my claims. However, based on the framework I have proposed, this is not really unexpected. Recoverability correlates with context: it is not the case that an element is categorically and incontrovertibly either recoverable or not. Rather, there are degrees of recoverability, and if an element is made

not unambiguously recoverable from the infinitive, since several underlying modal verbs are possible in this position. As we have seen, perfective auxiliaries on the contrary are unambiguously retrieved.

Note also that discourse ellipsis of copula verbs follows the same pattern as the perfective auxiliaries. Copula verbs are easily omitted under the structural conditions outlined here. This follows the same logic with respect to recoverability. Copula verbs are semantically light and do not contribute anything to the semantic representation of the sentence, as opposed to modal auxiliaries and lexical verbs.

Lastly, the question arises of whether we could imagine cases where the lexical verb is actually semantically recoverable, and where the verb as a consequence can be silent. Since we have pointed to recoverability as a general explanation, this would theoretically be a possible scenario. I propose that in theory this is indeed possible, but that importantly, if the lexical verb is missing, the underlying syntactic structure of the clause is less recoverable. Without an overt main lexical verb, it would be more difficult to identify the underlying constructional frame of the clause, and to see which of the five alternative structural frames the sentence is an instance of. Yet, examples of elided main verbs are indeed attested if the context is appropriate such that the verb is made discourse-prominent. Then the verb is most often elided together with the subject:

(213) ~~Jeg~~ spiste en bolle.
I ate a bun

(214) ~~Jeg spiste~~ en bolle.
~~I ate~~ a bun

(215) A: Har du spist noe?
'Have you eaten anything?'
B: ~~Jeg spiste~~ kjøttkaker til middag.
~~I ate~~ meat balls for dinner

However, note that in such cases, it is no longer obvious that the fragment at hand is really an elliptical variant of a full-fledged sentence. It may be just as correct to interpret it as a non-sentential fragment, with the structural form of an NP. I return to this issue in chapter 5.

---

sufficiently prominent, it may be elided. As we have seen, even lexical verbs can occasionally be dropped in cases where the elided verb is particularly discourse-prominent.

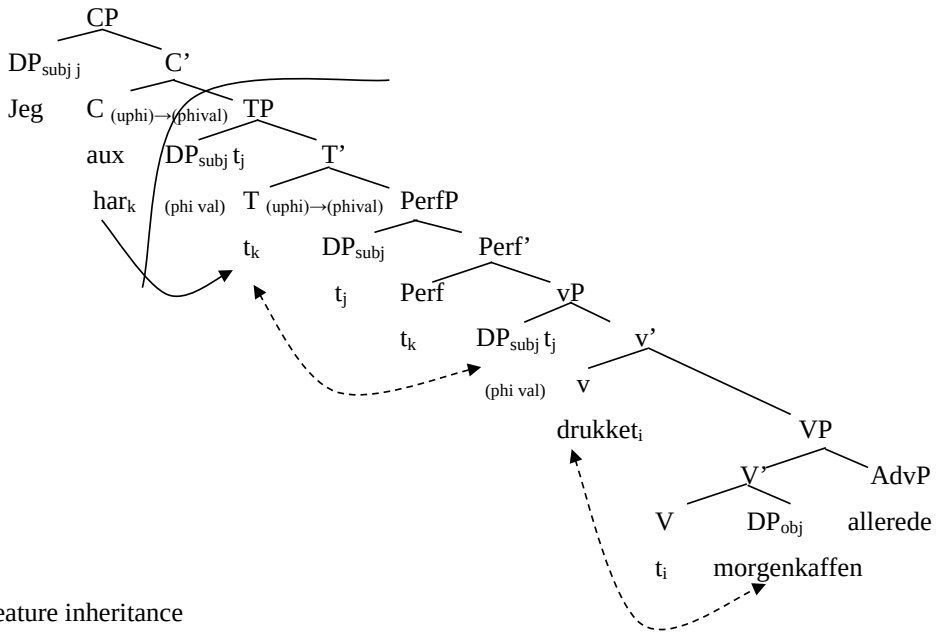
4.5.6 General pattern

From the analyses presented, we can conclude that there appears to be a restriction on discourse ellipses in the left periphery along the following lines: The mechanism of discourse ellipsis targets the top of the syntactic structure [spec,CP], and moves downwards from there. Only one chunk of agreeing elements can be omitted at a time, and specifically this chunk must be comprised entirely of elements that are part of the same agreement relation. The general conclusion can thus be summed up in the following principle:

> **When all elements in the C-T complex are part of the same Agreement relation, then all these elements can be phonologically unrealized. If the constituent in [spec,CP] is not part of this agreement system, ellipsis of the whole domain is not possible. Ellipsis of only [spec,CP] is possible in any case, given that the semantic identity criteria are fulfilled.**

More specifically, if the topicalized element is the same constituent as the one in [spec,TP], or in other words it is the subject, then it is possible to omit the whole subject-verb complex. However, if the topicalized element is something other than the subject, it is only permissible to leave [spec,CP] unrealized; in this case, both the subject and the verb must be phonologically instantiated. The general pattern is illustrated in the two structures below, one where the subject fills [spec,CP] (217), and the other with a fronted object (218):

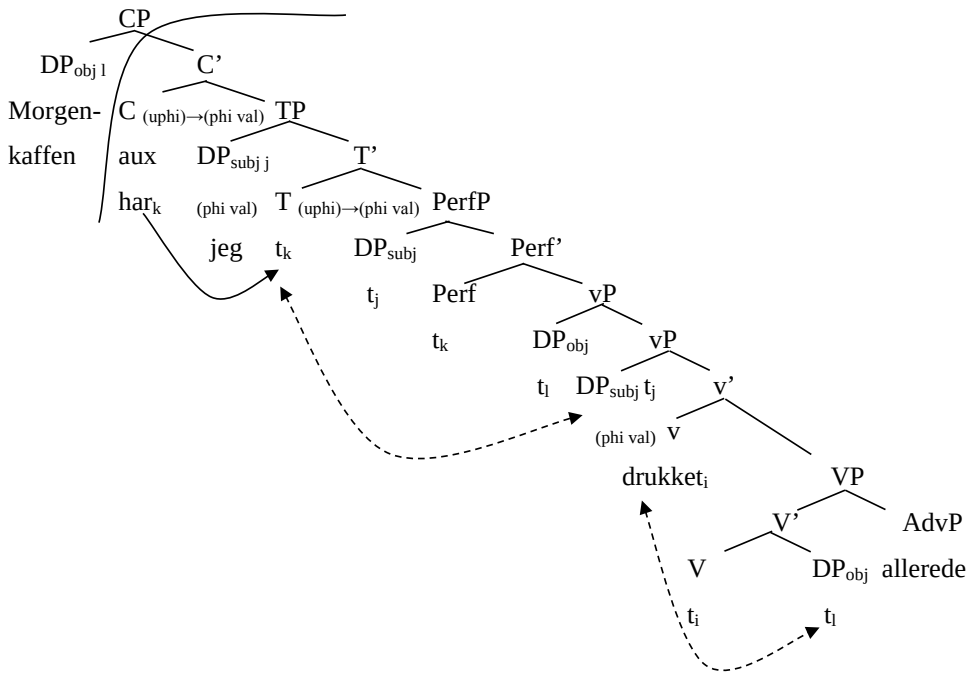
(216)



– = feature inheritance

--- = Agree between probe and goal

(217)



– = feature inheritance

--- = Agree between probe and goal

It is legitimate to ask why there would exist such a difference between these two sentence types. After all, the underlying relation between the C projection and the T projection is the same in both cases, independently of whether it is the subject or the object that is topicalized.

I propose that a key to an explanation to this issue is to be found precisely in [spec,CP], or rather in the element that moves into this position. As discussed, there is a fundamental distinction between the formal, potential agreement relation between C and [spec,CP], and the more substantial agreement relation which depends on the lexical elements which occupy these positions. If the subject fills [spec,CP] by movement, then the subject enters into an Agree relation with both T and C, and importantly [spec,CP] is then included in the same agreement relation as the remaining C-T domain. Consequently, the subject brings the relevant features along when it moves to [spec,CP], and this position becomes an extension of the agreement relation between the subject and the verb. Thus, the whole complex can more easily be deleted. TP is in a sense "extended" or doubled in CP.

On the other hand, when the object fills [spec,CP], the licensing pattern changes. The object belongs to a different agreement system. The object gets its phi-features valued inside vP, where it agrees with little v. In this case, the element in [spec,CP] is not included in the same agreement system as the other elements in the C-T complex, i.e., the subject and the object which are occupying the positions C, T and [spec,TP]. The topicalized object causes a disruption in the agreement chain, and the consequence of this is that only this object can be uninstantiated. The subject and the finite auxiliary must be phonologically realized, because they belong to a different agreement relation or agreement group than the element in [spec,CP].[78]

The analysis proposed in this section relies on general properties of V2 and of the C-T connection. It would therefore be expected that the empirical patterns that are attested are the same in other V2 languages with topic drop. It is beyond the scope of this dissertation to investigate this in depth, but note that at least Swedish[79] does indeed appear to follow the same restrictions. Whether this pattern holds also for other V2 languages is left open for further research.

To sum up, the general conclusion which can be drawn from the selected data presented in this section would be that it is possible to elide either the very first element – this would be regular topic drop – or alternatively the first group of agreeing elements. We have seen that when the subject occupies [spec,CP], the C-T complex becomes one related agreement group, and consequently that the whole complex can be null. A topicalized object leads to the opposite result. The object is not part of this agreement group, and hence the whole C-T complex cannot be null. It is not evident why the licensing of null elements should have anything to do with agreement. Yet, it is my claim that this is the case, and this hypothesis is clearly supported by the empirical patterns.

---

[78] Note also that sentences of the following type are also possible:

1. ~~Morgenkaffen har jeg~~ drukket allerede.

Here, the topicalized object, the finite auxiliary and the subject are all unrealized. This could be argued to be in line with the analysis outlined in this section. Two chunks are then omitted, both the topicalized object and the agreeing subject and verb. Unfortunately, the fact that we cannot unambiguously determine the underlying structure of this discourse ellipsis impairs this argument. It is not possible to know whether this is an ellipsis of a non-subject initial clause like in (1) or a subject-initial clause like in (2):

2. ~~Jeg har~~ drukket ~~morgenkaffen~~ allerede.

[79] This has been checked with a Swedish informant. More work is clearly needed here.

The attested connection between discourse ellipsis and agreement is somehow unexpected, and a natural question is why it should be. Why is it that agreement affects silence in this way? We have seen that elements in [spec,CP] are the first to be targeted by ellipsis. When elements in [spec,CP] are contextually recoverable (e.g., topics), they are easily elided. It appears that this position is the initial trigger of discourse ellipsis. If [spec,CP] is not silent, then any agreeing element in C cannot be either. Yet, if [spec,CP] is silent, it can drag along with it an agreeing element in C. Hence, contextual recoverability comes first, and since ellipsis begins from the top of the structure, [spec,CP] is frequently elided. Deletion from C requires agreement with this item in [spec,CP].

4.6 Summing up

As announced at the outset of this chapter, two main issues have been addressed here: what is the structure of discourse ellipses and what are the restrictions on possible ellipses types? As for the first question, I have argued for a full-fledged syntactic structure in discourse ellipses, and moreover I have argued that this structure contains unvalued features of various kinds. These features are valued through lexical insertion or from contextual information, or alternatively sentence-internally, through a probe-goal relation. As for the second question, I have concluded that neither a purely phonological account, nor a purely semantic/pragmatic or structural account can fully explain the empirical pattern. I have argued for an integrated analysis where both semantic recoverability conditions and syntactic restrictions influence licensing.

5 Conclusion

5.1 Summary of the dissertation

In chapter 1, I defined the empirical focus of the dissertation, and I delimited the domain of investigation by disentangling it from related empirical phenomena, such as other ellipsis phenomena and other spoken language phenomena. I further discussed the theoretical value of spoken performance data, and I presented my choice of methods for data collection through a comparison of different methods.

Chapter 2 was devoted to presentations of earlier generative analyses of argument drop. I rejected the core of this family of analyses, mostly on empirical grounds, since they cannot account for many of the construction types that are frequently attested in spontaneous speech. Hence, chapter 2 demonstrated the need for a revised model of analysis.

The first basis for such a model was laid in chapter 3. Observing that the form-meaning correspondence appears to break down in the case of ellipsis, I argued that it is necessary to investigate the relation between form/syntax and meaning more thoroughly, in order to build the analytical model on the right grounds. I did this by comparing two theoretical views, Ray Jackendoff's global semantics and Denis Bouchard's selective semantics. From this I concluded that there exists a grammar semantics which is not contextually dependent. This G-semantic component was argued to constitute the core of the sentence structure, each projection having a G-semantic core. I then argued for a separationist perspective on syntax, which allows for the possibility of phonologically unrealized syntactic positions, and which assumes that lexical items are inserted late into empty slots in ready-made syntactic frames. Hence, this chapter was not primarily concerned with ellipses, but rather, it dealt with language in general.

Chapter 4 was divided into two main parts, corresponding to two main questions. The first part dealt with the following question: what is the structure of discourse ellipses, and what does it contain? I argued against a truncated structure analysis and in favour of a model where syntactic structure contains unvalued features which are valued at the point of lexical insertion. The second part of the chapter was concerned with licensing restrictions on discourse ellipses. I showed that a phonological deletion analysis yields the wrong predictions, and moreover that neither a purely syntactic nor a purely semantic account is

satisfactory. Rather, I argued in favour of an analysis which combines structural restrictions (the Empty Left Edge Conditions as well as agreement relations in the C-T domain) and semantic restrictions (recoverability conditions).

5.2 Empirical and theoretical contributions

This dissertation provides new empirical and theoretical insights. Firstly, the empirical set of data investigated here, namely spontaneous speech, has not been the subject of much previous research, especially not within a generative framework. As discussed in chapter 1, this choice of empirical base immediately raises foundational issues concerning the theoretical value of performance data, grammaticality versus acceptability, and the core – periphery distinction. In accounting for linguistic variation, the main focus often lies on geographical differences between dialects, as well as sociocultural differences associated with gender, age etc. In this respect, the empirical focus of this thesis provides an additional axis, namely the one between written language and spontaneous speech. More specifically, my main concern has been the distinction between fragmentary and non-fragmentary language.

Theoretically, I have argued for a new perspective on the relation between fundamental components such as form, meaning, lexemes, semantics and context. I have rejected the mainstream lexicalist, endoskeletal view of the Minimalist Program in favour of an exoskeletal, separationist perspective. Hence, rather than applying existing theory and analyses to a new set of data, I have aimed to develop a new theoretical model, or at least to begin such a huge undertaking. It became clear at an early stage that existing theoretical models were unsatisfactory for my purposes, and that the data required a revision of the main theories. This therefore became my main occupation. The model that I have developed seeks to integrate insights from neo-constructional approaches into generative Minimalist theory.

In chapter 1, I stated that an overall goal of this thesis was to propose a grammar of discourse ellipsis in spontaneous speech, and moreover to single out the point in the linguistic process at which the constraints on discourse ellipses come to differ from the constraints on non-elliptical language. As for the first goal, I can now conclude that the grammar model that I have established is developed primarily to account for discourse ellipses and fragmentary language in general, but that it is equally suitable to account for other registers. As for the second goal, we may conclude that even though the general grammar model is not particular to fragmentary speech, the licensing restrictions on possible ellipses are specific to this register. This, as we have seen, is where the constraints come to differ. The general theoretical

model is thus not specific to discourse ellipses, but the licensing restrictions are. I will now point out some of the specific conclusions and theoretical insights that I have reached in this thesis.

A starting point for my proposed model was the opposition between Ray Jackendoff's global semantics and the selective semantics proposed by Denis Bouchard, and I argued in favor of the latter view. Bouchard's selective semantics and his principle of Full Identification have a clear precursor in Saussure's notion of the sign. Saussure stated that the sign has two sides: form and content. In syntax, the form – content pair may translate into the relation between the syntactic representation and the realized string. Importantly, a sign-based model of grammar will thus predict that there may be no content without form, which means no underlying representation without realized form/sound. However, the syntax of discourse ellipses shows that such sign-based models are insufficient. There are syntactic nodes which have no instantiation. A main goal of this thesis has therefore been to develop an alternative to a sign-based model.

Any elided element must be semantically recoverable, unless the element does not contribute semantically in the first place (as in the case of expletive subjects). We have seen that elements in the discourse-related C domain are more often elided than elements in other structural positions, but that only topics – representing given information – can be omitted. Focussed elements are never subject to ellipsis. On a more general level, this phenomenon is also covered by recoverability, since given information (a topic) is easily recoverable, whereas new information (bearing focus) is not.

On the other hand, we have also seen that there are certain structural requirements which must be fulfilled if ellipsis is to be felicitous. A general insight is that discourse ellipsis primarily occurs in the left periphery, in particular from [spec,CP], but occasionally also from C. Of course, both types are non-obligatory, since after all, non-elliptical sentences are the most frequent case.

The analysis I have proposed of ellipsis in the left periphery is that the whole C-T complex can be silent only when all the elements in this domain are part of the same concord relation. If [spec,CP] is filled by a non-subject, this element is not part of this concord group, and as a consequence, ellipsis of the whole domain is not possible. Ellipsis of only [spec,CP] is always possible in any case, given that the semantic identity criteria are fulfilled.

Hence, there are both semantic and structural criteria that ellipses must meet. We have seen that in some cases, the structural criterion (delete from the top and move downwards) is

overruled when the element in question is highly discourse-prominent. It then appears that semantic recoverability is a more influential restriction than the structural conditions. This is how we explained occurrences of medial ellipses. Yet, in the last part of the chapter, we looked at a group of data showing the opposite situation – ellipses which are semantically acceptable but structurally impermissible, and which are categorized as unacceptable. Hence, in this case, the structural condition overrules recoverability. It thus appears that the overall conclusion cannot be that one of these requirements is more decisive than the other. Rather, discourse ellipses are governed by interacting semantic and structural restrictions.

At a general level, the relation between structure and context has been a central issue of this thesis. How is the interaction between these components best characterized? I have claimed that elements can be deleted if they are semantically recoverable. Yet, crucially, the deletion does not involve the structure, only the instantiation of it, implying that contextual information does not affect the syntactic structure, only the realization of this structure.

The grammar of discourse ellipses can be seen as a kind of contextual adaptation. Ellipsis is only possible in the right context. The apparently fragmentary character of these strings may lead to the impression that syntax is partly destroyed, and that context has a strong direct impact on grammar, leading to a flexibility of the syntactic expression. However, the analysis outlined here shows that on the contrary, narrow syntax is not affected. Rather, the underlying structure stays intact, as the licensing restrictions concern only the level of phonological realization, and not the underlying structure. Hence, the grammar of discourse ellipses is best characterized as an interface phenomenon. It governs the interplay between structural and semantic restrictions on instantiation, but only on the level of instantiation. The apparent destruction or flexibility of syntax is thus refuted.

5.3 Prospects

The theoretical model proposed in this thesis has provided a basis for the analysis of discourse ellipses. Apart from the further theoretical development of the model itself, there are certain issues which have not been accounted for here, but which, I believe, should be investigated in further research.

Firstly, the analysis proposed here seeks to account for fragmentary language, taking spoken data as an empirical source. The language found in social media such as Facebook and Twitter, text messages and even e-mails is often claimed to exhibit oral traits. It would be

interesting to investigate whether the restrictions on possible ellipsis types are really the same in these registers as they are in spoken discourse, and if not, what the differences are.

Secondly, I have focussed primarily on syntactic and semantic restrictions. Yet, it is not unlikely that intonational patterns also have a certain impact on the licensing and interpretation of discourse ellipses.

Moreover, I have restricted my empirical focus to declarative main clauses, with the exception of a short discussion of yes/no questions in chapter 4. However, it appears that discourse ellipses in wh-questions are actually quite frequent:

(1) ~~Hva~~ skjer da?
~~what~~ happens then
'What's up?'

(2) ~~Hva~~ er det du driver med?
~~what~~ is it you do with
'What are you doing?'

(3) ~~Hva~~ holder du på med, egentlig?
~~What~~ hold you on with really
'What are you doing, really?'

(4) ~~Hvor~~ mange er klokka?
~~how~~ much is clock-the
'What time is it?'

(5) ~~Hvor~~ mange skiver vil du ha til frokost?
~~how~~ many slices of bread want you for breakfast
'How many slices of bread do you want for breakfast?'

(6) ~~Hvor~~ stort er det nye huset deres, da?
~~how~~ big is the new house yours then
'How big is your new house, then?'

It thus appears as if both wh-phrases (*hva* 'what') and parts of wh-phrases (*hvor* 'how') can be omitted. Interestingly there seems to be a distinction between different types of wh-elements when it comes to possible ellipsis. Whereas the ellipses in (1)-(6) are perfectly acceptable, the examples in (7)-(9), involving omission of *hvorfor* 'why', *hvordan* 'how' and *hvilken* 'which', are not:

(7) * ~~Hvorfor~~ gjorde du det?
~~why~~ did you it
'Why did you do it?'

(8) * ~~Hvordan~~ lager man spaghetti carbonara?
~~how~~ makes one spaghetti carbonara
'How do you make spaghetti carbonara?'

(9) * ~~Hvilken~~ bok leser du nå?
~~which~~ book read you now
'Which book are you reading now?'

An immediate explanation of this difference would be to point the recoverability condition, and to say that the wh-elements in (1)-(6) are more easily identified than the ones in (7)-(9). This is also supported by the example in (10), which shows that the ungrammatical ellipsis in (7) becomes acceptable if the wh-element is 'split' in two parts, and only the first part is elided:

(10) ~~Hva~~ gjorde du det for?
~~what~~ did you that for
'Why did you do that?'

Note that the wh-elements in (7)-(9) are parallel to adverbials in declarative sentences, and that the wh-elements in (1)-(6) are parallel to DPs. Hence, the pattern is not unexpected. In declarative sentences, DPs are more frequently omitted than adverbial constituents even when all structural and semantic restrictions are obeyed. Still, a more thorough investigation of discourse ellipses in wh-clauses, examining both structural and semantic restrictions, and exploring the empirical nuances in more detail, would be desirable.

Finally, I wish to draw the attention to a set of data which are related to the discourse ellipses, but which I believe belong to a different group of constructions, structurally speaking. To see how, I will first recall a theoretical discussion which was briefly mentioned in chapter 4. As we have seen, I have argued for full sentence structures in discourse ellipses, due to observations of connectivity effects. Moreover, I have argued that constituents may be deleted sentence-initially, if they are semantically recoverable. We have seen cases of

dropped arguments, adverbials and finite auxiliaries. Yet, one question which arises is the following: is it possible to delete a lexical verb if this verb is sufficiently familiar and prominent in the discourse? It seems probable that this is the case, and indeed, it appears to be borne out:

(11) A: Hvor reiser Alf på sommerferie?
where travels Alf on summer holiday
'Where does Alf go for his summer holiday?'
B: ~~Han reiser~~ til London.
~~he travels~~ to London
'He goes to London.'

However, how can we know that this is really a case of ellipsis? In this case, there are no structural cues which can unambiguously tell us that this is a sentence. The point is that the underlying syntactic frame is in this case not possible to identify. The same issue is illustrated through the difference displayed in the following examples:

(12) A: Vi tenkte vi skulle prøve det derre det er et reisebyrå som heter Nazar.
'We thought we should try that (…) travelling agency called Nazar.'
B: a. ~~Det~~ har jeg sett i katalogen ja.
~~it~~ have I seen in the catalogue yes
b. * Det ~~har~~ jeg sett i katalogen ja.
it ~~have~~ I seen in the catalogue yes
c. * ~~Det har~~ jeg sett i katalogen ja.
~~it have~~ I seen in the catalogue yes
'Yes, I have seen that in the catalogue.'

(13) A: Ja du skal ha fri på lørdagen du.
‘Yes, you are having the Saturday off.’
B: Mm
A: a. ~~Det~~ skal ikke jeg.
~~it~~ shall not I
b. * Det ~~skal~~ ikke jeg.
it ~~shall~~ not I
c. ~~Det skal~~ ikke jeg
~~it shall~~ not I
‘I am not.’

The question is why there is a difference in grammaticality when it comes to the third alternative ellipsis for these cases. In both (12) and (13), it is possible to drop the topicalized object, and furthermore, it is not possible to drop only the auxiliary when the topicalized object is realized. However, in (12), it is impossible to drop the object and the auxiliary together, even though this appears to be possible in (13). This may seems to be apparent counterevidence to the analysis proposed in chapter 4. Notice however that it is not obvious that (13) is really a case of discourse ellipsis. The structural sentence frame is not as easily identified in (13) as it is in (12), and we could thus envisage that this is a case of constituent negation and not an underlying full-fledged sentence. This assumption would explain the discrepancy in acceptability between the two cases.

The examples in (11), (12) and (13) thus represent borderline cases: fragments for which it is not evident whether they are structural sentences or not. This type of fragment was discussed briefly also in chapter 1. Such non-sentential fragments are highly frequent in spontaneous spoken language:

(14) God kaffe!
‘Good coffee!’
(15) Strålende vær!
‘Magnificent weather!’

Obviously, these ellipses express full-fledged propositions, semantically speaking. Nevertheless, whether or not these have also underlying full sentence structures is an open question. In the literature, there is a split between scholars who argue that these are underlyingly full sentences and scholars who argue the opposite, namely that these fragments are non-sentential phrases on a structural level. I would be inclined to opt for a non-sentential analysis of such examples, and to argue that these are full-fledged propositions, but not full sentence structures.[1] In discourse ellipses, the structural frame is easily recoverable. This is not the case in these free-standing phrases. In both cases, a full proposition is expressed, and in both cases, certain elements which are part of this proposition are not phonologically realized. Yet, whereas the silent elements are present in the sentence structure in the case of discourse ellipses, they are in the case of free-standing phrases only present in the non-sentential level of meaning. The distinction corresponds to Bouchard's (1995) division between G-semantic and S-semantic meaning, and we may thus conclude that the semantic enrichment of the fragmented strings occurs on a different tier of the derivation. Without a division between these different tiers, the distinction would not be possible to state.

To distinguish between free-standing phrases and sentential discourse ellipses, we also depend on the theoretical possibility of assuming richer syntactic structure than what can be directly motivated from instantiated lexical items. The distinction would not be possible to state in model that adopts a strong interpretation of Bouchard's principle of Full Identification.

My point is that these data clearly show the importance of correctly identifying the dividing lines between different derivational layers or tiers in the model of analysis. Is there only one kind of semantics, or is the picture more fine grained? Is there more syntax than what meets the eye/ear? What does the syntax contain, and what motivates it? How should lexical items be characterized, and how do they interact with syntactic structure? In cases of ellipsis, what is it that has disappeared? What governs the non-realizing of elements? Discussing these types of questions has been a main concern of this dissertation.

[1] For a more in-depth discussion of this issue, and for a presentation of arguments for each of the opposite standpoints, see Stanley (2000), Carston (2002), Merchant (2005), Elugardo & Stainton (2005), Progovac et al. (2006) and Stainton (2006).

References

Adger, D. 2003. *Core Syntax. A Minimalist Approach*. Oxford: Oxford University Press.

Åfarli, T.A. 1995. Seeds and Functional Projections. In *De Grammatica Generativa*, P. Goenaga (ed.), 139-150. Euskal Herriko Unibertsitatea, Donostia.

Åfarli, T.A. 2000. *Grammatikk – kultur eller natur? Elementær innføring i det generative grammatikkstudiets vitskapsteori.* Oslo: Det Norske Samlaget.

Åfarli, T.A. 2001. Separationism in the functional domain of the clause. In *Proceedings of the 18th Scandinavian Conference of Linguistics*, volume 1, A. Holmer, J.-O. Svantesson & Å. Viberg (eds), 179-189. Lund University.

Åfarli, T.A. 2006. Passive and Argument Structure. In *Passivization and Typology: Form and Function*, W. Abraham & L. Leisiö (eds), 373-382. Amsterdam: John Benjamins Publishing Company.

Åfarli, T.A. 2007. Do Verbs have Argument Structure? In *Argument Structure*, E. Reuland, T. Bhattacharya & G. Spathas (eds), 1-16. Amsterdam: Benjamins.

Åfarli, T.A. 2010. *Subjects and Predicates in Norwegian Dialect Syntax. Expletives, Agreement, Case.* Ms. INL, NTNU.

Åfarli, T.A. & Eide, K.M. 2000. Subject requirement and predication. *Nordic Journal of Linguistics* 23: 27-48.

Åfarli, T.A. & Eide, K.M. 2001. Predication at the Interface. *Syntax of Predication*, N. Zhang (red.), 1-25. ZASPIL – ZAS Papers in Linguistics. Vol. 25, 12/01.

Åfarli, T.A. & Eide, K.M. 2003. *Norsk generativ syntaks.* Oslo: Novus forlag.

Aitchinson, J. 2003. *Words in the Mind: An Introduction to the Mental Lexicon* (3rd edition), Oxford: Blackwell.

Akmajian, A. & Heny, F. 1975. *An Introduction to the Principles of Transformational Syntax*. Cambridge & London: The MIT Press.

Albrecht, L. 2010. *The Syntactic Licensing of Ellipsis.* Amsterdam & New York: John Benjamins.

Austin, J. L. 1962. *How to do things with words.* Oxford: Oxford University Press.

Avrutin, S. 2006. Weak Syntax. In *Broca's region*, Y. Grodzinsky & K. Amunts (eds), 49-62. Oxford: Oxford University Press.

Bach, E. 1964. *An Introduction to Transformational Grammars*. New York & London: Holt, Rinehart & Winston.

Baker, M. 1988. *Incorporation: A Theory of Grammatical Function Changing.* Chicago: University of Chicago Press.

Baker, M. 1997. Thematic Roles and Syntactic Structure. In *Elements of Grammar. Handbook in Generative Syntax*, L. Haegeman (ed), 73-137. Dordrecht: Kluwer Academic Publishers.

Baker, M. 2003. *Lexical Categories. Verbs, Nouns and Adjectives*. Cambridge: Cambridge University Press.

Barstad, Å.K. 2000. Salmers syntaktiske struktur – En analyse av leddstillingen i norske salmevers. M.A. thesis NTNU.

Barton, E.L. 1998. The Grammar of Telegraphic Structures. Sentential and Nonsentential Derivation. Journal of English Linguistics 26(1): 37-67.

Beaney, M. 1997. The Frege Reader. Oxford: Blackwell Publishers.

Besten, H. den. 1983. On the interaction of root transformations and lexical deletive rules. In On the Formal Syntax of the Westgermania, W. Abraham (ed.), 47-131. Amsterdam: John Benjamins.

Biber, D., Johansson, S., Leech, G., Conrad, S. & Finegan, E. 1999. Longman Grammar of Spoken and Written English. Harlow: Pearson Education Ltd.

Blakemore, D. 1992. Understanding Utterances. An Introduction to Pragmatics. Oxford: Blackwell Publishers.

Blanche-Benveniste, C. 1997. La notion de variation syntaxique dans la langue parlée. Langue française 115(1): 19-29.

Boeckx, C. 2006. *Linguistic Minimalism. Origins, Concepts, Methods and Aims*. Oxford: Oxford University Press.

Boeckx, C. 2008. *Bare Syntax*. Oxford: Oxford University Press.

Boeckx, C. (ed.). 2011. *The Oxford handbook of linguistic minimalism*. Oxford: Oxford University Press.

Borer, H. 2003. Exo-Skeletal vs. Endo-Skeletal Explanation: Syntactic Projections and the Lexicon. In *The Nature of Explanation in Linguistic Theory*, J. Moore & M. Polinsky (eds), 31-67. Chicago: CSLI publications and University of Chicago Press.

Borer, Hagit. 2005a. *Structuring Sense volume I: In name only*. Oxford: Oxford University Press.

Borer, Hagit. 2005b. *Structuring Sense volume II: The normal course of events*. Oxford: Oxford University Press.

Bosque, I. 2006. Coordinated adjectives and the interpretation of number features. In *Studies in Spanish Syntax*, L. Brugè (ed.), 47-60. Venezia: Libreria Editrice Cafoscarina.

Bouchard, D. 1995. *The Semantics of Syntax. A Minimalist Approach to Grammar*. Chicago & London: The University of Chicago Press.

Bowers, J. 1993. The Syntax of Predication. *Linguistic Inquiry* 24: 591-656.

Bowers, J. 2001. Predication. In *The Handbook of Contemporary Syntactic Theory*, Baltin, M. & Collins, C. (eds), 299-333. Oxford: Blackwell Publishing.

Brandt, M., Reis, M., Rosengren, I. & Zimmermann, I. 1992. Satztyp, Satzmodus und Illokution. In *Satz und Illokution* 1, Rosengren, I. (ed.), 1-90. Tübingen: Niemeyer.

Brazil, D. 1995. *A Grammar of Speech.* Oxford: Oxford University Press.

Bresnan, J. 1971. Sentence Stress and Syntactic Transformations. *Language* 47(2): 257-281.

Bromberg, H. & Wexler, K. 1995. Null subjects in *Wh*-questions. In *Papers on Language Processing and Acquisition,* C.T. Schütze et al. (eds.), 221-248. MIT Working Papers in Linguistics, 26.

Brøseth, H. 2007. A neo-constructional approach to computer-oriented talk. PhD dissertation, Norwegian University of Science and Technology.

Caramazza, A. 1996. The brain's dictionary. *Nature* 380: 485-486.

Carden, G. 1976. Syntactic and semantic data: Replication results. *Language in Society* 5: 99-104.

Cardinaletti, A. 1990. Subject/object asymmetries in German null-topic constructions and the status of spec CP. In *Grammar in Progress*, J. Mascarò & M. Nespor (eds), 75-84. Dordrecht: Foris Publications.

Cardinaletti, A. & Starke, M. 1999. The typology of structural deficiency: a case study of the three classes of pronouns. In *Clitics in the Languages of Europe,* H. van Riemsdijk (ed.), 145-233. Berlin: Mouton de Gruyter.

Carstairs McCarthy, A. 1999. *The Origins of Complex Language: An Inquiry Into the Evolutionary Beginnings of Sentences, Syllables, and Truth*. Oxford: Oxford University Press.

Carston, R. 2002. *Thoughts and Utterances. The Pragmatics Explicit Communication*. Malden: Blackwell Publishing.

Carter, R. & McCarthy, M. 1995. Grammar and Spoken Language. *Applied Linguistics* 16(2): 141-158.

Chafe, W.L. 1976. Givenness, contrstiveness, definiteness, subjects, topics and point of view. In *Subject and Topic*, C.N. Li (ed.), 25-55. New York: Academic Press.

Chafe, W.L. 1987. Cognitive constraints on information flow. In *Coherence and Grounding in Discourse*, R. Tomlin (ed.), 22-51. Amsterdam: John Benjamins.

Chafe, W. & Danielewicz, J. 1987. Properties of Spoken and Written Language. In *Comprehending Oral and Written Language*, R. Horowitz & S.J. Samuels (eds), 83-113. New York: Academic Press.

Chao, W. 1987. On Ellipsis. PhD dissertation, University of Massachusetts-Amherst.

Cheshire, J. 2005. Syntactic variation and spoken language. In *Syntax and Variation: Reconciling the Biological and the Social,* L. Cornips and K. Corrigan (eds), 81-106. Amsterdam: John Benjamins.

Chomsky, N. 1957. *Syntactic Structures*. The Hague: Mouton.

Chomsky, N. 1964. *Current issues in linguistic theory*. The Hague: Mouton.

Chomsky, N. 1965. *Aspects of the Theory of Syntax*. Cambridge, Mass.: The MIT Press.

Chomsky, N. 1970. Remarks on Nominalization. In *Readings in English Transformational Grammar*, R. Jacobs & P. Rosenbaum (eds), 184-221. Waltham, Mass.: Ginn.

Chomsky, N. 1975. *The logical structure of linguistic theory.* New York: Plenum Press.

Chomsky, N. 1981a. *Lectures on Government and Binding. The Pisa Lectures*. Dordrecht: Foris.

Chomsky, N. 1981b. Markedness and Core Grammar. In *Theory of Markedness in Generative Grammar. Proceedings of the 1979 GLOW Conference,* A. Belletti, L. Brandi & L. Rizzi (eds), 123-146. Pisa: Scuola normale superiore di Pisa.

Chomsky, N. 1986a. *Knowledge of Language: Its Nature, Origin, and Use*. Westport & London: Praeger Publishers.

Chomsky, N. 1986b. *Barriers.* Cambridge, MA & London: The MIT Press.

Chomsky, N. 1995. *The Minimalist Program*. Cambridge, Mass.: The MIT Press.

Chomsky, N. 2000a. *New Horizons in the Study of Language and Mind.* Cambridge: Cambridge University Press.

Chomsky, N. 2000b. Minimalist Inquiries: The Framework. In *Step by Step: Essays on Minimalist Syntax in honor of Howard Lasnik*, R. Martin, D. Michaels & J. Uriagereka (eds), 89-155. Cambridge, Mass: MIT Press.

Chomsky, N. 2000c. *The Architecture of Language*. Oxford: Oxford University Press.

Chomsky, N. 2001. Derivation by Phase. In *Ken Hale: A Life in Language,* M. Kenstovicz

(ed), 1-54. Cambridge, Mass: MIT Press.

Chomsky, N. 2002. *On Nature and Language.* Cambridge: Cambridge University Press.

Chomsky, N. 2004. Beyond Explanatory Adequacy. In *Structures & Beyond: The Cartography of Syntactic Structures*, A. Belletti (ed.), 104-131. Oxford: Oxford University Press.

Chomsky, N. 2005. Three Factors in Language Design. *Linguistic Inquiry* 36: 1-22.

Chomsky, N. 2007. Approaching UG From Below. In *Interfaces + Recursion = Language?*, U. Sauerland & H.M. Gärtner (eds), 1-29. New York: Mouton de Gruyter.

Chomsky, N. 2008. On Phases. In *Foundational Issues in Linguistic Theory. Essays in Honor of Jean-Roger Vergnaud*, R. Freidin, C. Peregrín Otero & M.L. Zubizarreta (eds), 133-166. Cambridge, MA: MIT Press.

Chomsky, N. 2009. Opening Remarks. In *Of Minds & Language. A dialogue with Noam Chomsky in the Basque Country*, M. Piattelli-Palmarini, J. Uriagereka & P. Salaburu (eds), 13-43. Oxford: Oxford University Press.

Clark, H. & Clark, E. 1977. *Psychology and Language.* Harcourt, Brace: New York.

Clark, H. & Haviland, S. 1977. Comprehension and the givenness contract. In *Discourse production and comprehension*, R. Freedle (ed.), 1-40. New Jersey: Ablex.

Clercq, K. de. 2009. Fonologische deletie in ja-neevraagfragmenten. In *Handelingen van de Koninklijke Zuid-Nederlandse Maatschappij voor Taal- en Letterkunde en Geschiedenis*, volume LXII.

Cole, P. 1987. Null objects in universal grammar. *Linguistic Inquiry* 18: 597-612.

Collins, C. 1997. *Local Economy*. Cambridge, Mass.: The MIT Press.

Corbett, G.G. 2000. *Number.* Cambridge: Cambridge University Press.

Cornips, L. 2006. Intermediate Syntactic Variants in a Dialect-Standard Speech Repertoire and Relative Acceptability. In *Gradience in Grammar. Generative Perspectives*, G. Fanselow et al. (eds), 85-105. Oxford: Oxford University Press.

Cornips, L. & Poletto, C. 2005. On standardising syntactic elicitation techniques (part 1). *Lingua* 115: 939-957.

Crane, T. 1990. The Language of Thought: No Syntax Without Semantics. *Mind & Language* 5(3): 187-212.

Crystal, D. 1976. Neglected Grammatical Factors in Conversational English. In *Studies in English Linguistics*, S. Greenbaum, G. Leech & J. Svartvik (eds), 153-166. London: Longman.

Crystal, D. 1987. *The Cambridge encyclopedia of language.* Cambridge: Cambridge University Press.

Crystal, D. 2008. *Dictionary of Linguistics and Phonetics*, 6th edition. Oxford: Blackwell Publishing.

Culicover, P. W. & Jackendoff, R. 2005. *Simpler Syntax*. Oxford: Oxford University Press.

Damasio, H., Grabowski, T.J., Tranel, D., Hichwa, R.D. & Damasio, A.R. 1996. A neural basis for lexical retrieval. *Nature* 380: 499-505.

Den Dikken, M. 1995. Binding, expletives and levels. *Linguistic Inquiry* 26: 347-354.

Den Dikken, M. 2001. "Pluringulars", pronouns and quirky agreement. *The Linguistic Review* 18: 19-41.

Dowty, D. 1989. On the semantic content of the notion `thematic role'. In *Properties, Types and Meaning*. *Volume 2: Semantic Issues*, G. Chierchia, B. Partee & R. Turner (eds), 69-130. D. Reidel, Dordrecht.

Dowty, D. 1991. Thematic Proto-Roles and Argument Selection. *Language* 67(3): 547-619.

Dowty, D.R., Wall, R.E. & Peters, S. 1981. *Introduction to Montague Semantics*. Dordrecht, Boston & London: Kluwer Academic Publishers.

Dyrland, E. 1973. Noen syntaktiske trekk i norske avisoverskrifter. Master thesis, University of Oslo.

Edelman, S. & Christiansen, M.H. 2003. How seriously should we take Minimalist Syntax? A comment on Lasnik. *Trends in Cognitive Science 7*: 60-61.

Eide, K.M. 1998. Som-Predicatives: Exploring the Predication Operator. In *Papers from the 16th Scandinavian Conference of Linguistics*, T. Haukioja (ed.), 64-74. University of Turku.

Eide K.M. & Åfarli, T.A. 1999a. Semantically Charged Syntax and the Construction of Meaning. *U. Penn Working Papers in Linguistics* 6(1): 111-126.

Eide K.M. & Åfarli, T.A. 1999b. The syntactic disguises of the predication operator. *Studia Linguistica* 53: 153-181.

Eide, K.M. og Åfarli, T.A. 2007. Flerspråklighet – en utfordring for det generativerammeverket? – Om dialektsyntaks og parallelle grammatikker. In *Nordisk dialektologi og sosiolingvistikk. Foredrag på 8. Nordiske Dialektologikonference. Århus 15.-18. august 2006*, T. Arboe (ed), 126-135. Aarhus Universitet.

Elugardo, R. & Stainton, R.J. 2005. *Ellipsis and Nonsentential Speech. Studies in Linguistics and Philosophy*. Dordrecht: Springer.

Embick, D. 2010. *Localism versus Globalism in Morphology and Phonology*. Cambridge, Ma: MIT Press.

Embick, D. & Noyer, R. 2001. Movement operations after syntax. *Linguistic Inquiry* 32: 555-595.

Epstein, S., & Seely, D. (eds). 2002. *Derivation and Explanation in the Minimalist Program*. Oxford: Blackwell Publishers.

Faarlund, J.T. 2003. Når alle informantane er døde. In *På språkjakt – problemer og utfordringer i språkvitenskapelig datainnsamling*, J. Bondi Johannessen et al. (eds), 5-30. Oslo: Unipub forlag.

Featherston, S. 2007. Data in generative grammar: The stick and the carrot. *Theoretical Linguistics* 33(3): 269-318.

Fiengo, R. & May, R. 1994. *Indices and Identity*. Cambridge & London: The MIT Press.

Fillmore, C.J. 1988. The Mechanisms of "Construction Grammar". *BLS* 14: 35-55.

Fillmore, C.J., Kay, P. & O'Connor, C. 1988. Regularity and Idiomaticity in Grammatical Constructions: The Case of *Let Alone*. *Language* 64: 501-538.

Fitzpatrick, J.M. 2006. Deletion through movement. *Natural Language & Linguistic Theory* 24: 399–431.

Fjeldstad, M. 2000. *Drept av krimliga. En syntaktisk og pragmatisk analyse av fragmentariske avisoverskrifter i norsk*. Master thesis, INL, Norwegian University of Science and Technology (NTNU).

Fodor, J. 1998. *Concepts. Where Cognitive Science Went Wrong*. Oxford: Oxford University Press.

Fodor, J. & Lepore, E. 2002. *The Compositionality Papers*. Oxford: Oxford University Press.

Fox, D. & Lasnik, H. 2003. Successive Cyclic Movement and Island Repair: The Difference between Sluicing and VP Ellipsis. *Linguistic Inquiry* 34: 143-154.

Frascarelli, M. 2007. Subjects, topics and the interpretation of referential pro. An interface approach to the linking of (null) pronouns. *Natural Language and Linguistic Theory* 25: 691-734.

Frascarelli, M. & R. Hinterhölzl. 2007. Types of Topics in German and Italian. In *On Information Structure, Meaning and Form*, K. Schwabe & S. Winkler (eds). 87-116. Amsterdam: John Benjamins.

Freidin, R. 1992. *Foundations of Generative Syntax*. Cambridge & London: The MIT Press.

Føllesdal, D. 1967. Comments on Stenius's 'Mood and Language-Game'. *Synthese* 17: 275-280.

Gazzaniga, M.S., Ivry, R.B. & Mangun, G.R. 2002. *Cognitive Neuroscience. The biology of the mind.* New York & London: W.W. Norton & Company.

Gelderen, E. van. 2012. Null Subjects in Old English. Ms. Arizona State University. [To appear in *Linguistic Inquiry* 44.2.]

Gibson, E. & Fedorenko, E. 2010a. The need for quantitative methods in syntax and semantics research. *Language and Cognitive Processes*: 1-37.

Gibson, E. & Fedorenko, E. 2010b. Weak quantitative standards in linguistic research. *Trends in Cognitive Science.* 14(6): 233-234.

Giere, R.N. 1997. *Understanding Scientific Reasoning*, 4th edition. Forth Worth: Harcourt, Brace College Publishers.

Gleitman, L. 1990. The Structural Sources of Verb Meanings. *Language Acquisition* 1: 3-55.

Goldberg, A. 1995. *Constructions. A Construction Grammar Approach to Argument Structure*. Chicago & London: The University of Chicago Press.

Goldberg, A. 2006. *Constructions at Work – The Nature of Generalization in Language.* Oxford: Oxford University Press.

Grimshaw, J. 1990. *Argument Structure*. Cambridge: MIT Press.

Groat, E. 1999. Raising the case of expletives. In *Working Minimalism*, S. Epstein & N. Hornstein (eds), 27-43. Cambridge, MA: The MIT Press.

Gundel, J.K. 1974. The Role of Topic and Comment in Linguistic Theory. PhD dissertation, University of Texas at Austin.

Gynnild, A. 1988. Dagspressens visuelle kommunikasjon. En analyse av tekst, bilder og layout i Adresseavisen, Dagbladet, Ekstra Bladet og Politiken 1970 og 1987. Master thesis, University of Trondheim.

Haegeman, L. 1987. Register variation in English: some theoretical observations. *Journal of English Linguistics* 20: 230-248.

Haegeman, L. 1990. Understood Subjects in English Diaries. *Multilingua* 9: 157-199.

Haegeman, L. 1992. *Theory and description in generative syntax: A case study in West Flemish*. Cambridge: Cambridge University Press.

Haegeman, L. 1994. *Introduction to Government and Binding Theory*. Oxford: Blackwell.

Haegeman, L. 1997. Register variation, truncation, and subject omission in English and French. *English Language and Linguistics* 1: 233-270.

Haegeman, L. 2000. Adult null subjects in non pro-drop languages. In *The Acquisition of Syntax: Studies in Comparative Developmental Linguistics*, M-A. Friedemann & L. Rizzi (eds), 129-169. Harlow: Longman.

Haegeman, L. 2007. Subject omission in present-day written English. On the theoretical relevance of peripheral data. *Rivista di Grammatica Generativa* 32: 91-124.

Haegeman, L. & Guéron, J. 1999. *English Grammar.* Oxford: Blackwell.

Haegeman, L. and Ihsane, T. 1999. Subject ellipsis in embedded clauses in English. *English Language and Linguistics* 3(1): 117-145.

Haegeman, L. and Ihsane, T. 2001. Adult Null Subjects in the non-*pro*-drop Languages: Two Diary Dialects. *Language Acquisition* 9(4): 329-346.

Haegeman, L & van Koppen, M. 2012. Complementizer Agreement and the Relation between C^0 and $T^{0.}$ *Linguistic Inquiry* 43(3).

Hale, K. & Keyser, S. 1993. On Argument Structure and the Lexical Expression of Syntactic Relations. In *The View from Building 20*, K. Hale & S. Keyser (eds), 53-109. Cambridge, Mass.: MIT Press.

Hale, K. & Keyser, S.J. 2002. *Prolegomenon to a Theory of Argument Structure*. Cambridge MA: MIT Press.

Halle, M. & Marantz, A. 1993. Distributed Morphology and the Pieces of Inflection. In *The View from Building 20*, K. Hale and S. J. Keyser (eds), 111-176. Cambridge: MIT Press.

Halliday, M.A.K. 1989. *Spoken and Written Language*. Oxford: Oxford University Press.

Hanssen, E. et al. 1978. *Oslomål. Prosjektbeskrivelse og syntaktisk analyse av oslomål med henblikk på sosiale skilnader. Talemålsundersøkelsen i Oslo (TAUS).* Skrift nr. 6. Hovedrapport. Oslo: Novus forlag.

Hanssen, E. 1983. Avbrutte setninger i talemål. *Talemålsundersøkelsen i Oslo (TAUS).* Skrift nr. 10, Oslo: Novus forlag As.

Harley, H. & Noyer, R. 1999. Distributed Morphology. *GLOT International* 4(4): 3-9.

Harris, Z. 1951. *Methods in Structural Linguistics*. Chicago: University of Chicago Press.

Harris, R.A. 1993. *The Linguistic Wars*. New York & Oxford: Oxford University Press.

Hellan, L. 1988. *Anaphora in Norwegian and the theory of grammar*. Dordrecht: Foris.

Hendriks, P. & Spenader, J. 2005. Why be silent? Some functions of ellipsis in natural language. In *Proceedings of the ESSLLI 2005 workshop on Cross-Modular Approaches to Ellipsis*, J. Spenader & P. Hendriks (eds), 29-36. Edinburgh: Heriot-Watt University.

Heycock, C. 1991. *Layers of Predication: The non-lexical syntax of clauses*. PhD dissertation, University of Pennsylvania.

Higginbotham, J. 2003. Précis of *Foundations of Language: Brain, Meaning, Grammar, Evolution. Behavioral and Brain Sciences* 26: 651-707.

Hjelmslev, L. 1961. *Prolegomena to a theory of language.* Madison, WI: University of Wisconsin Press.

Hoekstra, T. & Mulder, R. 1990. Unergatives as copular verbs: Locational and existential predication. *The Linguistic review* 7: 1-79.

Holmberg, A. 1986. *Word Order and Syntactic Features.* Dissertation, University of Stockholm.

Hopper, Paul J. 1998. Emergent grammar. In *The new psychology of language: cognitive and functional approaches to language*, Tomasello (ed.), 155-175. Mahwah, N.J.

Hornstein, N., Nunes, J. & Grohmann, K.K. 2005. *Understanding Minimalism*. Cambridge: Cambridge University Press.

Householder, F.W. 1973. On arguments from asterisks. *Foundations of Language* 10 (3): 365-376.

Huang, C.-T.J. 1984. On the Distribution and Reference of Empty Pronouns. *Linguistic Inquiry* 15: 531-574.

Huang, C.-T.J. 1989. *Pro*-drop in Chinese: a generalized control theory. In *The Null Subject Parameter*, O. Jaeggli & K.J. Safir (eds), 185-214. Dordrecht: Kluwer.

Huang, Y. 1995. On null subjects and null objects in generative grammar. *Linguistics* 33: 1081-1123.

Huang, Y. 2007. *Pragmatics.* Oxford: Oxford University Press.

Hughes, R., Carter, R., & McCarthy, M. 1995. Discourse Context as a predictor of grammatical choice. In *Language in a Changing Europe*, D. Graddol & S. Thomas (eds), 47-54. Clevedon: BAAL/Multilingual Matters.

Hyams, N. 1986. *Language Acquisition and the Theory of Parameters.* Dordrecht: Reidel.

Jackendoff, R.S. 1971. Gapping and Related Rules. *Linguistic Inquiry* 2: 21-35.

Jackendoff, R. 1983. *Semantics and Cognition.* Cambridge: MIT Press.

Jackendoff, R.S. 1990. *Semantic Structures.* Cambridge, Mass.: The MIT Press.

Jackendoff, R.S. 1997. *The Architecture of the Language Faculty*. Cambridge & London: The MIT Press.

Jackendoff, R.S. 2002. *Foundations of Language. Brain, Meaning, Grammar, Evolution*. Oxford: Oxford University Press.

Janda, R.D. 1985. Note-Taking English as a Simplified Register. *Discourse Processes* 8: 437-454.

Johannessen, J.B. 2003. Innsamling av språklige data: Informanter, introspeksjon og korpus. In *På språkjakt – problemer og utfordringer i språkvitenskapelig datainnsamling*, J.B. Johannessen et al. (eds), 133-171. Oslo: Unipub forlag.

Johannessen, J.B. & Jørgensen, F. 2006. Annotating and Parsing Spoken Language. In *Treebanking for Discourse and Speech*, P.J. Henrichsen & P.R. Skadhauge (eds), 83-103. København: Samfundslitteratur Press.

Johnson, K. 2001. What VP Ellipsis Can Do, and What it Can't, but not Why. In *The Handbook of Contemporary Syntactic Theory*, M. Baltin & C. Collins (eds), 439-479. Oxford: Blackwell Publishers.

Josefsson, G. 2006. Semantic and grammatical genders in Swedish – independent but interacting dimensions. *Lingua* 116: 1346-1368.

Jouitteau, M. 2004. Gestures as Expletives: Multichannel Syntax. In *WCCFL 23 Proceedings*, G. Garding & M. Tsujimura (eds), 104-114. Somerville, MA: Cascadilla Press.

Katz, J.J. & Fodor, J.A. 1963. The structure of a Semantic Theory. *Language* 39: 170-210.

Katz, J.J. & Postal, P.M. 1964. *An integrated theory of linguistic descriptions*. Cambridge, MA: MIT Press.

Kayne, R. 1984. *Connectedness and Binary Branching*. Dordrecht: Foris Publications.

Kenny, A. 1995. *Frege. An introduction to the founder of modern analytic philosophy.* London: Penguin Books.

Kidwai, A. 2010. The cartography of phases. Facts and inference in Meiteilon. In *Edges, Heads, and Projections: Interface properties*, Di Sciullo, A.M. & V. Hill (eds), 233–262. Amsterdam: John Benjamins.

Kiss, É.K. 1994. Sentence Structure and Word Order. In *The Syntactic Structure of Hungarian*, F. Kiefer & K.É. Kiss (eds), 1-90. San Diego: Academic Press.

Kitahara, H. 1997. *Elementary operations and optimal derivations.* Cambridge, Mass.: MIT Press.

Koster, J. 1975. Dutch as an SOV Language. *Linguistic Analysis* 1:111-136.

Kratzer, A. 1996. Severing the External Argument from the Verb. In *Phrase Structure and the Lexicon*, Rooryck, J. & L. Zaring, 109-137. Dordrecht: Kluwer.

Labov, W. 1975. *What is a linguistic fact?* Lisse: Peter de Ridder Press.

Labov, W. 1996. When Intuitions Fail. In *Papers from the Parasession on Theory and Data in Linguistics*, L. McNair, K. Singer, L. Dolbrin & M. Aucon (eds), 77-106. Chicago Linguistic Society 32.

Lakoff, G. 1987. *Women, Fire and Dangerous Things.* Chicago: University of Chicago Press.

Lambrecht, K. 1994. *Information structure and sentence form*. Cambridge: Cambridge University Press.

Langacker, R. 1986. *Foundations of Cognitive Grammar*, vol. 1. Stanford: Stanford University Press.

Lasnik, H. 2000. Syntactic Structures *Revisited. Contemporary Lectures on Classic Transformational Theory.* Cambridge & London: The MIT Press.

Lasnik, H. 2005. Review of Jason Merchant: The Syntax of Silence. *Language* 81: 259-265.

Lasnik, H. 2010. On Ellipsis. Is material that is phonetically absent but semantically present present or absent syntactically? In *Memory, Mind and Language*, H. Götzche (ed.), 221-242. Cambridge: Cambridge Scholars Publishing.

Lasnik, H. & Stowell, T. 1991. Weakest Crossover. *Linguistic Inquiry* 22: 687-720.

Leech, G. 2000. Same grammar or different grammar? Contrasting approaches to the grammar of spoken English discourse. In *Discourse and Social Life*, S. Sarangi & M. Coulthard (eds), 48-65. Cornwall: Longman.

Levin, B. & M. Rappaport Hovav. 2005. *Argument Realization*. Cambridge: Cambridge University Press.

Lewis, D. 1976. General Semantics. In *Montague Grammar*, B.H. Partee (ed.), 1-50. New York, San Fransisco & London: Academic Press.

Lindström, J. 2008. *Tur* och *ordning. Introduktion till svensk samtalsgrammatik.* Stockholm: Norstedts Akademiska Förlag.

Linell, P. 1988. The impact of literacy on the conception of language: The case of linguistics. In *The Written World*, R. Saljö (ed.), 41-58. Berlin: Springer.

Linell, P. 1998. *Approaching dialogue. Talk, interaction and contexts in dialogical perspectives*. Amsterdam/Philadelphia: John Benjamins Publishing Company.

Linell, P. 2005. En dialogisk grammatik? In *Samtal och grammatik. Studier i svenskt samtalsspråk*, J. Anward & B. Nordberg (eds), 231-328. Lund: Studentlitteratur.

Lobeck, A. 1995. *Ellipsis: Functional Heads, Licensing, and Identification*. New York & Oxford: Oxford University Press.

Lohndal, T. 2012. *Without Specifiers: Phrase Structure and Events.* PhD dissertation, University of Maryland.

Lohndal, T. & Pietroski, P. 2011. Interrogatives, Instructions, and I-languages: An I-Semantics for Questions. *Linguistic Analysis* 37: 458-515.

Lyons, J. 1977. *Semantics*, vol. 1. Cambridge: Cambridge University Press.

Marantz, A. 1991. Case and Licensing. In *Proceedings of the Eighth Eastern States Conference on Linguistics* (*ESCOL '91)*, G. Westphal, B. Ao & H.-R. Chae (eds), 234-253. Ithaca NY: CLC Publications.

McCarthy, M. 1998. *Spoken Language and Applied Linguistics*. Cambridge: Cambridge University Press.

McCawley, J. 1968. The role of semantics in a grammar. In *Universals in linguistic theory*, E. Bach and R. Harms (eds), 124-69. New York: Holt, Rinehart and Winston.

McCawley, J. 1976. *Grammar and meaning.* New York: Academic Press.

McGilvray, J. 1998. Meanings Are Syntactically Individuated and Found in the Head. *Mind & Language* 13: 225-280.

McShane, M. 2005. *A Theory of Ellipsis.* Oxford: Oxford University Press.

Merchant, J. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis.* Oxford: Oxford University Press.

Merchant, J. 2004. Fragments and ellipsis. *Linguistics and Philosophy* 27(6): 661-738.

Merchant, J. 2010. Three types of ellipsis. In *Context-Dependence, Perspective, and Relativity*, F. Recanati, I. Stojanovic & N. Villanueva (eds), 141-195. Mouton de Gruyter: Berlin.

Merchant. J. (forthcoming). Ellipsis. In *Syntax: An international handbook. 2nd edition*, A. Alexiadou & T. Kiss (eds). Berlin: Mouton de Gruyter. http://home.uchicago.edu/~merchant/publications.html. [Accessed May 2012]

Miller, J. 1995. Does spoken language have sentences? In *Grammar and meaning. Essays in honour of Sir John Lyons*, F.R. Palmer (ed), 116-135. Cambridge: Cambridge University Press.

Miller, J. 2006. Spoken and Written English. In *The Handbook of English Linguistics*, B. Aarts and A. McMahon (eds), 670-691. Oxford, Blackwell.

Miller, J. and Weinert, R. 1998. *Spontaneous Spoken Language. Syntax and Discourse*. New York: Oxford University Press.

Miyagawa, S. 2010. *Why Agree? Why Move? Unifying Agreement-Based and Discourse-Configurational Languages.* Cambridge & London: The MIT Press.

Molnár, V. 1991. *Das TOPIK im Deutschen und im Ungarischen* [Topic in German and Hungarian]. (Lunder germanistische Forchungen 58). Stockholm: Almqvist & Wiksell International.

Moro, A. 1997. *The Raising of Predicates*. Cambridge: Cambridge University Press.

Müller, G. 2009. On Deriving CED Effects from the PIC. *Linguistic Inquiry* 41(1): 35-82.

Mörnsjö, M. 2002. V1 Declaratives in Spoken Swedish. Doctoral dissertation, Lund University.

Napoli, D.J. 1982. Initial Material Deletion. *Glossa* 16: 85-111.

Newmeyer, F. 1983. *Grammatical Theory: Its Limits and Its Possibilities.* Chicago: University of Chicago Press.

Nunes, J. 1995. *The Copy Theory of Movement and Linearization of Chains in the Minimalist Program.* PhD Dissertation, University of Maryland.

Nunes, J. 2001. Sideward Movement. *Linguistic Inquiry* 31: 303-344.

Nunes, J. 2004. *Linearization of Chains and Sideward Movement.* Cambridge, MA: MIT Press.

Nunes, J. 2011. The Copy Theory. In *The Oxford Handbook of Linguistic Minimalism*, C. Boeckx (ed.), 143-172. Oxford: Oxford University Press.

Nygård, M. 2004. Talespråkssyntaks. En analyse av elliptiske konstruksjoner i talespråk. Master thesis, Norwegian University of Science and Technology (NTNU).

Nygård, M, Eide, K.M. & Åfarli, T.A. 2008. Ellipsens syntaktiske struktur. In *Språk i Oslo. Ny forskning omkring talespråk*, J.B. Johannessen & K. Hagen (eds), 172-183. Oslo: Novus forlag.

Palmer, H.E. 1924. *A Grammar of Spoken English on a Strictly Phonetic Basis.* Cambridge. Heffer & Sons.

Phillips, C. 2009. Should we impeach armchair linguists? In *Japanese/Korean Linguistics 17*, S. Iwasaki, H. Hoji, P. Clancy & S.-O. Sohn (eds). Stanford, CA: CSLI Publications.

Phillips, C. & Lau, E. 2004. Foundational issues. (Review of Ray Jackendoff 2002. *Foundations of language*). *Journal of Linguistics* 40: 571-591.

Pietroski, P.M. 2005. Meaning before Truth. In *Contextualism in Philosophy. Knowledge, Meaning, and Truth*, G. Preyer & G. Peter (eds), 255-302. Oxford: Oxford University Press.

Platzack, C. 1996. Germanic Verb Second Languages. Attract cs. Repel: On Optimaility, A-bar Movement and the Symmetrical/Asymmetrical Verb Second Hyopthesis'. In *Deutsch – typologisch*, E. Lang & G. Zifonum (eds), 92-120. Berlin/New York: Walter de Gruyter.

Platzack, C. 1998a. *Svenskans inre grammatik – det minimalistiska programmet. En introduction till modern generativ grammatik.* Lund: Studentlitteratur.

Platzack, C. 1998b. A Visibility Condition for the C-domain. *Working Papers in Scandinavian Syntax* 61: 53-97.

Platzack, C. 2000. Multiple Interfaces. In *Cognitive Interfaces. Constraints on Linking Cognitive Information*, E. van der Zee & U. Nikanne (eds), 21-53. Oxford: Oxford University Press.

Platzack, C. 2010. *Den fantastiska grammatiken. En minimalistisk beskrivning av svenskan.* Stockholm: Norstedts.

Platzack, C. 2012. Towards a Minimal Argument Structure. Ms. Lund University. Available from: http://ling.auf.net/lingbuzz/001409. [Accessed May 2012]

Platzack, C. & Rosengren, I. 1998. On the subject of imperatives: A minimalist account of the imperative clause. *The Journal of Comparative Germanic Linguistics* 1: 177-224.

Pollock, J.-Y. 1989. Verb Movement, Universal Grammar, and the Structure of IP. *Linguistic Inquiry* 20: 365-424.

Prince, E. 1981. Toward a taxonomy of given-new information. In *Radical Pragmatics*, P. Cole (ed.), 223-56. New York: Academic Press.

Progovac, L., Paesani, K., Casielles, E. & Barton, E. 2006. *The Syntax of Nonsententials: Multidisciplinary Perspectives* [Linguistik Aktuell 93]. Amsterdam: John Benjamins.

Quirk, R., Greenbaum, S., Leech, G. & Svartvik, J. 1972. *A Grammar of Contemporary English*. London: Longman.

Quirk, R., Greenbaum, S., Leech, G., and Svartvik, J. 1985. *A Comprehensive Grammar of the English Language*. London: Longman.

Radford, A. 1981. *Transformational Syntax. A student's guide to Chomsky's Extended Standard Theory.* Cambridge: Cambridge University Press.

Radford, A. 2004. *Minimalist syntax: exploring the structure of English.* Cambridge: Cambridge University Press.

Ramchand, G.C. 2008. *Verb Meaning and the Lexicon. A First-Phase Syntax.* Cambridge: Cambridge University Press.

Reinhart, T. 1981. Pragmatics and linguistics. An analysis of sentence topics. *Philosophica* 27: 53-94.

Reinhart, T. 2002. The Theta System: An Overview. *Theoretical Linguistics* 28: 229-290.

Reuland, E.J. 2011. *Anaphora and Language Design.* Cambridge & London: The MIT Press.

Richards, M.D. 2007. On Feature Inheritance: An Argument from the Phase Impenetrability Condition. *Linguistic Inquiry* 38(3): 563-572.

Richards, M. & Biberauer, T. 2005. Explaining *Expl*. In *The function of function words and functional categories*, M. den Dikken & C. Tortora (eds), 115 - 154. Amsterdam: Benjamins.

Rivero, M.L. & Terzi, A. 1995. Imperatives, V-movement and logical mood. *Journal of Linguistics* 31(2): 301-322.

Rizzi, L. 1982. *Issues in Italian Syntax.* Foris: Dordrecht.

Rizzi, L. 1986. Null Objects in Italian and the Theory of pro. *Linguistic Inquiry* 17(3): 501-557.

Rizzi, L. 1991. Proper Head Government and the Definition of A-Positions. GLOW Newsletter 26. 46-47.

Rizzi, L. 1994. Early Null Subjects and Root Null Subjects. In *Language Acquisition Studies in Generative Grammar*, T. Hoekstra & B.D. Schwartz (eds), 151-176. Amsterdam: John Benjamins.

Rizzi, L. 1997. The Fine Structure of the Left Periphery. In *Elements of Grammar. A Handbook in Generative Syntax*, L. Haegeman (ed), 281-337. Dordrecht: Kluwer.

Rizzi, L. & Roberts, I. 1996. Complex Inversion in French. In *Parameters and Functional Heads. Essays in Comparative Syntax*, A. Belletti & L. Rizzi (eds), 91-116. New York & Oxford: Oxford University Press.

Roberts, I. 2007. Introduction. In *Comparative Grammar: Critical Concepts in Linguistics*, Vol 2 (The Null Subject Parameter), I. Roberts (ed.). London: Routledge.

Roberts, I. 2010. Varieties of French and the Null Subject Parameter. In *Parametric Variation: Null Subjects in Minimalist Theory*, T. Biberauer, A. Holmberg, I. Roberts & M. Sheenan (eds), 303-327. Cambridge: Cambridge University Press.

Roeper, T. 1999. Universal Bilingualism. *Bilingualism* 2: 169-186.

Rosenkvist, H. 1995. *Discourse identification of non-canonical empty categories. An inquiry into the typology of empty categories.* Ms. University of Lund.

Ross, J.R. 1968. *Constraints on Variables in Syntax.* PhD dissertation, Massachusetts Institute of Technology.

Ross, J.R. 1982. *Pronoun Deleting Processes in German,* paper presented at the annual meeting of the Linguistic Society of America, San Diego, California.

Rögnvaldsson, E. & Thráinsson, H. 1990. On Icelandig word order once more. In *Modern Icelandic Syntax*, J. Maling & A. Zaenen (eds), 3-40. San Diego: Academic Press.

Sabel, J. 2000. Expletives as features. In *WCCFL 19 Proceedings*, R. Billerey & B. Lillehaugen (eds), 411-424. Somerville, MA: Cascadilla Press.

Sag, I. & Wasow, T. 1999. *Syntactic Theory: A formal introduction.* Stanford: CSLI Publications.

Sandøy, H. 1994. Talesyntaks og dialektsyntaks. In *Helsing til Lars Vassenden på 70-årsdagen,* J. Myking, H. Sandøy & I. Utne (eds), 195-206. *Nordisk Institutt: University of Bergen.*

Sauerland, U. and Elbourne, P. 2002. Total Reconstruction, PF Movement, and Derivational Order. *Linguistic Inquiry* 33(2): 283-319.

Schütze, C.T. 1996. *The Empirical Base of Linguistics. Grammaticality Judgments and Linguistic Methodology*. Chicago and London: University of Chicago Press.

Schütze, C.T. 2010. Linguistic evidence and grammatical theory. *WIREs (Wiley Interdisciplinary Reviews) Cognitive Science* 2: 206-221.

Seuren, P.A.M. 1998. *Western Linguistics. An Historical Introduction.* Oxford: Blackwell Publishers.

Shlonsky, U. 1994. Agreement in Comp. *The Linguistic Review* 11: 351-375.

Sigurdsson, H. Á. 1989. Verbal Syntax and Case in Icelandic. Doctoral dissertation, Lund University.

Sigurðsson, H.Á. 1993. Argument-Drop in Old Icelandic. *Lingua* 89: 143-176.

Sigurðsson, H.Á. 2004a. Meaningful silence, meaningless sounds. In *Linguistic Variation*

Yearbook 2004, Volume 4. P. Pica et al. (eds), 235-259. Amsterdam & Philadelphia: John Benjamins.

Sigurðsson, H.Á. 2004b. The syntax of Person, Tense, and speech features. *Italian Journal of Linguistics* 16: 219-251.

Sigurðsson, H.Á. 2011. Conditions on argument drop. *Linguistic Inquiry* 42: 267-304.

Sigurðsson, H.Á. & Maling, J. 2010. The Empty Left Edge Condition. In *Exploring Crash-Proof Grammars*, M. Putnam (ed.), 59-86. Amsterdam & Philadelphia: John Benjamins.

Sperber, D. & Wilson, D. 1995. *Relevance. Communication & Cognition*. 2nd edition. Oxford & Cambridge: Blackwell.

Sprouse, J. & Almeida, D. (forthcoming a). Power in acceptability judgment experiments and the reliability of data in syntax. Available from: http://ling.auf.net/LIngBuzz/001362. [Accessed May 2012].

Sprouse, J. & Almeida, D. (forthcoming b). The empirical status of data in syntax: a reply to Gibson and Fedorenko. *Language and Cognitive Processes.*

Sprouse, J., Schütze, C.T. & Almeida, D. (forthcoming). Assessing the reliability of journal data in syntax: Linguistic Inquiry 2001-2010. Ms. Available from: http://ling.auf.net/lingBuzz/001352. [Accessed May 2012]

Stainton, R. J. 2006. *Words and Thoughts. Subsentences, Ellipsis, and the Philosophy of Language*. Oxford: Clarendon Press.

Stanley, J. 2000. Context and logical form. *Linguistics and Philosophy* 23: 391-434.

Stenius, E. 1967: Mood and Language-Game. *Synthese* 17: 254-274.

Stowell, T. 1981. *Origins of Phrase Structure*, PhD dissertation, MIT.

Straumann, H. 1935. *Newspaper headlines. A study in linguistic method.* Woking: Unwin Brothers Ltd.

Strawson, P.F. 1964 Identifying reference and truth values. *Theoria* 30: 96-118. Reprinted in Semantics, D. Steinberg & L Jakobovits (eds). 1971. Cambridge: Cambridge University press.

Strawson, P.F. 1971. Identifying Reference and Truth-Values. In *Semantics: An Interdisciplinary Reader*, D. Steinberg & L. Jakobovitz (eds), 86-99. Cambridge: Cambridge University Press.

Strawson, P.F. 1974. *Subject and Predicate in Logic and Grammar*. London: Methuen.

Sullet-Nylander, F. 1998. *Le titre de presse. Analyses syntaxtique, pragmatique et rhétorique.* Doctoral dissertation. University of Stockholm.

Svenonius, P. 2004. On the Edge. In *Peripheries: Syntactic Edges and their Effects*, D. Adger, C. de Cat & G. Tsoulas (eds), 261-287. Kluwer, Dordrecht.

Svenonius, P. 2012. *Spanning*. Ms., CASTL, University of Tromsø. Available from: http://ling.auf.net/lingbuzz/001501 [Accessed July 2012]

Tallerman, M. 2006. Challenging the syllabic model of 'syntax as it is'. *Lingua* 116: 689-709.

Taraldsen, K.T. 1978. On the NIC, Vacuous Application and the *That*-trace Filter'. Unpublished manuscript, MIT. Distributed by Indiana University Linguistics Club, Bloomington, Indiana.

Taraldsen, K.T. 1986. *Som* and the Binding Theory. In *Topics in Scandinavian Syntax*, L. Hellan & K. Koch-Christensen (eds), 149-184. Dordrecht: Reidel.

Teleman, U. 1983. Har tal- och skriftspråk olika grammatiker. *Nordlund 3*, Institutionen för nordiska språk, Lund University: 3-23.

Tesak, J. & Dittmann, J. 1991. Telegraphic style in normal and aphasics. *Linguistics* 29: 1111-1137.

Thráinsson, H. 1996. On the (Non-)Universality of Functional Categories. In *Minimal Ideas. Syntactic Studies in the Minimalist Framework*, W. Abraham, S.D. Epstein, H. Thráinsson & C. J.-W. Zwart (eds), 253–281. Amsterdam: John Benjamins.

Trask, R.L. 1993. *A Dictionary of Grammatical Terms in Linguistics.* London & New York: Routledge.

Travis, L. 1984. Parameters and Effects of Word Order Variation, Doctoral dissertation, Massachusetts Institute of Technology.

Travis, L. 1991. Parameters of Phrase Structure and Verb-Second Phenomena. In *Principles and Parameters in Comparative Grammar*, R. Freidin (ed.), 339-364. Cambridge: MIT Press.

Tsao, T.T. 1977. *A functional study of topic in Chinese: the first step towards discourse analysis.* Doctoral dissertation, University of Southern California.

Uriagereka, J. 1999. Multiple Spell-out. In *Working Minimalism*, S.D. Epstein & N. Hornstein (eds), 251-282. Cambridge & London: The MIT Press.

Valian, V. 1991. Syntactic Subjects in the Early Speech of American and Italian Children. *Cognition* 40: 21-81.

Vikner, S. 1995. Verb movement and expletive subjects in the Germanic languages. Oxford: Oxford University Press.

Vinet, M.T. 1993. L'aspect et la copule vide dans la grammaire des titres. *Langue Francaise*: 83-100.

Weissenborn, J. 1992. Null Subjects in Early Grammars: Implications for Parameter Setting Theory. In *Theoretical Issues in Language Acquisition*, J. Weissenborn, H. Goodluck & T. Roeper (eds), 269-299. Hillsdale, NJ: Lawrence Erlbaum.

Westergaard, M. & Vangsnes, Ø.A. 2005.WH-questions, V2, and the Left Periphery of three Norwegian dialect types. *Journal of Comparative Germanic Linguistics* 8: 119-160.

Wiggen, G. 1986. Utelatelse av setningsledd. In *Artikler 1-4. Talemålsundersøkelsen i Oslo (Taus). Skrift 1-4*, E. Hanssen, T. Hoel, E.H. Jahr, O. Rekdal & G. Wiggen (eds), 69-125. Oslo: Novus forlag As.

Williams, E. 1980. Predication. *Linguistic Inquiry* 11: 203-238.

Wittgenstein, L. 1922. *Tractatus* Logico-Philosophicus. Translated by R. Ogden. New York: Harcourt, Brace.

Wittgenstein, L. 1953. *Philosophical investigations*. (Anscombe, G.E.M., trans.). Oxford: Basil Blackwell.

Zanuttini, R. & Portner, P. 2003. Exclamative Clauses: At the Syntax-Semantics Interface. *Language* 79(1): 39-51.

Zwart, C.J.-W. 1992. Dutch expletives and small clause predicate raising. In *NELS 22 Proceedings*, K. Broderick (ed.), 477-491. Amherst: GLSA.

Zwart, C.J.-W. 1997. *Morphosyntax of Verb Movement. A Minimalist Approach to the Syntax of Dutch.* Dordrecht: Kluwer Academic Publishers.

Empirical sources

BigBrother-korpuset (The BigBrother Corpus), Tekstlaboratoriet, ILN, Universitetet i Oslo. http://www.tekstlab.uio.no/nota/bigbrother/

Bross, H. & Ilves, K. 2009. *Nye bestevenner*. Oslo: Omnipax.

Fielding, H. 1996. *Bridget Jones's Diary*. London: Penguin Books.

Fielding, H. 1998. *Le journal de Bridget Jones*. Paris: Albin Michel.

Fielding, H. 2001. *Bridget Jones' dagbok.* Oslo: Aschehoug.

Nesbø, J. 2008. *Doktor Proktors tidsbadekar. Kanskje.* Oslo: Aschehoug.

Norsk talespråkskorpus – Oslodelen (NoTa-Oslo: Norwegian Speech Corpus – the Oslo part), Tekstlaboratoriet, ILN, Universitetet i Oslo. http://www.tekstlab.uio.no/nota/oslo/index.html

Lindstad, Arne Martinus; Nøklestad, Anders; Johannessen, Janne Bondi; Vangsnes, Øystein Alexander. 2009. The Nordic Dialect Database: Mapping Microsyntactic Variation in the Scandinavian Languages. In Jokinen, Kristiina and Eckhard Bick (eds.): NEALT Proceedings Series; Volum 4.

Appendix

In the running text, when corpus examples are cited, they are presented without any surrounding linguistic context. This is mostly due to limitations of space. However, in many cases it may be desirable to see the surrounding context of the example. This is the motivation for adding this appendix. For each example, the discourse ellipsis which is cited in the running text, is highlighted in bold letters. I have translated (in italics), but not glossed the surrounding linguistic context for each example. The relevant ellipsis examples are of course glossed in the running text. Moreover, note that the transcription of the examples is nearly equal to the transcription found in the corpus. Yet, in certain cases I have simplified some details of the transcriptions, but of course, not without being certain that no meaning would be lost. The reader who wishes to look up an example in the corpus himself, may of course do that:

For the Norwegian Speech Corpus (NoTa): http://www.tekstlab.uio.no/nota/oslo/
For the Nordic dialect corpus(NDC): http://www.tekstlab.uio.no/nota/scandiasyn/index.html

Chapter 1

Example 1 **NoTa**

A: Men husker du noe særlig fra det året?
B: Ja ja, det husker jeg ganske mye, jeg var jo tross alt åtte. **Husker litt fra jeg var åtte.**
A: Ja, det er jo ikke så lenge siden.

A: But can you really remember anything from that year?
B: Yes, yes, I remember quite a lot from it, I was eight after all. ***(I) remember a little bit from the time I was eight.***
A: Yes, it is not such a long time ago.

Example 2 **NoTa**

A: En gang jeg var på vei til basketballtrening så var det en som hadde kjørt over en sånn kjempeliten rev.
B: Oi.
A: **Var en som hadde kjørt forb- over en rev**, og så sto det masse folk der og sånn så sa de at'n var død.

A: One time when I was going to a basket ball training, someone had hit this really tiny fox by car.
B: Wow.
A: ***(There) was one who had passed… hit a fox****, and then a lot of people stood there and said that he was dead.*

Example 3 **NoTa**

A: Jeg gleder meg til å ha fri i helga jeg.
B: **Skal jeg òg**. Ja du skal ha fri på lørdagen du.
A: Mm.
B: Skal ikke jeg.
A: Det gleder jeg meg til altså.

A: I am looking forward to having some time off during the weekend.
B: ***I am going to do (that), too.*** *Yes, you are having the Saturday off.*
A: Mm.
B: I am not.
A: I am really looking forward to it, you know.

Example 4 **NoTa**

A: Hvordan er den i forhold til den boligen der du vokste opp?
B: Nei, den er helt helt forskjellig ja. Mm, veldig forskjellig. **Vokst opp i et stort stort hus** med tre etasjer og mange rom i hver etasje og store rom, god plass.

A: How is it compared to the house where you grew up?
B: No, well, it is completely different. Mm, very different. ***(I have) grown up in a big, big house*** *with three floors and many rooms on each floor, and large rooms, a lot of space.*

Example 14
A: Jeg har ikke sett på kino særlig i det siste faktisk.
B: Nei, jeg…
B: **Driver og prøver å komme på når jeg sist var på kino.** Det må være et år siden.

A: Actually, I haven't been to often the cinema lately.
B: No, I…
B: ***(I) am trying to figure out when was the last time I went to the cinema.***

Example 27
See example 1, chapter 1.

Example 28
See example 2, chapter 1.

Example 29
See example 3, chapter 1.

Example 30
See example 4, chapter 1.

Example 31 **NoTa**

A: Jeg tror jeg fikk ganske bra på den første prøven vi hadde i førsteklasse, men det måtte jeg få for jeg var liksom ikke helt stjerneeleven i gym tror jeg.
B: **Kan tenke meg det.**

A: I think I did quite well on the first test we had in first grade, but I really had to, because I was not really like the star student in gym, I think.
B: ***(I) can imagine that.***

Example 33 **NDC**

A: **Kjørt mye skuter i påska?**
B: Hvem, jeg?
A: Mm.
B: Ja, veldig mye.

A: ***(Have you) been driving scooter a lot during Easter?***
B: Who, me?
A: Mm.
B: Yes, a lot.

Example 35 **NoTa**

A: Under spørsmålsrunden så var det jo et eller annet om UEFA-cupen her for et par dager siden.
B: Hvilken spørsmålsrunde?
A: Den vi alltid har på jobben.
B: Og da fikk du jo sett hvor mye jeg følger med i Champions League og UEFA-cupen.
A: Ja, ja, riktig.
B: **Gikk ikke så veldig bra.**

A: During the question round there was something about the UEFA cup a couple of days ago.
B: What question round?
A: The one we always have at work.
B: And then you got to see how updated I am when it comes to Champions League and the UEFA cup.
A: Yes, right.
B: ***(It) didn't go very well.***

Example 36 **NoTA**

A: Når du kommer ned fra huset her, og så går man opp på en sånn topp. Der oppe tror jeg vi har begravet sånn sju, åtte døde dyr.
B: **Må vel ha katter**, som kommer hjem med det hele tiden.
A: Ja, sånn rotter og…

A: When you come down from the house, then you go up on this hilltop. Up there I believe we have buried seven or eight dead animals.
B: ***(You) need to have cats, probably****, who come home with this all the time.*
A: Yes, rats and…

Example 37 **NoTa**

A: Herregud, nei da, det var en lættis tur altså. Men vi må faen meg få tak i de hyttene igjen.
B: Ja jeg veit det.
A: **Dratt på hyttetur igjen**. Det var så ålreit det.

A: Oh my god, no, that trip was so much fun. But we really need to get hold of those cabins again.
B: Yes, I know.
A: ***(We should have) gone to the cabin again****. That was really so nice.*

Example 45 **NoTa**

A: Jeg har en kompis, en jeg kjenner da, en kompis av broren min, han tok med seg slange han, fra Bangladesh eller noe sånt noe. **Tok med seg sånn albinopytonslange**, altså sånn kvelerslange.

A: I have this friend, a guy I know, a friend of my brother, he brought a snake, from Bangladesh or something. ***(He) brought such an albino pyton snake****, a constrictor.*

Example 46 **NoTa**

A: Men vi skulle spille mot de gamle damene.
B: Ja, det, hvis vi avtaler med de så kan vi bare dra på trening en gang.
A: Det hadde vært gøy. Vi slår de sikkert, eller tenk om vi ikke gjør det da.
B: Men da må vi ha en dommer for de gjør… jeg har sett på dem en gang og de gjør så mye feil. Så hvis det hadde vært skikkelig, det hadde lønt seg for oss om vi hadde en dommer for de tar skritt og sånn hele tiden. Så da kunne vi tjent masse på det.
A: **Hadde vært gøy** å spille mot de damene.

A: *But we should play against the old ladies.*
B: *Yes, that, if we talk to them, we can just show up at their training session.*
A: *That would be fun. We will probably beat them, or what if we don't.*
B: *But then we need a referee because they do… I have watched then once and they make a lot of mistakes. So if it should be for real, it would be best for us if we had a referee, because they take too many steps and stuff all the time. So, then we could benefit a lot from that.*
A: ***(It) would have been fun*** *to play against those ladies.*

Example 47 **NoTa**

A: Har du sittet på med X?
B: Nei.
A: Du har ikke, shit altså.
B: **Klarer jeg ikke, altså**.
A: Jeg følte meg ikke trygg altså.

A: *Have you been driving with X?*
B: *No.*
A: *You haven't. Shit.*
B: ***(That), I just cannot handle.***
A: *I didn't feel safe, you know.*

Chapter 2

Example 1 **NoTa**

A: Jeg bor i et kollektiv nå med to andre mennesker, en helt vanlig fireromsleilighet i andre etasje.
B: Som dere deler bad og…
A: Vi har felles stue og bad og kjøkken, så jeg har relativt god plass egentlig, for oss tre. Og en hund har vi fått, det fikk vi i juni. **Fikk ny leieboer med hund.**

A: I live in a commune now with two other people, a quite ordinary four room apartment on the second floor.
B: Which you share a bathroom and…
A: We share the living room and bathroom and kitchen, so I have quite a lot of space, really, for the three of us. And we got a dog, we got it in June. ***(We) got a new tenant with a dog.***

Example 81 **NoTa**

A: Jeg tror maskinen krevde å bli omstarta fordi de hadde installert et eller annet.
B: Mm.
A: Altså den har jo vært slått av mens jeg har vært borte, så… de hadde installert et eller annet. **Sto et eller annet om "rebooting" og sånn på skjermen**, så jeg får vel omstarte når jeg kommer tilbake.

A: I think the machine demanded to be restarted because they had installed something.
B: Mm.
A: Well, it has been switched off when I was away, so… they had installed something. ***(It) said something about "rebooting" and stuff on the screen****, so I guess I will restart it when I get back.*

Example 82 **NoTa**

A: Kan du huske noe spesielt ifra barneskolen?
B: Noe jeg har gjort?
A: Ja, eller en spesiell historie, eller…
B: Nei, egentlig ikke. **Vært i masse slåsskamper på barneskolen.**

A: Do you remember anything in particular from primary school?
B: Something I did?
A: Yes, or a special story, or…
B: No, not really. ***(I have) been in lots of fights when I went to primary school.***

Example 83 **NDC**

A: Det med musikk, har du lyst til å fortsette med musikk videre når du blir … når du flytter, for eksempel?
B: **Vært litt artig å holde på med musikk sånn**, laga sin egen sang eller sånt.

A: So, about music, do you want to continue playing music when you become … when you move, for example?
B: ***(It would have) been quite fun to work with music****, make my own song or something.*

Example 84 **NDC**

A: Da skal jeg bare først spørre deg om noe. Hvor du er født og oppvokst hen?
B: Ja. **Født i Tromsø og oppvokst her.**

A: Well, then, I will first just as you something. Where are you born and raised?
B. Yes. ***(I am) born and raised in Tromsø and grown up here.***

Example 85 **NoTa**

A: Kan bli litt snevert så det er greit å kanskje stikke et par ganger på Grünerløkka i løpet av året, hvis man skal ut på byen.
B: Er det forskjell på klientellet?
A: **Svært stor forskjell på klientellet**, tror jeg altså.

A: Can be sort of limited, so it may be nice to pop by Grünerløkka during the year, if you are going out.
B: Are there differences in the clientele?
A: ***(There are) very large differences in the clientele****, I believe.*

Example 86 **NoTa**

A: Så kommer de og så bare "ja da gjør dere dette her ti ganger". Vi bare "ti"? Gjør det du da! Nei, nei, jeg er læreren jeg. Så løper dere fram og tilbake her og så klatrer litt her. Hallo, liksom.
B: Så koser han seg med kaffen sin.
A: Ja, ikke sant. **Setter dem seg der og drikker kaffe mens dem liksom setter på karakterene til oss.**

A: Then they just come and then "well, then you must do this ten times". And we: "ten?". Do it yourself! No, no, I'm the teacher. Then you run a little back and forth, and then climb a little bit here. I mean, hello!
B: Then he really enjoys his coffee,
A: Yes, right! ***(Then they) sit down and drink coffee while they like decide our grades.***

Chapter 4

Example 4 **NoTa**

A: Jeg fant tyggispapir i skolegården, og det var ikke lov å tygge tyggis så det meldte jeg fra til rektor. Så jeg skulle være hverdagshelten på skolen. **Hadde ikke så veldig mye venner egentlig**. Hadde sånn to rare høye jenter, jeg var bitteliten.

A: I found chewing gum paper in the school yard, and we weren't allowed to chew chewing gum, so I reported it to the principal. So, I wanted to be the everyday hero at school. ***(I) did not have all that many friends, really****. Had these two strange, tall girls, I was really tiny.*

Example 11

See example 45, chapter 1

Example 12 **NDC**

A: Du skal gå?
B: Jeg skal gå på XX kanskje. Media og kommunikasjon, tror jeg. Det blir bra. Nei, jeg vet ikke. Vi får se.
A: **Trenger ikke å bestemme seg enda.**
B: Nei, det er jo ennå ei stund.

A: You are going?
B: I may be going to XX. Media and communication, I think. That will be fine. No, I don't know.
A: ***(One) doesn't need to decide yet.***
B: No, we still have a while.

Example 13 **NoTa**

A: Hva fikk hun i bed.øk.?
B: Husker ikke, men hun strøk i pristeori tror jeg.
A: Hæ, kan hun stryke og fortsatt reise?
B: **Det var tjuefem som søkte og det var tjuefem plasser, så sier seg selv.**

A: Which grade did she get in business administration?
B: Don't remember, but she failed in price theory, I think.
A: What, she can fail and still go?
B: ***There were twenty-five applicants and twenty-five positions, so (it) is quite obvious.***

Example 58 **NoTa**

A: Det var like før jeg gikk i strupen på personen altså.
B: Jeg tror ikke det er så lurt.
A: Nei, er kanskje ikke det. Men de er ganske sære altså.
B: **Funker litt dårlig**.

A: I was so close to attacking this person physically.
B: I don't think that is such a good idea.
B: No, maybe not. But they are really quite odd, you know.
A: ***(It) works quite badly.***

Example 63 **NoTa**

A: Jeg skjønner ikke de som er redde for å dra til Moskva.
B: Nei det kan jeg være enig i.
A: **Bekymrer meg ikke jeg liksom**. Det flyet der kan styrte som alle andre fly på en måte.

A: I don't understand those who are scared of going to Moscow.
B: No, I can agree with you on that.
A: ***(I) don't worry, I don't.*** *That plane can sort of fall down just like any other plane.*

Example 67
See example 1, chapter 1.

Example 68-73
See examples 81-86, chapter 2.

Example 78 **NoTa**

A: Lærte meg fransk, jeg kunne ikke noe fransk når jeg dro ned.
B: Det er ikke så dumt.
A: Bodd et år i Mexico. **Bodd et år i London.**

A: Learned French. I didn't know any French when I went down there.
B: It's not a bad idea.
A: Lived one year in Mexico. ***(I have) lived one year in London.***

Example 79 **NoTa**

A: Det er vel mynta mye på turisme der òg regner jeg med.
B: Ja, vi tenkte vi skulle prøve det derre det er et reisebyrå som heter Nazar. Annonserer en del.
A: **Har jeg sett i katalogen ja.**

A: The target is probably tourism there as well, I reckon.
B: Yes, we thought we would try that, there is a travel agency called Nazar. Have been advertising quite a lot.
A: Yes, I have seen (it) in the brochure.

Example 86 NDC
See example 33, chapter 1.

Example 87 NoTa

A: Vi skal begynne å snakke om hvor du er født og oppvokst hen da.
B: Ja, jeg er født og oppvokst i Oslo. På Stovner. **Bodd der hele livet egentlig**.

A: We will start by talking about where you are born and raised.
*B: Yes, I am born and raised in Oslo. At Stovner. **(I have) lived there for all my life, really.***

Example 88 NoTa

A: Ja, det er liksom første jeg gjør også det er å sette på kaffen og smøre brødskiva mi og så går jeg inn og setter meg og så **noen ganger har jeg noe å lese på, andre ganger setter meg og strikker litt**, kanskje jeg ser på tv. Kommer litt an på, men det (er) sjelden jeg setter på tv på morgenen.

*A: Yes, that is sort of the first thing I do too, make coffee and butter my toast and then I go and sit down and then **sometimes I have something to read, other times (I) sit down and knit a little bit**, maybe I watch tv. Depends, but I rarely watch tv in the morning.*

Example 96 NoTa

A: Ender er skikkelig fine.
B: Ja, de er veldig fine. Vi har ofte hatt ender inne hos oss. Siden når de kommer opp fra stranda så går de helt inn. **Husker jeg var så gøy når jeg var liten.**

A: Ducks are really nice.
*B: Yes, they are really nice. We have often had ducks at our house. Since when they come from the beach, they go all the way into the house. **I remember (that) was so much fun when I was little.***

Example 97 **NoTa**

A: Det hadde vært sånn byggeplass der, som sagt under en sånn sklie så lagde vi, tok vi med vann og så lagde vi isoporsuppe. Og så spiste vi det. Men det var veldig hyggelig, hadde mange fine minner fra det.
B: Ja, det hørtes ikke spesielt sunt og næringsrikt ut med isopor da.
A: **Fikk jo litt næringsrik mat hjemme da**, så spiste vi isopor på førskolen.

A: It had been a construction site there, like I said under this slide we made, we brought water and made a soup out of polystyrene. And then we ate it. But it was very nice, I had many nice memories from that.
B: Yes, well polystyrene, that does not sound very healthy and nutritious.
A: ***(I) got some nutritious food at home, you know*** *and then we ate polystyrene at preschool.*

Example 98 **NoTa**

A: Altså jeg tror kanskje Hasle skole vil være en grei skole å gå på, for det at det vil være veldig, ganske altså, veldig blanda på en måte altså.
B: **Skulle tro det.**

A: *Well, I think that Hasle may be an ok school to go to, because it would be very, or sort of, very mixed.*
B: ***(One) should think so.***

Example 99 **NoTa**

A: Jeg tror kanskje at jeg har vært liksom litt for intellektuell, jeg. Slik at jeg har skremt dem istedenfor. Jeg tror det.
B: Ja, istedenfor å …
A: Jeg tror det ja.
B: Ja, jeg tror det ja.
A: Men de som er med i den gruppen, de har grepet det.
B: **Tror jeg også ja.**

A: I think that maybe I have been too much of an intellectual. So I may have scared them off instead. I think so.
B: Yes, instead of…
A: I think so, yes.
B: Yes, I think so.
A: But the ones who are in the group, they have understood it.
B: ***I think so, too.***

Example 101 NoTa

A: Det er verre for dem som skal begynne å kjøpe òg da, som skal inn på boligmarkedet nå stakkars.
B: Ja, det er første gangen du går inn det er da det er verst, siden så får du liksom dra fordelen med deg av det du har. Det er tøft å starte på bånn.
A: **Må nesten bare kaste deg i det**, hvis du har muligheten.

A: It is worse for those who are planning to buy, and who are entering the housing market. Poor guys.
B: Yes, the first time you go in, that's when it is worst, later you kind of get the benefit of what you already have. It is just hard to start at the bottom.
*A: **(You) just have to throw yourself in**, if you have the opportunity.*

Example 102 NDC

A: **Jeg liker at maten smaker litt spesielt. Er ikke så veldig glad i sånn vanlig norsk mat egentlig.** Synes jeg er litt kjedelig.

*A: **I like that the food tastes a bit different. (I) am not really that font of regular Norwegian food**. I think (it) is a bit boring.*

Example 103a
See example 79, chapter 4.

Example 103b NoTa

A: Jeg har vært mye i Frankrike. Jeg har studert i Frankrike, jeg.
B: Ja, det har du ja.
A: Stemmer det. **Feriert i Frankrike**, snakker fransk.

A: I have been a lot in France. I did my studies in France.
B: Yes, you did.
*A: Right. **(I have) spent my holidays in France**, (I) speak French.*

Example 103c NDC

A: Det blir vel sånn ja, du sykler. Gjør du det mye?
B: Ja, stort sett til og fra fotballbanen eller på turer. Holde meg i form. **Trener opp kondis til fotballsesongen.**

A: That's how it is like, yes, you are riding a bike. Do you do that a lot?
*B: Yes, mostly to the football field or when going on trips. Keep in shape. **(I) am exercising to improve my condition before the football season.***

Example 108 NoTa

A: **Skal du til helgen da?**
B: Hva jeg skal til helgen? Jeg tror jeg skal ut en av dagene, men ikke begge.

A: ***(What) are you doing this weekend?***
B: *What I am doing this weekend? I think I am going out one of the days, but not both.*

Example 109 NoTa

A: Så har de åpnet restaurant midt i frosken da. Da jeg var der så, det var på søndag og da regnet og regnet og regnet det.
B: **Mye folk?**
A: Ja, det var mye folk men helt tomt på restauranten.

A: *They have opened a restaurant in the middle of the frog. When I was there, it was Sunday and then it rained and rained and rained.*
B: ***(Were there) a lot of people?***
A: *Yes, there were lots of people, but totally empty in the restaurant.*

Example 110 NoTa

A: Åssen var det å være barn der som du bodde?
B: Nei, det er veldig bra. Det er et ganske lite sted. Mer eller mindre alle kjenner alle, og da, så det blir et relativt godt miljø. Men når man blir en sånn femten, seksten, sytten år så blir kanskje stedet litt lite.
A: Litt kjedelig?
B: Litt kjedelig ja. **Litt dårlig tilbud til den aldersgruppen.**

A: *How was it to be a child where you lived?*
B: *No, it is very nice. It is a quite small place. More or less everybody knows everybody, and so, the social environment is quite good. But when you turn like fifteen, sixteen, seventeen years, the place may become a bit small.*
A: *A bit boring?*
B: *A bit boring yes.* ***(There is) quite poor service for that age group.***

Example 111 NoTa

A: Jeg tror sytti prosent av klassen min på barneskolen bodde i en omkrets på fem minutter maks. Så da var det alltid ut i gatene og leke «boksen går» og «politi og tyv» og sånne ting.
B: Det var lett å samle alle.
A: **Veldig lett å samle alle**. Det var bare å løpe ute og banke på naboene.

A: I believe that seventy per cent of my class lived within a circuit of five minutes, at most. So we always went out in the streets to play "hit the box" and "police and thief" and things like that.
B: It was easy to gather everyone.
*A: **(It is) very easy to gather everyone**. We only had to run around and knock at the neighbors' doors.*

Example 112
See example 85, chapter 2.

Example 113 NoTa
A: Vil du vurdere det hvis du nå skulle få deg familie?
B: Har ikke tenkt så langt, jeg vet ikke nei. **Vanskelig å si.**

A: Will you consider it if you were going to have a family?
*B: Haven't thought so far, I don't know. **(It is) difficult to say.***

Example 118 NoTa

A: **Fint å bo i gården her?**
B: Ja, flott.
A: Pen, pen leilighet og jeg fikk det da kona døde i 2002.

*A: **(Is it) nice to live here in the building?***
B: Yes, very nice.
A: Pretty, pretty apartment, and I got it after my wife died in 2002.

Example 119 NoTa

A: Ja, vet du det er sånn å dra på. Det er bare… kommer lyder. **Kommer lyder hele tiden.**
B: Jeg tror det er jeg tror ikke… Jeg tror det er noe annet.

*A: Yes, you know, you have to pull it. It just, there comes sounds. **(There) are noioses constantly.***
B: I think it is, I don't think… I think it is something else.

Example 126 NoTa
A: Hvis man kan kalle det religion da.
B: Ja, det var jo sånn nypaganisme eller hva det heter da. Men det var jo, jeg syns det hørtes ålreit ut jeg.
A: Ja, det er kjempeålreit å grave opp lik.
B: Ja, men det var jo ikke, det er jo sånn misforstått greie. Men det var sånn derre…
A: Men det er ikke sant, det er nye Norge, det er sånn…
B: **Skal liksom være glad i familien din** og ikke bry deg om de andre og sånn…

A: Well, if you can call that a religion.
B: Yes, it was some kind of neo-paganism or something. But it was, I think it seemed all right.
A: Yes, it is very all right to dig up bodies.
B: Yes, but it wasn't, it is such a misunderstood thing. But it was like…
A: But it isn't true, it is the new Norway, it is like…
*B: **(You) are kind of supposed to love your family** and not to care about others and…*

Example 127 NoTa

A: Han er jo, så for det første er han jo veldig kjekk mann, og nå med slips og skjorte, for før gikk han alltid i genser. Har sikkert fått påpakk.
B: Kan jeg ikke… **Kan jeg ikke erindre** og det enda jeg, jeg som er så pinlig pirkete nøye.

A: He is, well firstly he is a very handsome man, and now with a shirt and a tie, because before he always wore a sweater. He has probably been reprimanded.
*B: I cannot…**(That), I cannot recall**, even if I am so strictly proper.*

Example 128 NoTa
A: Har du lyst til å reise noe andre steder?
B: Jeg har lyst til å reise overalt jeg. **Lyst til å reise til Italia** og så har jeg lyst til å reise til Australia.

A: Do you want to go somewhere else?
*B: I want to travel everywhere. **(I) want to go to Italy,** and then I want to go to Australia.*

Example 129 NDC
A: Er det noen forskjell på Voss nå og før, annet enn at det er mindre snø?
B: Ja, nei det er nå, det er blitt mer urbant kan du si. Det er nå blitt mer byprega. **Blitt større sentrum** og stadig bygget ut her, så det var nok mer en landsby før enn hva det er nå.

A: Are there any differences between Voss now and before, other than the fact that there is less snow?
*B: Yes, no, it has sort of become more urban, so to speak. It has become more city-like. **The centre has grown** and there is constant building here, so it was probably more of a village before, compared to now.*

Example 151 NoTa

A: Vi var jo inne i en av disse herre pyramidene. Folk som jeg reiste sammen med klarte å snike med seg kamera ned og hele pakka så…
B: Får du ikke lov til å ta bilder?
A: Nei, det er ikke lov, på grunn av den blitsen.
B: **Fløy vi rundt og tok bilder da så kom det en vakt.**

A: We were inside one of these pyramides. The people I was travelling with, managed to sneak in a camera and everything.
B: You weren't allowed to take photographs?
A: No, it is not allowed, because of the flash.
*B: **(We) flew around and took photos**, **then a guard came.***

Example 152 NoTa

A: Jeg skulle ønske jeg så bare halve filmen når han bare hadde det konge. Så går alt til helvete.
B: Ja, så ikke siste halvdelen, da alt går til helvete med kona og…
A: Men sånn er det med masse sånne filmer og med alle bøker syns jeg. **Syns jeg man bare skulle lese halve boken**, og så er alt konge.

A: I wish I only saw the half of the movie when he was doing really well. Then all goes to hell.
B: Yes, didn't see the last half, when everything goes to hell with the wife and…
*A: But that is how it is with many of those movies and with all books, I think. **(I) think one should only read half the book**, then everything is super.*

Example 153 NoTa

A: For far skulle på det møtet og jeg bare, før han gikk så var det sånn "ja er det noe jeg må vite som jeg kan få vite?" Men de bare "nei, nei, ingenting". Og han bare "ja, er du helt sikker?" "Ja, ja, ja," Men han bare "jeg orker ikke å få noen konfrontasjoner", og jeg bare "nei, ikke noe farlig". **Sitter jeg hjemme og venter på at han skal komme hjem så bare «ja, nei, hva gjorde du på den lørdagen? "**

*A: Dad was going to that meeting and I just, before he left it was like "well, is there anything I should know that you will tell me?" But they just "no, nothing". And he just "are you sure?" "Yes, yes, yes! But he just "I don't want to get into an argument" and I just "no, no worries". **(So I) sit at home and wait for him to come home, and then "yes, no… what did you do that Saturday?"***

Example 168 NoTa

A: Feriert i Frankrike, snakker fransk. Ja, eller studert i Frankrike, det var det året jeg tok seks og tjue studiepoeng.
B: Ingenting? Å ja, nei, du tok noe ja.
A: Lærte meg fransk da, jeg kunne ikke noe fransk når jeg dro ned.
B: Det er ikke så dumt.
A: **Bodd et år i Mexico.**

A: Been on holiday in France, speak French. Yes, I have studied in France, it was the year when I took 26 educational points.
B: Nothing? Oh no, yes, you passed some.
A: Learned French, remember, I didn't know any French before I went there.
B: That is not a bad thing.
A: ***(I have) lived one year in Mexico.***

Example 169 NoTa

A: Jeg ser jo fordelen med da å bo kanskje litt utenfor sentrum, men sånn vil det være uansett hvor du er da.
B: Vil du vurdere det hvis du nå skulle få deg familie?
A: Har ikke tenkt så langt. Jeg vet ikke nei. **Vanskelig å si**.

A: I can see the advantage of living a bit outside the city centre, but then it will be like that anywhere you are.
B: Would you consider it if you were having a family?
A: Have not thought about that yet. I don't know. ***(It is) difficult to say****.*

Example 170
See example 84, chapter 2.

Example 171
See example 79, chapter 4.

Example 202 NoTa

A: **Vært på ferie da?**
B: Nei, jeg skal på ferie neste år, holder på å spare nå.
A: Ja du gjør det ja? Jeg òg.

A: ***(Have you) been on holiday, then****?*
B: No, I am going on holidays next year, so I am saving up money now.
A: Are you? Me too.

Example 209 NoTa

A: Vi skal begynne å snakke om hvor du er født og oppvokst hen.
B: Ja, jeg er født og oppvokst i Oslo, på Stovner. **Bodd der hele livet mitt egentlig**.
A: We will start by talking about where you are born and raised.
B: Yes, I am born and raised in Oslo, at Stovner. ***(I have) lived there my whole life, really****.*

Example 211 NoTa

A: Hvor har du gått på skole hen?
B: **Gått på Sofienberg skole**, het det den gangen. Den er jo ikke lenger.

A: Where did you go to school?
B: ***(I have) gone to Sofienberg school,*** *it was called at the time. It doesn't exist anymore.*