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Expletives in Existentials
English *there* and German *da*

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Expletives in Existentials
English there and German da

Expletieven in Existentiële Zinnen
Het Engelse there en het Duitse da
(met een samenvatting in het Nederlands)

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Jutta Maria Hartmann

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Promotor: Prof. dr. H.C. van Riemsdijk
Copromotor: Dr. H.J.W.M Broekhuis

Committee: Prof. dr. R. D'Alessandro
Prof. dr. H.J. Bennis
Dr. S. Mohr
Dr. R.A. Muskens
Prof. dr. C. Thiersch
Prof. dr. S. Winkler

Meinen Eltern

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Introduction

The origin of the word *expletive* goes back to the Latin verb *explere*, which means ‘to fill, fill out’. This original meaning of the verb is relevant for the core definition of the linguistic term *Expletive*. The Merriam Webster Dictionary describes it as follows:¹

a syllable, word, or phrase inserted to fill a vacancy (as in a sentence or a metrical line) without adding to the sense; especially: a word (as *it* in ‘make it clear which you prefer’) that occupies the position of the subject or object of a verb in normal English word order and anticipates a subsequent word or phrase that supplies the needed meaningful content.

(Merriam Webster Online Dictionary, ©2005)

Thus, expletives are words that seem not to contribute to the meaning of the clause. But if they do not contribute to the meaning, what is their role in language? The standard answer to this question is that they are present in sentences for structural reasons, to fill positions in the sentence that cannot remain empty. From this perspective, expletive elements are an exciting topic of research, as their sheer presence can tell us something about sentence structure. For this reason, expletives figure prominently in the development and fleshing out of theoretical syntactic research, especially in the most recent development of generative grammar, the Minimalist Program (Chomsky 1995b, 2000, 2001 and related work). The research in this domain has mostly concentrated on the role of expletives in so-called presentational sentences, i.e. structures in which a main verb with its argument (or rather an independent predication structure) and expletives co-occur, as seen in (1).

- (1) a. There was a man shot.
b. There arrived a man.

¹There is a second meaning of the word: ‘an exclamatory word or phrase; especially: one that is obscene or profane’ (Merriam Webster Online Dictionary) or ‘(formal) a word, especially a rude word, that you use when you are angry, or in pain. Synonym: swear word.’ (*Oxford Advanced Learner’s Dictionary*, Hornby 1989). I am not concerned with this type of expression here.

In this line of research, it is common to put aside the study of existential sentences - i.e. sentences that express the existence of an entity, cf. (2) - and the role of expletives in these structures, more or less openly assuming that the existential structures might require a different analysis.²

- (2) There are people who don't like their jobs.

At the same time, existential sentences are subject to linguistic research as well. They can be very broadly defined as sentences that express the existence of an entity (in a given world). There are various ways to express existence, both cross-linguistically as well as within a single language. Take, for example, English. Existence can be either expressed by means of the lexical verb *exist*, or by means of the so-called *there*-construction.

- (3) a. Black swans exist in Australia.
b. There are black swans in Australia.

In this thesis, I put aside those existential sentences in which a lexical verb expresses the existential meaning and concentrate on structures that derive the existential meaning from a specific structural configuration, as illustrated in the *there*-sentence above. In languages like English, this type of existential sentences contains an expletive, *there*, the same holds for a similar construction in German. However, in some languages such an element is not present, cf. the Slavic languages. This fact is rarely studied in more detail.

The aim of this thesis is to bring together the study of expletive elements and the study of existential sentences in which they occur. In order to do this, I will look in detail at a small number of languages, concentrating mostly on English *there* and German *da*. The following five major issues will be investigated.

- (4) *Main research questions*
- (i) What is the structure of the existential *there*-sentences in English?
 - (ii) What role does *there* play in these sentences?
 - (iii) Does *there* play the same role in other, so-called presentational structures?
 - (iv) To what extent is German *da* similar to English *there*?
 - (v) What do the findings imply for the study of expletives and existentials in general?

²A clear exception is Moro (1997) who studied the nature of expletive and existential structures as well. As we will see below, however, his analysis is not entirely adequate.

The notion of expletive

Since the core feature of *expletives* is their perceived meaninglessness, let us start by defining them through this single feature.

- (5) *Working Definition of Expletive*
Expletives are elements that do not compositionally contribute to the meaning of the clause. They are semantically empty.

For English, there are at least two lexical items that fall under this definition: *it* and *there*. *There* occurs either as an expletive element (henceforth *there_{expl}*), cf. (6), or as a deictic/anaphoric locative pronoun (henceforth *there_{d/a}*)³ as adverbial, argument or predicate, cf. (7).

- (6) Marta Silva Campos, [...] calculates that *there* are almost two million children living in such poverty that the streets offer an alternative. (BNC, text="A46" n="55")
- (7) a. I always buy my shoes there.
b. Pink Floyd lived there for several years.
c. John was there.

The main difference between the two items seems to be that *there_{d/a}* refers to a location in the context of the speaker, or in the discourse. *There_{expl}* does not refer to a specific given location, which can be seen from the fact that it can co-occur both with *there_{d/a}* and *here*, a locative pronoun that has the opposite meaning of *there_{d/a}*, as seen in (8). With *there_{d/a}*, on the other hand, these options are rather restricted, cf. (9) (for further differences between the two types see Breivik 1983, 155ff).⁴

- (8) a. *There_{expl}* is nothing *there_{d/a}*.
b. *There_{expl}* is a book for you here.
- (9) a. #*There_{d/a}*, I bought a book *there_{d/a}*.
b. #*There_{d/a}*, I found a book for you here.

Furthermore, *there_{expl}* can be substituted with the noun phrase in the clause (at least in some cases), without the sentence losing any substantial meaning.⁵

³I take *deictic* to mean referring to a location relative to the position of the speaker, usually accompanied with a pointing gesture. On this narrow definition of deixis, deictic *there* has to be distinguished from anaphoric *there*, which refers back to a location mentioned in the discourse. The examples in (7) can be understood as either deictic or anaphoric depending on the context.

⁴It is possible to construe examples in which *there_{d/a}* and *here* co-occur. One type is when the first occurrence specifies a bigger location, and the second a smaller location, e.g. *Here (in this room), I sat there (on this chair)*. The second option is when one of the two occurrences is part of a complex DP, e.g. *There (in Rome), I found [this book here]*. Under these conditions, *there_{d/a}* can also occur twice.

⁵This statement is not entirely correct, see chapter 1, section 1.2.8 for discussion.

- (10) a. There is a man in the garden.
 b. A man is in the garden.

Thus, we see that the crucial property for calling *there_{expl}* an expletive (vs. a proform) is that it does not refer to a location in the context and, in some cases, it can be left out if another constituent takes its place.

As *there_{expl}* is the type of expletive that occurs in existential sentences, the study will be concerned mostly with this element. However, the definition of expletive given above includes a wider range of elements than will be studied here. So let me briefly mention a few more items to show the breadth of the notion.

As already mentioned above, *it* in English is a well-known candidate. Apart from its uses as a pronoun, cf. (11), *it* has several uses in which it is considered to be an expletive: as a place-holder for subject and object clauses, cf. (12), as subject in *it*-cleft sentences, cf. (13), or as subject with *weather-*, *time-*, *place-*expressions, cf. (14).

- (11) I read [a book on language acquisition]_{*i*}. It_{*i*} was very interesting.
 (12) a. It_{*i*} was unfortunate [that you came home late]_{*i*}.
 b. He made it_{*i*} clear [that he prefers to come home late]_{*i*}.
 (13) It was your father who was driving.
 (Huddleston and Pullum 2002, 1482)
 (14) a. It is raining heavily.
 b. It is five o'clock now.
 c. It is very noisy here.
 d. It is more than five miles to the nearest post office.
 (Huddleston and Pullum 2002, 1482)

The major difference between pronominal *it* and expletive *it* is that in the first case, the pronoun clearly refers to an entity in the discourse (including at least individuals, events and possibly situations), whereas this is not the case in (12) to (14). With this lack of referentiality, *it* is meaningless. This lack of meaning is especially obvious when *it* acts as a placeholder for clauses, as in (12-a): *It* can be substituted by the clause (cf. *That you came home late was unfortunate*) without a change in meaning.

Taking this together, the reason to call *it* in (12) - (14) an expletive is that it does not refer to an entity in the discourse, in contrast to regular pronouns. Thus, *it* can be labelled *expletive* according to the working definition given above.

Apart from these expletives in English (and their correlates in other languages), it has been claimed that there are *wh*-expletives in e.g. German (cf. Van Riemsdijk 1983, Fanselow and Mahajan 1996, Reis 2000), Hungarian (cf. Horvath 1997) and Romani (cf. McDaniel 1989), to name just a few random languages (for an overview and references see Fanselow 2006). In these cases,

two *wh*-pronouns are present in the structure, but only one questions for a specific entity as seen in (15).

- (15) Was meinst du [wen Peter Hans t vorgestellt hat]?
 WH think you_{NOM} [who_{ACC} Peter Hans t introduced has
 ‘Who do you think that Peter has introduced to Hans?’
 (Sabel 2000, 418)

The element *was* ‘what’ in the initial position seems superfluous as it can just as well be substituted by moving the embedded *wh*-pronoun to that position. The sentence in (16) seems to mean the same as (15).

- (16) Wen meinst du [dass Peter Hans t vorgestellt hat]?
 who_{ACC} think you_{NOM} [that Peter Hans t introduced has
 ‘Who do you think that Peter has introduced to Hans?’
 (Sabel 2000, 418)

Under the working hypothesis given above, these *wh*-elements should also be considered expletive elements.⁶

Finally, let me briefly mention a less clear-cut case which seems to fall under our definition of *expletive*. We have seen that *it* as a place-holder for clauses (cf. (12)) is an expletive. This implies that other place holders for clause-mate constituents in the same clause are also expletives, including weak pronouns and doubling clitics (cf. Alexiadou 2006 for an overview and references). To the best of my knowledge, these elements have not been classified as expletive elements. A priori, I do not see a reason to exclude these structures from the working definition above.

In sum, the definition of expletive as given in (5) includes many more items than will be studied here in this thesis. My main interest is to understand the role of expletive elements in existential sentences of the English type, the *there*-sentences.

⁶Henk van Riemsdijk (p.c.) notes that this property of non-referentiality of noun phrases or pronouns also occurs in idiomatic constructions. For example the phrase *the bucket* in the idiom *kick the bucket* does not refer to any object. Similarly, the pronoun *hem* in the Dutch idiom *Hij is hem gesmeert* ‘He got away’ does not refer to a specific entity. I think that we should not consider these elements expletives. The general property of this type of idiom is that its meaning is not built up compositionally. Thus, the problem is not the non-referentiality of certain elements, but the non-compositional meaning of the full structure.

Outline of the thesis

This thesis is structured along the lines of the research questions given in (4) with an introductory chapter that reviews the literature on expletive *there*, showing how *there* figured prominently in the discussion of theoretical issues in the last decades. We will see in chapter 1 that the analyses can be grouped into two main types, *there*-insertion approaches and *there*-in-core-predication approaches. *There*-insertion approaches assume that *there* is inserted in the subject position and that the structure below the subject provides an independent predication structure. This group of approaches has the major advantage that it predicts the restricted use of *there_{expl}* in non-thematic positions, while it cannot handle straightforwardly existential sentences of the type *there be NP*. The *there*-in-core-predication approaches assume that *there* is part of the predication structure of the sentence, either as predicate or subject of predication. These approaches straightforwardly account for the existential sentences of the type *there be NP*, but they have other, more specific problems. Presenting all of these approaches and discussing their advantages and disadvantages will set the stage for my own answer to the first two research questions, namely what is the structure of existential sentences of the type *there be NP*, and what is the role of *there* in these structures. I will present my answer to these questions in chapter 2.

My approach is clearly couched in the *there*-in-core predication approaches. I start by looking at the core facts about English *there* and I will show that we have to distinguish two types of *there*-structures: the *there*-BE structure with *be* as the main verb and the *there*-V structures in which *there* occurs with an unaccusative verb. For the *there*-BE structures, I will show that *there* does play a role both in the structure and in the interpretation of this type of existential sentence. I will suggest that *there* is part of an information-structural predication relationship. The existential reading of the structure arises from the interaction of this predication with a complex DP structure. Thus, *there* is not entirely meaningless in these structures. From this finding, the question arises whether *there* is part of the core predication also in the other structures in which it occurs.

This question will be dealt with in chapter 3. I will argue that the *there*-V structure is a type of locative inversion structure. They behave similarly in a number of environments. I will present an analysis of locative inversion based on Hoekstra and Mulder (1990) and Broekhuis (2005, 2008) and show how this structure can be adopted for the *there*-V structures as well. Then, I turn to structure of the type *there be NP XP* where XP is an adjective, or a present or past participle. I will argue that the analysis presented for existential sentences in chapter 2 also holds for these cases, with XP being an adjunct to the predication structure (or some higher structure). Participles can also occur as reduced relative clauses adjoined to the noun phrase. In the final section of chapter 3 I will discuss the so-called list reading and argue that sentences with this reading have the same predication structure as the existential clauses but a different DP structure.

Chapter 4 looks at the German element *da* ‘there’, and we will see that besides its dominant use as proform for adverbial phrases, it has a similar use as English *there* in existential structures of the type *da copula NP*, further supporting the compositional nature and analysis of the structural existential presented.

Chapter 5 discusses extensions and implications of the analysis presented in the previous chapters. I will show how the analysis for existential sentences can be extended to Serbian, a language that lacks an expletive element like *there* or German *da*. Furthermore, I will discuss the implications of the findings for the so-called Extended Projection Principle and the classification of expletive elements in Germanic. The last chapter summarizes and concludes the thesis.

Expletives in Theoretical Research: An Overview

1.1. Introduction

Sentences with expletive *there* in subject position (henceforth, *there*-sentences or the *there*-construction) have received considerable attention in Generative Grammar research as (some of) their properties, those given in (1), are notable from a theoretical perspective. I discuss them turn.

- (1) Theoretically interesting properties of *there*-sentences
- (i) Post-verbal subject;
 - (ii) Subject-verb agreement with the post-verbal noun phrase;¹
 - (iii) Case of the post-verbal noun phrase and how it is assigned;
 - (iv) Semantic restriction 1: definiteness restriction;
 - (v) Semantic restriction 2: predicate restriction.

(i) Post-verbal subject. In the *there*-construction, the (apparent) subject of the structure, is not in the typical subject position preceding the verb, but instead follows it. The subject position, Spec,IP² is occupied by a supposedly meaningless element, the expletive *there*.

- (2) a. A man is in the garden.
b. There is a man in the garden.

¹I use the term ‘noun phrase’ as a descriptive cover term for (post-verbal) nominal constituents in *there*-sentences when the internal structure of the element is not relevant.

²I use Spec,IP as a cover term for all possible projections in the tense domain wherever a split in separate heads of T, Agr etc. is not relevant. Note that only one overt noun phrase can occupy the position preceding the tensed verb in English, independent of the number of possible heads available in this domain. Spec,IP refers to this unique position.

We will see below that it is not clear that the noun phrase in (2-b) is the subject of the structure. Therefore, I will use the rather descriptive terms *post-verbal* or *post-copular* noun phrase from now on.

(ii) Agreement with the post-verbal noun phrase. The verb in *there*-sentences shows subject-verb agreement with the post-verbal noun phrase, cf. (3). This pattern is only found in a small number of specific constructions; examples are negative inversion structures, *only* inversion, locative inversion structures, inversions around *be*, *so*-inversion, to name the most well-known ones (for an overview see Huddleston and Pullum 2002, 95).³

- (3) a. There is/*are nothing wrong in living alone.
(BNC, text="BNL" n="12")
b. There are/*is many different types of lymphoma.
(BNC, text="CA9" n="28")

This fact is surprising from a theoretical perspective, as subject-verb agreement (and agreement in general) has been linked to the presence of a Spec,Head configuration, in which the subject occupies Spec,IP and the functional head I or INFL hosts the agreement features (for a recent discussion see Koopman 2006 and references therein). This configuration is not overtly present in the *there*-construction.

(iii) Case assignment. Case assignment to the post-verbal noun phrase raises the same question as agreement above. Firstly, the noun phrase in *there*-sentences has to be assigned case, due to the case filter, which requires all overt noun phrases to be assigned (abstract) case (see Chomsky 1981, 49, Vergnaud 1977/ 2006).

- (4) Case filter (Chomsky 1981, 49)
*NP if NP has phonetic content and no case.

The noun phrase in the *there*-construction cannot be assigned accusative as the verbs that it occurs with generally do not assign this case. Nominative case assignment is not straightforward either, as it has been assumed that it requires a Spec,Head configuration, just as agreement does.

The matter is even more complicated, as the *there*-construction also raises the question whether *there* is assigned case. These questions received different answers in the various approaches to English *there*, and they are a prominent issue especially in the *there*-insertion approaches, as we will see below.

(iv) The definiteness restriction. The *there*-construction exhibits a well-known (apparently) semantic restriction: the so-called *definiteness effect* or

³Note that especially in spoken language, plural agreement is not obligatory, see chapter 2, section 2.9.2 for discussion.

definiteness restriction. It is a cover term for the fact that *there*-sentences do not normally allow strong quantifiers and definite noun phrases, illustrated in (5) and (6) (for discussion see chapter 2, section 2.10, and the exceptional list reading see chapter 3, 3.7).

- (5) a. *There was everyone in the room.
 b. *There were all viewpoints considered.
 c. *There was each package inspected.
 (Milsark 1977)
- (6) a. *There is the wolf at the door.
 b. *There were John and Mary cycling along the creek.
 c. *There was Frank's article mentioned.
 (Milsark 1977)

(v) The predicate restriction. The second well-known semantic restriction is the so-called predicate restriction: only stage-level predicates, not individual-level predicates can occur with *there*, cf. (7). Stage-level predicates are adjectives or properties that hold of their subject only for a restricted time, e.g. *hungry, sick, happy*. Individual-level predicates hold of their subject without a time limit, e.g. *blond, intelligent, blue-eyed*. This distinction proved to be relevant in natural language (cf. Milsark 1977, Carlson 1977b, Kratzer 1995, Ramchand 1996).

- (7) a. There are firemen available.
 b. *There are firemen intelligent.
 (Milsark 1977)

The facts about the *there*-sentences given in (1) raised major discussions in the theoretical literature and it is the purpose of this chapter to review the various approaches to the syntax of *there*-sentences. The bulk of the literature can be divided into two major groups depending on whether they structurally relate the two sentences in (8) or not.

- (8) a. There is a man in the garden.
 b. A man is in the garden.

The first group assumes either that (8-a) is derived from (8-b), or that they have a common base structure. *There* does not have a meaning of its own, but is present in the structure in order to fill the subject position (to satisfy the Extended Projection Principle, see below). I call these approaches *there-insertion approaches*.

The second class of approaches argues that there is no immediate relation between the two sentences in (8), they are derived from two different sources, or base-structures. In this second type of approaches, *there* has some meaning of its own, even if it is only very limited. I call these latter approaches *there-in-core-predication approaches*.

Additionally, there is a group of approaches that does not neatly fit into the classification, therefore I discuss them under the rubric ‘Other approaches’. The approach proposed by Felser and Rupp (1997, 2001) is very similar to the *there*-insertion approaches in the predication structure they assume, but at the same time, they take *there* to be a (spatio-temporal) argument. The proposal by Kayne (2006) is different from all the others, as it assumes that *there* originates from the noun phrase.

The last section of this chapter provides an overview of the literature on the definiteness effect. The observation that strong quantifiers and definite noun phrases cannot occur with the *there* construction has been explained in syntactic, semantic and pragmatic approaches. Note that the literature on English *there* and the definiteness effect is quite vast, and even though I included as many references as possible, the discussion is not fully exhaustive.⁴

1.2. *There*-insertion approaches

1.2.1. Introduction

The *there*-insertion approaches assume that the two sentences in (8) are (transformationally) related in the sense that they have the same core predication structure: the noun phrase is the subject of predication and the PP is the predicate. The predication structure was not a central issue after Stowell’s (1978, 1981) small clause proposal, which will be presented below. *There* is a semantically empty element and is inserted into the Spec,IP position. Since this position is traditionally linked to nominative case assignment and subject-verb agreement, the major concern of the *there*-insertion approaches is to explain how the verb and the noun phrase agree in number and how this noun phrase is assigned case. To reach this goal, the noun phrase was assumed to be related to the Spec,IP position in one way or another. In Chomsky (1981), this relation was transformational: the post-verbal noun phrase originated in the Spec,IP position and was moved to its post-verbal position. This transformational relationship was encoded via co-indexing and allowed subject-verb-agreement and case assignment to be transferred via the index. Co-indexing was replaced in Chomsky (1986b, 1991) and Lasnik (1992) by LF movement: the noun phrase was assumed to move at LF to the Spec,IP position; case and agreement properties were checked for their applicability at this level. In Chomsky (1995b, chapter 4), Chomsky abandons LF movement of the post-verbal noun phrase, the associate in his terms, and suggests that only its formal features raise to the INFL head. *There* and Spec,IP are no longer relevant for agreement and case assignment in *there*-sentences. In Chomsky (2000) this step was generalized: the operation Agree allows case assignment and agreement at a distance - the traditionally assumed relation to the Spec,IP position is given up. In

⁴For an overview on the literature before 1981, see Breivik (1983).

this sense, the analysis of the *there*-construction and changes in the theory are closely related and I will present them in detail in the following subsections.

1.2.2. *There*-insertion: Chomsky (1981)

1.2.2.1. The *there*-insertion rule

In the early seventies, transformational grammarians proposed a transformational rule for *there*-sentences, the so-called *there*-insertion rule given in (9) (X, Y and Z are optional elements such as adverbial phrases).

- (9) *There*-insertion (optional)
- | | | | | | | |
|-----|---|--------------|---|-----------|---|---|
| SA: | X | NP | Y | <i>be</i> | Z | |
| | 1 | 2 | 3 | 4 | 5 | |
| SC: | 1 | <i>there</i> | 3 | 4 | 2 | 5 |
- (Burt 1971, 248)

In effect the rule takes a sentence like (10-a) and transforms it into (10-b).

- (10) a. [₁ Yesterday], [₂ a cow] [₃ certainly][₄ was] [₅ in the barn]
 b. [₁ Yesterday], there [₃ certainly][₄ was] [₂ a cow] [₅ in the barn].

As the rule is too complex to be part of Universal Grammar (UG), Milsark (1974, 192) suggested to break it down into two different rules, a rule of noun phrase postposing and a rule of *there*-insertion. The former postposes the noun phrase from Spec,IP to the post-verbal position. The latter inserts *there* in the vacated Spec,IP position.

A major problem of the transformation (as one rule or two) was over-generation. For example if the rules apply to a sentence like [₁ Yesterday], [₂ everyone] [₄ was] [₅ at the party], the outcome would be [₁ Yesterday], *there* [₄ was] [₂ everyone] [₅ at the party], which is ungrammatical. Milsark (1974, 1977) suggested to rule out ungrammatical structures of this type by a restriction on the surface structure that disallows definite phrases in *there*-insertion contexts (see 1.5.2 below).

This proposal was in line with a general change in the theory. Starting with Chomsky and Lasnik (1977), Chomsky (1981) (and follow-up work), transformations were allowed to apply freely and well-formedness conditions on the resulting surface structures ruled out ungrammatical structures. *There*-insertion became a rule that could apply between D-structure and S-structure, inserting *there* in any position (position of trace, PRO, empty subject positions), cf. Chomsky (1981, 86). More or less general constraints on the surface structure excluded ungrammatical outcomes of the rule. One such rule was that *there* is a semantically empty element and therefore cannot occur in (D-structure) argument/ θ -positions. These positions are reserved for arguments (which was stated in various versions of well-formedness conditions on D-structures and/or chains). This accounts for the ungrammaticality of examples like (11).

- (11) a. *There loves Mary.
 b. *Mary buys there.

Another well-formedness condition requires *there* to receive number from a so-called noun phrase associate. Technically, this condition was satisfied by co-indexing *there* and the post-verbal noun phrase. This indexing had to be different from the indexing that is relevant for Binding: it is co-superscription (not co-subscription), cf. (Chomsky 1981, 218). If *there* and the post-verbal noun phrase were co-indexed via co-subscription *there* would bind the noun phrase, which in turn would give rise to a violation of Binding Principle C, which states that R-expressions (referring noun phrases) have to be free.⁵ This well-formedness condition accounts for the difference between *there* and *it*: *there* can only occur with a noun phrase in the structure, while *it* occurs with clauses, adjectives and weather-verbs (cf. Chomsky 1981, 88f).

1.2.2.2. Case and agreement

To account for the case and agreement properties of the structure, Chomsky (1981, 87) exploited the transformational relationship between the noun phrase and the expletive (via the Spec,IP position), which was encoded via co-indexation. The noun phrase inherited case via the expletive: Case is assigned to the index (superscript) of the subject position and transferred to the post-verbal noun phrase via co-superscription.⁶ In this way, co-superscription makes a general formulation of case-transmission from the subject position to the post-verbal noun phrase possible, so that case assignment to the Spec,IP position under government by tensed AGR/I can be upheld.

The same holds for the agreement properties. As the expletive inherits the number properties from the noun phrase via the co-superscript, it can agree with I in ϕ -features under Spec,Head agreement.

1.2.2.3. Problems

The Government and Binding approach to *there*-structures had several major problems, which lead to its abandonment. The most prominent one was that co-superscription as a device to account for the case and agreement properties of the structures is powerful but not independently motivated (Safir 1982, 1985). Furthermore, if the distribution of *there* and *it* is exclusively due to the availability of a noun phrase, it is not clear why *it* occurs in clefts but not *there*: *It was a man who murdered Mary*. In addition, this proposal also has

⁵Safir (1985) extensively argues for a single rule of co-indexation. In order to circumvent the problem with *there*-sentences, he stipulates a rule saying that indefinite noun phrases are exempt from Binding Principle C, see 1.5.3 below for details.

⁶Note that this way of case assignment is the same for both English *there*-sentences and Italian post-verbal subjects (cf. Chomsky 1981, 259-270, Safir 1985 and Hartmann 2003 for some discussion).

all the problems that *there*-insertion approaches have in general, which I will discuss in 1.2.8.

1.2.3. Small clauses: Stowell (1978) and follow-up work

1.2.3.1. General outline

Stowell (1978) is the first to propose a small clause analysis of English *there*. He argues that the copula *be* belongs to the class of verbs listed in (12) that select for a small clause⁷ complement of the form $[NP + \{AP/PP/-ing VC\}]$.

- (12) ‘be’, circumstantial ‘have’, ‘have got’, ‘like’, ‘keep’, ‘want’ and ‘need’

Stowell argues for analysing $NP + \{AP/PP/ing-VC\}$ as a constituent because it is interpreted as a ‘situation’ or ‘event’. Additionally, Stowell (1978) assumes that the copula *be* is also a raising verb and the structures in (14) are derived from the base structures in (13) by raising the noun phrase.

- (13) a. ___ was [an American flag] [planted on the moon]
 b. ___ has been [an angry lion] [running wild]
 c. ___ may be [a cow] [in the barn]
 (Stowell 1978, 466)

- (14) a. An American flag was planted on the moon.
 b. An angry lion has been running wild.
 c. A cow may be in the barn.

Alternatively, the general *there*-insertion rule allows *there* to be inserted in the subject position of *be* in the environment of $[_{NP} \text{ ___ }] \text{ AUX NP Adj/PP/ing-VC}$, deriving the sentences in (15).

- (15) a. There was [an American flag] [planted on the moon]
 b. There has been [an angry lion] [running wild]
 c. There may be [a cow] [in the barn]

Apart from this *be* (which allows *there*-insertion or raising), Stowell assumes an additional, existential verb *be* that selects for a noun phrase in its complement position, but is not a raising verb. This *be* is the one that gives rise to the existential structures of the type *there be NP*.

The major advantage of this type of approach is that it straightforwardly predicts the type of predicative phrases that are available in *there*-structures, namely, those that also occur in other copula structures - PPs, adjectives and participles. This analysis was taken over (and expanded) by e.g. Burzio (1981,

⁷Small clauses are structures that contain a subject and a predicate but lack tense and modal projections, cf. for discussion and overview Bowers (1993), Rothstein (1995), Moro (2000), Den Dikken (2006), Hegedűs (forthcoming) and references therein. The term goes back at least as far as Williams (1975), but its current interpretation is introduced in Stowell (1981, 259).

234ff) and Safir (1982, 1985, 1987a,b) (among others) with the major difference that they assumed only one verb *be*, namely the one that allows either the subject of the small clause verb to raise or *there* to be inserted.

1.2.3.2. Problems

The small clause approaches face several problems. The most severe one is that they wrongly predict sentences of the type **there be NP NP* to occur, which I will discuss in detail below in 1.2.8. Williams (1984) pointed out two further problems.

(i) **Wh-movement.** Williams (1984) showed that the small clause approach makes the wrong prediction with respect to *wh*-movement. Whereas it is quite natural to extract the predicative adjective from small clause complements of *consider*, the same extraction fails with *there*.

- (16) a. How happy do you consider Bill?
 b. *How happy was there someone?
 (Williams 1984, 133f)

This example by Williams is biased towards a complex-NP analysis: ‘someone happy’ is one of the cases in which English allows postnominal adjectival modification (cf. Leu 2005 for an analysis). The observation seems to be correct though, as the following example shows.⁸

- (17) *How sick were there children?
 (McNally 1997, 66)

These data indicate that the syntactic status of the predicate AP/PP/participle in copula structures is different from the ones in *there*-sentences. As we will see in 3.3-3.6 that this is indeed the case.

(ii) **Heavy-NP shift.** Williams (1984) also observes that small clauses generally allow the subject noun phrase to undergo heavy-NP shift. Again this is impossible with *there*-sentences.

- (18) a. I consider sick several of George’s recent acquaintances.
 b. *There are sick several of George’s recent acquaintances.
 (Williams 1984, 134)

⁸The bias is probably not unintentional as Williams (1984) argues for analysing the noun phrase plus XP in *there*-constructions as a complex NP. Safir (1987a) argues against this. It is possible to extract the noun phrase leaving behind the adjective as illustrated in the following example, which is unexpected under a complex-NP analysis. I will come back to a discussion of these cases in 3.4.

- (i) I don’t know how many men were there sick.

This problem is not severe for two reasons: first of all, as Hannay (1985) points out, heavy-NP shift (HNPS) is also impossible in other small clause structures, cf. (19). Thus, whether a small clause allows HNPS or not is an independent factor and not a difference between *there*-sentences and other small clauses.

- (19) a. With so many of our closest friends sick, I don't think that there's any sense going to the party.
 b. *With sick so many of our closest friends, I don't think that there's any sense going to the party.
 (Hannay 1985, 84)

Furthermore, Safir (1987a, 257) notes that the grammaticality judgement given for (18-b) might not be as absolute as Williams suggests, cf. (20).

- (20) ?There are now sick and out of action twenty-one members of the Pine Barrens marching band.
 (Safir 1987a, 257)

1.2.3.3. Summary

The small clause approaches assume that copula and *there*-sentences have a common underlying structure. Either the subject of the small clause moves to Spec,IP or expletive *there* is inserted. This provides a straightforward account of the type of predicative phrases that can occur with *there*. However, these proposals face the problem that copula structures and *there*-structures differ with respect to *wh*-movement of those predicative phrases. This suggests that the XP in *there*-sentences of the type *there be NP XP* does not have the same position as the XP in copula structures of the type *NP is XP*. I will show in 3.3-3.6 that this is indeed the case: the XP in *there*-sentences is an adjunct, while it is the predicate in copula structures.

1.2.4. Expletive replacement: Chomsky (1986b)

1.2.4.1. General outline

In *Knowledge of Language*, the major issue concerning the *there*-construction is the relation of *there* with the post-verbal noun phrase - the so-called associate. Chomsky (1986b, 179ff) suggests that at LF the associate moves to Spec,IP to replace the expletive. As at LF only arguments and their traces are licit elements (cf. Chomsky 1986b, 98 and the *Principle of Full Interpretation*, cf. Chomsky 1991, 151) and as the expletive is neither an argument nor a trace of an argument, it cannot occur at LF; it has to be deleted. For this deletion to be in accordance with recoverability, the associate noun phrase has to replace the expletive at LF: it moves from its base position to the position of the expletive. The chain created by movement is subject to the Binding Principles at LF.

Under this analysis, examples like (21) violate Binding Principle A, because the associate noun phrase (here: *several books*) is embedded in a tensed clause and the trace of the noun phrase cannot be properly (A-)bound.⁹

- (21) *There were decided that several books would be on reserve.
(Chomsky 1986b, 179)

1.2.4.2. Problems

The expletive replacement analysis is problematic for various reasons, which I will discuss in turn.

(i) Scope data. The most obvious problem involves the following scope data from Williams (1984). The sentences in (22-a) and (22-b) exhibit an important difference in interpretation. Whereas in the first example the noun phrase can scope over or under the negation, the second example only has narrow scope of the noun phrase with respect to the modal.

- (22) a. Someone must be in the house.
 someone > must
 must > someone
 b. There must be someone in the house.
 *someone > must
 must > someone

As Shlonsky (1987, 41) correctly points out, the associate raising analysis does not predict this difference (see also Abe 1993).¹⁰ Given that scope is determined by movement (associate raising in the case of *there*-sentences), we would expect the noun phrase in *there*-sentences to have both scope options available, contrary to fact. The same holds with respect to negation or verbs like *seem* (examples from Safir 1985 cited in Shlonsky 1987, 41f): the noun phrase in *there*-sentences always scopes low.

⁹Chomsky also hypothesizes that the violation could be a violation of the empty category principle (under which subject traces are not licensed after the complementizer *that*) or, alternatively, that it could be ruled out as a violation of the chain condition which disallows two case positions in one single (A-)chain, as seen in the following definition.

- (i) If C- $\{\alpha_1 \dots \alpha_n\}$ is a maximal CHAIN, then α_n occupies its unique *theta*-position and α_1 its unique case-marked position. (Chomsky 1986b, 137)

¹⁰Shlonsky (1987) proposes instead that the full small clause moves to Spec,IP to replace the expletive. In this way the noun phrase is embedded in a complex constituent, so that it cannot scope out of it. Chomsky argues that this solution is problematic as it does not straightforwardly account for the agreement facts (Chomsky 1991, fn 40).

- (23) a. There aren't many men sick.
 b. Many men aren't sick.
 c. There seem to be many ships in the harbour.
 d. Many ships seem to be in the harbour.

(ii) Binding. Den Dikken (1995a) and Bošković (1997) point to a similar problem with the expletive replacement analysis. If the associate indeed replaces the expletive at LF, we expect it to be able to bind an anaphor higher than the position of the noun phrase and lower than the position of *there*, contrary to fact.

- (24) *There seems to himself to be someone in the garden.
 (Bošković 1997, 97)

(iii) Negative polarity items. The same reasoning applies to negative polarity items (NPIs), as Bošković (1997) points out. Negative polarity items would also be expected to be licensed if the associate has indeed moved up (and NPI licensing applies at LF), again contrary to fact.

- (25) a. *There seems to any European team to be no NBA team beatable.
 b. No NBA team seems to any European team to be beatable.
 (Bošković 1997, 98)

(iii) Weak-cross-over effects. As Den Dikken (1995a) shows, weak-cross-over (WCO) effects suggest that the associate does not raise at all. WCO violations occur when a noun phrase is A'-moved crossing a co-referential pronoun embedded in a noun phrase as in *??Who_i does his_i mother like t_i?* These violations also occur with quantifier raising, but not with A-movement. Thus, if the associate raising analysis is correct, a weak quantifier associate should be able to A-move to the subject position without giving rise to WCO effects, contrary to fact, cf. (26-b). We can conclude from this example that the associate does not A-move to the subject position.¹¹

- (26) a. Someone seems to his_i mother to be eligible for the job.
 b. *There seems to his_i mother to be someone eligible for the job.
 (Den Dikken 1995a, 349)

(iv) Scope of *only*. Another piece of evidence against moving the associate comes from the scope of *only* (cf. Den Dikken 1995a, 350). For a constituent to be associated with *only*, it has to be in the scope of *only* at LF (cf. Aoun and Li 1993, 206ff citing Tancredi 1990). In (27-a) *who* is not in the scope of *only*

¹¹The example does not show whether *someone* A'-moves as Den Dikken (1995a) seems to suggest (giving rise to WCO effects), or whether it does not move at all. Hatakeyama (1998, 245) points out that if *someone* does not move the example is predicted to be ungrammatical as well, because the pronoun *his* is not properly bound by its antecedent.

and cannot be associated with it. The single reading that is available is the one in which *only* is linked to the verb *love* (the constituent that is meant to be associated with *only* is given in small capitals). (27-b) shows that when *only* is associated with a universal quantifier, this quantifier cannot have a wide-scope reading. If the associate in *there*-sentences moved to Spec,IP at LF we would expect linking it to *only* to be impossible. This is not the case, as can be seen in (28).

- (27) a. *WHO does John only love t?
 b. Someone only loves EVERY BOY IN THIS ROOM.
- (28) a. There might only be ONE MAN in the garden.
 b. *ONE MAN might only be in the garden.

(v) Antecedent Contained Deletion (ACD). Bošković (1997) also shows that the associate raising approach cannot account for the ACD data in (29) (as observed by Hornstein 1994, 479).

- (29) a. John [_{VP} expected [no one that I did *e*] to be electable].
 b. *John expected there to be [no one that I did *e*] electable.
 (Bošković 1997, 86)

The problem with ACD is that if the full VP [*expected no one that I did e*] to be electable] is copied into the empty position, the empty position is copied as well, which leads to infinite regress. Hornstein (1994) and Lasnik (1993) have proposed that infinite regress does not occur if the noun phrase is moved at LF into a case position outside the VP (Spec,AgrOP of *expected*) before the VP is copied. This VP contains a trace instead of the noun phrase containing the empty position [expected *t*_{NP} to be elected] and the regress problem no longer arises. Now, if both *there* and the associate move to Spec,AgrOP (at LF), we expect ACD to be possible inside the associate, contrary to fact, cf.(29).

(vi) Case transmission. Lasnik (1992) takes issue with the case-transmission analysis still assumed in Chomsky (1986b). Lasnik's major point is that under a case-transmission analysis it is unclear why a sentence like (30) is ungrammatical (see also 1.2.8.2): {*there*, *someone*, *t*} is a well-formed (A-)CHAIN: it is assigned case in the position of *there* and is thus visible for θ -assignment.

- (30) *There is likely someone to be *t*_{someone} here.

Secondly, it is unclear why in (31-a), the verb *be* is obligatory while it is possible to leave it out in other environments.

- (31) a. We consider there *(to be) a man in the room.
 b. We consider John (to be) a fool.

Lasnik (1992) proposes that these facts are easily explained if we assume that *be* assigns case to the post-verbal noun phrase under government (partitive case in the sense of Belletti 1988 with some adjustments). In (30), the noun phrase is not in the position where *be* can assign case to it (the trace left behind by movement is an A-trace and therefore cannot be assigned case, either). In (31-a) *be* cannot be left out because it is the case-assigner in the structure.¹²

(vii) *Wh*-Extraction. Another problem was pointed out by Chomsky (1991) himself (referring to Safir 1985). If the associate is supposed to replace *there* at LF, the LF structure of (32-a) should be the same as the LF structure of (32-b). However, only the latter turns out to be ungrammatical.

- (32) a. how many men do you think that there were in the room?
 b. *how many men do you think that were in the room?
 (Chomsky 1991, 158)

To sum up, the expletive replacement hypothesis raises several severe problems. Chomsky (1991) tries to solve some of them, and that is what I turn my attention to now.

1.2.5. *There* as LF affix: Chomsky (1991), Lasnik (1992)

1.2.5.1. The general approach

Chomsky (1991, 441ff) further elaborates on the idea of associate raising and makes some crucial adjustments to his earlier proposal, in order to account for the data presented by Shlonsky (1987) and Lasnik (1992).¹³ Chomsky takes the following as the main properties of *there*-sentences: (i) Just as in all other *there*-insertion approaches, it is taken for granted that all *there*-sentences have a counterpart without *there*, cf. (33). (ii) *There* must appear in a formal

¹²Lasnik (1992) gives (i) as further evidence for case assignment of *be* to the associate. The same adjacency requirement (a case-assigner and its object have to be adjacent) holds in both (i-a) and (i-b).

- (i) a. *I heard usually a car.
 b. ?*There will be usually a man here.

Law (1996) argues against this position. This adverb placement results in ungrammatical sentences in both active and passive sentences. If case were at stake, the passive examples should be grammatical, contrary to fact.

- (ii) a. *John considered seriously Bill intelligent.
 b. *John was considered seriously intelligent.
 (Law 1996, 499f)

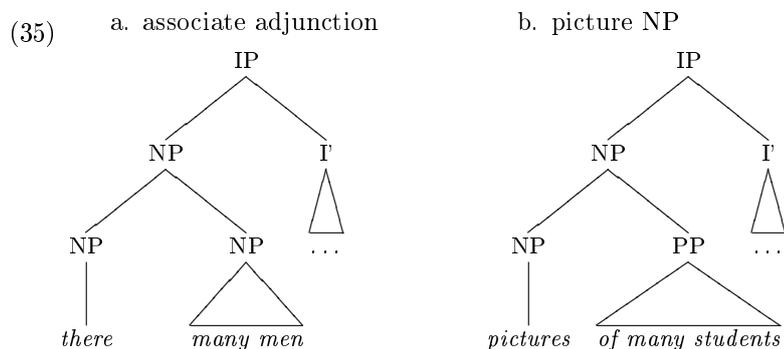
¹³Note that Lasnik (1992) was presented already in 1989 at the Second Princeton Workshop on Comparative Grammar, Princeton University, April 1989 (reference taken from Chomsky 1991)

relation with a noun phrase- its associate; this rules out structures like (34).
 (iii) The verb agrees with the associate.

- (33) a. There is a man in the room.
 b. A man is in the room.
- (34) a. *There was decided to travel by plane.
 b. *There is unlikely that anyone will agree.
 (Chomsky 1991, 441)

Following Lasnik (1992), Chomsky (1991) proposes that *there* is an LF affix - it needs a noun phrase to adjoin to it. This stipulation accounts for property (ii). Property (iii) is explained in the following way. *There* is claimed to lack inherent ϕ -features and agreement. The verb and associate agree at S-structure by some sort of feature percolation (Chomsky 1991, 442) and agreement is checked at LF with the associate raising to the relevant position.¹⁴ It follows that the associate has to be a noun phrase as other phrases (presumably) do not carry the relevant ϕ -features.

The major difference between this approach and the previous one is that the noun phrase adjoins to the expletive (instead of replacing it), parallel to *pictures of many students aren't here*, as illustrated in (35).



By adopting this structure, the scope facts in (22) and (23) can be explained. In its adjoined position, the associate does not c-command into the clause, and we no longer expect that the noun phrase scopes over negation (provided that scope is linked to c-command).¹⁵

The Binding and NPI licensing facts in (24) and (25) can be explained in a similar fashion. The associate does not c-command into the clause, therefore it

¹⁴Chomsky and Lasnik (1993) consider the possibility that *there* has ϕ -features of its own (which can vary). For adjunction to be felicitous, *there* and the associate have to agree in ϕ -features, yielding the observed apparent agreement between the associate and the verb.

¹⁵That c-command is at stake here can also be shown by Binding facts (Hans Broekhuis, p.c.): a noun phrase embedded in a specifier cannot bind an anaphor from this position: *Pictures of John pleased him/*himself*.

is not expected to give rise to Binding or NPI licensing. Note however, that this adjustment to the associate raising analysis cannot explain the facts pointed out by Den Dikken (1995a) with respect to WCO, cf. (26) and the scope of *only*, cf. (28), or the ACD facts brought up by Bošković (1997), cf. (29). These facts suggest that the associate does not (A-)move at all.

For the two examples in (32), Chomsky argues that the contrast in grammaticality is not a problem as the two have different derivations (Chomsky 1991, 158). The associate in (32-a) *wh*-moves in overt syntax leaving a trace that is legitimate (basically properly governed, or, as Chomsky phrases it, γ -marked in the sense of Lasnik and Saito 1984). This trace adjoins to the expletive at LF retaining its property of being governed/ γ -marked. In contrast to that, the noun phrase in (32-b) moves directly from the subject position at surface structure causing a violation of the Empty Category Principle (ECP).¹⁶ However, it remains unclear how the associate can be in its higher position at LF for *wh*-movement and at the same time satisfy *there*'s need to have a noun phrase associate at LF.

Furthermore, Chomsky shows that the associate raising idea can also account for the ungrammaticality of the examples in (36).

- (36) a. *There seems that **a man** is in the room.
 b. *There seems that John saw **a man**.
 c. *There was thought that pictures of **a man** were on sale.
 (Chomsky 1991, 443)

In (36-a), the associate cannot move to *there* because that would result in a violation of the ECP (see footnote 16). The trace in subject position of the embedded clause is not lexically (theta-)governed, and the associate cannot antecedent-govern its trace in the tensed clause (with CP acting as a barrier to government). In (36-b), LF raising of the noun phrase *a man* gives rise to a Condition A violation: the trace left behind is bound by the subject *John*, which is not the antecedent of the trace. (36-c) is a violation of subjacency.

That conditions on movement like the ECP or subjacency are at stake here can be shown by the examples in (37): the configuration allows Binding,

¹⁶The Empty Category Principle is formulated in (i).

- (i) **Empty category principle** (ECP) Traces must be properly governed.

The exact definition of government relevant to it was a highly debated issue (see for overview and discussion Van Riemsdijk and Williams 1986, 284ff, Chomsky 1986a, Rizzi 1990 and Broekhuis 1992). Haegeman (1994, 442) provides the following definition.

- (ii) **Proper government**
 A properly governs B if and only if (i) A theta-governs B or (ii) A antecedent-governs B (cf. Chomsky 1986a, 17)
- a. A theta-governs B if and only if A governs B and A theta-marks B.
 b. A antecedent-governs B iff A governs B and A is co-indexed with B.

cf. (37-b), but not movement, cf. (37-c) as Chomsky correctly points out.

- (37) a. *There was thought that pictures of a man were on sale.
 b. We thought that pictures of each other were on sale.
 c. *A man was thought that pictures of t were on sale.
 (Chomsky 1991, 443)

In short, the violations in (36) are ruled out on a par with the violations on movement in the following sentences:

- (38) a. *A man seems that t is in the room.
 b. *A man seems that John saw t.
 c. *A man was thought that pictures of t were on sale.
 (Moro 1997, 100)

1.2.5.2. Case and the notion of Greed

In terms of case, Chomsky (1991) adopts Lasnik's (1992) proposal to account for the data in (30) and (31-a). In this analysis, both *there* and the associate are assigned separate cases. *There* receives nominative in the subject position, while the associate is assigned partitive case in the sense of Belletti (1988) (see section 1.5.4).

However, Chomsky (1993) gives up the idea that the associate receives partitive case. Instead he concentrates on the interaction of the need of *there* to have a noun phrase adjoined to it to be interpretable at LF and the need of the noun phrase to receive case. In (39-a) both needs can be satisfied. In (39-b), on the other hand, the associate cannot raise, because, as Chomsky suggests, this movement would violate *Greed*: elements can only move to satisfy a need of their own (cf. Chomsky 1993, 201). The noun phrase in (39-b) is already assigned case, its movement would not serve any needs of its own. The sentence converges with a 'semi-gibberish' interpretation.

- (39) a. There is [_α a strange man] in the garden.
 b. *There seems to [_α a strange man] that it is raining outside.
 (Chomsky 1993, 32)

Lasnik (1995) discusses and rejects this notion of Greed. First, he correctly points out that the argument for Greed only goes through if there is no other need for the noun phrase to be moved, e.g. the need of *there* to have an associate adjoined to it. He suggests that movement involves *Enlightened Self-interest*: an item can move to satisfy both its own needs and the needs of its goal. The sentence in (39-b) could be ungrammatical (not only semi-gibberish) not only because the noun phrase cannot be moved but also because *there* has to have an associate adjoined to it.

Secondly, Lasnik (1995) criticizes Chomsky's approach because it leads to an inconsistency with respect to case checking. The case- and agreement

features of I must be strong and be satisfied at S-structure, otherwise the EPP would never be satisfied at S-structure due to Procrastinate (overt movement is more costly than covert movement). However, if *there* can satisfy (some of) these features at S-structure, the case features on I are deleted, and the noun phrase itself will never be able to move for case reasons to begin with.¹⁷

Finally, there is also an empirical reason to think that Greed is not well-motivated. Groat (1999) argues that the problem with the sentence in (39-b) is not case, but rather a general restriction on movement out of the PP: movement seems to be generally prohibited from this position as the following example suggests (see also Groat 1995).

- (40) *Who does it seem to t that it is raining?
(Groat 1999, 31)

This short discussion shows that Chomsky's argumentation is not a sufficient motivation for Greed and the analysis cannot be maintained in this way.¹⁸

1.2.5.3. Problems

The adjustment that Chomsky makes cannot account for all the problems of the previous account. Den Dikken (1995a) argues that the WCO effects and the facts concerning the scope of *only* show that the associate does not move. The same holds for the ACD facts brought up by Bošković (1997). In Chomsky's analysis however, the associate still moves to the subject position, hence the revised analysis cannot account for these facts.

1.2.5.4. An alternative analysis

Bošković (1997) follows Chomsky (1991) in assuming that *there* is an LF affix, but departs from Chomsky's analysis in the direction of movement. He suggests that *there* lowers to the associate at LF. This movement is driven by the need of the LF affix to adjoin to a suitable host (in line with Greed). Thus, it is not the associate that moves but the expletive. In this way, all the problematic data raised for the expletive replacement analysis can be explained.

In terms of case, Bošković (1997) follows Belletti (1988) and Lasnik (1993, 1995) and suggests that the associate is assigned partitive case. He brings the following empirical argument bearing on this issue. *Alleged* and *wager* are two verbs that are not able to assign case to subjects of embedded infinitival clauses (they do not belong to the class of the so-called ECM-verbs); the structures

¹⁷Instead, Lasnik sticks to his early suggestion that *there* is assigned nominative, while the post-verbal noun phrase is assigned partitive case. He proposes that the movement of the associate to the LF affix is due to the requirement of *there* as an affix to be supported by a noun phrase that is assigned partitive case.

¹⁸Lasnik (1995) also discusses two arguments against Greed based on specific analyses of multiple *wh*-movement and ECM constructions, see Lasnik (1995, 621f) for details. See also Frampton (1997) for an alternative proposal; for discussion in favour of Greed, see Bošković (1997, 78ff, 105ff, 134ff).

are nevertheless grammatical with *there* (as observed by Postal 1974, see also Ura 1993):

- (41) a. *He alleged stolen documents to be in the drawer.
 b. *He wagered a stranger to have been in that haunted house.
 c. He alleged there to be stolen documents in the drawer.
 d. He wagered there to have been a stranger in that haunted house.
 (Bošković 1997, 77)

If the associate had to move to the position of *there* in order to check case, the examples with *there* would be expected to be ungrammatical. Thus, there must be an alternative source for case for the associate in *there*-sentences, namely partitive case as suggested by Belletti (1988). This analysis has two problems. First of all, native speakers do not agree on the data, as Epstein and Seely (2006, 72ff) pointed out. Secondly, the recourse to Belletti's case theory is problematic in itself, as I will show in section 1.5.4 (for some more discussion of Bošković's approach see Hatakeyama 1998).

1.2.5.5. Summary

To sum up, we have seen that the analysis of Chomsky (1993) solves many of the problems of the expletive replacement analysis by positing that the associate adjoins to the expletive, and therefore does not c-command into the clause. However, as this analysis still assumes that the associate moves, the data brought up by Den Dikken (1995a) and Bošković (1997) with respect to WCO, the scope of *only* and ACD do not follow. The alternative analysis by Bošković (1997) involving affix lowering solves these problems. With respect to case assignment, Chomsky introduces the notion of Greed, which is rather disputable and does not have clear independent support. Thus, this analysis is not satisfactory, either.

1.2.6. Move F: Chomsky (1995b), chapter 4

Chomsky (1995b, chapter 4) considerably changes his earlier analyses of agreement in *there*-sentences and the properties of the expletive. As these changes are closely linked to some general developments in the theory, let us look at these first.

1.2.6.1. Background: Changes in the theory

Move α , with α being a full category, is reinterpreted as *Move* F , with F being a (set of) formal feature(s). The underlying intuition is that economy considerations favour movement of the relevant features over movement of the full category. Morphological properties and the properties of the phonological component decide how much material is pied-piped with feature movement (cf. Chomsky 1995b, 263). The minimum of pied-piped material is the full set of

formal features. From these considerations it follows that covert movement is movement of the feature bundle that needs checking, stranding phonological and semantic features.

Furthermore, the notion of Greed is given up in favour of an attract-based theory of movement. The target of movement attracts an element that is able to check a feature of the target. Whenever the feature is strong, the feature has to be checked overtly for the derivation to continue (i.e. a strong feature cannot be checked by feature movement). Additionally, Chomsky (1995a, 266) assumes that the item to be moved has to have an unchecked feature itself in order to be visible for the target.¹⁹

1.2.6.2. Feature movement in *there*-sentences

Turning to the *there*-sentences, Chomsky argues that the agreement facts are a result of feature movement, not movement of the associate itself: the ϕ -features of the associate adjoin to the I-head (and not to the expletive).²⁰ This step makes the scope facts in (22-b) fall out immediately. As only the formal but not the semantic features of the associate move, we do not expect a semantic effect of this movement (cf. Chomsky 1995b, 273). Chomsky argues that this analysis is supported by the control properties of the construction. Given that control relies on ϕ -features in an appropriate position, the raising of ϕ -features should make control possible. (42) shows that object noun phrases (*three men*) cannot control into adjuncts. By contrast, control is possible in *there*-sentences, cf. (43).

(42) *I met three men (last night) without identifying themselves.

(43) There arrived three men (last night) without identifying themselves
(Chomsky 1995a, 274)

The generalization seems to be supported by data from Italian vs. French. In impersonal sentences in Italian, the verb agrees with the associate and control is possible. In French, the verb agrees with the expletive and control is not possible:

(44) a. sono entrati tre uomini senza identificarsi
are entered three men without identifying-REFL
'Three men entered without identifying themselves.'

ITALIAN

¹⁹This idea is a reformulation of Lasnik's (1995) notion of Enlightened Self-interest in which movement serves both the moved item and the target.

²⁰In a similar vein, but a rather different approach, Sabel (2000) proposes that *there*-sentences are derived by feature movement. However, what is moved is not ϕ -features, but a D-feature, and the target of movement is not I but the specifier position. Thus, the D-feature of the noun phrase moves to the subject position and is phonologically spelled out as *there*. He accounts for German *was* 'what' as scope marker in the same fashion, see (15), p.5.

- b. *il est entré trois hommes sans s'annoncer
 expl is entered three men without REFL-identifying
 'Three men entered without identifying themselves.'
 (Chomsky 1995b, 274) FRENCH

1.2.6.3. The features of *there*

Apart from the feature movement part, Chomsky (1995b, 286ff) is also concerned with the features of the expletive. For *there* to occur in the sentence, it has to have some feature, and Chomsky argues that this is just a D-feature. This D-feature is able to satisfy the strong EPP on the I(nflectional) head. Chomsky argues that *there* bears neither case nor ϕ -features. The argument is as follows. Consider (45):

- (45) *There seems that [a lot of people] are intelligent.
 (Chomsky 1995a, 286)

According to Chomsky, this example shows that *there* must be unable to check some of the uninterpretable features of the matrix I-head, either its ϕ -features or Case, or both. If *there* lacks ϕ -features only, the features of the embedded noun phrase could still raise covertly; they are interpretable and therefore still available in the derivation.²¹ Thus, for ruling out (45), it is not enough for *there* to lack ϕ -features, it must lack case features. Example (46) shows the opposite.

- (46) *There seem to be [a man] in the room.

If *there* indeed had ϕ -features, it could check the uninterpretable agreement features of the matrix I-node. The uninterpretable case feature on the matrix node could then be checked by LF movement of the associate's feature. Thus the example can only be ruled out if *there* lacks ϕ -features. Chomsky concludes from this reasoning that *there* lacks both case and ϕ -features, it only contains D, in order to check the EPP feature of I.

However, the argumentation here is misleading. Since Chomsky has assumed earlier that a goal must have at least one unchecked feature to be visible for a probe, the noun phrase [a lot of people] in (45) cannot be moved: its case feature is checked already, and its ϕ -features do not need checking. Thus, (45) cannot be used to show that *there* lacks a case feature. It might lack ϕ -features, or there may be other reasons, e.g. that *there* cannot be linked to an embedded noun phrase, as suggested in earlier analyses.

²¹Chomsky makes reference here to the distinction between interpretable (visible at LF) and uninterpretable (visible to computation but deleted and erased after checking) features introduced in the same chapter (cf. Chomsky 1995a, 279ff. The distinction will become more relevant to the *there*-construction later, see the following subsection.

1.2.6.4. Problems

There are two problems with the feature raising analysis. First, Cardinaletti (1997) notes that the control facts only hold for *there*-V structures (*there*-sentences in which the main/tensed verb is not *be*, but an unaccusative verb); they do not hold for *there*-BE structures (sentences in which the main/tensed verb is *be*), see section 2.2 and 3.2 for the distinction.²²

- (47) a. There entered two men without identifying themselves.
 b. *There are two men in the room without introducing themselves.
 (Cardinaletti 1997, 524f)

Secondly, feature raising should be relevant for Binding, however, Binding is not possible in (48).

- (48) *There seem to each other to have been many linguists given good job offers.

Chomsky is aware of this but discards the problem and takes this to mean that feature raising does not provide the relevant configuration for Binding (cf. Chomsky 1995b, 275). This, however, cannot be on the right track: Bošković (1997, 97) pointed out that if we assume this, we also predict that sentences like *I asked them about themselves* should be ungrammatical as well, contrary to fact. The relevant anaphor is embedded in a PP in both sentences and they have the same configuration.

1.2.7. Agree: Chomsky (2000) and follow-up work

1.2.7.1. Background: Changes in the theory

Chomsky (2000) introduces a new operation, Agree, substituting covert movement (for case and agreement).²³ Agree establishes a checking relation with an element in its search space, which means that agreement is no longer restricted to a Spec,Head (or Head-Head) configuration (cf. Chomsky 2000, 101). Furthermore, the distinction between interpretable and uninterpretable features introduced earlier (cf. Chomsky 1995a, 279ff) becomes more prominent. Interpretable features are visible to the semantic component, as e.g. ϕ -features on noun phrases. Uninterpretable features such as case features on noun phrases need to be checked before the structure is sent off to the interfaces. Uninterpretable features are important for the operation Agree in two ways. First

²²The contrast between the two sentences could also be due to a stative vs. non-stative mismatch in the structures. However, even with a stative predicate in the control clause these sentences are not acceptable:

- (i) ??There are two men in the room without being well-dressed.

²³This is certainly not the only major change, but it is the most important one relevant for the issues discussed here.

of all, probes (the heads that search their c-command domain for a matching goal) are functional heads that have an uninterpretable feature to be checked. Secondly, for Agree to take place, the goal (the XP in the search space that has the appropriate features) has to be active (cf. Chomsky 2000, 123), which it is if it has an unchecked (case) feature. When an uninterpretable feature enters an Agree relation with a corresponding interpretable feature, the uninterpretable feature is checked and thus, deleted/erased (Chomsky 2000, 122f).²⁴ All uninterpretable features have to be checked/deleted before the structure is interpreted at the conceptual-interpretive (CI-)interface.

The introduction of Agree has considerable consequences for movement theory: with the Spec,Head configuration as the configuration for agreement/feature checking gone, the major driving force for movement of a nominative subject to the Spec,IP position is no longer available. Instead, the so-called EPP feature is introduced.²⁵ Its function is to force an additional specifier that is not required by semantic selection (cf. Chomsky 2000, 102).

Empirical support for Agree comes from Icelandic. First of all, the EPP feature on I can be satisfied by quirky subjects (see among others Taraldsen 1995, Sigurðsson 1996, Boeckx 2000, Holmberg and Hróarsdóttir 2004). In these cases, the verb (partially) agrees with a post-verbal subject. Secondly, Dutch and German have a class of so-called dative-nominative verbs in which the nominative noun phrase remains low in the structure but nevertheless agrees with the verb (see Lenerz 1977 for German, Den Besten 1985 and Broekhuis 1992 for Dutch). Thus, long-distance agreement (i.e. agreement between a verb and a noun phrase lower down in the structure) and nominative case assignment seem to be cross-linguistically available (and independent of expletive structures).

In sum, Agree complicates the theory of movement; however, as we will see now it simplifies the analysis of *there*-sentences (and inversion structures) since it voids the introduction of special mechanisms for nominative case checking or subject-verb agreement in post-verbal positions. Let me turn to this issue now.

1.2.7.2. Agree in *there*-sentences

As we have seen at the beginning of this chapter, the *there*-construction is special because the verb agrees with a post-verbal noun phrase and the noun phrase is assigned case in a position that had not been related to nominative case assignment. With Agree these facts are no longer surprising. Agree allows

²⁴The distinction between deletion and erasure is defined in Chomsky (1995b, 280) already, with deletion understood as ‘invisible at LF but accessible for the computation’ while erasure eliminates ‘the element entirely so that it is inaccessible to any operation, not just to interpretability at LF.’ Chomsky (2000, 122f) uses both expressions without explicitly (re)defining them.

²⁵The abbreviation EPP originally meant Extended Projection Principle that required all sentences to have subjects, cf. Chomsky (1982, 10).

a noun phrase to stay low in the structure and to enter into case- and agreement relations at the same time. To illustrate the point for English, consider (49):

(49) There is a man in the garden.

The derivation proceeds in the following steps (ignoring the internal structure of the VP):

- (50) Derivation of (49)
- (i) Merge I with VP;
 - (ii) I probes for NP to check its case and agreement features; Agree between I and NP;
 - (iii) Uninterpretable case features are checked and deleted on I and NP;
 - (iv) Uninterpretable ϕ -features are checked and deleted on I;
 - (v) Merge expletive *there* to satisfy EPP feature on I.

With this innovation in theoretical thinking, the questions surrounding the *there*-construction shift from focusing on case and agreement to focusing on the feature cluster and feature checking options of *there*. Raising structures of the type *there seems to be a man in the garden* suggest that *there* has some feature that allows it to be attracted by I. Chomsky (2000, 124) proposes that this feature is a person feature (but not a full set of ϕ -features), similar to his earlier suggestion that the relevant feature is a D-feature (cf. Chomsky 1995a, 287, see also Frampton 1997). The person feature is uninterpretable on the expletive and therefore needs to be checked (cf. Chomsky 2000, 125). The derivation is illustrated in the following.

- (51) Derivation of *There seems to be a man in the garden*
- (i) Merge infinitival (defective) I with VP;
 - (ii) Merge *there* in Spec,IP; check and delete EPP on infinitival I;
 - (iii) Merge matrix V with infinitival IP; merge finite I with VP;
 - (iv) Finite I probes for a noun phrase to check its case and agreement features; I finds *there* and checks person feature on *there*;
 - (v) *There* moves into Spec,IP to check EPP feature on I;

At this stage, I has one of its features checked, namely the EPP feature, but as *there* lacks some of the ϕ -features and case, I keeps on probing:

- (vi) I probes for a noun phrase to check its case and agreement features;
- (vii) I finds NP, Agree between I and NP;
- (viii) Uninterpretable case features are checked and deleted on I and NP;
- (ix) Uninterpretable ϕ -features are checked and deleted on I.

In this way, Agree provides a simple and general mechanism to account for the case and agreement properties of *there*-sentences in both finite and non-finite structures.

1.2.7.3. Problems

This Agree-analysis of the English *there*-construction raises serious theoretical and empirical problems, however.

(i) Feature checking of I. The first problem was pointed out by Frampton and Gutmann (2000). Chomsky assumes that *there* has an uninterpretable person feature.²⁶ But if this is true, how is this person feature deleted in (49)? Chomsky (2000, 128) hypothesizes that it acts as a probe when it enters the derivation. The feature is checked against I's ϕ -features and is deleted. However, the process of checking the person feature of *there* against the ϕ -feature set of I is quite an unusual process of ϕ -feature checking, as both the features of the probe and the features of the goal are uninterpretable. In the general case only the features of the probe are uninterpretable whereas those of the goal are interpretable.²⁷

The problem becomes even more pertinent with feature checking being feature valuation (cf. Chomsky 2001). If checking is feature valuation, how can the person feature of *there* be valued by its probe, I, given that that is not valued, either? (And *there* has to be merged before I probes for the noun phrase, as I's features would otherwise be satisfied).

Frampton and Gutmann (2000) propose that each Agree relation results in a link between the feature sets involved. This link has the effect that whenever the feature set of one link is changed, the feature set of the other changes as well. For the structures under discussion this means that the probe I seeks to find *there* first and *there* and I establish a link via Agree. When I finds the noun phrase which values I's features, the person feature of *there* is also valued via the link established previously.²⁸

(ii) Case on participle phrases. A more complex problem arises for the participle passives, cf. Chomsky (2001, 17ff). In several languages, passive participles agree with their object in number and/or gender, and in some languages also in case, cf. (52). Icelandic shows this agreement overtly; the examples with an overt expletive are given in (53-a) and with a non-overt expletive in (53-b).

²⁶Note that the person feature on *there* cannot be interpretable. If it were, *there* would not have any uninterpretable features, which would make it invisible for the probe I.

²⁷Note that the checking of case features on I/v has a similar problem (if case-checking is not a by-product of agreement-checking as proposed in Chomsky 2001, 16 referring to George and Kornfilt 1981): both features are uninterpretable. Pesetsky and Torrego (2001, 2004, 2007) propose a solution, suggesting that the case feature is in essence an uninterpretable tense feature, checked against an interpretable tense feature on I.

²⁸Note that there is a slight complication about the person feature of *there*: In list readings the person feature of the verb and the associate do not agree: *There is me/*There am I* (grammatical if *there* is deictic/anaphoric).

- (52) a. Expl seem to have been [_{α} caught_{NOM} several fish_{NOM}]
 b. expect Expl to have been [_{α} caught_{ACC} several fish_{ACC}]
- (53) a. Það voru taldir [hafa verið
 EXPL were_{3PL} believed_{NOM.PL.M.} have been
 keyptir einhverjir bátar.
 bought_{NOM.PL.M.} some boats_{NOM.PL.M.}
 ‘There were believed to have been some boats bought.’
 (Sigurðsson 1991, 356) ICELANDIC
- b. Hann taldi [hafa verið selda einhverja
 he believed have been sold_{ACC.PL.M.} some
 báta á uppboðinu]
 boats_{ACC.PL.M.} at auction-the
 ‘He believed some boats to have been sold at the auction.’
 (Sigurðsson 1991, 347) ICELANDIC

Two issues arise: (i) How does the probe keep probing for elements lower down in the structure, after probing for the expletive and the participle? (ii) How can the case feature on the participle be checked? Concerning the continuous probing, Chomsky proposes the principle *Maximize matching effects* (cf. Chomsky 2001, 15). Under this principle, a probe seeks a goal that matches ALL its features. This makes it possible for I (or v*) to probe several items until it finds a fully matching feature set. The probe’s unvalued features are valued against this full set and become inactive after that.²⁹

Turning to the case features of the participle, Chomsky proposes that at stage α the participle gets its uninterpretable number and gender feature valued by the interpretable feature of the noun phrase in the structure. With the features checked, they should be deleted and be no longer visible for the further derivation. However, in this case, the participle’s ϕ -features are no longer visible for the probe I. Assuming that the case feature on the participle is valued as a reflex of ϕ -feature valuation (cf. Chomsky 2001, 16 referring to George and Kornfilt 1981), the case feature of the participle can no longer be checked. Chomsky concludes that the ϕ -features of the participle must still be visible at the stage when I enters the derivation. He suggests that deletion of uninterpretable but valued features only takes place at the strong phase level. At the stage where I and v* probe for ϕ -features, they can still find the participle as a goal and can agree with it, and the case feature is valued as a by-product of agreement.

In Frampton et al. (2000) this further stipulation is not necessary. The participle and the noun phrase agree at an earlier stage, and the features of the two items are linked. When the probe I (or v*) finds the noun phrase, the case feature of the noun phrase is valued. As the noun phrase and participle are

²⁹Note that this implies that participles can never have a full set of ϕ -features. If they did, the probe I (or v*) would be satisfied and would not probe further for the noun phrase in the structure. This implication is not necessary for Frampton et al. (2000).

linked, the case feature of the participle can be valued as well (see Frampton and Gutmann 2000 for a slightly different approach to case assignment).

(iii) Feature-checking on *there*. Furthermore, Richards and Biberauer (2005) criticize the proposal that *there* is inserted in Spec,IP under an agreement-based theory. First of all, merging *there* in Spec,IP cannot result in the checking of the EPP feature on I.³⁰ For checking to take place, a Spec,Head configuration is not sufficient: a probe cannot look into its specifier, cf. Chomsky (2004, 115).³¹ Furthermore, if *there* is merged into Spec,IP its unvalued/uninterpretable person feature cannot be checked by I: either I is already valued and therefore invisible for probing (by *there*), or I is not yet valued itself, and agreement cannot check/value *there*'s uninterpretable feature (see also the criticism by Frampton and Gutmann 2000 above).

As an alternative, Richards and Biberauer (2005) propose that *there* is inserted in the specifier position of the phase-head *v* (cf. also Bowers 2002). In this configuration *there* is in the probing domain of I, which makes it possible for I to attract *there* and have its EPP features deleted. *There* is claimed to have a case feature, therefore it is active and visible for I. Furthermore, *there* has an interpretable default person feature and thus does not act as a probe itself. This approach runs into the same problems as all *there*-insertion approaches as we will see below, except for the well-known problem discussed in 1.2.8.2. So let me turn to the evaluation of these approaches.

1.2.8. Evaluation

1.2.8.1. The major advantage

Apart from the accounts of case and agreement facts discussed above, the major advantage of the *there*-insertion approaches presented here is that they require expletive *there* to be inserted in a specific environment only: Spec,IP, and *there* cannot turn up in theta-related positions, due to its lack of semantic content. Thus, sentences like (11) repeated here for convenience are ruled out.

- (54) a. *There loves Mary.
b. *Mary buys there.

However, there are a number of general problems for the *there*-insertion approaches, which I will discuss in the next sections.

³⁰Although the EPP feature is not necessarily a separate feature on a head that needs to be checked (Hans Broekhuis, p.c.), I think that the criticism still holds: *there* has to have some feature that needs to be checked (which we can see from its ability to raise), so it has to enter a checking relation with I.

³¹This criticism does not hold if Hornstein (2001) is correct in suggesting that Merge also involves Agree, e.g. in θ -features.

1.2.8.2. A well-known problem

The *there*-insertion analyses discussed above cannot deal straightforwardly with the ungrammaticality of structures like (55). Various more-or-less complex and more-or-less stipulated solutions have been proposed in the last three decades.

(55) *There seems a man to be in the room.

For the Government and Binding analysis, the major problem was a derivation in which the noun phrase, *a man* in (55), moves to the position of the trace in the subject position of the embedded clause, after *there* raised into the matrix clause. Recall that move- α applied freely and the resulting structure did not violate any of the proposed conditions. At that point in time, Chomsky appealed to the Principle of the Strict Cycle but he basically left the issue open.

Note that in both the Italian and English case, we must assume that the post-verbal noun phrase cannot be moved to the position of the embedded trace after raising, a possibility not ruled out by the case-filter. We might appeal here to the principle of the strict cycle, or to deeper assumptions from which it may follow (cf. Freidin, 1978). (Chomsky 1981, 267)

The first general solution was suggested in Chomsky (1991, 444f). In this analysis, Chomsky followed Lasnik (1992) (see p.20) who relied on Belletti's (1988) theory of partitive case according to which the verbs occurring with *there* (unaccusative verbs and *be*) assign partitive case to the noun phrase. Partitive, being a lexical case, can only be assigned in a V-related position. In (55), the noun phrase *a man* is not in an S-structure position to which partitive case can be assigned. Thus, the sentence crashes due to a case-filter violation. Chomsky did not take up this suggestion in later writings, but went back to the case-inheritance analysis proposed earlier.³²

With the rise of the Minimalist Program, Chomsky (1995a, chapter 4) provided a different explanation why (55) is ungrammatical. When the derivation reaches the stage of *[to be a man in the room]*, there are in principle two ways to proceed: (i) *there* is merged (given that *there* is present in the numeration), or (ii) *a man* moves. As the latter violates Procrastinate (overt movement is more costly than covert movement), the former is selected (Chomsky 1995b, 346). Thus, the *there*-construction is used to provide support for this principle.

A slight variation of this explanation was presented in Chomsky (2000): instead of Procrastinate, the economy principle 'Merge over Move' (proposed earlier in Chomsky 1995b, 226) rules out the respective structures. Under this principle, Merge is an inherently costless operation, while Move is inherently

³²Safir (1985) proposed a different solution based on a suggestion by Burzio (1981). He suggests that case-inheritance is only felicitous if the respective noun phrase is governed by predicational *be*, i.e. the *be* that selects for a small clause structure (cf. Safir 1985, 149ff).

uneconomical as it is more complex than Merge alone.³³ Note that examples like (56) give rise to the discussion of the notion *subarray*. If the numeration were one single big pool, we would predict *there* to be inserted in the embedded clause, but it can only be inserted in the matrix clause. Subarrays are propositional and are the basis for phases (cf. Chomsky 2000, 106f).

(56) There is a possibility that proofs will be discovered.

What we have seen from the previous discussion is that the *there*-insertion approaches face a serious empirical problem as they need to stipulate separate principles like *Merge over Move* to account for the ungrammaticality of (55).

1.2.8.3. Other problems

As we have seen already, most of the *there*-insertion approaches cannot deal with the ungrammaticality of the example in (55) above. Furthermore, they face several other serious empirical problems.

(i) ***There be NP* structures.** First of all, the *there*-insertion analyses have little to say about clauses of the type *there be NP* (cf. Jenkins 1975, 115). In the *there*-insertion approaches, *there* is a semantically null element and does not contribute anything to the structure. Thus, the core meaning and core predication structure has to be provided by the structure below Spec,IP. In a Stowell-like analysis this structure should be a small clause (as in Stowell 1978 and follow-up work), however, there is no overt predicate in the structure *there be NP*. Still, these structures occur rather freely.

- (57)
- a. There are dinosaurs.
 - b. But there are a number of treatments which can make an enormous difference to the quality of people's lives.
(BNC, text="CF5" n="10")
 - c. Some months before each series, there is a frantic period of preparation. (BNC, text="CH8" n="2").
 - d. There was medical evidence that her life could have been saved had she arrived at hospital earlier.
(BNC, text="FCT" n="14")

Note in this connection that a sentence like *There is a man* is not ungrammatical, but only odd due to the rather uninformative statement. As soon as the noun phrase is more complex the structure is fine, as the examples above show.

³³Broekhuis and Klooster (2001) and Broekhuis (2008) argue against the existence of a numeration and against the principle of 'Merge over Move' on the basis of negative polarity items in Dutch and an alternative analysis of *there*-sentences, namely Moro's (1997) analysis, which I will discuss and reject below in section 1.3.2.

(ii) The optionality of the PP. The same point can be made in a slightly different form. The *there*-insertion analyses assume for a structure like (58-a) that the PP is the main predicate of the clause, just as it is in the corresponding copula structure in (58-b). If the PP in a *there*-sentence and the PP in a copula structure are both predicates, it is hard to explain why the PP is optional with *there*-sentences, cf. (58-b), but cannot be left out in copula sentences (in non-ellipsis contexts), as in (58-d) (cf. Moro 1997, 105 for similar facts in Italian).

- (58) a. There are three good books about existentials on the shelf.
 b. There are three good books about existentials.
 c. Three good books about existentials are on the shelf.
 d. *Three good books about existentials are.

The same holds for other predicates, like APs or participles which is especially relevant for the small clause approaches. There are *there*-sentences which do not have a small clause source, namely when there is no additional predicate AP/PP/V-ing present. This is unexpected as main predicates can only be left out under ellipsis. But there is no sign of ellipsis in the examples in (57).³⁴

(iii) PP is not a predicate. Furthermore, it is possible to show that if a PP is present in *there*-sentences, it is not necessarily predicative, contrary to the prediction of the *there*-insertion analyses. In (59) the PP *in Prague* is a frame adverbial in the sense of Maienborn (2001), but not a predicate. This can be seen from the meaning of the clause: we do not state that tremendous under-development is located in Prague, but that it is true for Prague that it is tremendously underdeveloped (put rather informally).

- (59) Prague is a sleeping giant as a city in Europe.[. . .] *There's tremendous under-development in Prague at the moment* and that's gonna take off.
 (BNC, text="JJF" n="13")

Taking *there* as a place-holder for the subject position does not say anything about these cases, and I cannot see why these cases could or should be put aside.

(iv) Against existential *be*. Let's suppose that there is a way to predict *there be NP* sentences to be grammatical by assuming an existential verb *be* that selects for a noun phrase argument as its object. *There* is inserted according to the general rule. However, such an adjustment to the *there*-insertion analyses gives rise to another problem: *there* cannot be left out in these cases (of course these sentences are grammatical when read as examples of ellipsis, but this reading is irrelevant here)(cf. Jenkins 1975, Moro 1997).

³⁴Strictly speaking, Stowell's (1978) proposal accounts for these sentences as well by stipulating an additional existential *be* that selects for a noun phrase complement, not a small clause. However this proposal also has problems, see below.

(60) *Four Guinness Breweries are.

If *be* selects for a noun phrase, there is no obvious reason why the empty subject position should not be filled by NP-movement.

If this existential *be* selects for both a noun phrase complement and *there* as a subject, the facts in (54) can no longer be grasped. If an existential verb *be* can select *there* as an argument and assign a θ -role to it, why should *there* not be possible as a direct object or subject to other verbs?

(v) Overgeneration 1: **there be NP NP*. Another empirical problem is that *there*-insertion approaches predict more structures possible than are indeed available. Arguing against Stowell's approach, Williams (1984) pointed out that if *there* is inserted into Spec,IP directly, we would expect sentences with two noun phrases to be grammatical, contrary to fact, cf. (61). If all copula structures are derived from the same base in which the copula selects for a small clause, sentences like *John is a fool* should be derived from $[_{NP} e] be [_{SC} John a fool]$. However, *there* cannot be inserted in this environment, while it is perfectly grammatical in the other cases.

(61) *There was a friend of mine an imposter.
(Williams 1984, 132)

At first sight, this type of sentences can be ruled out independently. Nominal predicates tend to be individual-level predicates, and individual-level predicates cannot occur in *there*-sentences (by the predicate restriction), thus nominal predicates seem to fall under the predicate restriction. However, Stowell (1978) correctly points out that not all nominal predicates have all the properties of individual-level predicates. Individual-level predicates cannot have weak subjects (cf. Milsark 1974), i.e. the sentence *Some men are tall* can only mean that a subgroup of men are tall, and not that the quantity of tall men is small. Similarly, when bare plurals are subjects of individual-level predicates, they can only have a generic (i.e. strong) reading). For example, a sentence like *Pigs are intelligent* can only mean that the species of pigs (generic, strong reading) is intelligent. In contrast to that a sentence like *Wine glasses are in the cupboard* has the preferred reading that some wine glasses are in the cupboard (weak reading).

Turning to the nominal predicates, Stowell (1978) observes that some of them can have weak subjects. Furthermore, they can co-occur with time adverbials, which individual-level predicates generally cannot, cf. (62). Nevertheless, these noun phrases cannot occur in the *there*-construction cf. (63).³⁵

³⁵Note that in Stowell's analysis these cases are ruled out by a restriction on base structures of the type * $NP \text{ } ____ NP NP$. The criticism by Williams (1984) is valid nevertheless, as small clauses of the type $[_{SC} NP NP]$ do in fact exist as seen in examples like *I consider John a fool*, cf. Stowell (1983).

- (62) a. John was a nuisance last night.
 b. Two long-haired groupies were real nuisances at the concert yesterday.
 c. Jack will be a murderer in *Hamlet* tomorrow.
 d. A Mexican woman was a contestant on Concentration last week.
 (Stowell 1978, 462)
- (63) a. *There were two long-haired groupies real nuisances at the party last night.
 b. *There will be a good actor a murderer in *Hamlet* tonight.
 c. *There was a Mexican woman a contestant on Concentration (last Monday).
 (Stowell 1978, 462)

Furthermore, these nominal predicates fail another test. Kratzer (1995) observes that individual-level predicates cannot occur in *when*-clauses when neither the subject nor the object noun phrase introduces a variable.³⁶

- (64) *When John knows French, he knows it well.
 (Kratzer 1995, 129)

The noun phrases under discussion can occur in this context (note that predicate nominals are generally assumed not to introduce a variable into the discourse). Hence they are not individual-level predicates.

- (65) a. When John is a nuisance in the morning, he is a nuisance all night.
 b. When John is a murderer in Hamlet, he plays the best.

These data further support Stowell's observation that not all nominal predicates are stage-level. This in turn means that Williams' (1984) criticism is, at the heart of it, justified.

(vi) Overgeneration 2: Transitive Expletive Constructions. The *there*-insertion approaches presented here (except the small clause approach) also predict that English should allow the expletive to co-occur with transitive verbs. If subjects in general are base-generated in the specifier of vP (the subject-in-vP hypothesis)³⁷ and *there* is inserted in Spec,IP then there is no reason why

³⁶Note that Kratzer (1995) shows that there are also unaccusative individual-level predicates (like *gehören* 'belong to') which allow weak subjects. However, these cannot occur in *when*-clauses.

(i) *When this donkey belongs to Pedro, it is lucky. (Kratzer 1995, 137)

³⁷According to McCloskey (1997, 227) various researchers provided arguments for the subject-in-vP hypothesis independently: Kitagawa (1986), Koopman and Sportiche (1985, 1991), Kuroda (1988), Rosen (1989), Speas (1986), Wible (1990) Woolford (1991), Zagana (1982); for the various arguments for the subject-in-VP-hypothesis see McCloskey (1997, 204ff).

there should not be able to co-occur with transitive predicates (cf. Richards and Biberauer 2005). But it does not, cf. (66).

- (66) a. *There bought a man a book.
 b. *There a man bought a book.

Chomsky (1995b, 343) claims that this predication is not entirely wrong, arguing that these structures are restrictedly available in English. He cites examples like *There entered the room a man from England* and *There hit the stands a new journal*. However, these examples are restricted and only occur if the complex V NP gives rise to a come-into-existence/appearance reading, as required for all *there*-V sentences. For details see 3.2.6.

1.2.8.4. Summary

In sum, the discussion of *there*-insertion approaches has shown that the English *there*-construction has a prominent place in theoretical thinking, and changes in the theory often relied on conclusions taken from considerations about this construction. These analyses assume that *there* is a semantically empty element with an uninterpretable formal feature and it is inserted in Spec,IP. And even though this approach accounts for the restricted distribution of expletive *there*, the analyses face several empirical problems. (i) They cannot account for the ungrammaticality of (55) without stipulations. (ii) They basically cannot handle the well-formedness of the existential structure, i.e. *there be NP* sentences. These structures show that the PP that is generally assumed to be a predicate is optional, unlike the behaviour of PPs in copula structures, cf. (58). Furthermore, when a PP is present it can be shown to be non-predicative, as seen in (59). (iii) Exactly in these cases *there* is not optional, unlike what we would expect under the *there*-insertion analysis. (iv) The *there*-insertion analyses predict that *there* could co-occur with two noun phrases, contrary to fact, cf. (61) (see also the discussion in section 1.2.3 especially p.38). (v) The *there*-insertion approaches predict that *there* should be able to co-occur with transitive verbs as well, also contrary to fact.

As I consider the existence and productiveness of *there be NP* structures and the absence of transitive verbs co-occurring with *there* to be major facts about the English *there*-construction, I reject these analyses altogether. I now turn my attention to approaches that handle these data easily, viz. the *there*-in-core-predication approaches.

1.3. *There*-in-core-predication approaches

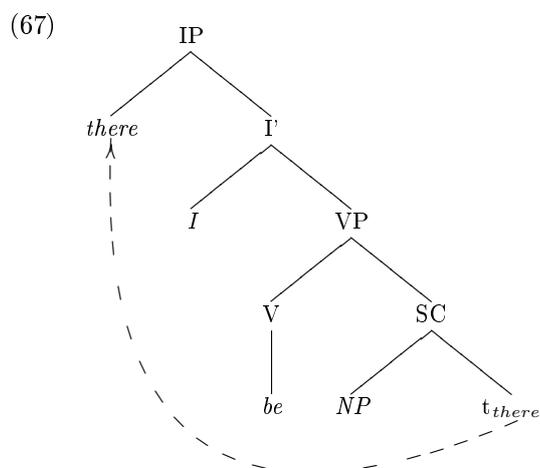
1.3.1. Introduction

After the discussion of the *there*-insertion approaches, in which *there* is merely a filler of the subject position, I now turn to those approaches that consider *there* to be part of the core predication. There are two basic lines of research in this group: one line of research argues that *there* is a dummy predicate (most prominently represented by Moro 1991, 1993, 1997, 2006 and Hoekstra and Mulder 1990); another line of research argues that *there* is the subject of predication (see Williams 1994, 2006, Hazout 2004 among others).³⁸

1.3.2. *There* as inverted predicate: Moro (1997)

1.3.2.1. The general approach

In his ground-breaking studies on copular clauses and predicative noun phrases, Moro (1991, 1997, 2006) argues that Italian *ci* and English *there* are dummy predicates that originate in a small clause with a noun phrase as their subject. *Ci/there* moves across the subject, and then further on to IP as seen in (67).



A similar approach is adopted by Hoekstra and Mulder (1990), with the difference that they assume *there* to be a PP, whereas Moro assumes it to be an NP (Moro's approach is also followed in Den Dikken 1995a, Belvin and Den Dikken 1997, Zwart 1992, Broekhuis 2008).³⁹

³⁸The idea that *there* is base generated at D-structure and therefore part of the argument structure goes back to Jenkins (1975). Similarly, Bennis (1986) argues for expletive *het* 'it' in Dutch to be part of the argument structure of a clause as well.

³⁹Note that the original idea is Moro's even though the publication dates suggest that Hoekstra and Mulder (1990) were first.

The structure that Moro assigns to *there*-sentences here is the same as the one that he assigns to specificational copula constructions (inverse structures in his terminology), in which the noun phrase subject introduces a variable and the post-copular noun phrase specifies a value for that variable. A typical example would be *The lead actress in that movie is Ingrid Bergmann* in which the first part provides ‘the variable *x* such that *x* is the lead actress of the movie’ (Mikkelsen 2005, 1) and the noun phrase *Ingrid Bergman* gives the value for this variable (see also Higgins 1973, 153ff, Akmajian 1979, 19ff). In this sense, specificational copula clauses are different from predicational copula structures (canonical structures in Moro’s terms) in which the second noun phrase expresses a property of the subject as in *John is a fool* or *Mary is the president* on a par with adjectival or prepositional predicative phrases like *John is stupid* or *Mary is in the garden*.

Moro argues at length that these two types of copula constructions should be analysed as originating from one and the same small clause structure. The only difference is whether it is the subject (predicational structures) or the predicate (specificational structures) that moves into Spec,IP.⁴⁰

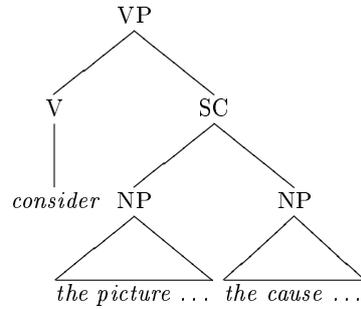
Moro’s main argument for treating *there*-sentences on a par with specificational copula constructions is the obligatory presence of the copula in both structures when embedded under *consider*. When a predicational sentence (canonical structure in Moro’s terms) is embedded under *consider*-type verbs, the copula is optional, as seen in (68-a). With a specificational copula structure the copula is obligatory, cf. (68-b).

- (68) a. John considers [a picture of the wall] (to be) [the cause of the riot]
 b. John considers [the cause of the riot] *(to be) [a picture of the wall]
 (Moro 1997, 37)

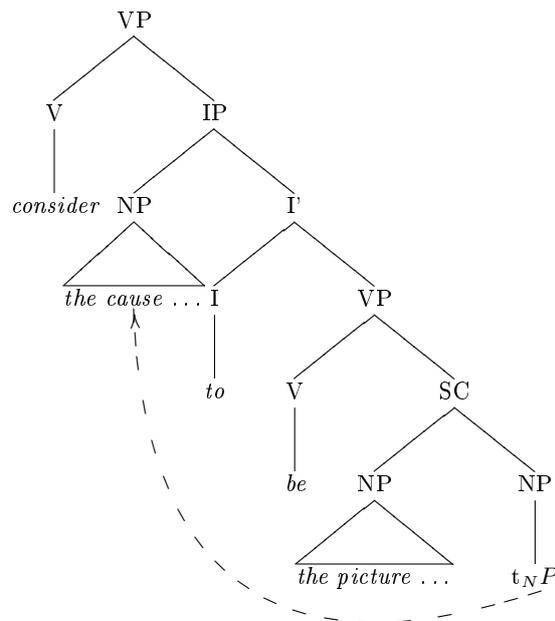
In Moro’s analysis these facts are straightforwardly explained. The specificational structure can only arise if the copula (and T) provides a landing site for the predicate DP. In predicational structures, either the bare small clause can be embedded, or the full IP, cf. the two structures in (69) and (70).

⁴⁰See Mikkelsen (2005) for a recent similar view; Rothstein (2001) and Heycock and Kroch (1997, 1999) argue against this predicate inversion analysis of specificational copula structures.

(69) Predicational/Canonical



(70) Specificational/Inverse



Turning to the *there*-construction, we observe that it patterns with the specificational structures when embedded under a verb selecting for a small clause: the copula cannot be left out. Moro (1997) takes this as evidence that *there* is a predicate that has to move across the copula.

- (71) a. I believe there to be a picture of the wall in the room.
 b. *I believe there a picture of the wall in the room.
 (Moro 1997, 119)

Specificational copula (i.e. inverse) structures show a further interesting property (both in English and Italian): they allow neither extraction of the post-copular noun phrase, cf. (72-a), nor extraction from the post-copular noun phrase, cf. (72-b).

- (72) a. *[Which picture]_i do you think [the cause of the riot]_j was [_{SC} t_i t_j]?
 b. *[Which wall]_i do you think [the cause of the riot]_j was [_{SC} [a picture of t_i] t_j]
 (Moro 1997, 45,49)

With the English *there*-construction matters are different: It is possible (at first sight) both to extract the post-verbal noun phrase (though with some restrictions), cf. (73) and to extract from it, as seen in (74).

- (73) a. ??Which actors were there in the room? (Heim 1987, 27)
 b. What is there in the refrigerator? (Aissen 1975, 7)
 c. How many men do you think that there were t in the room? (Moro 1997, 126)
- (74) Which wall do you think there was a picture of t?
 (Moro 1997, 124)

What we see here is an empirical difference between specificational copula structures and the *there*-construction. If these two structures are the same we need to find a reason why they behave differently. Moro (1997) argues that this difference can be explained by postulating a special property of *there* (and *ci*), namely that it lexicalizes the copula to make it an L-marker. In order to understand Moro's argument, we have to make two detours: we need to understand (i) the reason for the ungrammaticality of the examples in (72) and (ii) the difference between *what/how many X* extraction vs. *which X* extraction.

Let me start with the nature of the restrictions on extraction in specificational copula constructions. In Moro's view, the restriction on the extraction of the subject position in (72-a) is due to a violation of the ECP. Moro takes the ECP to be satisfied by antecedent government only (following Chomsky 1986a, 78). Chains include agreeing heads. Therefore, a trace in the small clause is only licensed if the noun phrase moves via the Spec,IP position giving rise to agreement with the copula. In specificational copula structures, this position is blocked by the inverted predicate noun phrase already. Thus, the subject of the small clause cannot be extracted (for details see Moro 1997, 45ff).

Subextraction from the post-copular noun phrase in specificational copula structures, cf. (72-b), is ungrammatical for a different reason: subjacency in the sense of Cinque (1990, 41f). In this version of subjacency one barrier is enough to create a subjacency violation and every maximal projection that is not L-marked is a barrier. A maximal projection is only L-marked if it is selected by a c-commanding head which is not distinct from [+V]. As the post-

copular noun phrase (the subject in the small clause) is not selected by the copula, it is not L-marked, and thus constitutes a barrier. Movement out of this noun phrase crosses a barrier and leads to a violation of subadjacency.

Let me now turn to the second detour that we have to make: the difference between *what/how many X* - extraction vs. *which X*-extraction. Following Heim (1987), Moro analyses *what*- and *how many X*-extraction as subextraction from a DP leaving behind a null D-head. *Which X* extraction is extraction of the full DP as shown in the following structures (see Heim 1987 for independent support for this structure):

- (75) a. $[_{DP} \text{ which X }]_i \dots t_i$
 b. $[_{NP} \text{ what }]_i \dots [_{DP} D^0 t_i]$
 c. $[_{NP} \text{ how many X }]_i \dots [_{DP} D^0 t_i]$

With this analysis of *what/how many X* vs. *which X*-extraction, the generalization for *there*-sentences is that extraction of the full post-copular DP is ungrammatical, whereas subextraction is possible, as seen in the following structures:

- (76) a. ??[$_{DP}$ Which actors $]_i$ were there t_i in the room?
 b. [$_{NP}$ What $]_k$ do you think that there $_j$ was [$_{SC}$ [$_{D}$ D^0 t_k] t_j]?
 c. [$_{NP}$ How many $]_k$ do you think that there $_j$ were [$_{SC}$ [$_{DP}$ D^0 t_k men $] t_j$] in the room?
 (Moro 1997, 127)

Thus, the difference between the specificational copula construction and the *there*-construction boils down to a difference in subextraction: whereas *there*-sentences allow this type of extraction specificational copula sentences do not.

Recall that the restriction on subextraction is due to a violation of subadjacency. Now, Moro claims that subextraction in *there*-sentences is possible because *there* (and *ci*) lexicalizes the copula. As a lexical verb it L-marks the DP (the subject of the small clause) which is then no longer a barrier to extraction. Subextraction in *there*-sentences is therefore possible. Extraction of the full DP as in (76-a) is ungrammatical: it leads to an ECP violation, just as it does in specificational copula structures.

Let me turn now to a different issue. Moro (1997) does not distinguish between deictic/anaphoric and expletive *there*; they are the same lexical item for him (contrary to most analyses of expletive structures). In his analysis, the clear difference in meaning between the two sentences in (77) is not due to two different lexical items but due to the two different LF structures given in (78).

- (77) a. Many people are there.
 b. There are many people.
- (78) a. [$_{IP}$ Many people [$_{IP}$ t are [$_{SC}$ t there]]]
 b. [$_{IP}$ people [$_{IP}$ there are [$_{SC}$ [$_{DP}$ many t] t_{there}]]]

The differences in LF structures arise from three independent principles. First, Moro stipulates a principle π that requires predicates to apply to variables at LF (Moro 1997, 139). Thus, every subject has to move in order to create a variable at LF.

(79) Principle π : Predicates apply only to variables at LF.

Secondly, Moro follows Higginbotham (1987) in assuming that the determiners that occur in *there*-sentences are adjectival, and therefore predicate-like (i.e. they have to apply to a variable at LF) even though they cannot act as true predicates in copular constructions like **The girls are many*. For *many* to apply to its complement NP, this NP has to raise at LF (according to principle π). Finally, locality restrictions on movement account for the distribution of the existential reading.

Taking these three ingredients together, a sentence like (77-a) cannot mean the same as (77-b) because they cannot have the same LF. Basically, the existential reading arises when DP-splitting is necessary. The locative reading arises when DP-splitting is impossible. In (77-a) the DP moves from the subject position and adjoins to the highest projection, IP, and the locative predicate *there* applies to the trace in subject position. The existential reading is ruled out: subextraction from the DP in subject position is not possible, as it would lead to a subjacency violation. By contrast, (77-b) cannot give rise to a locative reading, because the DP cannot move as a whole from its position as this would give rise to a ECP violation: it cannot move to the subject position first since this position is already occupied by *there* (see above). DP-splitting, on the other hand, is possible (and necessary): subextraction from the post-copular DP is possible and the extracted noun phrase adjoins to IP. Consequently, the existential reading is available, whereas a locative interpretation is excluded.⁴¹

1.3.2.2. Advantages

Moro's analysis has several advantages over the *there*-insertion proposals. First of all, it straightforwardly accounts for the optionality of the PP with *there*-sentences (and *ci*-sentences) versus its obligatoriness with copula structures: in the former case the PP (or AP) is an adjunct, while in the latter case it is the main predicate (cf. Moro 1997, 110).

- (80) a. There were [_{SC} many copies of the book t] in the studio.
 b. Many copies of the book were [_{SC} t in the studio].
 c. There were [_{SC} many copies t].
 d. *Many copies of the book were [_{SC} t].
 (Moro 1997, 119)

⁴¹With the assumptions above, Moro also grasps the definiteness effect, see 1.5. Furthermore, he derives the following differences between English and Italian from these principles as well. As *ci* is a clitic, it does not occupy the subject position and thus, the post-copular DP in a *ci*-sentence can move away, giving both the possibility of a locative reading and of the occurrence of proper names: *C'è Gianni*, cf. Moro (1997, 150ff).

A second advantage of his analysis, and of the base-generation proposals in general, is that it does not predict two noun phrases to occur with *there* (or *ci*). The constituents that follow the (complex) noun phrase are adjuncts, and noun phrases cannot be adjuncts.⁴² Thus, they are not expected to be possible in the *there* or *ci* structures (cf. Moro 1997, 110)

- (81) *There was a friend of mine an imposter.
(Williams 1984, 132)

A third advantageous aspect of this type of approach is that it straightforwardly handles the ungrammaticality of (82), which is notoriously difficult to deal with in the *there*-insertion approaches (cf. the discussion in 1.2.8.2).

- (82) *There seems a man to be in the room.

As *there* is base-generated in a small clause, it moves from this position to the infinitival Spec,IP position and from there it raises to the specifier position of the tensed I. If *a man* moved first to the embedded subject position, *there* could never cross the noun phrase without violating locality conditions on movement (cf. Moro 1997, 120).

1.3.2.3. Problems

Despite these appealing properties of Moro's approach, there are several problems for his analysis.

(i) The presence of the copula. The empirical similarity between specificational copula structures and *there*-sentences is that both of them have to co-occur with the copula when embedded under *consider*-type verbs, cf. the data in (71). Moro claims that the copula has to be present in these inversion structures to provide a landing site for the predicate. However, as Den Dikken (2006) points out, not all specificational (i.e. predicate inversion) structures need the copula to be present. The most relevant example comes from Heycock and Kroch (1999):

- (83) If Bill has an alibi for 6 p.m. that makes the murderer John.

In this example, we are clearly dealing with a specificational structure embedded under the verb *make*, however, the copula is not present. Thus, the copula is not a necessary condition for inversion to occur. The occurrence of the copula is not a sufficient condition for predicate inversion, either, as in sentences like *I consider John to be a fool* the copula is present without inversion. Thus, we need to explain the presence vs. absence of the copula in non-finite structures independently of inversion (see chapter 2, section 2.8.3 for a suggestion).

⁴²There are a few exceptions to this rule: temporal expressions like *last year*, *a few days ago*. These are of course also possible with *there*-structures.

(ii) **There-V structures.** Moro's analysis faces a serious empirical problem. His analysis of *wh*-extraction with *there* sentences incorrectly predicts that subextraction should be possible with *there-V* structures (*there*-sentences in which the main/tensed verb is not *be*) as well. Full verbs are always L-markers. If L-marking (and subjacency) were the relevant concept for making subextraction possible, extraction from the noun phrase in *there-V* structures should pattern in the same way as extraction from *there-BE* sentences, contrary to fact, cf. (85) and (86) vs. (87) and (88). This observation goes back to Aissen (1975). In the present study, the data was validated in a Magnitude Estimation Experiment (see 2.2 and appendix A for details). Note that I mark the examples sentences taken from the experiment marked with a special scale, cf. (84), to differentiate them from data collected by different means. Judgements in a Magnitude Estimation Experiment come out as numerical values, which I translated into the scale below to facilitate readability. The scale represents the clustering of significant vs. non-significant differences. The judgement given for each sentence is a judgement for the structure type and not for the individual sentence.

(84) Judgement scale (divided according to statistical significance)

1.0 - 1.3	+++	0.0 - -0.1	-
0.6 - 0.9	++	-0.2- -0.4	--
0.3 - 0.5	+	-0.5 - -0.8	---
0.1 - 0.2	+/-		

In this experiment, I found that there is no significant difference between *which* *X*-extraction vs. *what/how many* *X*-extraction with *there-V* structures, cf. (85) and (86). This means that extraction of the full-DP vs. extraction from the DP is equally unacceptable with *there-V* structures, in contrast to what we find with *there-BE* structures, cf. (87) and (88) (for more details on this issue, see section 2.2 and appendix A).

(85) *there-V* construction without PP

- a. +/- There appeared an error message.
- b. --- What did there appear?
- c. --- Which message did there appear?
- d. --- How many messages did there appear?

(86) *there-V* construction with PP

- a. +/- There arrived a new witness at the last hearing.
- b. --- What did there arrive at the last hearing?
- c. --- Which witness did there arrive at the last hearing?
- d. -- How many witnesses did there arrive at the last hearing?

(87) *there-BE* construction without PP

- a. +++ There was an error message.
- b. ++ What did you reckon that there was?

- c. -Which message did you reckon that there was?
 - d. +++How many messages did you say there were?
- (88) *there*-BE construction with PP.
- a. +++There was a new witness at the last hearing.
 - b. +++What did you say there was at the last hearing?
 - c. +/-Which witness did you say there was at the last hearing?
 - d. ++How many witnesses did you say there were at the last hearing?

(iii) Inversion Structures. Additionally, I think that analysing inversion structures and the *there*-BE construction in the same way is generally on the wrong track.⁴³ To make this point clear let me look at locative inversion structures which are the most obvious instance of predicate inversion (see Den Dikken 2006, Broekhuis 2005, 2008, Bresnan 1994, Hoekstra and Mulder 1990 for major data and analyses of these structures). Just like specificational sentences, locative inversion constructions do not allow extraction of and from the post-verbal noun phrase. Furthermore, there is no difference between lexical verbs and copula verbs in the structure. Therefore, L-marking cannot be the right concept for (dis-)allowing extraction from the noun phrase in these structures either.

- (89) Locative Inversion with *be*
- a. ++At the construction site was a big crane.
 - b. ---What did you say on the construction site was?
 - c. ---Which crane did you say on the construction site was?
 - d. ---How many cranes did you say on the construction site were?
- (90) Locative Inversion with other verbs
- a. ++Down the street came an army truck.
 - b. ---What did down the street come?
 - c. ---Which truck did down the street come?
 - d. ---How many trucks did down the street come?
- (91) Subextraction
- a. Imogen thinks that on this wall hung a picture of Brian.
 - b. *Which guy does Imogen think that on this wall hung [a picture of t]?
- (Den Dikken 2006, 122)

I take these data to show that the restriction on the extraction of and subextraction from the post-verbal DP is specific to (this type of) inversion structures and independent of Moro's ECP/subjacency account. Inversion structures arise from the information structural need to leave the subject behind in a low position/at the right edge to allow it to be in focus. *Wh*-movement is incompatible

⁴³Note that the parallelism makes sense for the *there*-V structures, cf. 3.2.

with such a structure, as it destroys this configuration. Thus, inversion structures are incompatible with *wh*-movement. There are several proposals in the literature that formalize this intuition (see Rochemont and Culicover 1990, Bresnan 1994, Broekhuis 2008)

(iv) The role of locality restrictions. Further support for the position that the limitation on *wh*-movement cannot be accounted for in the way Moro suggests comes from predicational copular constructions. Recall that the reason why the post-copular noun phrase cannot be *wh*-extracted as a whole is due to an ECP violation. And it holds for the post-copular noun phrase, independent of whether it is a subject or predicate. A noun phrase can escape the small clause only via the Spec,IP position. As soon as either of the noun phrases has moved to this position, the second noun phrase is frozen in place. Thus, extraction of the full noun phrase is predicted to be ungrammatical both in specificational as well as in predicational structures. Moro claims that this prediction is actually true, cf. (92).

(92) * $[_{DP}$ Which cause] $_j$ do you think $[_{DP}$ a picture of the wall] was $[_{SC}$ t_i t_j]? (Moro 1997, 59)

However, the example in (92) is misleading as it is difficult, if not impossible, to construe a context in which the question for *which cause* makes sense. As the following example shows, extraction of a full noun phrase in a predicational structure is felicitous.

(93) Whose father do you think John is?

If it is true that the predicative noun phrase can indeed *wh*-move over the subject position, even when the subject occupies the Spec,IP position, the explanation for the restriction on the extraction of the DP in specificational copula constructions is lost as well.

(v) The existential meaning. Finally, Moro's proposal of how the existential meaning arises is not convincing. Recall that DP-splitting is necessary for the existential meaning to arise, and it is independent of *there*. Consequently, we expect existential readings to arise with a predicative *there* following an indefinite noun phrase in a position from which subextraction is possible. However, this is not the case as can be seen from the following examples. (94-b) shows that subextraction is possible from the subject position of a small clause embedded under *want*. Thus, we expect DP-splitting to be possible as well, and an existential reading should be at least possible under Moro's analysis. However, (95) does not mean that John wants dinosaurs to exist.

(94) a. John wants someone in the garden.
b. What does John want a picture of in the garden?

(95) John wants dinosaurs there.

Note that Moro's analysis of DP-splitting at LF raises an additional question. If *there* is a pro-predicate and predicates apply to variables at LF, what does *there* apply to in (78-b)? It cannot apply to its subject in the small clause, as the subject cannot be moved away in Moro's account. And I can see no other way for *there* to satisfy π . At the same time, *there* should be subject to π as well. Otherwise we would make a distinction between the two, which does not fit Moro's proposal, either.

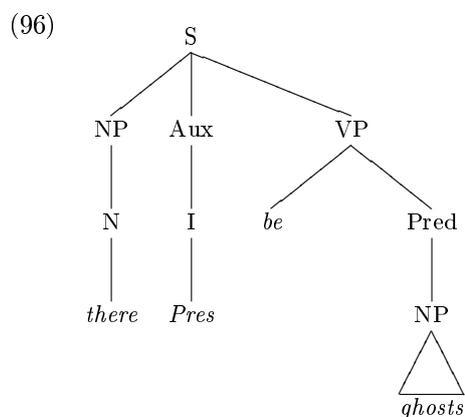
1.3.2.4. Summary

Summarizing this section, Moro's account has several advantages over the *there*-insertion approaches: it accounts for the optionality of the PP/AP with *there*-structures, the obligatoriness of *there* in *there be NP* sentences, and the ungrammaticality of **There seems a man to be in the garden*. His account nevertheless faces serious empirical problems. First of all, the reason for analysing *there*-sentences as predicate inversion structures, namely that the copula is necessary when embedded under *consider*-type verbs, was shown to be neither a necessary nor a sufficient condition for predicate inversion. Thus, the presence vs. absence of the copula is independent of predicate inversion and cannot be taken as support for Moro's approach. Secondly, Moro's account of the restrictions on *wh*-movement of and from the post-copular noun phrase (the subject of the small clause) in predicate inversion structures was shown to make the wrong predictions. Appealing to L-marking to account for the possibility of subextraction predicts that lexical verbs with *there* allow subextraction in the same way as *there*-sentences do, contrary to fact. Furthermore, his ECP account of the restriction on the extraction of the DP in existential sentences cannot be upheld, either. It predicts that neither the predicative DP in predicative/canonical structures nor the subject DP in specificational/inverse structures can be extracted. However, the former is not true: a predicative DP can be extracted in a predicative/canonical structure. Finally, Moro's syntactic account of the existential meaning makes the wrong predictions for a sentence like *John wants dinosaurs there*.

1.3.3. Predicative-NP approaches: Williams (1994)

1.3.3.1. The general outline

The second line of research in the *there*-in-core-predication approaches are those in which *there* is the subject of predication and the predicate is the post-copular noun phrase. To my knowledge, Jenkins (1975) was the first to propose such an analysis for the *there be NP* cases; other major proponents are Williams (1984, 1994, 2006), Higginbotham (1987), McNally (1997), Zamparelli (2000), Hazout (2004). Jenkins' (1975, 9) analysis is illustrated in (96).



Support for an analysis of the noun phrase as predicate comes from later studies. They concentrate on showing that the post-copular noun phrase behaves like a predicate nominal (more or less independent of the question whether the material following the copula is a complex noun phrase, as proposed by Jenkins 1975 and Williams 1980, 1994, 2006 or more than one constituent, as proposed by McNally 1997, Zamparelli 2000, Hazout 2004). Williams (1994) provides the following arguments for such an analysis. First of all, he observes that predicates are much more difficult to extract from *wh*-islands than arguments are, cf. (97) vs. (98).

- (97) a. ?What do you wonder who fixed?
 b. ?Who do you wonder why Bill likes?
 c. ?What do you wonder who believes handy?
 (adapted from Williams 1994, 137)
- (98) a. *How tall do you wonder who became?
 b. *How foolish do you wonder why Bill considers anyone t?
 (adapted from Williams 1994, 137)

The post-copular noun phrase in *there*-constructions behaves on a par with predicates, cf. (99), being just as degraded as extraction of predicates.⁴⁴

⁴⁴In Williams' analysis the PP can be part of the noun phrase itself. It can be stranded

- (99) a. *Who do you wonder why there was at the party?
 b. *How many people do you wonder why there were?

A second argument for analysing the post-copular noun phrase as a predicate is that it exhibits narrow scope, just like predicate nominals in other copular constructions do (cf. Williams 1994 and McNally 1997; for the observation that noun phrase in *there*-constructions obligatorily exhibit narrow scope, cf. Milsark 1977).

- (100) a. There weren't two people drunk. Neg > 2, *2>Neg
 b. John and Mary aren't two students I know. Neg > 2, *2>Neg

In her dissertation, McNally (1997) provides two further examples in which the post-copular noun phrase behaves on a par with predicate nominals in predicative copular structures. It is not possible (for most speakers) to relativise a predicate nominal with a *wh*-relative pronoun (for more details on amount relatives of this type see Carlson 1977a, Cornilescu 1996, Grosu and Landman 1998, McNally to appear).

- (101) a. The people *who/that/Ø there were at the party were drunk.
 b. They dressed like the eccentric women *who/that/Ø they were.
 (McNally 1997, 85)

Finally, both in *there*-structures and in other copula structures, strong quantifiers can only occur if they range over kinds, (cf. McNally 1997).

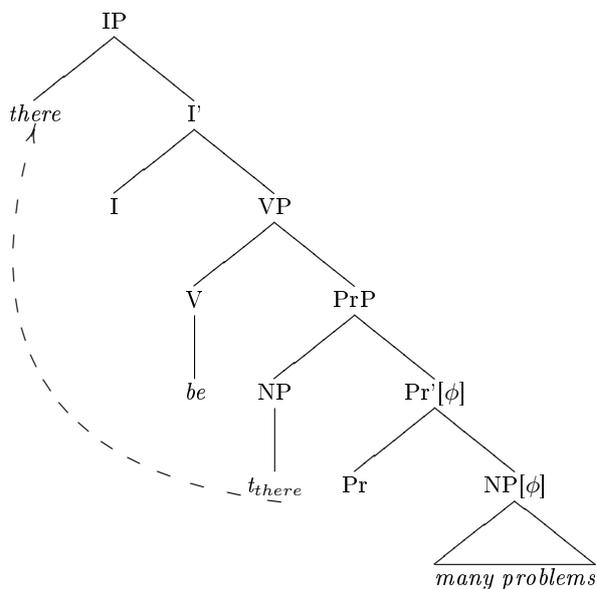
- (102) a. There was every kind of wine available for tasting.
 b. ??There was every worker ready.
- (103) a. John has been every kind of doctor.
 b. *John has been every doctor.

The basic idea that *there* is the subject of predication whereas the noun phrase is the predicate of the structure has been implemented in different ways. One aspect of variation is the base position of *there*. Williams (1994) argues that *there* is base-generated in Spec,IP and the noun phrase is the complement of the copula. Thus, the predication relationship is not local (which is a general property of predication in Williams' thinking). Zamparelli (2000) and Hazout (2004), on the other hand, have implemented the basic intuition in a small clause analysis of the type in (104).⁴⁵

due to an independent process of (PP) extraposition. The same holds for adjectives or other elements that can be stranded.

⁴⁵Zamparelli (2000) assumes this structure for the (bare) existential construction only. He takes both the English *there*- as well as Italian *ci*-sentences as ambiguous between an existential and a locative reading. The locative structure, according to Zamparelli, should originate in a small clause structure of the type Moro (1997) proposed, where *there* and *ci* are predicates.

(104) Hazout (2004, 411)



The second difference in the analysis is whether everything that follows the verb *be* is a single constituent, i.e. a complex noun phrase, or can be more than one constituent. Jenkins argues that at least in a number of *there*-sentences, everything that follows the noun phrase (which could be a PP, AP or participle) forms a complex noun phrase, cf. (105). Evidence in favour of this position comes from the fact that the same types of complex noun phrases occur in typical noun phrase positions, as shown in (106):

- (105) a. There are [some people who don't like beer].
 b. There are [a lot of people willing to help].
 c. There was [a man with a hat on].
 (Jenkins 1975, 16)
- (106) a. [Some people who don't like beer] are waiting for you.
 b. [A lot of people willing to help] are waiting for you.
 c. [A man with a hat on] is waiting for you.
 (Jenkins 1975, 16)

Jenkins already showed that this complex noun phrase analysis cannot be the only analysis, however. He observed that in some cases, the noun phrase plus what follows it in *there*-sentences cannot occur in a typical noun phrase position. Thus, it cannot be a single noun phrase constituent.⁴⁶

⁴⁶Jenkins takes this second structure to be *there be NP S* with *S* being a reduced cleft. Evidence for this analysis comes from intonation: both in a cleft structure and in this

- (107) a. There is a girl who knows you standing on the corner.
 b. *A girl who knows you standing on the corner is waiting for the bus.

Safir (1987b) provides another argument against the complex noun phrase analysis. Extraction from an additional constituent is possible, a fact which is unexpected if the whole phrase is a complex noun phrase. Extraction from complex noun phrases leads to ungrammaticality (cf. Ross 1967).

- (108) a. ?To what sorts of colleges are there many students applying t?
 b. *To what sorts of colleges did John meet many students applying t?

Another argument against the complex noun phrase analysis is brought up by Lumsden (1988) (referring to Pollard's 1984 dissertation). If *XP* were one constituent in the structure *there be XP*, it should be possible to extract both of them together, contrary to fact:

- (109) a. There is a unicorn available.
 b. *How many unicorns available are there?
 c. How many unicorns are there available?
 (Lumsden 1988, 51, citing from Pollard 1984)

As an alternative to the complex NP analysis, McNally (1997) and Zamparelli (2000) suggest that the noun phrase can be followed by an adjunct to the VP/IP. I will discuss the two positions in detail in chapter 3, section 3.4-3.6, where I will show that the complex noun phrase analysis cannot be the only analysis for these types of structures. Instead, I follow McNally (1997) (and follow-up work) in the suggestion that the noun phrase can be followed by an adjunct to the VP.

1.3.3.2. Advantages

The predicative noun phrase approaches to the *there*-construction have several advantages over the *there*-insertion approaches. First, of all, as the core predication is between *there* and the noun phrase, the PP present in some *there*-sentences is not a predicate, but an adjunct either to the noun phrase (in

type of *there*-structure the main stress in an unmarked contour falls on the NP:

- (i) That's BELMONDO in the garden. Jenkins (1975, 29)
- (ii) a. There is a MAN in the garden.
 b. There's a MAN standing on the corner.
 c. There's a MAN being beaten up outside.
 (Jenkins 1975, 30)

The same type of cleft-reduction is argued for with verbs of perception such as *hear*, *feel* and verbs like *find*, *catch*, *have* and *want* (similarly to Stowell's analysis).

Jenkins' 1975 and Williams' 1984, 1994 approach) or to the VP (in McNally's 1997 approach). As adjunct the PP is expected to be optional, cf. (110).

(110) There are three good books about existentials (on the shelf).

Secondly, it is not necessary to stipulate that **Many books were* is ungrammatical, cf. (80) above. As part of the core predication, *there* cannot be left out. Thirdly, these approaches straightforwardly predict that **There was a friend of mine an imposter* is unavailable. Everything that follows the noun phrase has to be an adjunct (either to the noun phrase or the VP/IP), but since noun phrases cannot be adjuncts they cannot occur. Finally, they do not predict the occurrence of **There seems a man to be in the garden*: In Williams (1984, 1994) *there* occupies the Spec,IP position in the base and there is no reason for the noun phrase to move to the higher position. In the small clause analysis by Zamparelli (2000), Hazout (2004), *there* moves from Spec,Pred to the Spec,IP and can move higher successive cyclicly in line with locality restrictions on movement.

1.3.3.3. Problems

There is also a set of data that are unexpected under the predicative noun phrase analysis.

(i) Other predicates. If *there* can be the subject of a predicate nominal, it is not obvious why it is restricted to nominals and cannot occur with predicative adjectives (or PPs) (cf. Jenkins 1975 for the observation)

- (111) a. *There is red.
 (Jenkins 1975, 39)
 b. *There is in the garden.

Hazout (2004) suggests a possible solution to this problem. He follows the suggestion by Chomsky that the major difference between *there* vs. *it* lies in a different set of ϕ -features. He proposes that *there* needs to inherit the ϕ -features from a noun phrase, and neither adjectives nor PPs can provide these features. However, Hazout's suggestion does not immediately account for the fact that bare singulars are also not possible with *there*-sentences, though they are with copula structures, as observed by Kallulli (to appear).

- (112) a. She is professor of philosophy at Yale.
 b. *There is professor of philosophy at Yale.
 (Kallulli to appear)

(ii) Tests for predicatehood. A more problematic set of data for the predicative noun phrase approaches is that the noun phrase in *there*-sentences does not behave as a predicate nominal under the available tests for predicatehood

(cf. Heggie 1988, Zamparelli 2000, Rothstein 1985, 2001 among others). Let me go through the applicable tests.

(A.) *Complement of consider-type verbs.* Usually predicate nominals can be the predicate after *consider*-type verbs, cf. (71). If *there* were a typical subject of *there*-sentences and the noun phrase a predicate nominal, they should be available as a small clause without *be*, contrary to fact.

- (71) a. I believe there to be a picture of the wall in the room.
 b. *I believe there a picture of the wall in the room.
 (Moro 1997, 119)

(B.) *Relativisation by which.* It has been established that *which*-clauses can relativise predicates (cf. Rothstein 2001, 257) as illustrated in (113-a). However, the post-copular noun phrase of an existential construction cannot be relativised in this way, cf. (113-b):⁴⁷

- (113) a. John is a murderer, which is a horrible thing to be.
 b. *There's a murderer, which is a horrible thing to be.

(C.) *Non-restrictive relative clause with who.* Another test for predicate nominals vs. argumental noun phrases is that the former cannot be modified by a non-restrictive relative clause with *who* (cf. Rapoport 1987, 135 and Doron 1988, 289).

- (114) *Rebecca is a good eater_i, who_i has been there for quite a while.
 (Rapoport 1987, 135)

In *there*-sentences these non-restrictive relative clauses are possible:

- (115) And there was one girl, who fancied herself in love with a naval cadet, who could actually produce real tears during the singing of ... (BNC, text="EFP" n="68")
 (116) There was another visitor, who was as discreet - and just as vital to the Shah as Dr Flandrin. (BNC, text="G3R" n="1190")

Note that the restriction is not about the unavailability of non-restrictive relative clauses with predicate nominals in general, but about the restriction on *who* with a predicate nominal. Non-restrictive relative clauses are possible

⁴⁷The sentence can be improved to the extent that some native speakers find it acceptable as in (i) (thanks to Henk van Riemsdijk p.c. for suggesting the example). I suspect that this improvement is related to the possibility for *which* to refer back to a situation as in (ii) under the interpretation that *It is good that Mary got a job*.

- (i) There's a murderer, which is a horrible thing for there to be.
 (ii) Mary got a job, which is good.

with *which* as the following examples show (thanks to Henk van Riemsdijk for suggesting the examples).

- (117) a. Bush is president of the United States, which is the most powerful position in the world.
 b. *Bush is president of the United States, who is the most powerful person in the world.

Furthermore, when the second nominal in the structure is definite, non-restrictive relative clauses become available again. Note, however, that it is difficult to exclude an identity or equative reading here.

- (118) a. Bush is the president of the United States, who is the most powerful person in the world.
 b. In this movie, Belmondo is Beaumont, who escaped from a prison in Africa.

(iii) Types of noun phrases. Apart from the fact that the tests on predicatehood fail with the predicate nominal in *there*-sentences, Higginbotham (1987) provides another piece of evidence against the predicatehood of the noun phrase in *there*-sentences. Not all noun phrases that can be predicates can occur in the *there*-construction, cf. (119)

- (119) a. Everything I respect, John is.
 b. *There is everything I respect.
 (Higginbotham 1987, 54)

(iv) Contrast to other predicate nominals. The final piece of evidence against the analysis of *there*-sentences in terms of standard copula structures is that *there*-sentences are not fully equivalent to copula structures of the *NP be NP* type. The class of quantifiers that occur with *there* is bigger than the class of quantifiers that are available with predicate nominals. *Several/many/few* are certainly available in the *there*-construction, but not as readily in copula constructions.

- (120) a. *We consider the boys several/many idiots.
 b. *They believed the men a few soldiers.
 (Rothstein 1985, 103)

Taken together, the predicative-NP approach has clear advantages over the *there*-insertion approaches but it also faces several problems. The first important problem is that it cannot account for the fact that *there* cannot be the subject of other predicates like adjectives, or predicative PPs. Secondly, the noun phrase in the *there*-construction fails the tests for predicatehood. Finally, the types of quantifiers available with the *there*-construction is not exactly the same as the quantifiers that occur with copula structures.

Note that most of these shortcomings of the predicate noun phrase approach relate to the predicative nature of the noun phrase and not to the overall structure of the sentence. In my own approach, I will pick up the idea from these approaches that *there* is the subject of predication. However, I depart from these approaches in the type of predication relationship that I assume. As I will show in chapter 2, it is not the subject of a predicate nominal but of a more complex predication relationship.

1.3.4. Conclusion

The *there*-in-core-predication approaches have several strong advantages over the *there*-insertion approaches:

1. The optionality of the PP/AP/participle is explained as the PP is taken to be an adjunct (either to VP or the noun phrase).
2. The obligatoriness of *there* (i.e. the ungrammaticality of **Many books are* outside ellipsis contexts) is due to the fact that *there* is part of the core predication structure.
3. The ungrammaticality of **There seems a man to be in the garden* follows from general principles of successive cyclic movement.

Despite these advantages over the *there*-insertion approaches, the two types of approaches have several shortcomings. Moro's approach (which takes *there* to be the predicate) makes the wrong prediction for the extraction facts both for *there*-V structures and locative inversion structures with a verb. Under his analysis subextraction from the post-verbal noun phrase should be possible in these structures, contrary to fact. Secondly, Moro's account of the extraction facts in general has been shown to be problematic. Subjacency and the ECP seem not to be the relevant principles. Finally, his semantic analysis of the existential meaning is not adequate.

The predicative-NP approaches (as proposed by Williams 1994, 2006, Zamparelli 2000, Hazout 2004) face serious difficulties in accounting for the differences between noun phrases in the *there*-construction and predicate nominals in copula structures. The noun phrase in the *there*-sentences fails several tests for predicatehood. Furthermore, not all quantifiers that can co-occur with *there* can occur in predicate nominal structures.

Thus, none of the approaches discussed so far provide a fully satisfactory account of the English *there*-construction. However, it is clear that the *there*-in-core-predication approaches fare much better than the *there*-insertion approaches with respect to the core data of the English *there*-sentences. My own analysis for the *there*-BE structures, therefore, will fall in the class of *there*-in-core-predication approaches, and I will assume along with Williams (1984, 1994) that *there* is the subject of predication. I depart from his suggestion in that I do not take the nominal in the structure to be the predicate, but it is part of a more complex predication structure.

1.4. Other approaches

In this section, I discuss two recent approaches to the *there*-construction that do not easily fit in the categorization above. The study by Felser and Rupp (1997, 2001) is similar to the *there*-insertion approaches in that the sentences embed a core predication independent of *there*. At the same time, they take *there* to be a meaningful part of the structure, namely an overt expression of the spatio-temporal (event) argument (cf. Kratzer 1995). Kayne (2006) suggests a completely different account in which *there* is base-generated inside the noun phrase and is moved from there into the subject position of the clause.

1.4.1. Spatio-temporal argument: Felser and Rupp (1997, 2001)

É. Kiss (1996) and Ramchand (1996) suggested that *there* is the overt realization of the Kratzerian spatio-temporal (event) argument. Felser and Rupp (1997, 2001) take up this idea and work it out in more detail.⁴⁸

The starting point for this type of analysis is the distinction between stage-level and individual-level predicates. Stage-level predicates are adjectives or properties that hold of their subject only for a restricted time, e.g. *hungry*, *sick*, *happy*. Individual-level predicates hold of their subject without a time limit, e.g. *blond*, *intelligent*, *blue-eyed*. This conceptual distinction was shown to be relevant for the syntax and semantics of various structures, two of which are relevant in the present discussion.⁴⁹

As we have seen above, the distinction is relevant for the *there*-construction which allows only stage-level but not individual-level predicates (cf. Milsark 1974, 1977) as seen in (121).

- (121) a. There are firemen available.
 b. *There are firemen intelligent.
 (Milsark 1977)

Furthermore, Carlson (1977b) showed that it is also relevant for the interpretation of bare plurals. Bare plural subjects of stage-level predicates can be interpreted existentially, while bare plural subjects of individual level-predicates can only have a generic interpretation. For illustration, consider the examples in (122) and (123).

- (122) a. Fireman are available. (existential/generic)
 b. Firemen are altruistic. (generic only)

⁴⁸Note that Mohr (2005) provides a similar proposal for Dutch *er*, a proposal which I consider adequate for Dutch, but as we will see below, not for English. Basilico (1997) assumes a similar structure with the difference that *there* is a topic quantifier instead of an event argument.

⁴⁹Other contexts in which the distinction is relevant are: the interpretation of absolute constructions (cf. Stump 1985), extraction (cf. Diesing 1992), modification of locatives (cf. Kratzer 1995), interpretation of *when*-clauses (cf. Kratzer 1995), among others.

- (123) a. Dogs bark. (existential/generic)
 b. Dogs like meat. (generic only)

The sentence in (122-a) can be interpreted to mean that there are available firemen, but (122-b) cannot mean that there are altruistic firemen. The latter has only the generic interpretation, namely that it is a property of firemen that they are altruistic.

Diesing (1992) accounts for these facts from bare plurals (and indefinite noun phrases in more general) by suggesting that stage-level predicates can have their subjects in two different subject positions at LF, a VP-internal subject position or a VP-external (IP-related) subject position, while individual-level predicates can only occur in a VP-external subject position (they are base-generated external to VP). A subject within a VP is interpreted existentially, because it is in the scope of existential closure. Subjects outside the VP are interpreted generically, due to Diesing's mapping hypothesis: material above VP is mapped into the restrictive clause (of a generic quantifier present with generic clauses), while material inside the VP is mapped into the nuclear scope (of the generic quantifier).

Kratzer (1995) adds another explanation to Diesing's proposal. She follows Diesing (1992) in the analysis that subjects inside the VP are interpreted existentially, while subjects outside the VP are interpreted generically. Stage-level predicates allow bare plural subjects to be interpreted existentially, because they have an additional, non-overt spatio-temporal argument that occupies the VP-external subject position. Thus, the overt bare plural argument is forced to remain VP-internally (at LF) and gets an existential interpretation. The possibility of a generic interpretation of the overt noun phrase (e.g. *dogs* in (123-a)) with (apparent) stage-level predicates is due to their ambiguity between a stage-level and an individual-level interpretation.⁵⁰

Against this background, Felser and Rupp (1997, 2001) suggest that *there* is the overt realization of this spatio-temporal argument that is present with stage-level predicates as proposed by É. Kiss (1996) and Ramchand (1996). They suggest that this spatio-temporal argument is merged in Spec,AspP (a projection between PredP/vP and IP) and it receives a theta-role from the entire vP (similar to the AGENT or CAUSER role in a layered VP approach). This analysis straightforwardly explains the fact that only stage-level predicates can occur with *there*: only these predicates have the appropriate argument structure. Secondly, this analysis explains another well-known fact about the *there*-construction: bare plurals must be interpreted existentially in *there*-sentences. Jenkins (1975) already observed that bare plurals are ambiguous between an existential reading and a generic reading (for an overview on genericity see Krifka et al. 1995). (124-a) can mean that (i) it must be the case that (some) minors are in the dorm by midnight, or that (ii) it holds for all minors

⁵⁰ Another difference in Kratzer's analysis is that she shows that individual-level predicates allow an existential interpretation if they are unaccusative predicates, cf. Kratzer (1995, 135f).

that they have to be in the dorm by midnight. With *there*-sentences (124-b) only the first, the existential reading, is available.

- (124) a. Minors must be in the dorm by midnight.
 b. There must be minors in the dorm by midnight.
 (Jenkins 1975, 47)

Similarly, *some* can be interpreted in two ways in (125-a). On its first (existential, cardinal, weak) reading, (125-a) means that a small number of random girls were at the party. On its second (partitive, strong) reading, (125-a) means that at least two of a known set of girls were at the party. Again, (125-b) lacks the second reading.

- (125) a. Some girls were at the party.
 b. There were some girls at the party.
 (Jenkins 1975, 94)

Now, if *there* occupies the higher subject position, the post-copular noun phrase has to remain vP-internally, hence it can only be interpreted existentially. Generic readings or strong quantifier readings are impossible. As for the distribution of overt vs. non-overt event arguments and subject position, Felser and Rupp (1997) propose that when the event argument is overt, it moves to Spec,IP to satisfy the EPP requirement and the subject of the embedded clause must stay vP-internally. Whenever the event argument is non-overt, the subject moves to the specifier of IP.⁵¹

This suggestion is quite appealing at first sight. However, it also has several shortcomings. First of all, in combination with the subject in vP hypothesis, the account overgenerates. If *there* is inserted in Spec,IP we would expect transitive verbs to be available with *there*. As Felser and Rupp (1997) want to generalize this approach to all expletives in Germanic languages, this prediction is rather welcome: other Germanic languages like Dutch, German, Icelandic and Yiddish do allow for these so-called transitive expletive constructions. However it leaves the issue pending why English (and the mainland Scandinavian languages) do not allow these structures.

Secondly, this account shares the major shortcomings with the *there*-insertion approaches. They crucially assume that *there*-sentences contain an embedded predicative structure with either an AP or PP being the main predicate. But as we have seen already, PP/AP are optional in these structures.

Thirdly, even though Felser and Rupp (2001) claim to have a solution for the ungrammaticality of **A solution is* (outside ellipsis contexts) vs. *There is a solution*, it is rather suspicious. They claim that without *there* ‘the predicate nominal *a solution*’ is not satisfied by any subject.’ (Felser and Rupp 2001, 312). The proposal is not satisfactory for two reasons. First of all, we have seen

⁵¹In order to account for word order possibilities in transitive expletive constructions, Felser and Rupp (1997) propose that Diesing’s mapping hypothesis has to be weakened. Subjects get an existential interpretation when they are in the scope of the event argument.

above (section 1.3.3) that the nominal in the structure is not a predicate. Secondly, predicate nominals tend to be individual-level predicates which cannot combine with the spatio-temporal event argument.

Finally, this analysis heavily relies on the analysis of stage-level vs. individual-level predicates in Kratzer's (1995) terms of a spatio-temporal argument. However, Maienborn (2003, 2005) raises some doubts about this analysis that I will review in the following.

A. According to the Kratzer/Diesing analysis, stage-level predicates are expected to always allow a stage-level interpretation. However, there are examples where this prediction might not be true. Maienborn (2003) (referring to Bäuerle 1994) and Higginbotham and Ramchand (1997) provide the following examples in which the adjectives seem to allow only an individual-level interpretation.

- (126) Feuerwehreute sind hungrig/müde/aufgekratzt.
Firemen are hungry/tired/excited.
(Maienborn 2003)

- (127) a. (Guess whether) firemen are nearby/at hand.
b. ?(Guess whether) firemen are far away/a mile up the road.
(Higginbotham and Ramchand 1997, 66)

B. Furthermore, individual-level predicates are not expected to allow an existential interpretation of bare plural subjects, however, such examples can also be produced.

- (128) a. Drinkers were under-age. (ILP: no existential reading)
b. John was shocked by his visit to the Red Lion. Drinkers were under-age, drugs were on sale, and a number of fights broke out while he was there.
(ILP: existential reading available)

C. Maienborn argues against a spatio-temporal argument with stage-level predicates in copula/small clause structures: (i) They cannot be complements to perception verbs (only a depictive analysis is possible), cf. (129) (ii) Copula sentences in general (independent of the individual vs. stage-level properties) do not allow for external locative modification (only frame adverbials are possible), cf. (130). (iii) Copula structures are not modifiable by manner adverbials, independent of the individual vs. stage-level distinction, cf. (131).

- (129) a. *Angela sah [_{SC} die Blätter welk]
Angela saw [the leaves faded]
'Angela saw the leaves faded.'
b. *Karin sah [_{SC} die Hose fleckig]
Karin saw the trousers stained
'Karin saw the trousers stained.'

- c. *Bardo sah [_{SC} die Vase kaputt]
 Bardo saw the vase broken
 ‘Bardo saw the vase broken.’
 (Maienborn 2003, 84) GERMAN
- (130) a. *Luise ist (ja doch) in der Küche ohnmächtig.
 Luise is (PRT PRT) in the kitchen unconscious
 ‘Luise is in the kitchen unconscious.’
 b. *Jochen ist (gerade) in der Hängematte wach.
 Jochen is (right-now) in the hammock awake
 ‘Jochen is in the hammock awake.’
 c. *Der Sekt ist (gerade) im Wohnzimmer warm.
 the champagne is (right-now) in-the living-room warm
 ‘The champagne is in the living room warm.’
 (Maienborn 2003, 84) GERMAN
- (131) a. *Heidi war mit ihrer Nichte intelligent/selbstlos/Vegetarierin.
 Heidi was with her niece intelligent/unselfish/vegetarian.
 ‘Heidi was with her niece intelligent/unselfish/vegetarian.’
 b. *Jochen war (gerade) unsicher auf der Leiter.
 Jochen was (right-now) unsteady on the ladder.
 ‘Jochen was unsteady on the ladder.’
 (Maienborn 2003, 89) GERMAN

Even though this evidence is not conclusive, I think it is important to bear in mind that the individual- vs. stage-level distinction might need to find a different analysis.

Concluding this section, I think the suggestion by Felser and Rupp (1997, 2001) is appealing, as it has a rather straightforward explanation for the predicate restriction and the interpretation of bare plurals in the English *there*-construction. However, we have seen that it has serious shortcomings as well. Just as the *there*-insertion proposals, it relies on a separate predication structure available in the vP, contrary to fact. *There* can occur without a PP (or any other) predicate, thus, the proposal by Felser and Rupp (2001) undergenerates. Furthermore, *there* does not occur with transitive verbs, a possibility that is not ruled out by Felser and Rupp (2001). In short, I consider it plausible that *there* has some meaning of its own that comes close or is equivalent to the spatio-temporal argument proposed by Kratzer. However, the specific implementation by Felser and Rupp (2001) cannot be upheld and further adjustments are necessary for this solution to be viable.

1.4.2. *There* originating in DP: Kayne (2006)

Kayne proposes that the expletives *there* (English), *ci* (Italian) and *ghe* (Paduan) among others originate in an associate DP with the derivation represented in (132).

- (135) a. *a there book, *a here book
 b. *there a book, *here some book
 (Kayne 2006, 8)

Kayne takes this to be evidence for obligatory movement of an indefinite, similarly to what Szabolcsi (1983, 1994) proposed for Hungarian possessive structures. With respect to the definiteness effect, Kayne suggests that the definite determiner (which is taken to precede *there*, based on the word order *the there book*) prohibits the extraction of the embedded noun phrase (referring to Fiengo and Higginbotham 1981 for support for this approach). Thus, it is impossible to derive a sentence like **There is the book on the table*. The suggestion has nice consequences for the agreement facts. As the DP in first position contains the trace of the nominal (see (132) above), the agreement of the DP with the verb is just an instance of Spec,Head agreement in the usual way, so that no special mechanism of downwards agreement is necessary. Furthermore, Kayne sees his analysis supported as it predicts why *there* and not *then* is the expletive to occur: locatives are more easily used deictically than temporal adverbials. Elements like *here* and *where* are excluded, as Kayne suggests, because *there* is the most neutral instance.

The analysis presented by Kayne (2006) is rather different from what we have discussed so far. However, I think it has a number of shortcomings (which might be due to its sketchy nature). First, apparently, Kayne assumes that the DP from which *there* originates is the subject of some other predicate. This, however, is problematic. As we have seen above, it cannot account for the existence of bare existentials like *there is no problem*. This might not be a serious problem for the analysis, as *there* originates in the DP and this fact might be accommodated.

Furthermore, Kayne does not discuss the nature of the projection that the embedded DP moves to. This, of course, is a general problem of remnant movement analyses. In most cases, an item has to move out of a certain XP to a higher projection before this XP remnant moves. The trigger for this first step of extraction is not obvious in general.

It seems to me that the most serious problem for Kayne's analysis is that it is highly unclear how the semantics of the structure could be derived from the proposed syntax, especially when it comes to true existentials. Phrases like *that there book* do not have an existential import.

Finally, his suggestions for the definiteness restriction are too strong: it has been noted in various places in the literature that the ban on definite DPs is not absolute with *there* (cf. Rando and Napoli 1978, Abbott 1992, 1993, 1997, Ward and Birner 1995, Birner and Ward 1998 among others) and we will see further evidence for this in the next chapter, section 2.10.

In sum, Kayne's analysis is different from what we have seen so far, however, it also has several shortcomings and it is not worked out in sufficient detail to allow a complete assessment.

1.4.3. Summary

In this section, I have discussed two very different proposals that do not neatly fit into the classification of approaches to *there* discussed above. Felser and Rupp (2001) suggest that *there* is the overt expression of the Kratzerian spatio-temporal argument. It is base-generated in the projection AspP, higher than vP and lower than IP and can move from there. We have seen that this proposal nicely accounts for the predicate restriction and the existential interpretation of bare plural subjects with *there* (though we should bear in mind that the stage-level/individual-level distinction might not be entirely appropriate). However, their proposal relies on an independent predication relationship within the vP, which leads to the same problems that the *there*-insertion approaches raised: it cannot explain the optionality of the PP, the obligatoriness of *there* and predicts that *there* should co-occur with transitive verbs, contrary to fact.

Kayne (2006) proposes a very different structure for *there*-sentences in which *there* is base-generated inside the DP and from there, moves into the Spec,IP position. The proposal is not worked out in sufficient detail to assess it properly. Kayne seems to face the same problem as the the *there*-insertion approaches, as he as well relies on an independent predication relationship with *there*-sentences. Thus, the optionality of the PP and the obligatoriness of *there* cannot be predicted. Secondly, it not obvious how *there*-sentences give rise to the specific existential meaning.

As these approaches also face the shortcomings of the *there*-insertion approaches, I reject them for the analysis of English *there*-sentences. The only element that will partly turn up in my analysis is the fact that *there* is not a filler element alone, but has some meaning of its own.

1.5. The definiteness effect

1.5.1. Introduction

One of the intriguing features of the English *there*-construction is that it gives rise to the so-called definiteness restriction/effect. The type of noun phrase that can occur in the structure is restricted: strong quantifiers, cf. (136), and definite noun phrases, cf. (137) are excluded.

- (136) a. *There was everyone in the room.
 b. *There were all viewpoints considered.
 c. *There was each package inspected.
 (Milsark 1977)
- (137) a. *There is the wolf at the door.
 b. *There were John and Mary cycling along the creek.
 c. *There was Frank's article mentioned.
 (Milsark 1977)

In the following, I review only a very limited set of the approaches to the definiteness restriction presented in the literature. There are semantic, pragmatic as well as syntactic approaches to explain the restriction. I start with discussing Milsark (1977) which provided the major insight concerning the restriction by introducing the distinction between strong and weak quantifiers. Then, I discuss the syntactic analyses by Safir (1985, 1987b) and Belletti (1988) who link the restriction to the nature of case assignment in *there*-sentences, though in radically different ways. For the pragmatic analyses, I include Zucchi's 1995 formal approach that defines those noun phrases that cannot occur in *there*-sentences as noun phrases that have an existential presupposition (following work by De Jong and Verkuyl 1985 and Lumsden 1988). Ward and Birner (1995) and Birner and Ward (1998) provide a less formal pragmatic explanation for the restriction: they suggest that the noun phrase in existential sentences has to be hearer-new. From the semantic approaches I discuss Higginbotham (1987) who suggests that the noun phrase in *there*-sentences is of predicative nature, and Keenan (1987, 2003) who provides a useful semantic definition of the quantifiers that do occur with English *there*. Finally, I turn to McNally (1997, 1998), who combines semantic and pragmatic approaches.

This selection does not represent a balanced review of the large number of papers that deal with the phenomenon by far, but is rather meant to give an impression of the range of different suggestions made in the literature.⁵⁴

⁵⁴ Among the many approaches left out are the certainly important ones by Barwise and Cooper (1981) and Heim (1987) and others like Musan (1996) (for an overview see Zucchi 1995 and McNally 1998).

1.5.2. Weak vs. strong quantifiers: Milsark (1977)

In his groundbreaking paper ‘On the peculiarities of the Existential Construction in English’, Milsark formalizes the definiteness restriction as a constraint on the well-formedness of syntactic surface structures. He formulates it as in (138).

- (138) The Definiteness Restriction
 CONDITION: 2 [the noun phrase in *there*-insertion constructions] must be [-definite].
 (Milsark 1977, 4)

Milsark claims that the determiners that may occur in the *there*-sentences are basically cardinals, i.e. they specify a random amount or quantity; quantificational noun phrases, i.e. noun phrases that quantify over two sets, cannot occur with *there*. Let me illustrate the distinction with the determiner *some*, which is ambiguous between a strong and a weak reading. In its weak reading, *some* (henceforth *sm*) expresses an unspecified amount. The strong reading of *some* (henceforth: *SOME*) expresses that an unspecified amount of a given set expressed by the noun is under discussion. The two readings can be illustrated with the following example:

- (139) Some boys came in.
 sm A small amount of individuals that are boys came in.
 SOME A smaller part of the boys under discussions came in.

Note that the two readings of the phrases can be distinguished by their intonation, as pointed out by Drubig (1992).

- (140) [*sm*] Some BOYS came in.
 [*SOME*] SOME boys came IN.

Milsark explains the definiteness restriction in terms of the semantics of existential sentences. He defines their meaning as in (141).

- (141) **The E-Rule**
there AUX be Q NP X is interpreted:
 The class C denoted by NP has at least one member *c* such that P(*c*) is true, where P is a predicate and P is the reading of X and the set of such members *c* is of cardinality Q.
 (Milsark 1974, 206)

Informally speaking, Milsark’s E-Rule specifies that the number of individuals for whom the predicate specified in X holds is at least one. A cardinal determiner Q can specify the number of individuals for which X holds more precisely. Strong quantifiers are excluded because they do not denote a cardinality, but quantify, and existential quantification is incompatible with any other form of quantification (over the same noun phrase).

Milsark's approach has been shown to run into difficulties with statements like *There is no justice* (cf. Higginbotham 1987).⁵⁵ The problem is that the E-rule specifies that the set denoted by the noun phrase is required to have least one member, which results in a contradictory requirement for the set **justice** to have at least one member, and the cardinality of that set being zero.⁵⁶ At the heart of this problem for Milsark are two issues: firstly, *justice* is a mass noun, thus, the cardinality of it cannot be specified. Secondly, the sentence *There is no justice* does not include a property X, which is required by the definition.

Milsark's distinction between weak and strong quantifiers still holds and is a crucial distinction in quantifier theory. However, his E-rule for *there*-BE structure cannot be maintained.

1.5.3. Unbalanced theta-chains: Safir (1982, 1985)

Safir (1985) follows a different route. He observes that in the Germanic and Romance languages, the definiteness effect occurs in those syntactic configurations where nominative case assignment does not follow the general pattern. This generalization holds for different types of presentational constructions, in which the subject of a verb does not appear in the regular subject position.

To account for this cross-linguistic generalization, Safir proposes that the noun phrase inherits its case from the subject position via co-indexing with an expletive in this position. With case inheritance being a syntactic phenomenon, the account of the definiteness restriction has to be syntactic, not semantic in nature. Safir's (1982, 1985) major concern are the well-formedness conditions on syntactic chains created by (co-)indexing. Chain formation and co-indexing are relevant for Binding Theory, θ -theory, the formation of movement chains, and the relationship between *there* and its associate noun phrase in *there*-sentences (cf. Chomsky 1981). Safir's central claim is that there is only a single type of co-indexing. He argues against the distinction of co-indexing for Binding (subscription) and co-indexing in *there*-associate chains (superscription) as introduced by Chomsky (1981). Recall from 1.2.2 that Chomsky introduced a different kind of co-indexing for *there*-sentences since the co-indexing of *there* with its associate would result in a Binding Condition C violation: the noun phrase in *there*-sentences is a referential expression and therefore should be free. In order to overcome this problem, Safir proposes that indefinite noun phrases are exempt from Binding Conditions at S-structure.⁵⁷

⁵⁵Zucchi (1995) also cites von Stechow (1980) and Heim (1987) for this criticism.

⁵⁶Note that an interpretation of *no* as consisting of sentential negation plus an indefinite article does not help either. This move would allow a reading in which the cardinality is not one but higher than one. This again is not what this sentence means.

⁵⁷Borer (1986) also argues for one single type of co-indexing, but she deals with the noun phrase in *there*-sentences differently. She assumes that elements that do not have *i*-features (number, gender, person) are excluded from the Binding Conditions. *There* does not have *i*-features and therefore it can be co-indexed with the post-verbal noun phrase without violating any principle of Binding Theory.

- (142) **Indefinite NP Property (INPP):** Indefinite θ -chains are optionally exempted from the BCs at S-structure.

The motivation for (142) comes from the observation that in impersonal constructions across languages (English, French, German among others), case assignment to the noun phrase via co-indexing correlates with the definiteness effect. The condition is defined for S-structure only, because at LF, the configuration for a Binding violation is no longer met: the indefinite noun phrase raises to the subject position since it is an existentially quantified noun phrase. Raising of indefinite noun phrases is an instance of (the independently motivated) quantifier raising. This approach makes it possible to link the special case-assignment properties, the quantificational nature of indefinite noun phrases and the definiteness effect in a syntactic account. Definites are excluded in Safir's account because they are not quantificational.⁵⁸

Safir's approach faces several problems. Firstly, co-indexing as a syntactic device has been eliminated from core syntax in current theorizing, hence this approach can no longer be upheld in its original form (for more theoretical arguments against Safir's approach, see Reuland 1985). Secondly, Reuland (1985) points out that the definiteness restriction is not restricted to case-transmission contexts. The German existential construction with *es gibt*, for instance, gives rise to the definiteness effect, despite the fact that the noun phrase is assigned accusative case. Thirdly, not all expletive structures give rise to the same type of definiteness restriction. For instance, Vangsnes (2002) showed that Icelandic expletive structures co-occur with strong quantifiers, a fact that is unexpected and unexplained under Safir's analysis. Similarly, Mohr (2005) pointed out that German expletive structures also occur with definite noun phrases, and the same has been claimed for English *there*-sentences (cf. Rando and Napoli 1978, Prince 1981, Birner and Ward 1998; see also section 2.10 below). Fourthly, Safir's account lacks locality restrictions on the case-transmission, as Vikner (1995) points out (following Falk 1989 and Lasnik 1992). Vikner shows that in Danish expletive structures, the noun phrase has to remain in its base position, cf. (143). Safir's proposal does not account for this effect.⁵⁹

- (143) a. ...at der kan være komet et brev
 ...that there may have come a letter
 '...that there may have come a letter.'
 b. *...at der kan være et brev komet
 c. *...at der kan et brev være komet
 d. *...at der et brev kan være komet DANISH
 (Vikner 1995, 171)

⁵⁸Safir (1987b) gives up the interaction with Binding Theory and switches to an analysis in which the relevant property is not being indefinite but being a predicate.

⁵⁹The effect is comparable to English, in which the noun phrase in an embedded clause cannot move to the embedded subject position: **There seems a man to be in the garden.* See section 1.2.8.2 for details on this type of example.

Taken together, Safir's account for the definiteness restriction cannot be upheld.

1.5.4. Partitive case: Belletti (1988)

Belletti (1988) agrees with Safir (1985) that the definiteness restriction has to be linked to the phenomenon of case assignment, but her account is radically different. She argues that a special case, partitive case, is responsible for the occurrence of the definiteness restriction with English *there*-sentences and impersonal structures in Italian. Her starting point is that unaccusative verbs and *be* assign a morphologically distinguishable case in Finnish: partitive case.

- (144) a. Pöydällä on kirjoja
 On-the-table is books_{PART.PL}
 'There are (some) books on the table.'
- b. Helsingistä tulee kirjeitä
 from-Helsinki comes letters_{PART.PL}
 'There come some letters from Helsinki'
- (Belletti 1988, 2) FINNISH

Interestingly, partitive case seems to be incompatible with definite DPs and universal quantifiers in these contexts. Thus, partitive case induces a definiteness restriction. Belletti generalizes this effect to a one-to-one relationship: wherever we observe a definiteness restriction, we actually observe partitive case. In this vein, she assumes that partitive case is assigned to the post-verbal subject in Italian unaccusative sentences, cf. (145), and to the noun phrase in English *there*-sentences.

- (145) Verrá uno/qualche/*lo/*ogni studente a riparare il lavadino.
 will-come a/some/the/every student to fix the sink
 'A/Some/the/every student will come to fix the sink.'
- (Belletti 1988, 11) ITALIAN

Belletti (1988) argues that partitive case is an inherent case that can only be assigned to VP-internal positions that are thematically related to the verb (complement positions, specifier of VP including adjoined VP positions for post-verbal subjects in Italian).⁶⁰ Whenever the noun phrase moves to a nominative case position, partitive cannot be assigned. In this way, Belletti accounts for the disappearance of the definiteness restriction when the noun phrase moves to the subject position, cf. (146)

- (146) a. There arrived a man/*the man/*every man.
 b. A man/the man/every man arrived.

Belletti's theory of partitive case raises several theoretical and empirical issues.

⁶⁰Belletti also includes the list reading as the only possible interpretation of definite DPs that are assigned partitive; see section 3.7 for details about this reading.

On the theoretical side, the major problem is that she has to assume that inherent partitive is assigned optionally. It is unclear how it is possible to regulate when partitive case is assigned/checked in a VP related position and when not, without assuming that look-ahead is possible.

Another issue is whether partitive case is really inherent or not. Lasnik (1992) observed that the evidence for this position is contradictory. If partitive case is an inherent case, passive verbs should be able to assign it as well. But the ungrammaticality of (147-b) shows that passivised verbs cannot assign case to the embedded small clause subject, thus, partitive case cannot be inherent case.

- (147) a. Ho sempre considerato [Gianni intelligente]
 I-have always considered John intelligent
 'I have always considered John intelligent.'
 b. *Sono considerati [alcuni studenti intelligenti]
 are considered some students intelligent
 'Some students are considered intelligent.'

(Lasnik 1992, 394)

ITALIAN

This argument, however, does not go through: *intelligente* is a individual-level predicate; those only occur with strong subjects, and strong subjects are predicted to be incompatible with partitive case in Belletti's theory. Therefore, the problem in this example might be that partitive case is incompatible with the strong reading of *some students* that is forced by the individual-level predicate.⁶¹

Whether partitive case is inherent or not is nevertheless disputable. In Finnish, it seems to be a structural case in the sense that it is assigned to a certain structural position. It can also occur on the subject of a small clause embedded under a *consider*-type verb. On the other hand, a certain class of verbs only assigns partitive as e.g. the verb *love*, which suggests that partitive is an inherent case. Note, however, that verbs like *love* are inherently atelic, and if Kiparsky (1998) and Kratzer (2004) are correct in generalizing partitive to atelicity then partitive can be maintained to be a structural case. For discussion see Kiparsky (1998).

A further partly theoretical, partly empirical problem is how partitive case can be matched to morphological case in languages that do not have a morphological paradigm for partitive case. Vikner (1995) observes that there is no one-to-one match between abstract partitive case and a certain morphological paradigm. The point can be illustrated with data from German: Passives with an expletive in first position show a definiteness effect in German. In Belletti's terms, this means that the subject is assigned partitive case, which is realized morphologically as nominative:

⁶¹Thanks to Hans Broekhuis (p.c.) for pointing me in this direction. As *consider*-type verbs hardly combine with stage-level predicates, the opposite cannot be tested straightforwardly.

- (148) Es wurde am Tatort ein dänischer Linguist/*ich gesehen.
 there was at crime-scene a Danish linguist/me seen
 ‘A Danish linguist/I was seen at the crime-scene’
 (Vikner 1995, 175) GERMAN

Belletti suggests that partitive case is also possible as complement to transitive verbs (in line with the Finnish examples). If partitive were always morphologically realized in the nominative paradigm, we would expect that nominative objects of transitive verbs are possible in German, which is not the case. Thus, partitive case is neither morphologically realized in the Germanic languages, nor is it linked to an existing morphological case paradigm.

The most serious empirical problems for the partitive case hypothesis are pointed out by De Hoop (1992) (see also Vainikka and Maling 1996, Law 1996 and Felser and Rupp 2001). Even though there is a preference for indefinite meanings with partitive case, there is no one-to-one correlation between the two. First of all, partitive case is compatible with a definite interpretation of noun phrases in Finnish, cf. (149). Here, the distinction of partitive vs. accusative involves aspectual distinctions (see also Heinämäki 1984, Vainikka 1993).

- (149) a. Anne rakensi taloa
 Anne built house_{PART}
 ‘Anne was building a house/the house.’ FINNISH
 b. Anne rakensi talon
 Anne built house_{ACC}
 ‘Anne built a house/the house.’ FINNISH
 (De Hoop 1992, 64)

Furthermore, partitive case is also compatible with (at least some) strong quantifiers (cf. Vainikka and Maling 1996, 187).

- (150) a. Presidentti ampui kaikkia lintuja
 president shot all_{PART} birds_{PART}
 ‘The president shot at all the birds.’ FINNISH
 (De Hoop 1992, 64)
 b. Pekka kokeili useimpia reseptejä
 Pekka tried most_{PART} recipes_{PART}
 ‘Pekka tried most (of the) recipes.’ FINNISH
 (Vainikka and Maling 1996, 187)

Note, however, that the picture of partitive case in Finnish is rather complex. There are two types of partitive case: one type that gives rise to aspectual distinctions, as in the examples above, and another type that is related to the quantificational nature of the noun phrase that it is assigned to (cf. Kiparsky 1998, 267). The latter type occurs on the object of a inherently bounded (i.e. telic) verb (i) if the noun is a bare plural and has an indefinite interpretation

(accusative gives rise to a definite interpretation); (ii) if the noun is embedded under a numeral phrase.

- (151) a. Saa-n #karhu-a/#kah-ta karhu-a/karhu-j-a
 get_{1SG} bear_{PART}/two_{PART} bear_{PART}/bears_{PART}
 ‘I’ll get the (a) bear/(the) two bears/bears’
 b. Saa-n karhu-n/kaksi karhu-a/karhu-t
 get_{1SG} bear_{ACC}/two_{ACC} bear_{PART}/bears_{ACC}
 ‘I’ll get the (a) bear/two bears/the bears’
 (Kiparsky 1998, 268) FINNISH

(iii) Partitive case shows up on bare plural or bare singular mass noun subjects of a set of unaccusative verbs and copula structures (the so-called *presentational* or *existential* verbs).

- (152) a. Karhu/#Karhu-a kuol-i
 bear_{SG.NOM}/bear_{SG.PART} die_{PAST.3SG}
 ‘The bear died.’
 b. Karhu-t kuol-i-vat
 bear_{PL.NOM} die_{PAST.3PL}
 ‘The bears died’
 c. Karhu-j-a kuol-i
 bear_{PL.PART} die_{PAST.3SG}
 ‘Bears died.’
 (Kiparsky 1998, 297) FINNISH

The generalization of indefinite readings of Finnish noun phrase with partitive only applies to bare nouns, and not to complex noun phrases. Thus, the core of the criticism holds even with this more fine-grained distinction: there is no direct correlation between partitive case and indefinite readings. Rather, a noun phrase is assigned partitive, as Kiparsky puts it, ‘either if it is governed by one of a class of unbounded verbal predicates or if it is *quantitatively indeterminate*’ (Kiparsky 1998, 271).⁶²

Thus, the parallelism between Finnish partitive case and the definiteness restriction is not as clear-cut as Belletti (1988) suggests and it seems to me that the evidence brought forward is sufficient to reject the partitive case hypothesis for English *there* altogether.

1.5.5. Presuppositional noun phrases: Zucchi (1995)

Zucchi (1995) provides a formal pragmatic account for the definiteness effect in terms of presuppositionality (following Jong and Verkuyl 1985 and Lumsden 1988). In order to understand this proposal, let me introduce a few core notions about (strong) quantifiers in general, illustrated with the following example.

⁶²For a detailed analysis of partitive case in Finnish as a marker of QP, see Asbury (2008).

(153) Most children cried.

We can express the meaning of the quantifier *most*, as providing a relation between two sets: the set of children, and the set of entities that cry. The meaning of *most* says that a larger part of the members of the set of children (the so-called restrictor set) are members of the set of entities that cry. Thus, *most* relates two sets, and this is what quantifiers do in general. The same is expressed in the semantic type of quantifiers in general: $\langle\langle e,t\rangle\langle\langle e,t\rangle,t\rangle\rangle$, which means that a quantifier is a function from sets of properties ($\langle e,t\rangle$) to a function from sets of properties to truth values ($\langle\langle e,t\rangle,\langle t\rangle\rangle$). Quantifiers divide their restrictor set into parts by intersecting it with another property. Now, for strong quantifiers like *most*, we need to look at both parts if we want to evaluate the truth value of a sentence (this is also the notion of conservativity that we will encounter below). In our example above, we have to count the members of both parts of the set of children, those that cry and those that do not, and if more than half of the set of children are also part of the set of entities that cried, we can say that the sentence is true.

Zucchi (1995) suggests that strong quantifiers are presuppositional, which means that we assume for a phrase like *most children* that there is at least one child we are talking about. Put differently, strong quantifiers presuppose that their restrictor set is non-empty.

Turning to the *there*-sentences, Zucchi (1995) proposes a felicity condition that disallows any presuppositions about the set denoted by the noun phrase, both that it is empty and that it is not empty. Strong quantifiers are incompatible with this felicity condition, because they carry exactly this presupposition. For illustration let me consider an example like *Every student is in the garden*. According to Zucchi, the strong quantifier *every* requires that its first argument (the restrictor set) is not empty, meaning that there are students (in a contextually given domain) and for all of them it is true that they are in the garden. This requirement on the noun phrase is incompatible with the proposed felicity condition on *there*-sentences thus strong determiners are ruled out in them.

Keenan (2003) criticizes Zucchi's approach in the following way. Firstly, Zucchi only defines the determiners that do not occur in *there*-sentences, but not those that do. From a language learner perspective, however, it should be possible to find the unifying criterion for the latter. Secondly, the definition of presuppositionality would actually predict the quantifier *all* to occur in *there*-sentences, as *all* does not introduce a presupposition about the actual existence of items denoted by the noun phrase. (154-a) does not presuppose (154-b): the sentence in (154-a) can be true at a school even if there are no scholarship recipients yet, and even if there never will be any.

- (154) a. All scholarship recipients are required to sign the loyalty oath.
 b. There is at least one scholarship recipient.
 (Keenan 2003, 196)

Furthermore, Keenan argues that the felicity condition on existential sentences is not precise enough. Thus, in some cases, the cardinality of the denotation might be under discussion, not the mere existence of one member of the set denoted by the noun phrase. This is illustrated in the following example, uttered in a context where two lecturers observe students streaming into the lecture hall.

- (155) A: Wow, there's gonna be hundreds of people at my lecture on PIE laryngals.
 B: No, there'll just be three or four, the others are just taking a shortcut to the spa.

In the second sentence, Keenan suggests that there is a presupposition that there are people who are coming to the lecture, but the number of them is under this discussion. Thus, noun phrases can be presupposed and yet occur in *there*-sentences; this is a counterexample to Zucchi's felicity condition on *there*-sentences.

1.5.6. Hearer-newness: Ward and Birner (1995)

A less formal pragmatic account for the definiteness restriction is given in Ward and Birner (1995). They analyze a corpus of over 1.3 million words of transcribed oral data drawn from the transcripts of 'The Presidential Commission on the Space Shuttle Challenger Accident' in order to provide a pragmatic analysis for definite noun phrases that occur with *there*-sentences. They arrive at the generalization that the post-copular noun phrase has to be hearer-new, in the sense of Prince (1981), cf. table 1.1 (taken from Birner and Ward 1998).

	Discourse-old	Discourse-new
Hearer-old	evoked	unused
Hearer-new	\emptyset	brand-new

Table 1.1.: Information structure status of noun phrases

Discourse-new items are those items not yet mentioned in the discourse, discourse-old items those already mentioned. Hearer-old items are those presumed to be part of the knowledge of the addressee, hearer-new items are those that are neither mentioned nor presumed by the hearer. Combining the two properties provides us with four different types of discourse items. Note that the combination of hearer-new and discourse-old items was assumed to be non-existent (items mentioned in the discourse are unlikely to be new to the hearer), however, Birner (2004) argues that this type of information is inferable information as it is treated both as hearer-new and as discourse-old.

Ward and Birner (1995) differentiate between five different types of hearer-new noun phrases illustrated below:⁶³

(i) Hearer-old entities treated as hearer-new. This type of noun phrases is typically used in reminder contexts, where the noun phrase in question has been mentioned previously, but is nevertheless treated as hearer-new. An example is the following:

- (156) Previous discourse:
 To go back through just a little of the history, the operational maintenance and requirements specification document had requirements for inspections in there . . .
 A: Well, didn't the designer of the orbiter, the manufacturer, develop maintenance requirements and documentation as part of the design obligations?
 B: Yes, sir. And that is what we showed in the very first part, before the Pan Am study. *There were those orbiter maintenance and requirement specifications*, which . . .
 (Birner and Ward 1998, 124)

(ii) Hearer-new tokens of hearer-old types. These items are noun phrases that express a new token (relevant in the current situation) of a type that is assumed to be hearer-old, as illustrated in the following sentence.

- (157) There was the usual crowd at the beach today.
 (Ward and Birner 1995, 732)

(iii) Hearer-old entities newly instantiating a variable. This type is usually referred to as the list reading. The context provides a list and the *there*-sentences gives the items that belong to this list (which can be hearer-old or discourse-old). They are presented as a hearer-new item on the list in question.

- (158) A: I cannot imagine what I'm going to make for dinner tonight.
 B: Well, there's that leftover meatloaf.
 (Ward et al. 2002, 1398)

(iv) Hearer-new entities with uniquely identifying descriptions. These items are definite descriptions that are hearer-new. Their definiteness arises from the uniqueness of the referent, not its status as discourse-old item.

- (159) In addition, as the review continues, *there is always the chance that we'll uncover something additional that is significant.*
 (Ward and Birner 1995, 736)

⁶³See also: Birner and Ward (1998), Ward et al. (2002). For a syntactic implementation of the hearer-new status of the noun phrase, see Barbiers and Rooryck (1999).

- (160) a. There was the tallest boy in my history class at the party last night.
 b. You can see the runway and the HUD that overlays the Edwards runways and then *there is this line which comes out to the outer glide slope aim point*. It is hard to see the PAPIs there because of the lights that are here.
 c. There are the following bizarre reasons for this effect.
 (Ward and Birner 1995, 737)

(v) False definites. The final group of definites that occur with *there* is the group of false definites. These are noun phrases headed by a definite or demonstrative determiner but their meaning is not definite, i.e. neither uniqueness nor discourse-oldness, cf. (161).

- (161) One day last year on a cold, clear, crisp afternoon, *there was this huge sheet of ice in the street*.
 (Ward and Birner 1995, 738)

In sum, there are two types of hearer-new items: the discourse-old vs. the discourse-new ones. In the first group, that is (i)-(iii), the content of the noun phrases is known in some sense, but presented as new in the structure. In the second group, that is (iv)-(iv), the content of the noun phrases is truly new.

The wealth of data provided clearly shows that definite noun phrases do occur with *there*-sentences. However, Birner and Ward have to stretch the term hearer-newness rather forcefully: it can include discourse-old information, hearer-old information as long as we talk about types and not tokens. Thus it becomes hard to have a clear notion of hearer-newness.

A further weakness of Ward and Birner (1995) and Birner and Ward (1998) is that they have nothing to say about the restriction on strong quantifiers and the fact that noun phrases can only take narrow-scope. However, if McNally (1997) is right that we need to distinguish between two types of definiteness restriction, a semantic and a pragmatic restriction (see 1.5.9) this aspect is not necessarily a weakness.

What this criticism certainly shows is that the analysis by Ward and Birner (1995) as well as Birner and Ward (1998) is certainly not sufficient to account for a wide range of facts linked to the type of noun phrase that occurs in the English *there*-construction.

1.5.7. Defining existential quantifiers: Keenan (1987, 2003)

Keenan's (1987, 2003) major concern is to provide a formal semantic definition of those noun phrases that can occur in *there*-sentences. Keenan (1987) argues that the defining criterion is whether a certain determiner is existential, as stated in the following semantic definition:

- (162) a. A basic determiner is called *existential* iff it is always interpreted by an existential function, where
 b. A function f from properties to sets of properties is *existential* iff for all properties p, q , $p \in f(q)$ iff $1 \in f(q \wedge p)$
 (Keenan 1987, 291)

Informally speaking, a determiner is existential if it is a function that relates two sets of properties by intersection, and there is at least one member in this intersection. In this way, Keenan's definition of existential determiner relies on the availability of two sets of properties, one denoted by the noun phrase, and a second property expressed by a predicate. He shows that the definition of existential quantifiers implies that *Q NP is XP* and *Q NP who is XP exists* is equivalent. We can use this insight as a test for establishing whether a determiner is existential or not: If a sentence pair of the form *Q NP is XP* and *Q NP who is XP exists* has the same meaning, the quantifier is existential. Consider (163) vs. (164):

- (163) a. Some student is a vegetarian.
 b. Some student who is a vegetarian exists.
 (Keenan 1987, 291)
- (164) a. Every student is a vegetarian.
 b. Every student who is a vegetarian exists.
 (Keenan 1987, 291)

Whereas in (163) the two sentences mean the same, this does not hold for (164). Thus, *some* is an existential quantifier, while *every* is not. Keenan proposes that only existential quantifiers can occur in *there*-sentences, because only these can give rise to an existential meaning. The strong determiners are not ungrammatical, strictly speaking, but they do not give rise to an existential meaning. This in turn is derived from Keenan's (1987) analysis: as *There is a man in the garden* and *a man is in the garden* are truth-conditionally equivalent (with *there* being meaningless), the determiner is the only element in the structure that can provide a difference in meaning. Thus, the determiner decides whether an existential reading arises or not: existential determiners do, whereas non-existential determiners do not. Furthermore, Keenan suggests an analysis for complex (or rather, conjoined) determiners built up from more than one determiner: complex determiners are existential iff they are built from existential determiners by Boolean combinations. Thus, a complex determiner like *at least two dogs and more than ten cats* is existential because both *at least two dogs* and *more than ten cats* are existential. Note, however, that this approach implies that determiners can be discontinuous strings of words, an assumption which is syntactically problematic.

In his more recent paper, Keenan (2003) redefines existential quantifiers as those quantifiers that are conservative on their second argument, cons_2 . In order to make this point, Keenan (2003, 199) redefines the general notion

of conservativity (see De Swart 1998 for an introduction to the notion) as conservativity on the first argument. A quantifier is conservative on its first argument, if we need to consider the whole restrictor set of the quantifier in order to evaluate the truth value of the sentence, not only the intersected part. Thus, the size of the second property is irrelevant, and we can extend it without a change in meaning. Let me illustrate the formal definition with an example. Consider (165).

- (165) a. Every linguistics student has a BMW.
b. Every linguistics student has a car.

In (165-a) *linguistics students* is the first argument, *BMW* is the second argument. Now, if we extend the domain of the second argument to *a car* (thus, creating the set B' by extending the set BMW to all cars) as in (165-b) the sentence is still true under the same conditions.⁶⁴

Now consider the notion of conservativity on the second argument (cons_2). A quantifier is conservative on its second argument iff we can extend the restrictor set without a change in meaning.⁶⁵ Let me illustrate the definition with the example in (166) (with some as the weak quantifier *sm*).

- (166) a. Some linguistic students are in my class.
b. Some linguistic students are in my class.

If we extend the domain of the first argument in (166-a) to *students* (creating A') to (166-b), the statement is still true under the same conditions (though less informative). This property is conservativity on the second argument (cons_2).

Now, most of the quantifiers that occur in the *there*-sentences are both cons_1 and cons_2 (all cardinals are). Thus, it is possible to extend either of the two arguments, and the resulting sentences are all truth-conditionally equivalent (they are true of the same situation).

⁶⁴Keenan's formal definition is given in (i) with $\text{GQ}_{E,X}$ the set of functions from P_E , the subsets of E, into X.

- (i) Conservativity on the first argument (cons_1):
a. A map D from P_E into $\text{GQ}_{E,X}$ is conservative on its first argument (cons_1) iff $A \cap B = A \cap B' \Rightarrow DAB = DAB'$, for all A, B, B' \subseteq E.
b. An equivalent statement is: $DAB = DAA \cap B$, for all A, B.

This means that a quantifier is conservative on its first argument if the mapping from A to B is equivalent to the mapping from A to B', or the mapping from A to B is equivalent to a mapping from A to the intersection of A and B.

⁶⁵Keenan's formal definition is given in (i):

- (i) Conservativity on the second argument (cons_2):
a. A map D from P_E into $\text{GQ}_{E,X}$ is conservative on its second argument (cons_2) iff $A \cap B = A' \cap B \Rightarrow DAB = DA'B$, for all A, A', B \subseteq E.
b. An equivalent statement is: $DAB = DA \cap B$, B, for all A, B.

- (167) a. There are some/three linguistics students in my living room.
 b. There are some/three linguistics students in my house.
 c. There are some/three students in my living room.
 d. There are some/three students in my house.

However, there is also a small number of determiners that are cons_2 , but not cons_1 . According to Keenan, these are *mostly* and *only/just*. These determiners can occur in *there*-sentences as the following examples show.

- (168) a. There are just freshmen in that course.
 b. There are mostly freshmen in that course.
 (Keenan 2003, 205)

Let me illustrate that these determiners are cons_2 but not cons_1 . In order to be parallel to the previous examples, our starting point is the sentence *There are just linguistics freshmen in my living room*. In order to test for cons_2 we have to extend the domain of the first argument, to *There are just freshman in my living room*, which seems to be truth-conditionally equivalent to the first sentence. In order to test for cons_1 , we extend the domain of the second argument to *There are just linguistic freshmen in my house*. Clearly this extension is not truth-conditionally equivalent, hence these determiners are not cons_1 . Then *just* is cons_2 but not cons_1 . Keenan concludes that the determiners that do occur with the English *there*-construction can be defined as those determiners that are cons_2 .

The major problem with Keenan's approach to the *there*-sentences is his assumption that *there*-sentences always contain a PP or another XP in the structure to provide the second argument for the quantifier. But this is neither true nor necessary from a syntactic point of view (see 1.2.8 above).⁶⁶

However, the fact that most determiners that occur in *there*-sentences are both cons_1 and cons_2 might indicate that a second argument is not necessary to begin with. Then, those determiners that are cons_2 only - i.e. *just* and *only*- could not occur without a PP in the *there*-sentences. I think that they might be less of a problem, as it is not entirely clear whether these elements are determiners to begin with. Firstly, they can co-occur with other quantifiers. Secondly, they can take positions in the clause that are not available for other quantifiers.

- (169) a. John met just every famous linguist.
 b. There will just/mostly be freshmen in that course.
 c. *There will some be freshmen in that course.

⁶⁶There is one more option: If a second property is necessary to provide the quantifier with a second argument, syntax might not need to provide a PP, but any property might be fine, that is, a relative clause or any other restrictive clause might do as well. However, sentences like *There is no justice* seem to show the opposite. I leave this issue to future research.

If we put these items aside, Keenan (1987, 2003) provides us with a useful definition of the quantifiers that can occur in the *there*-construction, namely those that are cons_1 and cons_2 . However, Keenan does not provide a satisfactory answer to the question why this should be the case.

1.5.8. Predicatehood: Higginbotham (1987)

Higginbotham (1987) looks at various environments in which definiteness effects arise, and he suggests that they are due to an interaction of several factors. The two domains that interest us here are predicate nominals and *there*-sentences.

Higginbotham takes as his starting point the following notions of arguments and predicates:

- (170) a. All arguments are saturated.
 b. All predicates are unsaturated.
 (Higginbotham 1987, 46)

As noun phrases are usually arguments, they are saturated. Higginbotham suggests that nouns are inherently predicates, but when they are arguments they are saturated by the determiner. Under this analysis, it is rather surprising that noun phrases can act as predicates in sentences like *John is a lawyer*. Higginbotham suggests as the reason for this that determiners do not always close the open argument of N', but some can also act as modifiers to the noun (they are adjectival, cf. also Bowers 1975). The determiner *a*, for instance, can be interpreted as a numeral, and numerals can generally be interpreted as adjectival modifiers of the noun. Under this approach a sentence like *They are three friends of mine* is interpreted as *three(X) & friends of mine (X)*; *three* 'as a predicate is true of three-member collections, and of nothing else' (Higginbotham 1987, 48). It follows that those quantifiers that can be adjectival can occur with predicate nominals.⁶⁷ Strong quantifiers cannot occur there because they are not adjectival.⁶⁸

The matter with *there*-sentences is slightly more complicated, though it reduces to the same effect: a determiner can occur in a *there*-sentence if it is adjectival. Before arriving at this conclusion, Higginbotham (1987) starts from the claim that the core meaning of the existential sentence is located in the noun phrase in *there*-sentences. It is a saturated predicate bound by an unrestricted or *absolute* quantifier, which does not have a restrictor and a nuclear scope,

⁶⁷Higginbotham provides the following formal definition with quantifiers understood as functions from ordered pairs of subsets of domain D to truth-values.

- (i) A quantifier q over domain D is of adjectival character if, for some function f from subsets of D to truth values $q(X,Y) = f(X \cap Y)$, for every pair X and Y of subsets of D.

⁶⁸Note that Higginbotham suggests that strong quantifiers are possible if they range over the interpretation of predicates, accounting for the grammaticality of examples like *John is everything I despise* (due to Williams 1983, 426).

but it only ranges over the denotation of the noun. A sentence like *There is no justice* is interpreted as $[No X]justice(x)$. This interpretation is equivalent to an existential interpretation when the quantifier is of adjectival character. To rule out strong quantifiers, Higginbotham (1987) conjectures that they do not have an unrestricted or absolute form. Names or definite descriptions are ruled out because they are singular terms, and cannot be subjected to the relevant kind of quantification.

The major advantage of Higginbotham's analysis is that it works well with the necessary syntactic structure: his semantic analysis does not rely on the presence of a PP (or any other predicative XP). Secondly, the approach straightforwardly accounts for the scope data brought forward by Williams (1984). Basically, the noun phrase in *there*-sentences does not interact with negation or modals in the structure. A sentence like *There isn't a man in the garden* cannot mean that there is a man, and this man is not in the garden. According to Higginbotham, the quantifiers occurring in *there*-sentences are adjectival, thus, they are not truly quantificational, and we do not expect them to take scope to begin with.

Higginbotham's crucial insight into the definiteness effect is that those quantifiers that do occur in the *there*-construction are not really quantifiers, but rather act as modifiers. I will give a syntactic interpretation of this insight in my own proposal in chapter 2.

1.5.9. Sortal restriction: McNally (1997, 1998)

McNally (1997) provides a syntactic analysis close to Williams (1994) (later also suggested by Zamparelli 2000 and Hazout 2004) in which the base structure of an English *there*-sentence is *there be NP* without requiring a coda being present. Based on this syntactic analysis, she proposes [there-be] to be interpreted as the predicate *is-instantiated* as given in (171). An application is given in (172):

(171) **is-instantiated:** $\lambda P[\exists x[P(x)]]$

(172) a. There was snow.
 b. $\lambda P[\exists x[P(x)]](\lambda x[\text{snow}(x)]) = \exists x[\text{snow}(x)]$

McNally argues that the existential predicate is sortally restricted to non-particulars (i.e. kinds, sorts, varieties etc.), which she models as properties. By 'sortally restricted', she means a restriction on the type of entity that the predicate selects, similarly to the verb *gather* that selects for nouns referring to collections of entities (independent of the syntactic number of the noun phrase):

(173) a. #A girl gathered outside.
 b. A crowd gathered outside.
 (McNally 1998, 356)

This type of sortal restriction is maintained under quantification. Therefore,

the relation between (174-a) and (174-b) is of the same type as the one between (175-a) and (175-b):

- (174) a. *There was every doctor at the convention.
 b. There was every kind of doctor at the convention.
- (175) a. *Every girl gathered in a different square.
 b. Every crowd gathered in a different square.

Thus, the existential predicate selects for non-particulars only, just like *gather* selects for plurality denoting subjects. The restriction to non-particulars includes both general property type of interpretation of noun phrases as well as readings of sorts and kinds (cf. (174-b)). Any analysis that relies on the nature of the quantifier has a hard time excluding (174-a) while allowing (174-b).

McNally's proposal goes well with Williams' (1994) idea that the noun phrase in the structure is a predicate nominal. Predicate nominals are usually interpreted as properties, thus the predicate *is*-instantiated can account for these cases as well.

Note that, in principle, definite DPs can also have a property-type interpretation (cf. Partee 1987), as e.g. *John is the vice-president of the soccer club in Tilburg*. Hence it is expected under McNally's proposal that definite DPs are not generally ruled out and the definiteness restriction cannot be seen as a uniform phenomenon. McNally argues that the restriction on strong quantifiers is a semantic restriction in the sense that strong quantifiers are not non-particulars. Thus, the existential predicate [there-be] cannot select for it. Definite descriptions, on the other hand, are in principle of the right sort to occur with [there-be], but they are pragmatically restricted. This is a welcome result for two reasons. Firstly, definites can occur with *there*, as she argues, under the appropriate pragmatic conditions presented by Ward and Birner (1995). Secondly, while the sortal restriction on strong quantifiers seems to hold cross-linguistically, the pragmatic restriction on these sentences does not. For example, Catalan shows the restriction on quantifiers ranging over particulars, but no pragmatic restriction on definite DPs, as seen in the following examples:

- (176) a. *Hi havia cada cotxe a la cursa.
 there have each car at the race.
 'There was each car at the race.'
- b. Hi havia la Joana a la festa.
 there have the Joana at the party
 'Joan was at the party.'

(McNally 1998, 367)

CATALAN

Zamparelli (2000) criticizes McNally's approach on the following grounds. Firstly, she needs to assume a separate existential *be*, and it remains unclear why a combination of an expletive element and an otherwise rather meaningless element

should lead to an existential interpretation not only in English, but in other languages as well.

Secondly, if the restriction on *kind*-nouns is truly semantic, it is not clear why phrases that can receive kind-interpretations in other constructions cannot occur in the *there*-construction. Consider the examples in (177). All of them prefer or even require a kind interpretation for the subject.

- (177) a. Most insects live on average 10 months.
 b. Nowadays, every computer is available in at least two models.
 c. Each car sold in the U.S. undergoes thorough crash tests.
 (Zamparelli 2000, 65)

However, the same type of expression is only felicitous when the interpretation relies on the overt expression of the noun *kind* or *sort*, as seen in (178).

- (178) a. ?Yes, there are those insects in the Amazonic Forest.
 b. ?There was every car at the exhibition.
 c. ?There was each product individually wrapped.

These facts suggest that the definiteness restriction is not only a semantic phenomenon, but also has a syntactic side to it. This insight from Zamparelli will play a crucial role in my own approach to the definiteness restriction in 2.10.

1.5.10. Summary

This section reviewed a number of approaches to the definiteness restriction, the restriction that strong quantifiers and definite noun phrases cannot readily occur in the *there*-construction. We saw two syntactic, two pragmatic and three semantic accounts of this restriction.

The two syntactic accounts, namely Safir (1985, 1987b) and Belletti (1988), suggest that the definiteness restriction is linked to case assignment, though in radically different ways. We saw that both of them face serious problems and I rejected an analysis of the definiteness restriction in terms of case assignment. This means that case is not the cause of the definiteness restriction. There might be indirect effects, or interrelations with case assignment, though. As we will see in 2.8.1 for Serbian, case is relevant in the existential construction as it reflects a certain type of DP structure. Furthermore, the rejection of the two syntactic accounts of the definiteness restriction does not imply that syntax is not involved. As the data from Zamparelli (2000) above show, the syntactic structure of the noun phrase plays a crucial role in the effects of the definiteness effect. We will see in chapter 2, section 2.10 how this can be spelled out precisely.

In the pragmatic approaches we saw that the analysis by Zucchi (1995) defines the class of determiners that do not occur in the *there*-construction. However, the proposed felicity condition is not entirely adequate, as Keenan

(2003) already pointed out. The less formal approach by Ward and Birner (1995) and Birner and Ward (1998) can account for a subset of the definiteness restriction, but it is not suitable for accounting for the restriction on strong quantifiers.

Turning to the semantic approaches, Keenan (1987, 2003) provides a formal definition of those quantifiers that do occur in the *there*-construction, basically formalizing Milsark's distinction of strong vs. weak quantifiers. The core of this formulation is that only those quantifiers occur in existential sentences that are conservative both on their first and on their second argument. Even though his analysis of the *there*-construction that assumes that *There is a man in the garden* and *A man is in the garden* are equivalent is syntactically not tenable (cf. 1.2.8), the definition he provides is useful. It can be linked to the insight of Higginbotham (1987) that the determiners and quantifiers that occur with the *there*-construction are also a syntactically/categorically different class, adjectival in his terms. Again, this insight will feature prominently in my own analysis of English *there*-sentences.

1.6. Conclusion

This review of the literature on the analysis of English *there*-sentences has shown that the major syntactic approaches can be divided into two different groups. The first group, which I call *there*-insertion approaches, starts from the assumption that the two sentences in (8) share a common base predication structure.

- (8) a. There is a man in the garden.
b. A man is in the garden.

There is assumed to be a semantically empty element inserted into the subject position. In this group fall the small clause approach by Stowell (1978) and follow-up work and all analyses proposed by Chomsky in the last two decades. The *there*-insertion approaches share a central problem: if the two sentences in (8) are necessarily linked, how come that bare existentials are possible, even though their counterpart is ungrammatical (outside of ellipsis contexts).

- (57) a. There are dinosaurs.
b. *Dinosaurs are.

The second group of proposals, which I call *there-in-core-predication approaches*, do not face this problem, as there is no transformational relationship between the sentences in (8). I discussed two sub-types: the small clause approach by Moro (1997) and the predicative-NP approaches. A major objection to Moro's approach was that with his analysis of predicate inversion, he draws a parallel of *there*-structures with other predicate inversion cases such as locative inversion. On empirical grounds, the *there*-BE structures behave very differently from

predicate inversion structures, therefore I concluded that this approach is not satisfactory. With the predicative-NP approaches, originating in Jenkins (1975) and Williams (1994), we saw that they grasp a number of core facts; however, they still face the major problem that the noun phrase in *there*-sentences does not behave like a predicate nominal.

The final part of the chapter was devoted to the definiteness effect, and I discussed a small set of approaches, including syntactic, pragmatic and semantic explanations of the restriction. We concluded that neither of the approaches is fully satisfactory, but some of them provide crucial insights that we will come back to in the next chapter.

Apart from discussing these approaches, the section introduced a broad set of data which needs to be accounted for. Against this background I will present my own proposal in the next chapters.

Expletives in Existentials: *There*-BE Sentences

2.1. Introduction

In the preceding chapter, we have seen several approaches to the English *there*-construction and expletive structures in general, of which I discussed the pros and cons. None of the approaches turned out to be fully satisfactory. This discussion also served to introduce a range of facts that must be accounted for under any theory of the English *there*-construction. These core facts are the focus of the first two parts of this chapter. In section 2.2, I will first establish the crucial distinction between *there*-BE (in which the main/tensed verb is *be*) and *there*-V sentences (in which the tensed/main verb is another verb). They differ in several respects and I will propose that the two structures have to be analysed differently. Section 2.3 presents the core facts about the English *there*-BE structure, most of which we already came across in the previous chapter. With this data as background, I will proceed to present my own proposal for the *there*-BE sentences, which has three subparts to be presented separately. (i) I will propose that *there* and the noun phrase¹ are part of a syntactic predication configuration Pred_{EXP} , with *there* being the subject of predication in the specifier of Pred_{EXP} and with the noun phrase being the complement of Pred_{EXP} . (ii) This configuration is read off as an information structural predication, more precisely, athetic statement about a situation. (iii) The existential meaning arises through existential closure of a variable introduced by the (empty) D-layer of the noun phrase.

I will show that my proposal straightforwardly accounts for the core facts

¹I use the term 'noun phrase' as a descriptive cover term for nominal constituents when the internal structure of the element is not relevant.

(section 2.7), the similarities of *there-BE* sentences and copula structures, case and agreement properties, as well as a number of other facts (section 2.8). The final section discusses how the present proposal can be naturally extended to account for the definiteness restriction. I present new data extracted from the British National Corpus that show that the definite determiner *the* can occur with *there-BE* sentences (contrary to what is standardly assumed). We will see that it is a specific class of definite DPs that we find, and that we are not dealing with definite DPs that refer to an entity established in the previous discourse. I will show that these data fall out if we extend the notion of weak vs. strong readings of quantifiers to the definite determiner *the*: In its strong reading, it relates the DP to a previously established entity. The weak reading expresses uniqueness, amount, sort. Just as with quantifiers, only the weak reading of *the* can arise in the *there-BE* construction. The present proposal therefore accounts for a broad range of facts.

2.2. *There-BE* vs. *there-V* structures

2.2.1. Introduction

English *there* occurs in subject position both with the verb *be*, cf. (1) and with a number of intransitive, mostly unaccusative verbs, cf. (2).

- (1)
 - a. As an added bonus, there is a tax differential which makes lead free petrol some 10p per gallon cheaper in the UK.
(BNC, text="AN2" n="4")
 - b. Finally, there is a completely new section on tropical AIDS.
(BNC, text="HJN" n="27")
- (2)
 - a. After her coat was thrown down on to the couch, [...] *there appeared before the child a fat woman, a very fat woman*, in what seemed to be a clean blue-striped blouse and a long grey skirt with a fringe. (BNC, text="CK9" n="148")
 - b. And on they travelled through the forest until they came to a place where the roads crossed and *there sat an old woman resting on a stone*. (BNC, text="F72" n="190")

Many analyses of English *there* implicitly or explicitly assume that it does not matter whether the verb is *be* or another verb. However, I will show below that the two structures behave differently in many respects. Thus, the distinction is crucial and I label the two types differently: those structures in which the tensed/main verb is *be* I call *there-BE* structures; those in which the tensed/main verb is another one (mostly unaccusative verbs), I call *there-V* structures.²

²Note that I use 'tensed/main verb', because some researchers mistakenly assume that participles, when occurring with *be*, can be the main verb of *there-structures*. But these structures work the same way as other *there-BE* structures, see section 3.5 and 3.6.

The major aim of this section is to show that the two structures differ in so many respects that a common analysis of them is neither possible nor justified.

2.2.2. Experimental evidence for *there*-V vs. *there*-BE

Aissen (1975) observed that *there*-V structures differ from *there*-BE structures in a number of respects. She shows that *there*-V structures are islands (Ross 1975), illustrated here with a pseudo-cleft example for *there*-V structures and a simple *wh*-question for *there*-BE structures:

- (3) a. *It was a jack rabbit that there jumped out of that hole.
 b. What is there in the fridge?
 (Aissen 1975, 7)

Aissen (1975) shows that in being islands the *there*-V structures pattern with locative inversion structures illustrated here with a pseudo-cleft structure.

- (4) *What on the front lawn of the church stands is a three oak crosses.
 (Aissen 1975, 7)

As these facts are crucial to any analysis of English *there*-structures, I carried out a Magnitude Estimation experiment and tested the differences/similarities between locative inversion, *there*-V and *there*-BE structures with respect to *wh*-movement of the noun phrase. In order to do this, I tested three variables: construction type, verb type and movement type. *Construction type* distinguishes between three different constructions: *there be/V NP* (which I label existential structure), *there be/V NP PP* (which I label locative structure), and the inverted structure *PP be/V NP*. *Verb type* distinguishes between the copula *be* and an unaccusative verb. *Movement type* distinguishes between the base form, extraction of *what*, extraction of *how many X* and extraction with *which X*. Crossing these variables resulted in 24 conditions to be tested as seen in (5) to (8) (for details of the experiment setup and results, see appendix A):³

- (5) Movement Type: Base
- | | | |
|----|----------------|------------------|
| a. | there be NP | (existential BE) |
| b. | there be NP PP | (locative BE) |
| c. | PP be NP | (inversion BE) |
| d. | there V NP | (existential V) |
| e. | there V NP PP | (locative V) |
| f. | PP V NP | (inversion V) |

³Note that in the cases of extraction from the structures with the copula *be* an additional layer of embedding with a bridge verb was used in order to ensure that the participants have the correct interpretation of the sentences; for details see appendix A, p. 262.

- (6) Movement Type: Extraction with *what*
- | | | |
|----|-----------------------------|------------------|
| a. | what bridge-V there be t | (existential BE) |
| b. | what bridge-V there be t PP | (locative BE) |
| c. | what bridge-V PP be t | (inversion BE) |
| d. | what did there V t | (existential V) |
| e. | what did there V t PP | (locative V) |
| f. | what did PP V t | (inversion V) |
- (7) Movement Type: Extraction with *which X*
- | | | |
|----|--------------------------------|------------------|
| a. | which X bridge-V there be t | (existential BE) |
| b. | which X bridge-V there be t PP | (locative BE) |
| c. | which X bridge-V PP be t | (inversion BE) |
| d. | which X did there V t | (existential V) |
| e. | which X did there V t PP | (locative V) |
| f. | which X did PP V t | (inversion V) |
- (8) Extraction with *how many X*
- | | | |
|----|-----------------------------------|------------------|
| a. | how many X bridge-V there be t | (existential BE) |
| b. | how many X bridge-V there be t PP | (locative BE) |
| c. | how many X bridge-V PP be t | (inversion BE) |
| d. | how many X did there V t | (existential V) |
| e. | how many X did there V t PP | (locative V) |
| f. | how many X did PP V t | (inversion V) |

The judgements collected in a Magnitude Estimation experiment are numerical, so that native speakers can express gradient judgements in a fine-grained scale. I transformed these numerical values into a scale ranging from +++ to --- for two reasons: (i) It is easier to see the differences among the relevant sentence structures this way. (ii) The judgements from the experiment are visually different from the judgements taken from other types of questionnaire studies and papers. The scale was employed to reflect the statistically significant differences of the structures, and is given in (9). Note that the judgements are provided for sentence types, not individual sentences.

- (9) Scale for Magnitude Estimation judgements

1.0 - 1.3	+++	0.0 - -0.1	-
0.6 - 0.9	++	-0.2 - -0.4	--
0.3 - 0.5	+	-0.5 - -0.8	---
0.1 - 0.2	+/-		

The experiment confirmed Aissen's findings. *There-V* structures are different from *there-BE* structures in the following respects.

- (i) **General acceptability.** *There-V* structures are generally judged less acceptable than *there-BE* structures.

- (10) a. +++There was a new witness.
 b. +/-There arrived a new witness.
- (11) a. +++There was an empty lift down the dark well.
 b. +/-There came an empty lift down the dark well.

(ii) **Wh-Movement of the full noun phrase.** *There*-BE structures allow *wh*-extraction of *how many X* or *what*-phrases, only extraction with *which X* is severely less acceptable, cf. (12) and (13) (due to the definiteness effect, cf. Heim 1987).

- (12) a. ++What did you say there was?
 b. -Which witness did you suppose there was?
 c. +++How many advertisements did you say there were?
- (13) a. ++What did you reckon there was in the dark blue hat?
 b. +/-Which lift did you suppose there was down the dark well?
 c. ++How many rabbits did you reckon there were in the dark blue hat?

In contrast to that, all types of *wh*-movement are (almost) equally degraded in *there*-V structures, cf. (14) and (15). Note however the slight effect with *how many* in *there*-V structures with a PP; see the appendix for details.

- (14) a. ---What did there come?
 b. ---Which miner did there come?
 c. ---How many burglars did there come?
- (15) a. ---What did there arrive at the last hearing?
 b. ---Which advertisement did there appear on the noticeboard?
 c. --How many coaches did there arrive in front of the main station?

Thus, the Magnitude Estimation experiment shows that *there*-V structures are clearly different from *there*-BE structures.

2.2.3. Other evidence for *there*-V vs. *there*-BE

The facts from my Magnitude Estimation Experiment are, however, not the only differences known. There are several other differences that are reported in the literature.

(i) **Subextraction.** Guéron (1980) showed that subextraction from the post-verbal noun phrase is not possible with the *there*-V construction, while it is with the *there*-BE construction.

- (16) Subextraction from NP
 a. There hung on the wall a picture of Bill.
 b. *Who did there hang on the wall a picture of?

- c. There is a picture of someone on the table.
- d. Who is there a picture of on the table?

(Guéron 1980, 671)

(ii) Embedding. Aissen (1975) also showed that *there*-V structures cannot occur in a number of embedded structures: indirect questions, cf. (17), sentential subject positions, cf. (18) and comparatives, cf. (19). In all these contexts, the *there*-BE construction is perfectly grammatical (see also Hartmann 2005).⁴

- (17) a. *The reporter wants to know whether there stands a billboard at the intersection.
- b. John wants to know whether there is a billboard at the intersection.
- (18) a. ??That there stands a Tiffany lamp on his dresser is surprising.
- b. That there is a Tiffany lamp on his dresser is surprising.
- (19) a. ??There lie more apples on the ground than there grow on the tree.
- b. There are more apples lying on the ground than there are hanging on the tree.

(iii) VP deletion/VP preposing. Guéron (1980) reports that while *there*-BE structures allow for VP preposing and VP deletion, the *there*-V structures do not.⁵ Note that (21-a) could also be analysed as only fronting of the noun phrase. The claim still holds, as we can also pied-pipe the PP along with the noun phrase as in (22).

- (20) VP deletion
 - a. There was a man on the lawn before John thought there would be.
 - b. *There sat on the lawn a huge dog before John thought there would.
 (Guéron 1980, 671)
- (21) VP preposing
 - a. John said there was a man on the lawn and a man there was on the lawn.
 - b. *John said there would sit on the lawn a huge dog and sit on the lawn there did a huge dog.
 - c. *John said there would sit on the lawn a huge dog and sit there did a huge dog on the lawn.
 (Guéron 1980, 671)

⁴The examples are adapted from Aissen (1975) and were checked with 5 native speakers. The judgements given reflect the following averages (scale 1 (unacceptable) to 5): 1.0-1.9:*; 2.0-2.9:??; 3.0-3.9:?.; 4.0-5.0: ok.

⁵I took the term VP deletion from Guéron (1980), however, I remain agnostic whether we are really dealing with a deletion process or not.

- (22) John said there was a man on the lawn and a man on the lawn there was.

(iv) Control. *There*-V structures allow control into an adjunct phrase, while *there*-BE structures do not (cf. Cardinaletti 1997 referring to Luigi Burzio, Chris Wilder and an anonymous LI reviewer).

- (23) a. There entered two men without identifying themselves.
 b. *There are three men in the room without introducing themselves
 c. *There was believed to be no one serving on the committee until interviewed by Bob.
 (Cardinaletti 1997, 524f)

So far we have seen only differences between *there*-V and *there*-BE structures. Guéron (1980) notes one similarity of *there*-V and *there*-BE: according to her, neither of the two structures allows sentential negation. However, the type of example that she gives as ungrammatical in (24-a) is acceptable, as multiple examples of the type in (25) from the British National Corpus show.

- (24) a. *There isn't a man at the door.
 b. *There didn't sit on the lawn a huge bulldog.
 (Guéron 1980, 670)
- (25) There isn't a colour changer for the double knit or Chunky gauges.
 (BNC, text="CK3" n="990")

2.2.4. Summary

Taken together, we have seen in section 2.2 that the English *there*-BE construction differs from *there*-V structures in the following respects.

- (26) Differences between *there*-BE and *there*-V structures
- (i) General acceptability;
 - (ii) Wh-movement of the full noun phrase;
 - (iii) Subextraction;
 - (iv) Embedding;
 - (v) VP preposing and VP deletion;
 - (vi) Control.

The only feature that the two structures share is the occurrence of *there* in subject position. As the differences clearly outweigh this one similarity, I suggest that the two structures must be analysed as two different derivations. In the remainder of this chapter, I discuss the *there*-BE structures showing that they are existential structures derived from a specific predication configuration. For the *there*-V structures, I will propose in the next chapter, section 3.2, that they should be analysed in terms of locative inversion.

2.3. Major properties of *there-BE* sentences

Now that I have established that the *there-BE* and *there-V* sentences have to have distinct structures, let me focus on the former and summarize the core facts that need to be accounted for.

(i) Optionality of the PP The PP (or any other XP following *there be NP*) is optional: the core structure of *there-BE* sentences only consists of *there be NP*, as the following examples illustrate:

- (27) a. There are dinosaurs.
 b. But there are a number of treatments which can make an enormous difference to the quality of people's lives.
 (BNC, text="CF5" n="10")
 c. Some months before each series, there is a frantic period of preparation. (BNC, text="CH8" n="2").
 d. There was medical evidence that her life could have been saved had she arrived at hospital earlier.
 (BNC, text="FCT" n="14")

These examples show that there is no syntactic (or semantic) requirement for a PP or XP to be present in these sentences. This means that the PP or any other XP following *there be NP* cannot be the main predicate of the clause, contrary to what is assumed by all *there*-insertion approaches. To leave out a predicate in a sentence is only possible in ellipsis cases which only occur under certain licensing conditions (for approaches to ellipsis see Craenenbroek 2004, Winkler 2005 and references therein).

(ii) *There* is obligatory. *There* is obligatorily present in *there be NP* structures, leaving it out leads to an ungrammatical sentence.⁶

- (28) a. *Are Dinosaurs.
 b. *Dinosaurs are.

This fact has given rise to the *there*-in-core-predication approaches, in which *there* is part of the predication structure and as such, cannot be left out.

(iii) *There* does not occur in argument (either subject or object) positions of regular verbs.

- (29) a. *John loves there.
 b. *There makes a good impression on me.

⁶ *Dinosaurs are* can be grammatical in an ellipsis context, but it cannot be interpreted equivalently to *There are dinosaurs*. This is only possible in archaic structures as the famous Descartes quote shows: *I think therefore I am*.

This fact has figured prominently in Chomskyan approaches to the English *there*-construction, and resulted in the claim that *there* cannot receive a θ -role due to its lack of semantic content. *There* is inherently related to Spec,IP, which is only a potential θ -position, but can also host noun phrases that receive their θ -role in a different position (e.g. derived subjects in passive structures).

(iv) ***There* is not a predicate.** The discussion of Moro (1991, 1997) showed that *there* cannot be a predicate: *there*-BE sentences do not behave like predicate inversion structures (i.e. locative inversion and specificational copula structures). The crucial diagnostic for predicate inversion is *wh*-movement: both extraction of a full noun phrase and subextraction from a noun phrase are impossible with predicate inversion structures, cf. (30) and (31).

- (30) a. *What did you say that on the construction site was?
 b. *Which picture do you think that the cause of the riot was?
- (31) a. *Which guy does Imogen think that on this wall hung a picture of
 t?
 b. *Which wall do you think the cause of the riot was a picture of t?

In *there*-BE sentences both types of extraction are possible. Thus, *there*-BE sentences cannot be predicate inversion structures and it follows that *there* cannot be a predicate (for details see chapter 1, 1.3.2).

- (32) a. What did you say that there is?
 b. Which wall do you think there was a picture of t?

(v) **The noun phrase in *there*-BE sentences is not a predicate nominal.** Predicate nominals can occur as a complement to *believe*-type verbs without the copula. This is not possible for the noun phrase in *there*-BE structures.

- (33) a. I consider John a fool.
 b. *I consider there dinosaurs.

Furthermore, a [+human] predicate nominal cannot be modified by a non-restrictive relative clause with *who*. The noun phrase in *there*-BE sentences allows this modification.

- (34) a. *Rebecca is a good eater_i, who_i has been there for quite a while.
 (Rapoport 1987, 135)
 b. And there was one girl, who fancied herself in love with a naval cadet, who could actually produce real tears during the singing of ... (BNC, text="EFP" n="68")

Summarizing this section, we have seen that *there*-BE structures exhibit a number of core properties, which are summarized in (35).

- (35) Core properties of *there*-BE structures
- i. Optionality of the PP;
 - ii. Obligatoriness of *there*;
 - iii. *There* does not occur in argument positions;
 - iv. *There* is not a predicate;
 - v. The noun phrase is not a predicate nominal.

Obviously, these are not the only facts that need to be accounted for, but I consider these to be the core facts that any analysis needs to take into account. Let me now turn to my own of account of these facts.

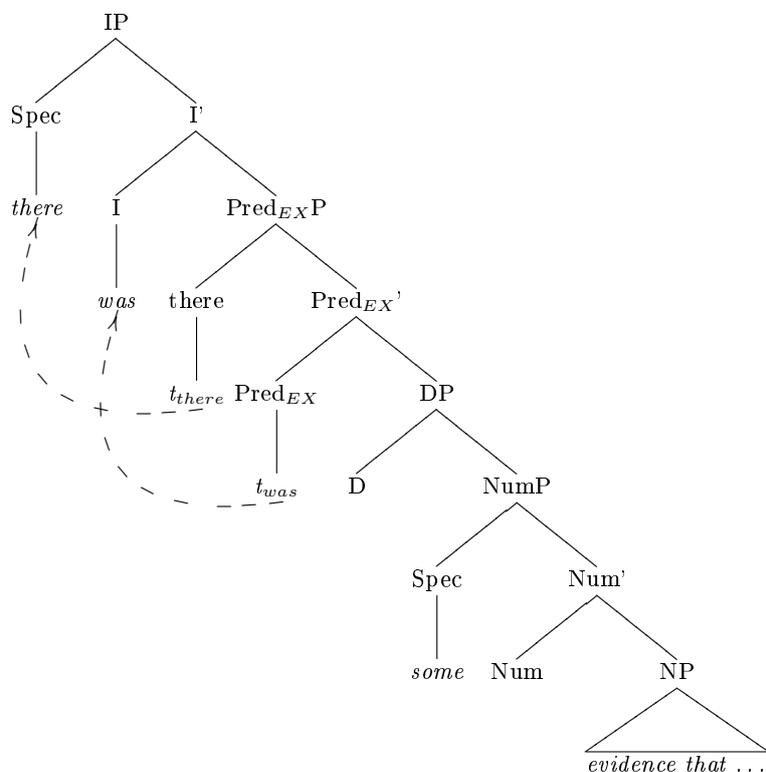
2.4. The proposal in a nutshell

The starting point of my analysis is the claim that *there* is the (true) subject in English *there*-BE sentences as proposed by Jenkins (1975), Williams (1994, 2006), Zamparelli (2000) and Hazout (2004) (among others). It is hosted in the subject position of a Pred-head that establishes a syntactic configuration of predication (see Bowers 1993 and follow-up work) - a Relator in the sense of Den Dikken (2006) - that takes as its complement a complex DP structure. As we have seen in the core data above, the noun phrase in the structure does not behave like a predicate nominal (cf. (35)-(iv)), thus it cannot be the predicate of the structure. *There* is not a predicate in the structure, either, as we have seen in (35)-(v). So the following question arises: What is the predication relationship in these structures, semantically and syntactically? The proposal that I will defend here is that there is a syntactic requirement for (at least) one sentential predication configuration (cf. Rothstein 1985, 2001). This predication relationship in *there*-BE sentences is interpreted in terms of information structure, as athetic statement presenting an entity as part of a given situation. The syntactic structure I argue for is given in (36), for a sentence like (37).

- (37) There was some medical evidence that her life could have been saved had she arrived at hospital earlier.
(BNC, text="FCT" n="14", adapted.)

Before I discuss how this structure accounts for the core properties of the *there*-BE sentences, I want to elaborate on two issues that are not entirely obvious at first sight, but crucial to my analysis: the type of predication and the relevance of the complex DP structure. I address these issues in more detail in the next two sections in order to show why it makes sense to pursue the analysis in (36).

(36)



2.5. Existentials, predication andthetic sentences

2.5.1. The status of PredP

Most of the literature on PredP or similar configurations concentrates on showing that there is a syntactic configuration which is read off as a subject-predicate relationship (cf. Stowell 1983, Rothstein 1985, Bowers 1993, Den Dikken 2006). In the typical PredP structure, the complement of the Pred-head is interpreted as a property (cf. Bowers 1993, 697). The function of the Pred-head is to make a predicate out of this property (in the sense of Chierchia's Chierchia 1985 \cup -operator); the same holds for Pred that selects for a VP (equivalent to the light verb *v* in other studies). This however, is certainly not the case in the structure under discussion here. The complement of Pred is not interpreted as a property, and thus the function of Pred_{EX} cannot be to make a predicate out of it.⁷ Thus, Pred_{EX} is of a different type than the general Pred-head found in copula structures.

At first sight, this move seems to be a weakening of the PredP proposal in

⁷It might be interpreted as an instantiation of a property as McNally (1997, 1998) argues, but not as a property per se.

general, but a close look at the properties of PredP proposed so far shows that we need to distinguish different types of PredPs anyway. First of all, Bowers' PredP does not always select for a constituent that is interpreted as a property. PredP also selects for unaccusative VPs whose arguments are satisfied inside the VP already, thus they should be saturated and they cannot be interpreted as properties. Second, Bowers (2001) suggests that Pred can also select for TrP (responsible for transitivity and accusative case assignment), another category that is not straightforwardly interpreted as a property: it can be a category that has all its arguments saturated. Thirdly, Adger and Ramchand (2003) proposed two types of PredPs, one with and one without an event variable. This means that we need to distinguish between different Pred-heads independently of the proposal made here. To this collection of PredPs I add a further head, one, whose complement is a complex DP and whose subject is a proform for a (spatio-temporal) situation. The common function of different Pred-heads is to make a predicate out of their complement (independent of the complement being a property or not), in one sense or another. With Pred_{EX} the resulting predication is information structural, more precisely athetic statement with a situation as topic. In order to spell-out the proposal in more detail, I will first present the distinction between thetic and categorical statements, and then show how this applies to the structure under discussion.

2.5.2. The thetic vs. categorical distinction

The discussion of thetic vs. categorical judgements goes back to the 19th century philosopher Franz Brentano whose ideas were further developed by his student Anton Marty (Marty 1897). Simply put, thetic sentences present a situation in its entirety, while categorical sentences set apart an entity and say something about this entity. Consider (38-a), which is a standard example of a thetic sentence. The sentence simply expresses a state of affairs, namely that it is raining. By contrast, the categorical statement in (38-b) presents an individual, namely John, and states about him that he is intelligent.

- (38) a. It is raining. (thetic)
 b. John is intelligent. (categorical)

In the framework of generative grammar, the distinction of thetic and categorical sentences was first explored by Kuroda (1972), who argued that the distinction is morphologically expressed in Japanese. Thetic sentences include the morpheme *ga*, cf. (39-a), while categorical judgements include the morpheme *wa*, cf. (39-b).⁸

- (39) a. Inu ga neko o oikakete iru.
 dog GA cat ACC chasing is

⁸The distinction between *wa* and *ga* has also been analyzed in terms of information structural distinctions: *wa* is taken as a topic marker, whereas *ga* marks nominative. For discussion and references see Inoue (2006).

- b. Inu wa neko o oikakete iru.
 dog WA cat ACC chasing is
 ‘A/the dog is chasing a cat.’
 (Kuroda 1972, 161)

Several years after Kuroda’s study, Sasse (1987) took up the issue again and argued that the distinction is visible in a wide range of languages, just in different disguises. In English, for example, thetic and categorial sentences can be differentiated by intonation.⁹ Thus, the sentences in (40) are thetic sentences, with stress on the noun phrase only (marked with capital letters), while the sentences in (41) are categorial judgments, with stress both on the noun and on the verb (see also Drubig 1992, von Stechow 1989). The same holds for similar sentences in German, for example.

- (40) a. The BRItish are coming.
 b. My SIsTer died.
 c. The BUTter melted.
 d. The SKY is falling.
- (41) a. MArY is SINGing.
 b. My SIsTer is DYing.
 c. The BUTter MELTed.
 d. The SHIP SANK.

According to Sasse (1987) the relevant distinction is that in (40) the situation is presented as a whole, without setting apart a participant in the structure. As his predecessors, Sasse (1987) proposes that thetic sentences do not involve predication (in the sense of assigning a property to an individual), only categorial statements do.

Sasse’s notion of predication is clearly limited to ascribing a property to an entity. He rejects Frege’s wider notion of predication in terms of unsaturated functions (cf. Frege 1891a,b). This is due to the fact that the analysis of thetic sentences as unstructured presentations of events or entities, cannot be straightforwardly expressed in Frege’s terms. Functional application always divides a structure into a function and an argument of that function. If thetic sentences are situations presented unstructured, i.e. without setting apart a participant in the structure, Frege’s functional application provides too much structure or structural organization.

However, this conclusion also depends on the notion of structuredness as opposed to the notion of predication. Looking at the matter from a different perspective, the predication that Sasse speaks about can also be understood in terms of information structural notions like topic-comment or theme-rheme.

⁹Other options for marking thetic sentences found in the wide range of languages that Sasse investigates, are: subject-verb inversion (in Romance, some Slavic languages among others), split structures (structurally similar to cleft-sentences), incorporation and verb nominalization.

Sasse rejects these notions mostly because they are ambiguously used and the concepts involved are not very well understood. Even though I think that his criticism is appropriate, it still seems clear that exactly these concepts are involved in categorical statements. Thus, the assignment of a property to an individual is equivalent to saying something about this individual, making the individual a sentence topic (in the sense of Reinhart 1981).¹⁰ In this sense, sticking to a specific notion of predication where notions of information structure would be more adequate only adds to the confusion.

Assuming that this line of reasoning is on the right track, the difference betweenthetic and categorical sentences is not necessarily about being structured (categorical) vs. being unstructured (thetic). Rather, categorical sentences are structured in a specific information structural way, whereasthetic sentences are structured differently. On this analysis, it is possible to use functional application (i.e., predication in the Fregean sense) forthetic sentences as a mechanism to derive a truth value, without losing the distinction to categorical sentences. Thus, it seems possible to include the distinction betweenthetic vs. categorical in a Fregean approach. But if the subject is not the topic of athetic sentence, are these sentences topicless? Erteschik-Shir (1997, 2007) answers this question in the negative and proposes that the Kratzerian spatio-temporal argument is the topic of athetic sentence (her so-called *stage topic*) (Erteschik-Shir 1997, 241,fn27). Maleczki (2004) proposes a semantic treatment of this underlying concept, in which the logical subject of athetic sentence is a location with the rest of the sentence being predicated of it. And it is this type of predication relationship that I will make use of below.

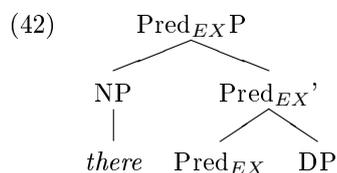
2.5.3. *There*-BE sentences asthetic statements

Ever since the distinction ofthetic vs. categorical judgements was made, English *there*-sentences have been considered to bethetic sentences. I take this observation as a starting point for my analysis. I follow Erteschik-Shir (1997, 2007) and Maleczki (2004) in assuming thatthetic sentences exhibit a predication relationship in which an abstract location is the topic and the rest of the sentence is predicated of it. The intuition that needs to be expressed in a more formal way is that existential sentences state about a location (or situation in the sense of Kratzer 2007) that it contains an individual of the type (and quantity) expressed by the DP.¹¹

I propose that the relevant syntactic structure of predication is provided by a PredP the head of which selects for a complement that is not a predicate, as in (42).

¹⁰Note that the notion of sentence topic presented by Reinhart (1981) is distinct from the notion of discourse familiarity or old information.

¹¹Thethetic sentence type that we are talking about here is then *entity-central* as opposed to *event-central*. See Sasse (1987) for the distinction. Maleczki (2004) adds a third-type, the situation ascribing type.



This PredP is different from the PredP that is usually assumed to be present in small clause structures. The complement of the latter is a predicate, while the complement of the former is not. In order to distinguish the two, I call the latter Pred_{EXP}. Pred_{EXP} is closer to the higher PredP (or vP) argued for by Bowers (2002). The subject of this projection is a proform for either a location or a situation argument, which in English is expressed by *there*.¹²

The predicative head is obligatorily spelled out by the copula verb, which I assume to be a dummy element that is inserted to provide the functional head Pred_{EXP} with phonetic content, similarly to dummy *do* with the difference that *do* occurs with events and agent verbs, while *be* is restricted to states.¹³

Expletive *there* in this analysis is a proform that picks up the situation/location from the context (interacting with grammatical tense). Its default value is the situation of here and now. Thus a sentence like *There are dinosaurs* is interpreted as true of the actual world if the actual world is such that it contains individuals that are dinosaurs. This overall situation can be further specified by a frame adverbial (in the sense of Maienborn 2001), in which case the situation is limited to the frame provided by the PP.¹⁴ In this sense, *In Africa, there are dinosaurs* gives rise to a reading in which it holds for the location Africa that it contains individuals of the type dinosaur.

¹²In my analysis nothing particular relies on the exact nature of *there* as a proform for a location, a complex situation, or for the Kratzerian spatio-temporal argument (cf. Felser and Rupp 1997, 2001, Kallulli to appear). The fact that *there* is a locative proform suggests that it refers to a location. However, temporal modifiers can also provide the frame for which the existential statement holds, as in (i), which suggests that we are dealing with a more complex proform.

(i) In the afternoon session there was an equally irritable wrangle over a proposal to adopt a law on compliance with the constitution, ...
(BNC, text="A9V" n="29")

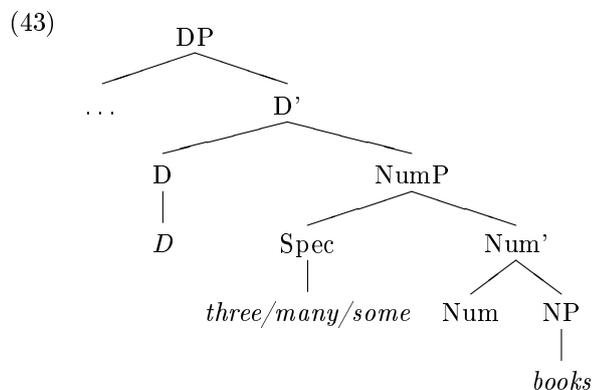
¹³I suspect that the copula can also provide phonological content to other functional projections, in which the projection provides additional content (e.g. agentivity). An analysis along these lines might be possible for the difference between: *Jane is polite*. vs. *Jane is being polite*. See Rothstein (2001, Chapter 10) for more data and a different proposal.

¹⁴The notion of frame setting goes back to at least Chafe (1976, 51) and is defined in Jacobs (2001, 656) as follows: 'In (X Y), X is the frame for Y iff X specifies a domain of (possible) reality to which the proposition is expressed by Y is restricted.'

2.6. The internal structure of the DP

2.6.1. The overall structure

In the proposal developed here, the internal structure of the DP plays a crucial role for the interpretation of the structure. The lexical noun phrase is embedded in two functional layers, one that determines the quantity of the lexical noun phrase and an empty D-layer that is eventually responsible for the existential interpretation. For expository reasons let me call the first layer NumP (following Ritter 1991 among others).¹⁵ In essence, I will argue for the minimal structure in (43).



It is clear that the nominal structure in *there*-BE sentences needs to be at least as big as NumP since we need a projection that hosts the numerals and weak quantifiers that we find in the following examples.¹⁶

- (44) Vulnerable people should be aware that there are **some** laboratories and practitioners who rely on controversial and unproven procedures. (BNC, text="AKN" n="45")
- (45) Nevertheless, there are **many** films that undermine this argument, suggesting that British character won't do as an explanation of poor filmmaking. (BNC, text="A7L" n="8")

¹⁵The label is not so important here. The relevant projection appears under the label count phrase #P in Borer (2005a), PredicateP in Zamparelli (2000), ClassP in Tănase-Dogaru (2007). Note that NumP is not the host for plural marking on nouns, but specifies quantity, quality and possibly kind. Note also that I assume along with Borer (2005a) and Zamparelli (2000) (among others) that the strong quantifiers appear in a higher syntactic projection.

¹⁶I assume that the cardinals occupy the specifier of NumP (and are not heads) for the reason that these elements can be complex, as for example *at most five*. As far as I can see, the structure presented here is, in principle, also compatible with an analysis in which the numerals are heads, or analyzed as adjectival modifiers, a suggestion made by Bowers (1975) and taken up by Higginbotham (1987). This assumption is especially made for weak quantifiers in Slavic (cf. Babby 1987, Franks 1994, Franks and Pereltsvaig 2004, Bošković 2003, Pereltsvaig 2006).

- (46) A float could be on the cards by the end of next year, but before then there could be **a few** punch-ups with Britain's farmers who provide all the milk to make the cheese. (BNC, text="CEL" n="99")
- (47) There is normally **more than one** way of writing about a particular historical subject or period. (BNC, text="EDF" n="2")
- (48) Whereas there were nearly **two thousand** SAS and SBS members, the 14th INT had no more than a hundred, of which only thirty were field-operational. (BNC, text="CML" n="22")

NumP is the host for these weak quantifiers and numerals (cf. Hudson 1989, Borer 2005a among others). That the weak quantifiers and numerals are hosted in the same position is supported by the fact that they are all cardinal determiners in the definition that Keenan (1987) provides for the class of determiners (for more detail, see chapter 1, 1.5). NumP is also the position for the indefinite determiner *a* (cf. Borer 2005a). This NumP is embedded under a further layer, which I claim to be phonologically empty. Let us turn our attention to this layer.

2.6.2. The role of the empty D-layer

A crucial part of the analysis presented in (36) is that the lexical noun phrase and the layer that hosts the weak quantifiers, NumP, are embedded under an empty D-layer. This can be broken up into two claims: (i) that there is a D-layer present and (ii) that the layer is empty.

The D-layer has been argued to provide a noun phrase with referentiality (cf. Higginbotham 1985) and to be the host for strong quantifiers (cf. Bowers 1988, Zamparelli 2000, Borer 2005a among others). Following Borer (2005a, 30ff), I assume that any layer in the noun phrase needs to be licensed, or, as she puts it, be assigned a value. This can be obtained by either merging (or moving) a head (in head position) or a phrase (in specifier position). A third option is licensing by an unselective binder, e.g. an operator like *always*, a generic operator or existential closure. With this approach, Borer can account for the various different readings of (non-specific) indefinite noun phrases (among many other observations). She suggests that these indefinites have an empty D-layer that needs to be bound DP-externally; depending on the operator present, different readings arise for the noun phrase. If no other operator is present, the indefinite noun phrase is bound by existential closure.

My claim is that we find the same type of DP in *there*-BE sentences. This layer introduces a variable into the discourse that has to be bound by existential closure for the existential meaning to arise.¹⁷ This proposal provides a formal

¹⁷Alternatively, one can imagine that an existential quantifier is present in the specifier of the D-layer as proposed by Hartmann and Miličević (to appear). It seems to me that the two proposals are notational variants, so that it is hard to decide which version is essentially correct.

syntactic implementation for Higginbotham's (1987) claim that the core of the existential meaning lies in the noun phrase in the structure. Existential closure gives rise to an existential reading of the noun phrase (in line with Heim (1982)) as suggested by Borer (2005a, 137). In this way, the semantic structure of $\exists x(\text{man}(x)\dots)$ arises, which I take to be the core of the interpretation of *there*-BE sentences.

The presence of an empty D-layer is further motivated by the fact that the noun phrase in English *there* structures is not a predicate. As I will illustrate below (see section 2.8.1), it has been proposed that predicate nominals are NPs, while argument noun phrases are DPs. Hence predicate nominals lack the D-layer, but they can project up to NumP. Since the noun phrase in *there*-BE sentences does not behave like a predicate nominal, it has to be a larger category, DP as I will propose. This structure of the noun phrase in existential *there*-BE sentences provides a formalization of the special nature of the DP: it is neither a predicate nominal nor a referential DP (see below 2.8.2 and 2.8.3).

Additional support for this approach comes from the fact that DPs in which the D-layer is filled are not ungrammatical with *there*, per se but they give rise to a different, the so-called list reading, as shown in (49) and (50). With the highest D-layer filled, the existential reading does not arise. Instead the DP specifies an element of a list specified in the context (for details see chapter 3, section 3.7).

- (49) A: Did we call everyone?
 B: No, There's still John and Bill.
- (50) Is there anything worth seeing around here? Well, there is the Necco factory. (Milsark 1974, 208)

Another argument for the presence of this empty D-layer comes from existential sentences in Serbian (for more details on Serbian, see 5.2). The noun phrase in existential sentences in Serbian is (usually) marked with genitive case, cf. (51).

- (51) Ima knjiga (ovde).
 Has books_{GEN.F.PL} here
 'There are (some) books (here).' SERBIAN

Genitive case also turns up on noun phrases that are in the scope of a quantifier, as seen in (52) (the so-called genitive of quantification).

- (52) a. Vidim pet prijatelja
 see_{1SG} five friends_{GEN}
 ‘I see five friends.’
- b. Ivan uze nekoliko cvetova.
 Ivan took several flowers_{GEN}
 ‘Ivan took several (of the) flowers.’
- c. Većina knjiga je dosadna.
 Most_{NOM} books_{GEN} is boring
 ‘Most books are boring.’
- SERBIAN

As we can clearly see in (52-c), genitive case is assigned DP-internally: the full DP receives nominative in subject position, which is spelled out on the quantifier (numerals do not show (structural) case morphology, thus, which case they are assigned is not visible).¹⁸ Bošković (2003, 2006) proposed that the head that hosts the (strong) quantifiers is responsible for case-assignment to its complement. Turning now to genitive case in existential structures, its presence points to two facts: (i) the noun phrase is quantified (ii) a case assigning head is present on top of the overt structure.¹⁹ This is exactly what we find in existential sentences: existential closure introduces existential quantification.²⁰ The D-head is responsible for case assignment in the structure. Thus, we have further support for the presence of an additional functional layer, on top of NumP, the empty D-layer (given that the analysis for existential sentences in Serbian and in English is the same - which I will show to be the case in 5).²¹

A similar case can be made for French existential structures as Henk van Riemsdijk (p.c.) and Ian Roberts (p.c.) pointed out independently. In its existential reading, *il y a* requires the determiner *de* to be present for the existential reading to arise with mass nouns.

- (53) Il y a de l'eau sur la table.
 Expl CL has DE the-water on the table
 ‘There is some water on the table.’
- FRENCH

¹⁸I put aside some more complicated matters with the numerals from one to four. See Bošković (2003, 2006) for discussion.

¹⁹The facts in Finnish are similar, with partitive case occurring both in existential sentences and in quantified noun expressions. See Asbury (2008) for an analysis of genitive case in Slavic on a par with partitive case in Finnish, though in a different way than provided here.

²⁰Note that the matter is more complicated as indefinite noun phrases with an existential reading can be nominative, see Hartmann and Milićević (2007) for discussion.

²¹Note that these facts also clearly show that semantics is not enough: in some languages case is involved which indicates that syntax also plays a role in the interpretation of these structures.

2.7. Accounting for the core facts

Assuming the syntactic structure proposed in (36) and the extended explication of the nature of the predication and the role of the D-layer, I will now show how the proposed analysis accounts for the major properties of *there*-BE sentences provided in the 2.3.

(i) The optionality of the PP. As we have seen above, one of the core properties of the English *there*-BE construction is that the PP (or any other XP following *there be NP*) is optional. In the analysis presented here, these constituents have to be adjuncts, either to the DP, Pred_{EX}P or TP. As adjuncts these elements are necessarily optional.

(ii) The obligatoriness of *there*. The obligatory presence of *there* is due to the fact that it is the subject of the core predication of the sentence. It is a proform that stands for the situation that we are talking about.

(iii) *There* is not an argument to regular verbs. One aspect of the special predication structure Pred_{EX}P is that the predication in the structure is not related to theta-role assignment. In this way, it can be upheld that the major difference between *there* and *it* is that the former cannot receive a θ -role (cf. Bennis 1986, Vikner 1995, Ruys 2007 among others). If *there* cannot receive a θ -role, it cannot occur as an argument to regular verbs.^{22, 23}

(iv) *There* is not a predicate. As the subject of predication and proform for a situation, *there* cannot be the predicate in the structure.

(v) The noun phrase in *there*-BE sentences is not a predicate nominal. Assuming that predicate nominals do not project a D-layer (cf. 2.8.1), the DP in the *there*-BE structure is too big to be a predicate nominal.

²²Note that this is a major difference from approaches like Kallulli (to appear) in which *be* is taken as a lexical verb that selects for the noun phrase and *there*, the same way as any other regular verb selects for its arguments. Two problems arise with this proposal: first we need to assume several verbs *be*, and second, if *there* can be the argument of *be* why can it not function as an argument of other verbs?

²³Note that the notion of argument to verbs aimed at here is not the same as argument in the sense of event argument. The major difference is that θ -role assignment is involved in the selection of noun phrase arguments, while event arguments can be arguments of verbs, but they are generally not assumed to receive a θ -role. Thus, *there* may still be considered a spatio-temporal event argument in the sense of Kratzer (1995) as proposed by E. Kiss (1996), Ramchand (1996) and Felser and Rupp (2001).

2.8. Advantages of the analysis

Now that we have seen that the proposed analysis straightforwardly accounts for the core facts of the *there*-BE structure, let me turn my attention to further advantages of the analysis. We have seen in 1.3.3 that the behaviour of *there*-BE structure is similar to copula structures in several respects. As we will see below this is due to the similarity in the DP structure. I assumed that predicate nominals are smaller than DP and I will elaborate on this assumption in section 2.8.1. The difference between the noun phrase in existential structures and noun phrases in predicative positions is that the former require an empty D-layer, while the latter do not have such a layer. Thus the overt lexical material is the same, but the structure is different. This assumption will allow me to account both for the similarities to and the differences from predicate nominals. Additionally, I will show how the *wh*-movement restriction and the interpretation of bare plurals falls out from the proposal.

2.8.1. Some assumptions about DP structure

It is a well-known fact that noun phrases can have (at least) two different types of interpretations: a referential and a predicative interpretation. This is illustrated in (54) and (55).

- (54) a. **The mayor of London** likes mushrooms.
 b. John likes **the mayor of London**.
- (55) John is **the mayor of London**.

That these two readings have to be distinguished can be seen from the fact that a noun phrase in predicative position is three-way ambiguous, while a noun phrase in argument position is only two-way ambiguous (cf. McCawley 1981, 176-180). Consider the examples in (56)

- (56) a. Michael Moskowitz wants to meet the mayor of Heppleworth, Iowa.
 b. Michael Moskowitz wants to be the mayor of Heppleworth, Iowa.
 (Mandelbaum 1994, 17, citing from McCawley 1981).

The sentence in (56-a) has two readings, a *de re* and a *de dicto* reading. Under the *de re* reading, Moskowitz wants to meet a specific person who happens to be the mayor of Heppleworth, Iowa. Under the *de dicto* reading, Moskowitz wants to meet the mayor of Heppleworth, whoever this person might be.

The sentence in (56-b) has three readings: a *de re* and a *de dicto* reading (under an identificational interpretation) and on top of that a predicative reading. Under the *de re* reading, Moskowitz wants to be a specific person who happens to be the mayor of Heppleworth, Iowa. Under the *de dicto* reading, Moskowitz wants to be the person who is the mayor of Heppleworth, Iowa. On the predicative reading, Moskowitz wants to take up the post mayor of Heppleworth, Iowa. Thus, noun phrases in predicative position have an additional

interpretation.

Whether this distinction is only a semantic one or is also reflected in the syntax, is a disputed question. Partee (1987) proposed a number of type-shifting operations that allow noun phrases to receive referential (type $\langle e \rangle$), predicative (type $\langle e, t \rangle$) or quantificational (type $\langle \langle e, t \rangle, t \rangle$) interpretations (see Partee 1987 for details). These semantic operations can apply to all noun phrases. In some cases, the outcome of the operation is illicit and therefore, not all types of noun phrases can have all types of interpretations. For example, strong quantifiers like *every* or *most* cannot receive an $\langle e \rangle$ or $\langle e, t \rangle$ type interpretation, because there is no licit outcome of the respective type shifting operations. These type-shifting operations can be induced by lexical items (e.g. the copula *be*), but they need not be (for a discussion of some problems that this approach raises, see Zamparelli 2000).

In order to avoid this mapping from one syntactic form to various semantic interpretations, a number of syntacticians proposed that the distinction is also reflected in syntax (cf. Hudson 1989, Bowers 1988, 1991, Holmberg 1993, Mandelbaum 1994, Kallulli 1997, 1999, Zamparelli 2000, Borer 2005a among others). Some argue that referential noun phrases are of category DP (going back to Abney 1987, Longobardi 1994; but see Franks and Pereltsvaig 2004, Pereltsvaig 2006); others argue that predicative noun phrases are of category NP (or at least smaller than DP) (cf. Hudson 1989, Mandelbaum 1994, Zamparelli 2000 among others; for an opposite view see Julien 2006).

The first argument for this position goes back to Higginbotham's (1985) proposal that all NPs are unsaturated predicates²⁴ and that the role of the determiner is to saturate the external role of this noun phrase. In this line of thinking, noun phrases can only be predicative if they are still of category NP. The problem for this proposal is that noun phrases that are headed by a determiner can still be predicative in structures like *John is a teacher* or *Bill was the president of the United States*. Mandelbaum (1994) proposes that the determiner is adjectival (following Higginbotham 1987 and going back to at least Milsark 1974) in these cases and not a determiner head, which nicely grasps the distinction between quantifiers that occur in predicative position and those that cannot.

Coordination data provide the second argument for distinguishing predicative noun phrases as NPs from referential noun phrases as DPs. It is a well-known fact that identity-statements cannot be coordinated with a predicate nominal (without a pause before the conjunction), suggesting that they are not of the same category.

- (57) a. ??Mark Twain is Samuel Clements and a writer.
 b. ??The Gran Zebrú is a mountain and the Königsspitze.
 c. ??Diego della Verga is Zorro and the cause of the turmoil.
 (Zamparelli 2000, 126)

²⁴According to Zamparelli (2000, 15) (see also the appendix in Moro 1997), this idea goes back to Aristotle *De interpretatione*, 1, 16a, 10-20).

Finally, the assumption that predicative noun phrases are smaller than referential noun phrases is also in line with much current research investigating the mapping from syntax to semantics. I follow Borer (2005a) here in assuming the following about UG:

- (58) a. True of UG: A unique syntactic representation α entails a unique semantic representation α' .
 b. Not true of UG: a unique semantic representation α' entails a unique syntactic representation α .
 (Borer 2005a, 16).

According to (58-a), a copula clause like *John is the president of the United States* cannot lead to two semantic representations (a predicative and an identificational one) unless there are two syntactic structures available. I therefore assume that the structure of the identity statement is different from the structure of the predicative statement: in the former case the noun phrase is a DP, while in the latter case it is smaller than that. This implies that the definite determiner in predicative structures can occur lower in the DP than the D-layer. I will discuss this issue of two positions for the determiner in more detail in section 2.10.3.

Furthermore, I follow another proposal in the literature, namely that weak quantifiers are base-generated and remain lower than the DP layer while strong quantifiers end up at least as high as DP (Bowers 1988, Hudson 1989, Zamparelli 2000, Borer 2005a among others). The major argument for this position is that weak quantifiers can be preceded by the definite determiner, while strong quantifiers cannot (which is not only true of English):

- (59) a. the three stooges
 b. the few volunteers
 c. these several mistakes
 d. the many medals (Borer 2005a, 140)
- (60) a. *the every boy
 b. *the each boy
 c. *the both boys (Borer 2005a, 141)

Finally, I assume that indefinites and numerals can only have a wide-scope reading if they are interpreted as specific/referential. For this reading, they have to move to the D-layer, as the D-layer is the layer for referentiality (cf. Zamparelli 2000 for a similar approach). Thus, the two readings of *Everyone bought two books* are structurally ambiguous. In the wide scope reading *two* is in the specifier of D, in the narrow scope reading it is in the specifier of NumP.

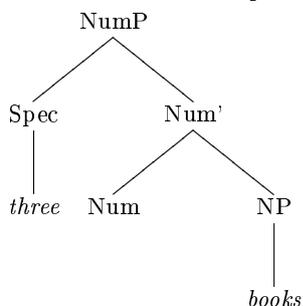
With this background, let me now turn to the similarities and differences between copula structures and *there*-BE structures.

2.8.2. Similarities with predicative NP structures

As we have seen in the discussion of predicative NP approaches in 1.3.3, the *there-BE* structures exhibit several similarities to the so-called copula structures with predicate nominals (e.g. *John is a fool*). I will address these similarities here and show that they follow from my proposal.

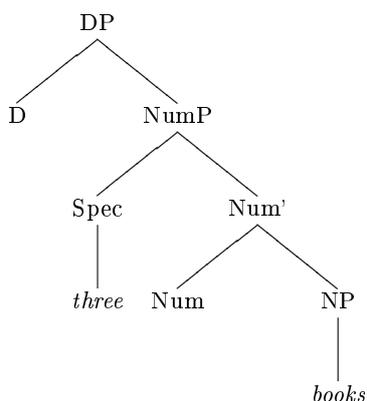
Predicative noun phrase structures are similar to the *there-BE* structures because the main verb is the copula *be* in both structures. As argued above, the structure of predicate nominals is smaller than DP, as shown in (61) (whether NumP is a separate projection or the numerals are adjoined to NP is not crucial).

(61) The structure of a predicate nominal



The noun phrase in the existential structure is similar to the noun phrase in predicative structures, because the overtly expressed part is just as big as the full structure in a predicate nominal. The difference between predicate nominals and the DP in the *there-BE* structures is that the latter projects an empty DP layer, cf. (62).

(62) The structure of the DP in existential sentences



This similarity in the overt material is the reason for the similarities between predicate nominal sentences and *there*-BE structures.

(i) Narrow scope. The noun phrase in *there*-BE sentences and the predicate nominal in copula structures cannot take wide scope with respects to modals or negation, as seen in (63).

- (63) a. There weren't two people drunk. Neg > 2, *2>Neg
 b. John and Mary aren't two students I know. Neg > 2, *2>Neg

This follows from the assumption made above in 2.8.1 that numerals and quantifiers can only have a wide-scope reading if they move to the specifier of DP. In existential sentences, the numerals cannot appear in the D-layer because it needs to be empty for existential closure to apply. With the copula structures, this D-layer is simply not present. It follows that numerals are confined to narrow scope in both structures.

(ii) Strong quantifiers with kind-readings. As we have seen above in 1.5.9, both the *there*-BE sentences and copula structures allow strong quantifiers with kind-readings.

- (64) a. There was every kind of wine available for tasting.
 b. ??There was every worker ready.
- (65) a. John has been every kind of doctor.
 b. *John has been every doctor.

This fact is unexpected as *every* is a strong quantifier and as such should be merged in the specifier of the D-head, a position that I claimed to be necessarily empty or absent. However, these phrases are special, because they seem to behave more like indefinites than like quantifiers in other environments. Carlson (1977b) already observed that phrases like *this kind of X* can have an existential interpretation along the lines of bare plurals.

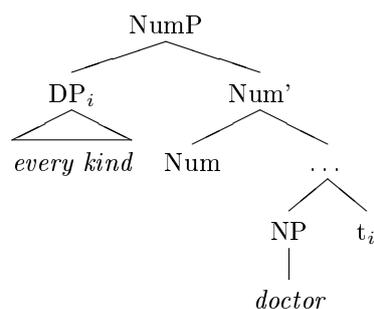
- (66) a. Bill shot this kind of animal yesterday.
 b. This kind of animal is sitting on my lawn.
 c. I saw this kind of animal in the zoo.
 (Carlson 1977b, 46)

In (66-a), we are not talking about a specific kind of the type animal that has been shot, but about some members of a specific kind of animals. The interpretation is existential and not definite, despite the presence of the determiner *this*. To account for these data, Carlson (1977b) suggests that *this kind* acts as a modifier of the noun *animal*.

Similarly, a sentence like *John shot every kind of animal yesterday*, does not mean that for every animal kind, it is true that John shot the whole kind

(and made them extinct). It means that John shot some members of several kinds of animal. Wilkinson (1995) argues for a second reading of *kind* to account for the occurrence of *kind* in structures like *an animal of that kind*, in which *kind* is not a modifier but rather a simple predicate. Zamparelli (2000) takes up these analyses and argues that the full DP *every kind* is base generated lower in the structure in parallel to the structures *NP of D kind*. Crucially, the site where the DP ends up is NumP (or PDP - Predicate Determiner Phrase - in Zamparelli's phrasing). Following this analysis, it becomes clear why these strong quantifiers that range over kinds can occur in both *there*-BE and copula structures. They do not modify the head noun of the structure (i.e. *wine* in (64-a) and *doctor* in (65-a)), but the quantifier modifies the noun *kind* and this phrase ends up in the specifier of NumP. The resulting structure is given in (67).

(67) adapted and simplified from Zamparelli (2000, 116)



It is not entirely clear to me whether the DP *every kind* really moves from below, though. However, what I think is true about the structure is that *kind* is not the head noun. In the existential reading pointed out for (66-a) above, as well as in *there*-BE structures and copula structures we are talking about animals and not about kinds.²⁵ The important point for *there*-BE structures and the copula structures under discussion here is that the quantifier modifies the noun *kind* and sits in the specifier of NumP. As predicate nominals can be as big as NumP and as the empty D-layer is above NumP, these structures are licit. Thus, the reason why the two structures behave in a similar fashion is due to the obligatory emptiness (*there*-BE sentences) or lack of (predicate nominals) the highest D-projection.²⁶

(iii) The restriction on the relative pronoun. The noun phrase cannot be relativized by *who* either in copula structures or in *there*-BE sentences.

²⁵This invites an alternative analysis of these phrases in terms of semi-lexical nouns, cf. Van Riemsdijk (1998), Vos (1999) and Tănase-Dogaru (2007) for interesting proposals.

²⁶For cases like Williams' example *This house has been every color* we need to assume an empty KIND noun. Why it can be non-overt in copula structures but not in *there*-BE sentences is not clear to me.

- (68) a. The people *who/that/Ø there were at the party were drunk.
 b. They dressed like the eccentric women *who/that/Ø they were.
 (McNally 1997, 85)

This follows on the assumption that *who* pronominalizes a full DP. As predicate nominals are smaller than that, *who* cannot pronominalize a predicative NP. Independent support for this claim comes from regular copula structures. Predicate nominals are questioned by *what*, while extraction with *who* is used when the DP is extracted from an argument position.

- (69) Q: What did you say that John is?
 A1: A teacher./A fool./Intelligent.
 A2: #That man over there./#Mr. Smith.
- (70) Q: Who did you say is intelligent?
 A1: #A teacher./#A fool./#Intelligent.
 A2: That man over there./Mr. Smith.

Thus, *who* is a pronominal for a full DP, and it cannot stand for a predicate nominal, which is smaller than this. The explanation is similar for the restriction on *there*-BE sentences. When *who* pronominalizes the full DP, existential closure over the empty D-layer is no longer possible, an existential reading cannot arise. Thus, relativization of the noun phrase in *there*-BE sentence with *who* is impossible.

(iv) Extraction from *wh*-islands. Arguments differ from predicates with respect to *wh*-extraction out of *wh*-islands, cf. (71) vs. (72) (cf. Williams 1994).

- (71) a. ?What do you wonder who fixed?
 b. ?Who do you wonder why Bill likes?
- (72) a. *How tall do you wonder who became?
 b. *How foolish do you wonder why Bill considers anyone t?

Extraction of the noun phrase from the *there*-BE structures patterns with extraction of predicates from small clauses, cf. (73).

- (73) a. *Who do you wonder why there was at the party?
 b. *How many people do you wonder why there were?

So, the generalization seems to be that the difference has to do with a distinction of arguments selected/ θ -marked by a lexical verb vs. non-arguments, whatever the precise explanation for the contrast might be (cf. Rizzi 1990 for discussion). In the analysis presented here, the DP in *there*-BE structures is not selected by a verb. We are not expecting it to behave on a par with θ -marked arguments.

2.8.3. Differences from predicative NP structures

So far we have seen that the similarities between *there*-BE and other copula constructions can be derived from the syntactic structure proposed here. Let me now turn my attention to the differences between the two structures, and show how they follow from the present proposal.

(i) **Embedding under *consider*.** Pred_{EXP} cannot be embedded as a small clause complement to *consider*-type verbs in contrast to other PredPs.

- (74) a. I believe there to be a picture of the wall in the room.
 b. *I believe there a picture of the wall in the room.
 (Moro 1997, 119)

This falls out immediately from the analysis presented here. *There*-BE sentences contain a Pred_{EXP} that needs to be overtly expressed by the copula *be*. Furthermore, existential closure is necessary to derive the existential meaning, and the domain of existential closure is at least VP (cf. Diesing 1992) or even TP (cf. Borer 2005b). Thus, the presence of Pred_{EXP} is not enough for an existential reading to arise. *There*-BE sentences need to project at least a VP/TP, and therefore, Pred_{EXP} cannot be embedded under *consider*-type verbs.

(ii) **Non-restrictive relative clauses.** [+Human] predicate nominals cannot be modified by a non-restrictive relative clause with *who*. The noun phrase in *there*-BE sentences allows such a modification.

- (75) *Rebecca is a good eater_i, who_i has been there for quite a while.
 (Rapoport 1987, 135)
- (76) And there was one girl, who fancied herself in love with a naval cadet, who could actually produce real tears during the singing of ...
 (BNC, text="EFP" n="68")

The structure provided here, explains the difference. Syntactically, the structure in *there*-BE sentences includes a D-layer. Thus the category is available for a non-restrictive relative clause to adjoin to (for analyses of non-restrictive relative clauses see Vries 2006 and references therein). Semantically, existential sentences state about a situation that an individual (of a certain amount, number) of the type specified by the NP is part of this situation. Hence there is an individual in the discourse that can be further specified by a non-restrictive relative clause.

(iii) **Bare singulars.** As Kallulli (to appear) points out, *there*-BE sentences do not allow bare singulars, while predicative copula structures do:

- (77) a. She is professor of philosophy at Yale.
 b. *There is professor of philosophy at Yale.
 (Kallulli to appear)

As has been argued repeatedly, bare singulars do not project a DP (cf. Longobardi 1994, Kallulli 1997, 1999 among others), therefore, they are not expected to occur with the *there*-BE sentences under the analysis presented above. Support for this line of reasoning comes from examples like *There was dog on the street*, in which a bare singular can occur, but only in a special interpretation: it states that there are pieces of dog on the street. That is the only way to accommodate the bare singular in this structure is to divide it into quantities. This divisive function is usually taken to be located in the Num-head. Thus, the structure must be expanded at least as far as NumP, and in that case, the projection of DP is also available.

(iv) Other predicates. We have seen above that copula structures typically occur with other predicates such as adjectives, or prepositional phrases as well. This is not possible with *there*-BE structures. As we have seen in 1.3.3, these facts are unexpected under a predicative NP analysis of *there*-BE sentences.

- (78) a. *There is red.
 b. *There is in the garden.

In the analysis proposed here, this type of structure is not expected for two reasons. First, the complement of Pred_{EX} is not a predicate but a DP, hence we do not expect predicates of the category AP/PP to occur. Second, predicates assign a θ -role to their subjects, but *there* cannot bear a θ -role. For these two reasons, the sentences in (78) are predicted to be ungrammatical.

2.8.4. The interpretation of bare plurals

In English, bare plurals can have either an existential interpretation or a generic interpretation, as seen in (79). In *there*-BE sentences they can only have the existential reading, cf. (80).²⁷

- | | | |
|------|---|-------------|
| (79) | Cats are in the garden. | (ambiguous) |
| (i) | Some cats are in the garden. | existential |
| (ii) | Cats are such that they are in the garden | generic |
| (80) | There are cats in the garden. | existential |

²⁷Note that individual-level predicates are generally taken to allow a generic reading of their subject only. Diesing (1992) links this observation to a structural difference: the subject of individual-level predicates is base-generated VP-externally, and VP-external subjects have strong (i.e. generic) readings for bare plurals. Ladusaw (1994) links this fact to the categorical nature of sentences containing individual-level properties.

Longobardi (1994) suggests that the existential reading in (English) bare plurals is possible if the noun does not move to D. The generic interpretation is only possible if the noun moves to D. Given that the D-layer has to be empty for the existential reading to arise, the bare plural cannot move to D in *there-BE* sentences, thus, a generic reading cannot arise.

2.8.5. Extraction from *there-BE* sentences

As we have already seen above, extraction out of English *there-BE* sentences is possible but restricted.

- (81) a. ??Which actors were there in the room? (Heim 1987, 27)
 b. What is there in the refrigerator? (Aissen 1975, 7)
 c. How many men do you think that there were t in the room? (Moro 1997, 126)

Heim (1987) argued that the difference between *which X* vs. *what/how many X* is that the latter pronominalizes/occurs in something smaller than DP (NP or NumP), while the former sits in the specifier of DP. That this reasoning is correct can also be seen from echo questions, in which *what* can co-occur with an overt determiner. This is not possible with *which X* (or *who*).

- (82) A: There was a professor of parapsychology giving a talk about traces.
 B: There was a WHAT??
 B': *There was a WHO??
 (Zamparelli 2000, 141)
- (83) A: I saw the strange professor of parapsychology giving a talk about traces.
 B: *You saw a which professor?
 (Zamparelli 2000, 141)

Further evidence for taking *which* to occur in the specifier of DP is that the D-layer provides referentiality, and as we will see below, it links the phrase to the discourse. *Which X*-phrases are necessarily D-linked (in the sense of Pesetsky 1987b), hence *which* occurs in the specifier of D.

This difference of the position of *which* essentially accounts for the differences in extraction in *there-BE* structures. In my approach, the D-layer has to be left empty, the *wh*-pronoun *which* cannot co-occur with the existential structure as it is base-generated in the D-layer. Thus, *wh*-movement is allowed in principle; however, for the D-layer to remain empty, only subextraction is possible.

2.9. Case and agreement

2.9.1. Case

Ever since the early 1980s, the case filter has played an important role in syntactic theory. It states that all overtly expressed noun phrases must be assigned abstract case (Case from here on), as originally proposed by Vergnaud (1977/ 2006), Rouveret and Vergnaud (1980) and discussed in Chomsky (1981):

- (84) * $[_{NP} \alpha]$ if α has no Case and α contains a phonetic matrix
(Chomsky 1981, 175)

Going back to at least Chomsky (1981, 334), Case assignment has been tightly related to a visibility condition for θ -role assignment. Well-formedness conditions on Chains at LF (i.e. movement chains as well as single NPs) require a case position for the possibility of θ -role assignment (see also Chomsky 1986b, 96).²⁸ Thus, every noun phrase in an argument position needs to be in a Chain that is assigned Case (structural or inherent) in order to be visible for θ -role assignment (thus establishing an indirect relationship between case, argument positions and theta-roles).

With respect to the *there*-BE structure two questions arise: Is *there* a noun phrase and if so, is it assigned case? How does the post-copular noun phrase receive case and what case? In essence, there are three different approaches to the case question:

(A) Only one Case is available in the structure, namely nominative case related to I (or accusative in Exceptional Case Marking (ECM) contexts). It is assigned to *there* and transmitted to the noun phrase in one way or another. This approach is mostly favoured in Government and Binding approaches (cf. Chomsky 1981, Safir 1985).

(B) Two Cases are available: *there* is assigned/checks nominative Case with the I head (or accusative in ECM structures), while the post-verbal noun phrase receives partitive Case. The main proponents of this approach are Belletti (1988), Lasnik (1995) and Bošković (1997).

(C) *There* is not assigned Case but the post-verbal noun phrase receives Case in situ. This approach is mostly favoured in Minimalist work, cf. Chomsky (2000) and follow-up work.

²⁸The original formulation in Chomsky (1981) is given in (i). Note that this condition is already a first step towards checking Case and θ -role assignment at LF, even though θ -roles are assumed to be assigned at D-structure and Case at S-structure.

- (i) Suppose that a position P is marked with the θ -role R and $C = \alpha_i, \dots, \alpha_n$ is a chain. Then C is assigned R by P if and only if for some i , α_i is in position P and C has case or is headed by PRO.
(Chomsky 1981, 334)

Let me first look at approach A. This approach relies on the assumption made in the framework of Government and Binding that nominative case is necessarily assigned to Spec,IP by the I head. Cross-linguistically, we see that this cannot be the only way to assign nominative case: in German and Dutch, nominative arguments can occur *v*P internally, which can be clearly seen in so-called dative-nominative verbs (see Lenerz 1977 for German, Den Besten 1985, Broekhuis 1992 for Dutch among others) as seen in (85).

- (85) Daaronn leken niemand die computers snel genoeg.
 Therefore seemed_{PL} nobody_{DAT} those computers fast enough
 ‘Therefore those computers seemed fast enough to nobody.’
 (Broekhuis 2007, 8) DUTCH

Furthermore, the process of case-transmission is ad hoc in formalization and only doable via co-indexing, a device that has been abandoned for theory-internal reasons.

One might suggest that we need some sort of case-transmission, as *there* appears almost exclusively in positions that are traditionally related to case: in the subject position of finite clauses, cf. (86), the subject position of ECM complements, cf. (87), as complement to case-assigning complementizers like *for*, cf. (88) and after the preposition *of* in nominalizations, cf. (89).

- (86) ... there was a temporary change in emphasis away from land reform to a desire to increase production. (BNC, text="KM6" n="15")
- (87) Their understanding of social action is a 'realist' one, in so far as they believe there to be general, deep-lying mechanisms affecting human conduct ... (BNC, text="HRM" n="1084")
- (88) I thought that it was still possible for there to be a political link between the United Kingdom and India. (BNC, hit text="A69" n="1141")
- (89) Jet-lag is the consequence of there being a mis-match between our body clock and the external timing. ... (BNC, text="A75" n="1363")

If *there* appears in a position in which it cannot be assigned case, the sentence is ungrammatical:

- (90) *It seems there to be a man here. (Lasnik 1993, 382)

Note, however, that the argumentation only goes through if case-assignment is indeed the relevant property for *there* (and subjects in general) to appear in those positions traditionally assumed to be case positions. Alternatively, ϕ -feature checking might be responsible for the data presented in (91) and (92), as proposed by Broekhuis (2008). An argument in favour of taking ϕ -features as the relevant trigger for movement comes from the following line of thinking. Broekhuis (2008) assumes that accusative case is linked to little *v* and can be checked at a distance. Agreement features are related to the verbal root *V*

and they have to be checked locally (short object shift). In English, the verb always moves from *V* to *v*, thus deriving the VO order. Accusative case is linked to the specifier of *v* and it is not checked locally in English: otherwise we would expect an OV order with the object in *Spec, vP* and the verb in *v* (English certainly does not have *v*-to-I movement). If accusative case checking and nominative case checking proceed in the same way, nominative can also be checked at a distance in English. Thus, it is not necessarily case, but rather ϕ -features, that drives movement to *Spec, IP*.

Similarly, Hazout (2004) suggests that case is assigned to (the position of) *there*. In (91), we observe that case assignment is subject to an adjacency requirement. A noun phrase and its case assigner cannot be separated by an adverbial. The same adjacency requirement holds for *there*, cf. (92).²⁹

- (91) a. I find it irritating that usually this street is closed.
 b. *I find it irritating for usually this street to be closed.
 (Hazout 2004, 426, taken from Emonds (1985))
- (92) a. For there unexpectedly to be a unicorn in the garden is unlikely.
 b. *For unexpectedly there to be a unicorn in the garden is unlikely.
 (Hazout 2004, 426)

However, it is not entirely clear whether this adjacency requirement is really to do with case assignment. The problem may just as easily find an explanation in theories about the positioning of adverbs in the clause, similarly to what we saw in chapter 1, footnote 12 (p. 21).

Taken together, there is no clear evidence for the claim that Case is assigned to the position of *there* as assumed by the approach in (A). This approach is rather questionable theoretically: case-transmission by means of co-indexation is no longer considered a legitimate procedure in Minimalist thinking.

Let me now turn to approach (B), which suggests that both *there* and the noun phrase are assigned case independently. Lasnik (1995) proposes that two different cases are available in *there*-BE structures. He argues that the data in

²⁹Bošković (1997, 57ff) provides another argument for the claim that *there* needs to be assigned case. Consider the contrast in (i), which was originally brought up by Postal (1974) and discussed in Ura (1993).

- (i) a. They alleged there to have been many strangers in that garden.
 b. *They alleged many strangers to have been in that garden.
 c. Mary alleged him to have kissed Jane.

Bošković (1997) argues that the reason why *there* and pronouns can occur in the ECM position of *wager*-class verbs is their head status. They can adjoin to the verb for case-checking. Full phrases cannot be case-licensed with *wager*-class verbs as they cannot head-move and the case position of *wager*-class verb is not accessible: *wager*-class verbs are embedded in an additional V-shell that gives rise to this locality problem. I do not consider this argument here as it relies on the specific analysis provided, and the data are disputed, cf. Epstein and Seely (2006).

(93) show that the *there*-BE structure requires two cases to be available, one assigned by I, the other - partitive case - assigned by the verb *be*. If one case were enough for both *there* and the noun phrase, (93-a) should be acceptable, contrary to fact.

- (93) a. *I wanted there someone here at 6:00.
 b. John wanted there to be someone here at 6:00.
 (Lasnik 1995, 623)

However, we have seen above that there is another reason for these sentences to be out: the phonological expression of Pred_{EX} is *be*. Without *be* the structure is interpreted as a general predication structure, and *there* cannot occur. Thus, Lasnik's argument is not compelling, either. Furthermore, as we have seen in 1.5.4, partitive case assignment in *there*-BE structures is highly problematic. So I reject this approach on these grounds.

Let me finally turn to approach C, which assumes that *there* does not check/receive Case. According to Chomsky (1995a, Chapter 4) the example in (94) can only be ruled out if we assume that that *there* cannot receive case. Chomsky argues that the ϕ -features of the noun phrase could raise at LF so that agreement should be possible.

- (94) *There seems that [a lot of people] are intelligent.
 (Chomsky 1995b, 286)

However, this argument crucially relies on the assumption that the ϕ -features of the embedded noun phrase are available at the matrix level as well, an assumption which is objectable. First, ϕ -feature movement out of the embedded clause is A-movement and A-movement is not possible out of tensed clauses: **A lot of people seems are intelligent* is clearly ungrammatical.³⁰ Second, in more recent approaches to movement, the features of *a lot of people* are not visible to a higher probe: *a lot of people* has its case-feature checked; furthermore it did not move to the edge of the embedded CP phase.³¹ Thus the crucial example receives an independent explanation and it does not speak against *there* being assigned case. In sum, this means that the argument provided by Chomsky does not support his proposal. The example in (94) can be accounted for differently. However, there is not a clear argument against this position, either.

So what are the options for case assignment in *there*-BE structures? I would like to propose that there are two possibilities, both of which I consider plausible, but so far no conclusive evidence in favour of one or the other is available.

- (i) *There* is not assigned case and the I head assigns case to the noun phrase in situ, as proposed by Chomsky (2000) and follow-up work.

³⁰Alternatively, this sentence could be ruled out if *there* occupies a *theta*-position, see Bennis (1986) and Ruys (2007) for an analysis of Dutch *schijnen* 'seem' along these lines.

³¹Thanks to Hans Broekhuis (p.c.) for suggesting this explanation.

(ii) *There* shares its case with the noun phrase as proposed by Moro (1997). That two nominal items can share their case is supported by data from Latin (and other languages), in which in a structure like *Caesar dux est* ‘Caesar is a/the leader’ both noun phrases show morphological nominative. Note, however, that other languages do not show overt morphological agreement in predicative contexts, as illustrated here for Russian.

- (95) Puškin byl velikim poétom.
 Pushkin was great poet_{INSTR}
 ‘Pushkin was a great poet.’
 (Matushansky to appear) RUSSIAN

What I would like to propose here is that the two noun phrases can indeed share an abstract Case feature, nominative, but that the morphological case does not show this agreement overtly. Rather, the second argument is assigned morphological default case, which is accusative in English (see Sigurðsson 2006b,a). This is the case that appears in list reading contexts, as seen in (96).

- (96) A: Who will help John with his homework?
 B: There is me, and a few other students in the class.

I leave it to future research to decide between the two options.³²

2.9.2. Agreement

In the general case, the verb agrees with the post-verbal noun phrase in number, as can be seen in the following Standard English example.³³

- (97) a. There was/*were a man in the room.
 b. There *was/were three men in the room.

However, it has been argued that in informal registers the verb does not necessarily agree with the post-copular noun phrase, but can also turn up in the singular (cf. Meechan and Foley 1994, Smallwood 1997, Sobin 1997, Schütze 1999, Rupp 2005 and references therein). I will refer to this type of agreement as default agreement. Here are some illustrative examples from the British National Corpus (from spoken texts):

³²If it turns out that case is the relevant property for the data in (86)-(90), a technical possibility of case-transmission might be available along the following lines. If agreement establishes a link between the formal features of two items, as proposed by Frampton and Gutmann (2000) (see also López 2002), case transmission can be argued to be established via such a link. As I will argue below, *there* and the noun phrase agree in ϕ -features. This procedure could establish a link, thus case could be transmitted via this link. I leave this issue to further research.

³³If I am correct in assuming that the same structure holds for list readings, they provide us with the insight that the verb and noun phrase do not agree in person, as the example in (96) illustrates.

- (98) It is a case isn't it, that if you want to be a er a professional woman footballer, certainly *there's more opportunities on the continent than there are in Britain*, is, is is is that the case?
(BNC, text="FL5" n="218")
- (99) She's gone for this promotion in work and er even though she doesn't think she's much chance of getting it because *there's two permanent lads there that really, you know, would be next in line*.
(BNC, text="KD8" n="266")

Chomsky (1995b, 384) argues that non-agreement in *there*-constructions is a 'superficial' phenomenon that only occurs with the contracted form *there's*. It does not occur in all relevant environments, e.g. it is incompatible with negation and questioning as seen in (100). In this way, he excludes the non-agreeing form from core grammar.

- (100) a. *Is there three books on the table?
b. *There isn't three books on the table.
(Chomsky 1995b, 384)

However, Chomsky's claim is not supported by the available corpus studies. Based on a corpus study on Inner Sydney English, Eisikovits (1991) reports that default agreement also occurs with negation and questions, as seen in (101). Similar examples can be found in the British National Corpus, cf. (102).

- (101) a. Isn't there any girls going?
b. Is there any nets out there?
c. There isn't any girls going, is there?
- (102) a. There isn't very many soldiers that grew up at this school any more. (BNC, text="HV8" n="20")
b. There isn't many these days. (BNC, text="KE0" n="1421")

The major influence that facilitates default agreement is the informal register. Default agreement is also possible under inversion with *where* (cf. Lisenby 1995 quoted in Schütze 1999), cf. (103), and locative inversion, cf. (104) (see Smallwood 1997).

- (103) Where's/is/are a cup and a bowl? (Schütze 1999, 20)
- (104) a. On the centre of the page is two houses.
b. In the bottom is three stars.
(Smallwood 1997, 13)

However, agreement vs. non-agreement is not consistent throughout the paradigm: even in informal contexts the agreement pattern is not 100% default agreement. Meechan and Foley (1994), for example, only found default agreement in 72% of the cases and Smallwood (1997) in a more formal experimental contexts reports default agreement in only 41,8% of the cases. A very limited

survey of the spoken texts in the British National Corpus provides a similar pattern. The combination of singular agreement with a noun phrase containing *two* occurs only in 50% of the cases found. The search for *there two* in the span of three words provided 740 hits. The combination of *there 's/is/was two* in the span of three words resulted in 370 hits (284 for *'s*; 4 for *is*; 82 for *was*).

These data clearly show that the grammar provides two different mechanisms for agreement when it comes to post-verbal noun phrases. For the non-agreeing pattern, I assume that *there* is specified for ϕ -features of its own, namely, 3rd person singular. As such it does not act as a probe, but only as a goal for the I-head and the verb finally agrees with *there*.

For the agreeing structure, I follow the analysis presented by Hazout (2004). *There* enters the derivation with unvalued ϕ -features. It probes its c-command domain, and its features are valued by the post-copular noun phrase. When finite I probes for ϕ -features to be moved to the specifier position, it finds *there*. *There* moves to the specifier position of IP and values the I-head. Note that if unvalued features are by definition uninterpretable (as proposed in Chomsky 2001, 5), the features have to be active until the derivation reaches the finite I-head (alternatively feature valuation and interpretability might be two different concepts as proposed by Pesetsky and Torrego 2001, 2004, 2007).

This kind of solution provides further support for the overall analysis. As the noun phrase is not the highest argument, it is not expected to raise, and it is not expected to agree with the verb to begin with. Additionally, with *there* being base-generated higher than the nominal phrase, it is technically unproblematic to introduce *there* as a probe for the ϕ -features on the noun phrase. In a structure where *there* is base-generated lower than the noun phrase (as proposed by Moro 1997), it is difficult to have *there* inherit ϕ -features from the noun phrase as the noun phrase carries interpretable/valued ϕ -features and cannot act as a probe; *there* does not c-command the noun phrase and therefore cannot probe for the features either.

2.10. Existentials and the definiteness effect

2.10.1. Introduction

The English *there*-BE structure is famous for its so-called definiteness effect, or definiteness restriction: strong quantifiers and definite phrases are excluded as illustrated in (105) and (106) (for an overview of the literature see 1.5).

- (105) a. *There was everyone in the room.
 b. *There were all viewpoints considered.
 c. *There was each package inspected.
 (Milsark 1977)
- (106) a. *There is the wolf at the door.
 b. *There were John and Mary cycling along the creek.
 c. *There was Frank's article mentioned.
 (Milsark 1977)

The analysis of English *there*-BE structures presented above opens an interesting way to look at the definiteness restriction as both a syntactic and a semantic effect, which I will explore in this section. I will put a special focus on definite DPs headed by the determiner *the*, for which it has been noted repeatedly (cf. Rando and Napoli 1978, Prince 1981, Holmback 1983, Hannay 1985, Birner and Ward 1998 among others) that they are possible outside list contexts, contra Milsark's judgement given in (106). Based on data from the British National Corpus, I will show that the types of DPs with the determiner *the* that do occur are of a special class: they either express uniqueness or amount/quality/kind. I will account for these data by claiming that the definite determiner *the* also has a weak and a strong reading just like numerals or quantifiers. This claim is supported by an observation made by Brugger and Prinzhorn (1996) who report that Bavarian has two different definite determiners: one that expresses uniqueness, and one that provides reference to a previously established discourse entity (see also Scheutz 1988). They suggest that the definite determiner can be merged in two different positions: the standard D projection or an agreement projection inside the DP, which they label DAGR.

This section is structured as follows: I will first provide a general syntactic analysis of weak and strong determiners and show how the syntactic structure predicts the relevant restrictions. Then I will provide the weak vs. strong reading of the definite determiner *the* and present the data collected in the British National Corpus, which supports the analysis: all of the definite DPs that occur in the *there*-BE structure (outside list contexts) have a weak reading of the determiner *the*.

2.10.2. Definiteness effect and DP structure

We have seen above that the existential meaning in English *there*-BE sentences arises through existential closure of the empty D-layer. With this DP structure we were able to explain a range of similarities and differences between predicate nominal copula structures and *there*-BE sentences. The very same DP structure will also account for a range of facts with respect to the definiteness restriction. As the D-layer needs to be empty in *there*-BE sentences, those elements that necessarily occupy the D-layer cannot occur in *there*-BE sentences.

Crucial to the analysis given here is the assumption that strong quantifiers and weak quantifiers occupy different positions in the noun phrase (cf. 2.8.1). This claim is by no means new and it appears in the literature in different guises. Some studies assume that weak quantifiers are adjectival (cf. Bowers 1975, Higginbotham 1985, Mandelbaum 1994 among others), while others propose that they are hosted in a functional projection different from and lower than DP (cf. Zamparelli 2000, Borer 2005a, among others). Strong quantifiers are either assumed to appear in the specifier (or head) of DP (cf. Hudson 1989, Zamparelli 2000, Borer 2005a, among others) or in a functional layer on top of DP (cf. QP in Sportiche 1988, Giusti 1991 among others; for an overview see Cardinaletti and Giusti 2006).

Evidence for the assumption that strong quantifiers are hosted in the D-layer or higher is that strong quantifiers cannot follow a definite determiner, while weak quantifiers usually can (cf. Bowers 1975, Borer 2005a).³⁴

- (107) a. the many medals/ these several mistakes/ the few volunteers
 b. *the most boys/ *the all boys/ *the both boys

As we know from Milsark (1974, 1977), some quantifiers are ambiguous between a weak and a strong reading, most prominently *some*, *many* and the numerals. If we want to derive ambiguities in meaning from ambiguities in structure, the quantifiers have to be assumed to be in different positions for the weak and the strong reading.³⁵

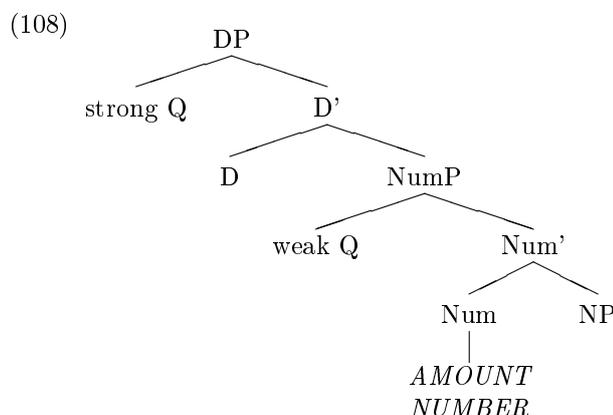
I assume the DP structure in (108), though nothing important relies on the specific implementation as long as the weak quantifiers occupy a position lower than DP, while strong quantifiers occupy DP or a higher position.

The structure contains an empty noun heading NumP along the lines of Jackendoff (1977), Van Riemsdijk (2005), Kayne (2005) (among others). This noun can also be overt as we will see in the next section.

With the structure in (108) the definiteness effect follows from the analysis defended here in the following way.

³⁴As Borer (2005a, 140) points out there are two exceptions: *some* cannot occur following a quantifier: **the some boys*. Furthermore, *most* can follow the determiner *the*, presumably as part of a complex superlative form (Borer 2005a), *the most beautiful girl*.

³⁵There is a further issue of whether the weak/strong quantifiers are heads or phrases. I do not dwell on this issue. For some of the (weak) quantifiers it is clear that they occupy specifier positions as they can be phrasal: *at most five*, *exactly two*.



(i) Strong quantifiers. Strong quantifiers like *every*, *most*, *both* usually cannot occur in *there*-BE sentences as seen above in (105). As strong quantifiers occur in the D-layer, but the DP layer has to be empty to be bound by existential closure, strong quantifiers cannot occur in the *there*-BE structure. If strong quantifiers occur higher than just DP, the following reasoning applies. The empty D-layer introduces a variable which will be bound by a strong quantifier in a higher position, so it can no longer be bound by existential closure; thus the existential reading cannot arise.

Interestingly, there are a few instances of *there*-BE sentences co-occurring with *every*. A search in the BNC for *there* and *every* in the span of 4 words, produced 208 relevant hits with the nouns in (109) (the number in brackets gives the number of hits with this specific item). Some examples are given in (110)-(113).

- (109) Nouns occurring with *every* in *there*-BE structures.
reason(75), *chance*(47), *possibility*(15), *likelihood*(13), *indication*(10),
sign(6), *need*(6), *justification*(4), *incentive*(4), *opportunity*(4), *pro-*
spect(4), *evidence*(4), *intention*(2), *risk*(1), *appearance*(1), *hope*(2),
comfort and luxury(1), *encouragement*(1), *danger*(1), *fear*(1), *bit*(1),
advantage(1), *argument*(1), *artefact*(1), *expectation*(1), *provision*(1).
- (110) In a stimulating address, the Chief of the Air Staff, Air Chief Marshal Sir Peter Harding enlarged upon his theme of last year, and described how it was planned to improve Service life. *There was every reason to believe that the new modern, but smaller RAF would be well able to meet any demands upon it.* (BNC text="A67" n="316")
- (111) AIDS is an everyday topic in the papers and on television; *there is every chance that your children have become interested*, even at a young age, but they may have misunderstood things and have some strange ideas. (BNC text="A0J" n="777")

- (112) 'If the river is contaminated with toxic waste *then there is every possibility all river life would be killed off for generations.*'
(BNC text="A6R" n="144")
- (113) The kidney being a discrete organ, *there was every chance that the cancer had been contained.* (BNC, text="B19" n="677")
- (114) 'I would have said,' the Master observed grimly, 'that *with a bloody great placard waving under the horse's nose, there was every likelihood she'd fall off!*' (BNC text="CEB" n="2751")

In these cases, *every* does not have a quantifier reading, but it specifies a very high amount/degree. That the quantifier reading is not present can be seen from the lack of a (possible) wide-scope reading in (115).

- (115) Some employees should be given every opportunity to acquire stakes of the company they work in.
(adapted from BNC, text="AM8" n="854")

I take these data to show that even the strong quantifiers can be accommodated to a weak reading. Under this reading, *every* occurs in the specifier position of NumP, where it specifies AMOUNT. This is in line with Borer's assumption that the quantifier *every* is base-generated low in the structure (cf. Borer 2005a, 137ff). *Every* is possible with the set of nouns in (109), because we are dealing with abstract concepts that are measurable (but not countable), which makes a wide-scope reading rather difficult.

Similarly, *most* also occurs with *there*-BE sentences in restricted circumstances. Again, *most* does not give rise to a strong reading, but rather to a reading of comparative amount, as seen in the following examples.

- (116) Why were most of the tin mines in Cornwall closed earlier this century? How many tin mines on the map are shown to be working today? *Around which town is there most tin mining?*
(BNC, text="B1H" n="456")
- (117) Owners of hotels, guest houses, caravan parks and shops have to make most of their profit in a very short time. In which months will they make most of their profit? *In which months is there most unemployment?* (BNC, text="B1H" n="592")
- (118) *And it is with the statistical evaluation of leys that there is most controversy* and where much work still needs doing.
(BNC, text="B7D" n="1017")

For illustration take the phrase *most tin mining* in (116). The question asks for those places where the amount of tin mining is the largest, as compared to other places. The place that has most tin mining is not necessarily the one in which most of the tin mining takes place. Assume that there are five villages, A with 3 tin mines, B with 5 tin mines, C with 2, D with 1 and E with 3 tin

mines. In these circumstances, B is the place with most tin mining (5) but it certainly is not the place where most of the tin mining takes place: it has only 5 out of 14 tin mines. *Most* in these cases specifies a relative amount, occupying the specifier of NumP. It follows that the D-layer is empty and an existential reading can arise.³⁶

(ii) Strong readings of weak quantifiers (and numerals). Milsark (1977) also observed that some quantifiers are ambiguous between a weak (existential) and a strong (proportional) reading. In the context of *there*-BE sentences, however, the strong reading is impossible. In the structure in (108), strong readings only occur when the quantifier moves to/occupies Spec,DP (Borer 2005a, 143). As the D-layer needs to be empty for the existential reading to arise, no quantifier can move to this position. Hence only the weak reading is available.

(iii) Possessive DPs. McNally (1998) observes that possessive DPs can occur with *there* if they have a non-specific reading.

- (119) a. There was someone's book lying on the table.
 b. *There was John's book on the table.

These facts can be accommodated in my analysis with an additional, but to my mind plausible, assumption: possessive DPs can have two different positions in the structure: one lower than the D-layer, one in the D-layer. Whenever the possessor refers to a specific entity in the discourse, it has to occupy the higher position. The possessive phrase *John's* occupies the specifier of D, therefore it is incompatible with the existential reading.

(iv) The article *the*. Milsark (1974, 1977) claims that noun phrases headed by the definite determiner *the* are generally ungrammatical, except for list reading contexts. It has been long noted in the pragmatics literature (cf. Rando and Napoli 1978, Prince 1981, Hannay 1985, Birner and Ward 1998 and references therein) that this is not quite true. Let me therefore discuss this issue in more detail in the next section.

2.10.3. *The* and *there*

English *there*-BE sentences containing a noun phrase with the definite determiner *the* are preferably interpreted with a list reading. This makes it difficult to get judgements as to whether the definite determiner is also acceptable under an existential reading. As list readings are hardly compatible with negation (cf. Ross 1975), I used negation to exclude them. In a first round of searching the

³⁶This ambiguity is also present in German *die meisten X* 'the most', as pointed out by Heim (1991, 533), and with superlative phrases in general as originally observed by Ross (1964) and elaborated on by Heim (1984) Szabolcsi (1986) and Heim (1994). The same holds for Dutch *de meeste* 'the most'.

British National Corpus (BNC), I searched for *the* occurring with *there* under negation.³⁷ I descriptively classified the 259 hits in the following five groups (which will be illustrated below).

- (120) Types of noun phrases headed by *the* in negative *there*-BE sentences
- (i) (Multiply) modified noun phrases;
 - (ii) superlatives;
 - (iii) *same* or *usual*;
 - (iv) amount relatives;
 - (v) *The* + noun.

In a second step, I searched for positive cases of *there* occurring with *the* to see whether we find the same types of definite DPs in positive sentences (in order to ensure that negation does not bias the data completely). Note that the aim of the search was only to extract a variety of data, not to do a quantitative corpus study. All of the examples presented here are double-checked with a native speaker, who accepts all the examples.

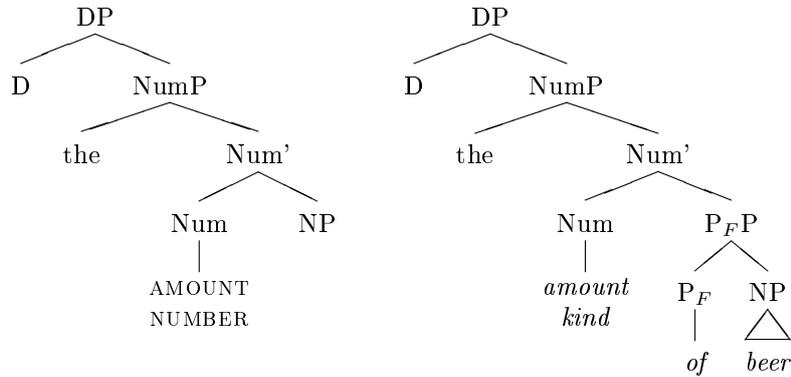
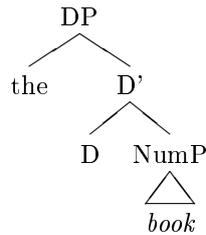
The data from the BNC show two things: (i) noun phrases headed by the definite determiner *the* indeed occur with *there*-BE structures; and (ii) these noun phrases are of a specific kind: they introduce new discourse items and they give rise to a uniqueness or amount/degree reading (which will become much clearer below).³⁸ I did not find noun phrases that were linked to items in the preceding discourse.

In order to account for these facts, I propose that the definite determiner *the* has both a weak and a strong reading. In the weak reading, *the* occupies the specifier of NumP and either the head of NumP is a silent noun AMOUNT/NUMBER; or the head noun is overtly expressed and has to co-occur with the preposition *of* (labelled P_F following Van Riemsdijk 2005), cf. (121) (see Tănase-Dogaru 2007 for the suggestion that the preposition is present to separate the semi-lexical from the lexical domain of the noun phrase). In the strong reading, it links the full DP to an entity in the discourse. It can only do so if it occupies a position in the D-layer (with the D-layer providing referentiality), cf. (122).³⁹

³⁷The search pattern used was *there + not/n't + the* within the scope of 5 words, and there were 296 hits in 249 texts; 27 examples had to be excluded as they did not fit the pattern I was looking for. I found 5158 examples of the combination existential *there + the* in the span of 3 words and, 7898 examples in the span of 4 words; there are 246230 examples with existential *there* (unclassified *there* yields 18 hits, adverbial *there* yields 71841 hits).

³⁸Note that the class of definite noun phrases that occur in *there*-BE sentences is not the class of 'weak definites' as defined by Poesio (1994).

³⁹Note again that there is an issue of whether *the* is the specifier or head of this projection. I leave this discussion to future research.

(121) Weak reading of *the*(122) Strong reading of *the*

In the following I will go through the different classes and show which structure is relevant.

(i) **(Multiply) modified noun phrases with *the*.** The most striking group that I found are definites that are modified preverbally and/or post-verbally. Consider the following examples of various types of modification:

- (Adj) NP + relative clause

- (123) The Army had taught him that, too, and the SAS acceptance tests had rammed the lesson home by sending him out over the damp Brecon Beacons with a 55-lb Bergen rucksack knowing he had to cover a certain distance in a certain time but not knowing that when he had done it, *there wouldn't be the trucks they had promised* but a vague assurance of a cup of tea if he kept on marching a few more miles in that direction. (BNC, text="H86" n="1281")
- (124) But Fenella Fielding survived it all and enjoyed the experience. '*There wasn't the awful competitiveness that we had on stage,*' she told me. (BNC, text="J0W" n="1778")

- NP + *to*-infinitives

- (125) But he needs more speed. When Bill Koch's latest boat, Kanza, halted Conner's run of four wins, it was evident Conner can only win by superior sailing not superior speed. '*There just weren't the windshifts to give us leverage,*' Conner admitted. (BNC, text="AHK" n="372")
- (126) There are patients here looked after by their own GPs especially on the medical side and of course they know their GPs. The GPs know them and their backgrounds and their relatives can come. But it's more than just a question of who the patients prefer to be treated by. If *there aren't the doctors to run it*, it's not much of a hospital. (BNC, text="KRM" n="487")
- (127) But nothing so romantic ever transpired there, and the coffee was as bad as railway coffee has always been, and much worse than it is now. I cannot imagine why we chose this post-prandial pleasure, except that it was the only place available as a change from the B.P. cafeteria. For my part, I think *there was the temptation to cause myself pain*: to call up the memory of so many anguished partings at railway stations, so much less anguished (it seemed now) than the final one. (BNC, text="AMC" n="223")
- (128) We've seen flashes of the old Liverpool but all too often they've fallen below acceptable standards and that's the problem - their consistency has gone and that was always their hallmark. The reasons? The team doesn't automatically pick itself any more. *There aren't the players on the staff to put pressure on those in the team to perform.* (BNC, text="CEP" n="1051")
- (Adj) NP + complement (clause)
- (129) A single 19-year-old student admitted: 'I should use condoms, perhaps, but I don't. I often think about it, but I feel the women at university - I know it's stupid - but I feel they're safer.' *There were also the traditional complaints that condoms lessen sensitivity*: 'It's like washing your feet with your socks on,' said a married 43-year-old credit controller. (BNC, text="ECT" n="1310")
- (130) Pressures to reduce the impact weapons systems costs on the defence budget have led to systems being purchased from abroad, invariably from the US. In recent years this has increased, and the US has become the dominant partner. Short term this has enabled the UK to maintain a state-of-the-art capability, although *there has not been the desired reduction in the total percentage of the defence budget committed R&D.* (BNC, text="HJ1" n="4879")

- (131) There is little talk of film as ‘film’, television as ‘television’ or of the two forms as different but connected social processes. *There is only the odd passing comment on what makes a film or TV programme politically effective*, how form and content might combine to produce the politically challenging and provocative programmes that the left would presumably like to see. (BNC, text="ARD" n="639")

The examples have in common that the head noun is restricted by further modifiers, providing a fairly precise description. It has been observed in the pragmatics literature that definite noun phrases that are modified by a restrictive relative clause are non-anaphoric/novel definites (cf. Reed 1996, 145). And indeed the definite determiner *the* in the examples above expresses that there is a unique element that satisfies the description given by the noun and its modifier. Syntactically, uniqueness is expressed in NumP with the silent noun number being modified by the definite determiner, cf. (121).

(ii) Definites with superlatives. A second group of DPs (and a rather frequent one) are the definites that occur with superlatives. Superlatives usually imply the uniqueness of the referent, which is clear from the fact that phrases like *#a nicest student* are generally infelicitous (for exceptions see Herdan and Sharvit 2006). Additionally, superlatives have a reading, in which it specifies the highest amount. In the latter case, the silent noun is not NUMBER but AMOUNT.

- (132) But there is a fall-back position and that is that the European Community have a directive called the Environmental Impact Assessment Directive that requires that before a major project of this type is put through *there must be the fullest public consultation*. In my view, although there’s a current debate about this *there has not been the fullest public consultation* and I would er myself be minded to invoke the er EC directive on this er in order to try and er to make sure that the the public feel they are fully aware of what the proposals are. (BNC, text="HMP" n="117")

That we are indeed dealing with an amount reading, becomes obvious from its interaction with negation. Negation of the amount reading of the superlative gives rise to the scale reversal effect (cf. Fouconnier 1975, Krifka 1995). Negation of a part of an individual implies the negation of all higher amounts of that individual. Thus, a presuppositional reading of *there was no X* arises. Consider (133). The negation denies the lowest amount of the scale of a *sign of polite thank-you*. By implication, the reading that arises is that there was no sign of a polite thank-you.

- (133) But Doreen retained the sulkiness she’d brought to the table, and when Jean placed fruit and cereal before her *there was not the slightest sign of a polite thank-you*. (BNC, text="HHB" n="2861")

- (134) The Finance Ministry official concluded with an indictment of the entire governmental system of the empire. ‘Nowhere’, he wrote, is there so much and at the same time so little centralization as there is in Russia. On the one hand the ministries have arrogated to themselves the virtually exclusive right to decide all matters, but at the same time *there is not the slightest link between the separate ministries . . .* (BNC, text="HY7" n="682")
- (135) There was nobody from Bulgaria. That country was held fast in the grip of a most oppressive regime and *there was never the remotest possibility that anyone could come.* (BNC, text="CC7" n="252")

Note however that only those superlatives that imply an amount and not a uniqueness reading give rise to this effect, as seen in (132). Furthermore, superlatives occur in positive sentences as well.

- (136) After a brief pause for thought, Stuart Baxter said, ‘No can do, Vic. *There’d be the most almighty row if we appeared to be sabotaging an Industry Year project simply because this bird is a member of CND.*’ (BNC, text="ANY" n="2158")

(iii) ***The same/usual X.*** The BNC also brought up several examples with *the same/usual X* - a type of definite DPs already reported by Ward and Birner (1995). For them, these are instantiations of new tokens of hearer-old types. In the view defended here, the intuition seems correct, but the relevance for the *there*-BE structure is not that the post-copular noun phrase is hearer-new in the token-sense. Rather, these structures have a type/kind/sort reading with the respective noun overt in some cases, and silent in others (see Jackendoff 1977, Van Riemsdijk 2005, Kayne 2005, Tănase-Dogaru 2007 among others). For these cases, I assume the same analysis as proposed in Zamparelli (2000), and presented above in (67).

- (137) We were invited to a ‘banquet’ on the evening after our arrival here, but actually *there wasn’t the usual kind of formal speech making.* (BNC, text="KAL" n="366")
- (138) The research literature, mostly emerging from the USA, has many parallels with earlier writing on the subject of child abuse. *There are the same problems in estimating incidence,* in defining the phenomena and in defining the characteristics of the abuser or the situations which give rise to abuse. (BNC, text="CFE" n="449")

Additionally, the structure also turns up with amount or degree readings, again with the option that the noun is overt.

- (139) As Geoffrey Holmes has suggested, the demographic and economic underpinnings of stability were emerging in the second half of the sev-

enteenth century - a stagnant population, years of agricultural plenty and a more buoyant economy meant that *there was not the same pressure on resources and scarcity of food and employment which had caused such social distress and serious unrest in the late-Elizabethan and early-Stuart period.* (BNC, text="HY9" n="1406")

- (140) Employment was very few and far between. *Because there wasn't the same amount of work,* this is just after the war I'm talking about, and there wasn't so many going then. (BNC, text="GYU" n="333")
- (141) One packet of crisps or 1 oz. of nuts on five days in the week. 22. One packet of crisps or 1 oz. of nuts on four days in the week. 23. One packet of crisps or 1 oz. of nuts on three days in the week. It should take 23 weeks for all 23 goals to be accomplished. You can see that *there need not be the same number of fat goals as sugar goals.* (BNC, text="AD0" n="1785")
- (142) 'Is our Sun in a galaxy?' 'Yes. We call it the Galaxy - with a capital G. Mind you, as galaxies go, it's nothing special - just one of 100,000 million galaxies. *There are the same number of galaxies as there are stars in any one galaxy.* (BNC, text="FNW" n="1241")

(iv) **The with amount relatives.** A fourth group of definites found with *there* are definites with relative clauses that embed another *there*-BE structure. These relatives are known as amount relatives (cf. Carlson 1977a, Heim 1987, Grosu and Landman 1998). The amount relatives are known to be possible with a subset of (mostly strong) determiners.⁴⁰

- (143) a. I read all the books there were on the table.
b. You've eaten every cookie there was in the house.
(McNally 2008, 2)
- (144) a. *{Five, Most, Several, Many} men there were t here, disagreed.
b. *{Some, each, a } man there was t disagreed.
(Carlson 1977a, 525)

Embedded in the *there*-BE structure the examples specify an amount (or rather the absence of an amount/quantity), again either with a silent noun AMOUNT, as in (146), or KIND/AMOUNT in (147).

- (145) [...] although today it must be admitted that single people, don't get offered one bedroom flats, but then in those days *there wasn't the shortage of accommodation that there is today* (BNC, text="F82" n="85")

⁴⁰Note that McNally (2008) argues that some of these relative clauses have another reading as well.

- (146) And it's not all honey, starting somewhere at six in the morning if you live eight or nine miles off. *There were not the multitude of motorcars about in those days, as there are now*, but that was one of the firms that was trying to make it, and has done it, like that. (BNC, text="FXU" n="128")
- (147) I got the job and the speech became included in the play itself. I think you do have to do your homework as an actor. A.R. *There are not the chances around these days as there were some years ago*. (BNC, text="A06" n="2156")

It is also possible (though not necessary) to interpret these cases in the sense of a *kind* instead of an amount reading as seen in the following examples.

- (148) Malcolm Banks, chairman of the East Suffolk Licensed Victuallers Association, says changing social attitudes have not helped small pubs. 'People don't use pubs like they used to do and that's the demise of the country pub, not so much the other things that have been said. I think it would be a crying shame if the country pub disappeared but they need customers and *there aren't the customers around that there were in the past*.' (BNC, text="E9R" n="903")
- (149) If we start from the bottom up, I think there has been a big advance in women as professionals, as producers, directors, starting to come into sound, quite a lot of editors, slightly more difficult with cameras. *There aren't the professional barriers there that I think there were ten years ago*. (BNC, text="ATA" n="704")

Note that this type of examples with an amount relative embedded was not found outside negative clauses in the whole corpus (a search for *there + the + that there* in the span of 7 words did not provide a single relevant hit.)

(v) **The + noun.** The final group of definite DPs consists of different types of single nouns with the determiner *the*. First of all, there are several examples of 'the time' or 'the money', which again seem to imply some amount reading of 'not enough time' or 'not enough money' (in the negative clauses) for the things described in the previous discourse.

- (150) Her husband is a restaurant worker. He is out all day from 11 am. to midnight. 'Where does he work,' I ask. 'I don't know the place. I have never been there. I don't know the name or address except that it is a club of some sort. He never really talks about his work. *There isn't the time*.' (BNC, text="A6V" n="320")
- (151) Was what it erm finally brought about the end of the strike in twenty six? Pardon? What was it finally brought about the end of the strike in nineteen twenty six? Well it were just like I like I the unions weren't

as, as er financially well off as they were er at the present day. *There was not the money*, we were forced to. (BNC, text="GYU" n="94")

This type of bare definite does not occur in positive cases, except in the following case:

- (152) Wild? Wild parties and wild women? No. Wild as in wild about Gaelic football. *There was the time he kicked the ball in the house and smashed his mum's good plates*, but apart from that he was a decent youngster. (BNC, text="HJ4" n="9160")

Another type of these definites is the unique reference to a common knowledge event like 'the war' or concept like 'the freedom'.

- (153) She shared her home with Irina and me and watched over us as fiercely as if we were her own children. She could be brisk and tender by startling turns. She was more demonstrative than our mother, more daring, less inhibited, more fun. She once confessed how unhappy she had been at home. 'Even if *there hadn't been the war*, I would never have gone back.' (BNC, text="HD7" n="1361")
- (154) But fox hunting doesn't address that. Fox hunting falls purely and simply on the side of unnecessary cruelty. Freedom, because *there is not the freedom here*. (BNC, text="JNB" n="413")

As before, I think that these bare definites fall either into the class of uniquely referring expressions (the latter group) or the class of definites noun phrase in which an amount/kind is specified.

This section has shown that the noun phrases introduced with the definite determiner *the* in *there*-BE structures, all fall under the two options for a weak interpretation of the noun phrase. In its weak reading, the definite determiner *the* gives rise to a uniqueness reading (presumably by specifying the empty noun NUMBER) or an amount/degree readings. Additionally, we saw a number of kind readings and I suggested that they fall under the structure in which the determiner and the noun form a phrase of their own and occur in the specifier of NumP as proposed by Zamparelli (2000) for the *every kind* phrases, cf. (67).

2.10.4. Loose ends

Before I conclude this section on the definiteness effect, let me say a few words about the classes of seemingly discourse old definites discussed by Ward and Birner (1995) and Birner and Ward (1998): (i) Hearer-old entities treated as hearer-new (the reminder contexts), (ii) Hearer-new tokens of hearer-old types, (iii) Hearer-old entities newly instantiating a variable (list reading). Class (ii) has been discussed above already, where I stressed that what is relevant is the kind reading of these definites. Class (iii) will be discussed in the next chapter,

section 3.7. Let me look at class (i) definites, those that are discourse old, reintroduced to the discourse and as such presented as discourse new.

- (155) Previous discourse:
 To go back through just a little of the history, the operational maintenance and requirements specification document had requirements for inspections in there . . .
- A: Well, didn't the designer of the orbiter, the manufacturer, develop maintenance requirements and documentation as part of the design obligations?
- B: Yes, sir. And that is what we showed in the very first part, before the Pan Am study. *There were those orbiter maintenance and requirement specifications*, which . . .
- (Birner and Ward 1998, 124)

Note that this example involves the demonstrative and not the definite determiner, suggesting that the higher D-layer is filled that links the DP to the discourse, yet the reading that arises is existential. This is rather unexpected under the analysis presented here. Note, however, that the example requires stress on the copula - the copula cannot be reduced (except if the demonstrative receives an interpretation of a false definite, or list reading).

- (156) #There's this orbiter maintenance requirement specification.

Even though it is not entirely clear to me how intonation can save the example and force existential closure to occur, it seems to me that these examples are not necessarily counter-examples to the claims made so far.

2.10.5. Summary

The preceding sections showed how the proposed analysis can account for the definiteness restriction with English *there* on the widely held assumption that weak quantifiers occupy a position lower than the D-layer, while strong quantifiers occupy a position in or higher than the D-layer. In the analysis presented here, the existential reading of *there*-BE sentences arises from the empty D-layer being bound by existential closure. Thus, the existential reading is incompatible with material in the D-layer (or higher). Hence strong quantifiers cannot occur in *there*-BE structures, only weak quantifiers can.

I extended this distinction between weak and strong readings to possessive phrases: Possessive phrases that contain a DP that is linked to the discourse occupy a position in the D-layer, therefore they cannot occur in *there*-BE sentences. Furthermore, there is no position for strong quantifiers to move to, only weak readings of quantifiers are allowed.

The same distinction holds for the definite determiner *the*: it only occurs in the D-layer when it links the DP to entities in the discourse. The definite determiner *the* can give rise to a uniqueness interpretation of the DP or specify

a silent noun AMOUNT/NUMBER. In the latter two cases, it is hosted by a lower projection NumP. I showed that it is only the weak reading of the definite determiner that occurs in the *there*-BE structure, as expected under the analysis presented here.

2.11. Conclusion

This chapter provided a major insight into *there*-sentences in English, namely that we have to distinguish *there*-BE sentences from *there*-V sentences. They differ in the following respects.

- (157) Differences between *there*-BE and *there*-V structures
- (i) General acceptability;
 - (ii) Wh-movement of the full noun phrase;
 - (iii) Subextraction;
 - (iv) Embedding;
 - (v) VP preposing and VP deletion;
 - (vi) Control.

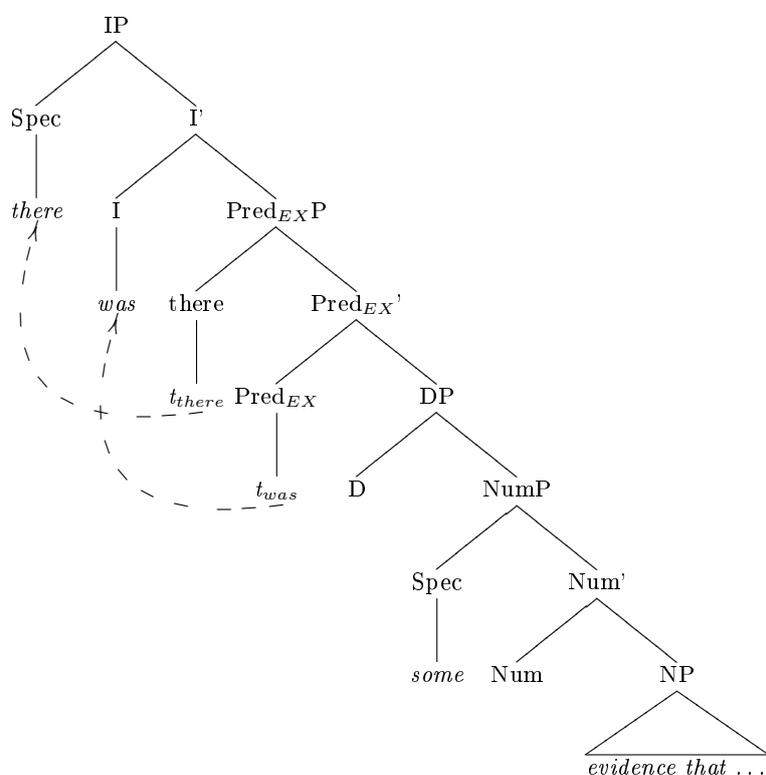
Postponing the analysis of *there*-V sentences until chapter 3, I presented my analysis of *there*-BE sentences in English summarised in (158). I suggested that the syntactic predication structure is provided by a special PredP which I labeled Pred_{EX}P. This structure is read off in semantics as an information structural predication of athetic sentence. *There* is a proform for a location/situation. The core of the existential meaning of the structure is derived from the interaction of a complex DP structure with an empty D-layer and existential closure. The full structure is given in (158).

I showed that this analysis straightforwardly accounts for the core properties of *there*-BE sentences, namely (i) the PP is optional because it is an adjunct; (ii) *there* is obligatory, because it is the true subject of the structure; (iii) *there* is a special proform restricted to this configuration because it cannot be assigned a θ -role; (iv) *there* is not the predicate but the subject in the structure; (v) and finally, the noun phrase is not a predicate nominal because it contains a D-layer (under the assumption that predicate nominals are smaller than DP).

Furthermore, the proposed analysis accounts for the similarities and differences between predicate nominal copula structures and *there*-BE sentences. The major similarity between noun phrases in *there*-BE structures and predicate nominals is that the overt material is the same. They differ in that the noun phrase in *there*-BE structures projects an empty D-layer, while this is not the case with predicate nominals.

The complex DP structure can also be taken to account for the existential interpretation of bare plurals and the *wh*-extraction data. According to Longobardi (1994), bare plurals in English only receive a generic interpretation of the bare plural if the bare plural moves to D. As this is not possible in existen-

(158)



tial *there*-BE structures, a generic reading cannot arise. The restriction on the extraction of *which X* phrases can be grasped in the same way. *Which*-phrases cannot occur with existential *there*-BE structures, because *which* occurs in the D-layer.

Finally, I showed how the definiteness effect can be derived from the complex DP structure as well. Starting off with the analysis that strong quantifiers occupy a higher position in the structure than weak quantifiers, we saw that this can account for a large number of facts. Strong quantifiers are excluded from the *there*-BE structures because they occur in the D-layer (or higher). Weak readings of quantifiers arise in the lower position, NumP, and are felicitous with *there*-BE sentences. Finally, I extended this difference between strong and weak quantifiers to the definite determiner *the*. In its strong reading, the definite determiner *the* links the full DP to an entity in the discourse. In its weak reading, it is the specifier of an empty (or in some cases overt) noun AMOUNT/NUMBER. Presenting new data extracted from the British National Corpus, I showed that only the weak reading of *the* can occur in *there*-BE sentences.

There-V and Complex *There-BE* Structures

3.1. Introduction

In the previous chapter, I argued for an analysis of existential sentences in English (i.e. *there-BE* sentences), in which the so-called expletive *there* is part of the predication structure of the clause, and as such a meaningful element. In this section, I investigate whether my proposal accounts for all instances of *there* in subject position. The examples in (1) to (6) show that *there* occurs in a number of other environments in subject position, as well.¹

- (1) *there-V sentences*
There arrived a bus at the station.
- (2) *Locative there-BE sentences*
There is a man in the garden.
- (3) *Passive participle there-BE sentences*
There was a book put on the table.
- (4) *Present participle there-BE sentences*
There was a student applying for the job.
- (5) *Adjectival there-BE sentences*
There are firemen available.

¹The classification here is based on but not identical to Milsark (1974). Note that in spoken language, *there* also occurs in so-called contact clauses, as e.g. *There's a man wants to see you*. For discussion of these cases see Erdmann (1980), Harris and Vincent (1980), McCawley (1981), Lambrecht (1988). They will be excluded from my study altogether.

(6) *List readings*

A: What could I give my sister for her birthday?

B: There's John's book on birdwatching.

(Birner and Ward 1998, 116 quoting Abbott 1992)

In the following I will discuss these structures in turn. As we have seen in 2.2, the crucial distinction is between the *there-BE* sentences (sentences in which the main/tensed verb is *be*) and the *there-V* sentences (sentences in which the main/tensed verb is another (usually unaccusative) verb), summarised in (7).

(7) Differences between *there-V* and *there-BE* sentences

- (i) General acceptability;
- (ii) *Wh*-movement of the full noun phrase;
- (iii) Subextraction from the noun phrase;
- (iv) Embedding;
- (v) VP deletion/VP preposing;
- (vi) Control possibilities.

The previous chapter provided an account of the *there-BE* sentences of the type *there be DP*. In this chapter, I focus on two issues: first, the analysis of *there-V* sentences and second, whether the *there-BE* structures of the type *there be DP XP* in which *XP* is a predicative element (cf. (2) to (5)) also fall under the analysis presented in chapter 2.

I will argue that the *there-V* structures have to be analysed in terms of locative inversion structures, as the two behave similarly in various environments. Turning to the *there-BE* structures of the type *there be DP XP*, I will show that the analysis presented in chapter 2 is appropriate. For the present and past participle cases as well as for the adjectival cases, we need to assume two different structures, an adjunct structure and a complex-NP structure. Note that this excludes a true passive or progressive present tense, as well as a small clause analysis of these structures. Finally, I will turn to the list reading cases, cf. (6), and I will propose that they are derived from the Pred_{EXP} configuration proposed for the existential structure. However, they differ from the existential structures in that existential closure need not apply.

3.2. A locative inversion analysis of *there-V* structures

3.2.1. Introduction

We saw in 2.2 that *there-V* structures are crucially different from *there-BE* structures. In this section, I will show that the former are a subtype of the locative inversion structures: they behave similarly to locative inversion structures in the relevant aspects. I will first discuss the crucial similarities between

there-V and locative inversion structures. Then, I will provide an analysis of locative inversion based on previous proposals by Hoekstra and Mulder (1990) and Broekhuis (2005, 2008). I will show how this analysis can be applied to *there-V* structures. Before I conclude the section, I discuss two interesting issues that arise with the *there-V* structures: the interaction with heavy-NP shift and the classification of the verb class that occurs in *there-V* structures. These two subsections aim at clarifying the issues involved, leaving a full understanding of the structures to future research. The final section summarizes the relevant findings.

3.2.2. The data

There-V structures and locative inversion structures pattern alike in various respects (cf. Aissen 1975, Hartmann 2005). First of all, *wh*-movement of the post-verbal noun phrase is impossible, as shown in the following examples taken from the Magnitude Estimation experiment (see appendix A).²

- (8) a. ---Which rabbit did there appear?
 b. ---Which burglar did down the hot chimney come?
- (9) a. --How many trucks did there come down the quiet street?
 b. ---How many burglars did down the hot chimney come?

Second, *wh*-movement from the post-verbal noun phrase is impossible in both structures.

- (10) a. *Who did there appear a picture of t in the Daily Telegraph?
 b. *Who do you think on this wall hung a picture of?

Third, neither *there-V* structures nor locative inversion structures can occur in comparative *than* clauses (cf. Aissen 1975, 8).

- (11) a. ??There lie more apples on the ground than there grow on the tree.
 b. *On the ground lie more apples than on the tree grow.
 (Hartmann 2005, 95)

Fourth, neither *there-V* structures nor locative inversion structures can be embedded in indirect questions, cf. (12),³ or sentential subject positions, cf. (13) and (14).⁴

²The examples and judgements from the Magnitude Estimation experiment are set apart from other sentences by a different scheme of providing judgements, instead of */?, I provide + and -. See p. 92 and the appendix for details.

³An anonymous reviewer for Hartmann (2005) reports judgements from one native speaker for whom the embedded *there-V* construction is only weird whereas the locative inversion construction is ungrammatical. One speaker reported a similar judgement for the comparatives. I suspect the reason for this is that the PP in locative inversion structures is topicalized, whereas *there* is not. See below.

⁴Stowell (1981, 272) relates this property to the impossibility of topicalization in sentential subjects and other embedding structures as seen in *[That this book Bill liked] is obvious.

- (12) a. *The reporter wants to know whether there stands a billboard at the intersection.
 b. *The reporter wants to know whether at the intersection stands a billboard.
 (Hartmann 2005, 95)
- (13) a. ??That there stands a Tiffany lamp on his dresser is surprising.
 b. ??That on his dresser stands a Tiffany lamp is surprising.
 (Hartmann 2005, 95)
- (14) *[That in this chair was sitting my older brother] is obvious.
 (Stowell 1981, 272)

Fifth, the verb classes with which locative inversion and *there-V* structures occur are the same (cf. Levin and Rappaport Hovav 1995, 220). These verbs can be characterized as by and large unaccusative verbs, with the core classes being (a) verbs of appearance (e.g. *appear*, *arise*); (b) verbs of existence (e.g. *exist* or *thrive*) (c) verbs of inherently directed motion (e.g. *come* or *arrive*) (d) manner of motion verbs with a directional PP (e.g. *stride* or *run*). Note however, that not all unaccusative verbs can occur in locative inversion and *there-V* structures: verbs of change of stage (e.g. *break* or *melt*) cannot. Additionally, there are a number of verbs that seem not to fall in the class of unaccusative verbs (e.g. *tick*, *bubble*), but that do occur with locative inversion structures, see Levin and Rappaport Hovav (1995) for discussion.

Sixth, both locative inversion and *there-V* constructions give rise to a so-called presentational focus on the post-verbal noun phrase (cf. Bolinger 1977, 94, Bresnan 1994, 85, Birner and Ward 1998 among others). This type of focus serves the function of (re)introducing the post-verbal noun phrase on a specific, known scene.

Finally, neither *there-V* structures nor locative inversion allow sentential negation.

- (15) a. *There didn't sit on the lawn a huge bulldog.
 (Guéron 1980, 670)
 b. *There doesn't lie a fear behind this exchange.
 c. *There doesn't lie behind this exchange a fear of a victory by Labour.
- (16) In the garden doesn't stand a fountain. (Levine 1989, 1015)

Apart from these similarities, there are also a number of differences between the two structures, to which I turn now. The first difference is that *there-V* structures can occur embedded under ECM verbs (cf. Aissen 1975), while locative inversion cannot (cf. Stowell 1981, 271).

- (17) By next year, I expect there to hang on this wall a picture of Leonard Pabbs. (Aissen 1975, 10)

- (18) a. *I expect in the room to be sitting my older brother.
 b. *I believe down the hill to have rolled a ball.
 (Stowell 1981, 271)

The second difference between *there-V* structures and locative inversion structures is that while *there-V* structures in some cases allow yes-no question formation. This is impossible with locative inversion structures.⁵

- (19) a. *Did on the lawn lie a piece of luggage?
 b. Did there lie a piece of luggage on the lawn?

Finally, Bresnan (1994) observes that when the PP is questioned, subject auxiliary inversion does not apply in locative inversion structures, but it does in *there-V* structures.

- (20) a. On which wall hung a portrait of the artist?
 b. *On which wall did hang a portrait of the artist?
 c. *On which wall there hung a portrait of the artist?
 d. On which wall did there hang a portrait of the artist?
 (Bresnan 1994, 100)

In sum, the data presented above shows that the *there-V* structures pattern with locative inversion structures in several respects, though there are also some differences. As we will see in the following section, we can account for the similarities in the structures if we assume the same analysis for both locative inversion and *there-V* sentences, and we will see how it is rather straightforward to account for the differences as well: the PP in locative inversion structures is topicalized, while *there* remains in Spec,IP.

3.2.3. An analysis of locative inversion

There are many analyses of locative inversion proposed in the literature (cf. Emonds 1976, Coopmans 1989, Levine 1989, Hoekstra and Mulder 1990, Bresnan 1994, Rochemont and Culicover 1990, Broekhuis 2005, 2008, Den Dikken 2006 among many others). In the following, I present the main pieces of data

⁵Note that there is quite some noise in the data (see among others Ross 1975), with some speakers considering yes-no questions in *there-V* structures as ungrammatical, as in (i), while others detect a difference with respect to verb class, as in (ii). The important point here is that speakers agree on the ungrammaticality of locative inversion for these structures.

- (i) a. ??Did there occur a drop in subchlostinic pressure?
 b. ??*Did there sit on the shelf more than two volumes of Proust?
 (Ross 1975, 575)
- (ii) a. Did there arise during the meeting any unresolved issue?
 b. *Did there walk into the room a man with long blond hair?
 (Rochemont and Culicover 1990, 132)

that any analysis of locative inversion should be able to account for. After that, I choose one of the available analyses that more or less straightforwardly accounts for the given facts.

(i) The PP is moved into Spec,IP. It has been argued in several places that the PP is the subject in the structure, in the sense that it occupies Spec,IP at some point in the derivation. Evidence for this position comes from question tags (cf. Bowers 1976, 237) in which the proform *there* picks up the reference of the PP, suggesting that it is the subject of the structure.⁶

- (21) a. In the garden is a beautiful statue, isn't there?
 b. *In the garden is a beautiful statue, isn't it?
 (Bowers 1976, 237)

The second argument for assuming that the PP occupies Spec,IP is that it does not require *do*-support for *wh*-question formation, just as it is the case with noun phrase subjects.

- (22) a. Who came home late?
 b. In which garden stood a fountain?

Furthermore, Bresnan (1994) suggest that coordination structures support the claim that the PP is the subject. Observe in (23) that coordination of two relative clauses with a subject gap only works if the subject is gapped in both conjuncts.

- (23) a. She's someone that t loves cooking and t hates jogging.
 b. *She's someone that cooking amuses t and t hates jogging.
 (Bresnan 1994, 98)

Turning to coordination with locative inversion structures, we see that it is grammatical to extract the PP from the subject position in both conjuncts. However, it is impossible to extract the PP from a locative inversion structure in one conjunct and from a complement position in the other conjunct. As this restriction of conjoining gaps only holds for subject gaps, the PP in the locative inversion has to occupy the subject position Spec,IP.

- (24) a. That's the old graveyard, in which t is buried a pirate and t is likely to be buried a treasure.
 b. ??That's the old graveyard in which workers are digging t and t is likely to be buried a treasure.
 (Bresnan 1994, 98)

⁶Levine (1989) however provides the following examples in which the noun phrase is pronominalized in the tag (capital letters stand for stress), citing Iwakura (1978).

- (i) a. Under the bridge were the two vagrants you were tracking, WERen't they?
 b. In the room are Mary and her husband, aren't they?
 (Levine 1989, 1025)

Fourth, it has been argued that the presence of *that*-trace effects with locative inversions suggests that the PP *wh*-moves via the subject position, leaving an offending trace.

- (25) a. It's in these villages that we all believe t can be found the best examples of this cuisine.
 b. *It's in these villages that we all believe that t can be found the best examples of this cuisine.
 (Bresnan 1994, 97)

However, Culicover and Levine (2001, 286f) correctly point out that these data only show that there is a trace in subject position but not that it is left behind by the PP. In principle the trace could also be left by a heavy-NP shifted noun phrase, which is what Culicover and Levine (2001) claim for one type of locative inversion structures, the heavy inversion (cf. Culicover and Levine 2001 for details).

Fifth, the fact that the PP can undergo raising was taken as another argument for its subjecthood, cf. Bresnan (1994).

- (26) On this wall is likely to be hung a portrait of our funder.

Culicover and Levine (2001) show that the data are not entirely conclusive though. The PP in inversion structures cannot raise when the noun phrase is not shifted to the right edge.

- (27) a. *Into the room appeared to be walking Robin slowly.
 b. Into the room appeared to be walking slowly a very large caterpillar.
 (Culicover and Levine 2001, 288)

Finally, Culicover and Levine (2001) suggest that the lack of *weak cross over* (WCO) with inversion structures support the claim that the PP moves via the subject position. Recall that WCO effects are induced by A'-movement of an operator over an embedded co-indexed pronoun. Preposing of a locative constituent does not give rise to a WCO violation, which suggests that it has to be *wh*-moved into an A-position.⁷

- (28) a. *Into every dog_i's cage its_i owner peered.
 b. Into every dog_i's cage peered its_i owner.
 c. *Next to none of the winning dogs_i its_i owner stood.
 d. Next to none of the winning dogs_i stood its_i owner.
 (Culicover and Levine 2001, 289)

In summary, we can say that there are several arguments for the claim that the PP occupies Spec,IP at least at some point during the derivation (tag formation,

⁷Hans Broekhuis (p.c.) notes that this data is problematic as the noun phrase embedded in the prepositional phrase does not c-command the pronoun from an A-position either.

lack of *do*-support with question formation, coordination, WCO effects), even though not all of the arguments are conclusive.

(ii) The PP is in a Topic Position. Apart from the fact that the PP is in subject position at some point of the derivation, there is evidence that the PP does not remain in this position, but it moves into a topic position. The first piece of evidence is that locative inversion structures do not allow yes-no question formation with *do*-support. The ungrammaticality follows if the PP does not remain in Spec,IP but moves to a higher position (cf. Bresnan 1994).

- (29) a. Do you remember? *Did on this wall hang a Mexican serape?
 b. *Was among the ruins found a skeleton?
 (Bresnan 1994, 108)

Furthermore, locative inversion structures cannot be embedded under *expect*-type verbs (cf. Stowell 1981, 271). As non-finite structures do not allow topicalization in general, locative inversion cannot occur in these structures. Note that if the PP moves on to a higher topic position, locative inversion is possible.

- (30) a. *Imogen expects on this wall to be hung a portrait of Brian.
 b. On this wall Imogen expects to be hung a portrait of Brian.
 (Den Dikken 2006, 98)

(iii) The Focus effect. Locative inversion structures give rise to the so-called focus effect (cf. Bresnan 1994 citing Hetzron 1971, 1975 and Bolinger 1971, 1977; Birner and Ward 1998 among others). The noun phrase in locative inversion structures is ‘introduced or reintroduced on the (scene) referred to by the preposed locative.’ (Bresnan 1994, 85), implying that a locative inversion structure is odd if the noun phrase is introduced in the previous discourse or is a pronoun (# marks infelicitious discourse).⁸

- (31) A: I’m looking for my friend Rose.
 B: #Among the guests of honor was sitting Rose.
 (Bresnan 1994, 85)
- (32) *Rose_i? Among the guest of honour was sitting she_i/her_i.
 (Bresnan 1994, 85)

(iv) The Extraction Restriction. The noun phrase in locative inversion structures cannot be extracted either by *wh*-movement, cf. (33) and (8), (9) and (10) above, or by relativization (cf. Aissen 1975 and Bresnan 1994 citing Langendoen 1973, 1979) as seen in (34).⁹ Subextraction is not possible, either (cf. Ross 1975).

⁸Pronouns are possible if they receive heavy stress and are used deictically, i.e. the speaker is also pointing at an entity in the actual world.

⁹Note that Levine (1989) finds relativization acceptable.

- (33) a. *?What kind of mushrooms do you think on these trails can be found
t?
b. *?What kind of mushrooms do you think on these trails can be found
specimen of t?
(Bresnan 1994, 87)
- (34) a. I expect on these trails can be found many kinds of mushrooms.
b. ?*many kinds of mushrooms, which I expect on these trails can be
found.
(Bresnan 1994, 87)

(v) The Lexical Restriction. Locative inversion cannot occur with all types of verbs in English, but is by and large restricted to a subclass of intransitive verbs, namely those in which the preposed locative prepositional phrase is predicated of the noun phrase argument in the structure (cf. Hoekstra and Mulder 1990, Bresnan 1994, for a different position see Levin and Rappaport Hovav 1995).¹⁰

These are the core facts of locative inversion that need to be accounted for, and there are several analyses that do this straightforwardly. It is not my aim to review them here, rather I would like to sketch an analysis based on the proposals and insights of previous work by Hoekstra and Mulder (1990) and further developed by Broekhuis (2005, 2008). Hoekstra and Mulder (1990) proposed that those verbs that allow locative inversion are unaccusative in the sense that the verb selects for a small clause constituent in which the PP is predicative and predicated of the noun phrase in the structure. I take this small clause structure as the starting point, extending it to a PredP phrase along the lines of Bowers (1993). Hoekstra and Mulder (1990) claim that from this small clause, either the noun phrase or the predicate can move into Spec,IP. The two options can arise because, as Hoekstra and Mulder (1990) assume, the noun phrase and the PP are co-indexed. This co-indexing allows case to be transferred to the noun phrase when it is left behind (similarly to the case-transmission approach to *there*-sentences in Chomsky 1981). Broekhuis (2008) takes this co-indexing relationship to be agreement in ϕ -features, which he assumes to hold in general between predicates and their arguments.¹¹ Whatever

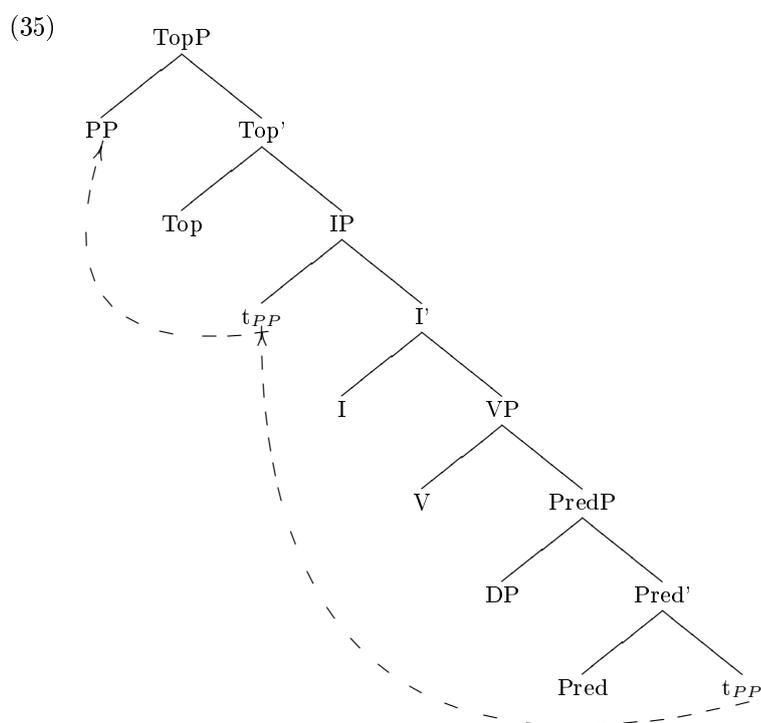
¹⁰Note however, that the precise generalization is still under discussion, as there seem to be a number of exceptions to it. It has been observed, for example, that non-predicative adverbial phrases can occur in first position with locative inversion structures as well. If Culicover and Levine (2001) are on the right track with their distinction between heavy and light inversion, these exceptional examples would fall under the class of heavy inversion and would be derived differently.

(i) In the hall ticked the long case clock that had been a wedding present from their parents. [P.Lively, Perfect Happiness] (Levin and Rappaport Hovav 1995, 225)

¹¹Note, however, that this type of ϕ -feature agreement has to be abstract. Noun phrases in a predicative relationship do not always show overt agreement in ϕ -features (gender and number in this case) as Moro (1997) pointed out, cf. (i). For discussion see Broekhuis

the precise relationship between the noun phrase and the prepositional phrase might be, let me take it for granted for the time being that there is such a relationship and that it allows the PP to move to the subject position.¹²

As we have seen above, there is evidence that the PP does not stay in the subject position but topicalizes. I take this to mean that the PP moves to a higher projection, TopP, (via Spec,IP) as proposed in Den Dikken and Næss (1993). The resulting structure that I am assuming is given in (35) (I only include the projections necessary for the analysis, but there might be more projections present for independent reasons).



This structure accounts both for the subject properties as well as for the topic properties of the PP in locative inversion structures. It restricts the class of

(2008, Ch 5.1).

- (i) Gianni ritiene questi libri la causa della rivolta
 G. believes these_{M.PL} books_{M.PL} the_{F.SG} cause_{F.SG} of-the riot
 (Moro 1997, 53)

ITALIAN

¹²The matter is tightly related to the question of the nature of the Extended Projection Principle in English. Whatever makes subjects move to the Spec,IP position in general should allow the PP to move in this case. In Broekhuis (2008) agreement is the driving force. If É. Kiss (1996) is right that there is a topic-like A-position above Spec,IP, the properties of this projection might be more relevant. I leave this issue to future research.

verbs to those verbs that are able to select a PredP, the core category occurring with locative inversion structures (though there are exceptions, cf. footnote 10). However, the analysis needs an additional restriction on the type of PP allowed: the structure predicts that resultative PPs should also be possible to invert, contrary to fact.

(36) *Into pieces broke a vase that cost him a fortune.

The question is whether this is a syntactic restriction or a restriction on the interpretation of the structure. I suspect that it is the latter. In the general case of locative inversion, the PP provides the scene on which the noun phrase is presented; it is/modifies the stage topic in the sense of Erteschik-Shir (1997). Only PPs with a locative meaning, but not resultative phrases can provide this scene. Hence a resultative phrase is not felicitous in locative inversion structures.

The focus effect and the extraction restriction are not directly accounted for by this structure. First, let me conjecture that the two facts are linked (cf. Den Dikken 2006, 126). Informally speaking, if the noun phrase has to be left behind for reasons of presentational focus, it should not be possible to extract it. Den Dikken (2006) suggests in support of this assumption that restriction on *wh*-movement is a surface effect. *Wh*-in situ is possible, as (37) shows, and the sentence allows a pair-list reading. On general assumptions, then, LF movement has to be possible.

(37) Out of which barn ran which horse? (Den Dikken 2006, 131)

So how do we derive the focus effect? Broekhuis (2008) has an information-structural proposal for these facts. In his general framework, the Derivation and Evaluation Model, the computational system produces a limited number of structures via the operations Merge, Move and Agree. The output structures are evaluated in an optimality theoretic system (for details see Broekhuis and Dekkers 2000 and Broekhuis 2000, 2008). Turning to the locative inversion structure, the interaction of two constraints is crucial: one that requires the agreement features on I to be checked locally (EPP(ϕ)), and a second that requires focus constituents - focus in the sense of new information - to be aligned on the right edge of the clause (ALIGNFOCUS). ALIGNFOCUS is ranked higher than EPP(ϕ), with the result that in those cases in which the noun phrase is new information and the predicate is old information, the predicate can move to the subject position, and agreement is checked at a distance.¹³

¹³In Broekhuis (2008) it is rather the remnant PredP (not the PP on its own) or even a remnant VP that moves, with the noun phrase argument moving out of the PredP via short object shift. The size of the constituent depends on the information structural properties of the clause. In this way, Broekhuis (2008) can also account for the so-called preposing-around-*be* structures (cf. Emonds 1976, Rochemont and Culicover 1990 for discussion). Furthermore, Broekhuis (2008) takes the PP/PredP/VP to move to Spec,IP: he does not provide a formal account of topicalization; nothing in his analysis excludes it.

The information structural properties of the structure then follow from the interaction of constraints and not from the syntactic derivation per se.¹⁴ The restriction on *wh*-movement can thus be accounted for in terms of the focus properties of the structure. Locative inversion only arises when the noun phrase in the structure has to be aligned to the right in order to satisfy AlignFocus. *Wh*-movement of the noun phrase destroys this configuration, and the two are incompatible.

In sum, I am assuming the structure in (35) and suggest that the focus effect and *wh*-extraction effects are related and are not necessarily core syntactic effects but rather information-structural ones. Let me now turn to the *there-V* structures and show how the analysis presented for locative inversion can be extended to these.

3.2.4. An analysis of *there-V* structures

We have established above that *there-V* structures pattern with locative inversion structures in the relevant respects. They should therefore be grasped with the same structure as the one presented for locative inversion in (35). In order to this, let me first look into the role of *there* in the structure. There are three possibilities:

- (i) *There* could be an underspecified copy of the PP (as proposed e.g. by Sabel 2000 for *there-BE* structures, or Surányi 1998 for Hungarian *ott*);
- (ii) *There* could be base generated as the specifier of the PP and leave the PP behind, similar to the relationship proposed for *it* and CP by Emonds (1976) (for an analysis of weak locative pronouns along these lines see Tortora 1997).
- (iii) *There* could be the true predicate and the PP an adjunct to the structure, which is basically the proposal in Moro (1997). It is not adequate for existentials, but it might be reasonable to adopt it for *there-V* structures.

Even though it is hard to distinguish among these options, let me take two pieces of evidence that point to the third option. First, when *there* is present, the PP can be left out. This suggests that the PP is not a necessary ingredient to the analysis, which speaks against the possibilities in (i) and (ii).

- (38) It is even possible that now and again an extra long detour may have caused us to walk below the windows of Braemar Mansions (...), little knowing that *there sat the sibyl who would completely have understood all our troubles*. (BNC text="CA6" n="106")

¹⁴Note however, that the notion of focus as new information might need some adjustment: the following question-answer pair does not give rise to an inverted structure, even though the predicate is old information and the subject new:

- (i) Who is in the garden? The child of our neighbour is in the garden.

Second, the PP can occur in the first position (at least in some cases) as illustrated in the following.

- (39) The Frisque are an aggressive, exploitative, worker species. [...] *At the centre of their hive there sits a queen, radiating her implacable commands through the labyrinthine tunnels.*
(BNC text="CJA" n="2381")

Again this is unexpected if *there* and the PP originate from the same base position and *there* moves away into a structurally higher position. If the PP is moved to this topic position from a lower position, movement of the PP over the proform would give rise to economy violations. If the PP is base-generated in the high position, *there* could not turn up in the lower position. So I take *there* to be a proform standing for a predicative PP in the *there*-V structures (following option (iii)).

A second issue to discuss is topicalization. We have seen above that the PP in locative inversion structures topicalizes. So the question is: Does the same hold for *there* in *there*-V structures? Following a suggestion by Den Dikken and Næss (1993), I would like to suggest that *there* does not (necessarily) topicalize. Broekhuis (2008) suggests that the lack of topicalization is due to the lack of content for *there*.¹⁵ Taken together, the structure that I would like to propose is given in (40) (more or less following Moro 1997, Hoekstra and Mulder 1990, Broekhuis 2005, 2008).

This structure accounts for the similarities of *there*-V structures and locative inversion structures rather straightforwardly, as the main properties can be accounted for in the same way. The restriction to the class of unaccusative verbs is due to the fact that a PredP configuration is necessary for the analysis of these structure. Second, the focus effect and the restriction on *wh*-movement are derived in the same way: the structure only arises to put a special focus on the post-verbal noun phrase. *Wh*-movement would destroy this special configuration, thus, it is incompatible with the inversion structure.¹⁶

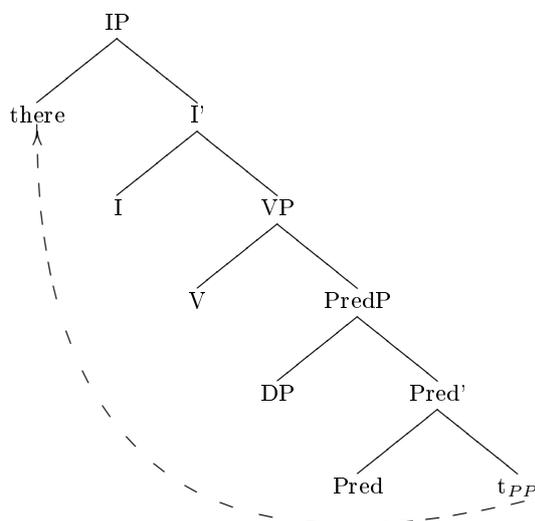
The analysis presented here also accounts for the differences between *there*-V and locative inversion structures: all of them are due to the fact that the PP in locative inversion always topicalizes, while *there* in *there*-V structures can remain in Spec,IP. With *there* remaining in Spec,IP it is not surprising that

¹⁵Note that if *there* in *there*-V structures can be deictic/locative *there* (as e.g. in (38)), this argumentation does not go through. Deictic/locative *there* can topicalize as the following example illustrates.

- (i) a. We went to France last year. There, our Volkswagen broke down.
b. There, you can find the toilet. [pointing to the end of the corridor]

¹⁶Note, however, that the similarities in terms of the restrictions on embedding cannot be straightforwardly accounted for under the proposed analysis. If *there* remains in subject position, it is not clear why it should not be possible to embed it. The reason quite plausibly lies in the information structural properties of the structure, but a detailed analysis along these lines will be left to future research.

(40)



these structures can be the complement to *expect*-type verbs, cf. (17). Second, *there-V* structures allow (to some degree) yes-no question-formation with *do*-support. As *there* can remain in Spec,IP, an auxiliary can be inserted higher for question formation. This is not possible with locative inversion cases.

Finally, the structure in (40) explains why questioning of the PP in *there-V* sentences requires *do*-support, while this is impossible with locative inversion structures, cf. (20). The PP in *there-V* structures is an adjunct and it has to be moved to the front; *there* sits in Spec,IP and *do*-support is necessary for question formation. With locative inversion structures the PP is both the subject and the topic and question formation does not require *do*-support.

In sum, we have seen that the analysis of locative inversion can be successfully applied to the *there-V* structures, cf. (40). The differences between the two structures follow from the fact that *there* does not necessarily topicalize, while the PP in locative inversion structures does.

3.2.5. *There-V* and heavy-NP shift

Rochement and Culicover (1990) proposed an analysis for the *there-V* structures in terms of heavy-NP shift (HNPS). I will present and discuss their analysis here. We will see that *there-V* structures cannot be derived by HNPS, though HNPS can apply on top of the derivation presented in 3.2.4.

In Rochement and Culicover (1990), the noun phrase of *there-V* structures moves from its VP-internal position to Spec,IP and from there adjoins to IP. The resulting ungrammatical structure is given in (41-a).

- (41) a. [IP [IP t_j walked into the room] NP_{*i*}]
 b. *Walked into the room a man with long blond hair.

(Rochemont and Culicover 1990, 123)

They suggest that the reason for the ungrammaticality of this structure is that the trace in Spec,IP is not lexically governed.¹⁷ Insertion of *there* in subject position replaces the offending trace, and the structure becomes grammatical. This is basically what Milsark's *there*-insertion rule does (following NP postposing) - replacing the trace left behind by the noun phrase (Milsark 1974, 192).

In the analysis by Rochemont and Culicover (1990), the noun phrase moves via Spec,IP and adjoins to IP. They support the adjunction analysis with evidence from VP ellipsis, VP preposing, pseudoclefting and parentheticals.

(i) VP ellipsis. The VP ellipsis case shows the following. If the noun phrase were adjoined to the VP, it should be possible to elide it along with the VP. VP ellipsis including the noun phrase is ungrammatical, as (42) shows. They conclude that the noun phrase has to be adjoined higher in the structure.¹⁸

- (42) a. *There actually entered a room a veritable army of revelers, and for some reason I had thought that there might.
 b. *If Mary claims that there jumped out in front of her several friendly well-dressed Martians, then there did.
 c. *John said that there might walk into the room at any moment someone who would be perfect for the part and there may.

(Rochemont and Culicover 1990, 118)

(ii) VP preposing. The same point can be made with VP preposing. If the noun phrase were adjoined to the VP, it should be possible to prepose it with the rest of the VP. Again this is ungrammatical as seen in (43). The structure improves when the noun phrase is left behind, cf. (44).¹⁹

- (43) a. *They said that there would enter the room a herd of unruly elephants, and enter the room a herd of unruly elephants there did.

¹⁷The violation cannot be a violation of the EPP, as traces satisfy it.

¹⁸Rochemont and Culicover (1990) note a few cases that are not as clear as the ones presented in the main text:

- (i) a. ?There had actually entered the room a veritable army of revelers, but for some reason I thought there hadn't.
 b. ??You may think that there will eventually fall on Bill a massive wall hanging, but I believe that there won't.
 c. ?There walked into the room many more people than there should have.
 d. ??Although there probably shouldn't have, there actually walked into the room at that time every one of the candidates.

(Rochemont and Culicover 1990, 122)

¹⁹Note that Guéron (1980, 671) claims that VP preposing is ungrammatical with *there*-V structures (her *there*-insertion-2) independent of whether the noun phrase is preposed or stranded.

- b. *Mary was told that there might jump out in front of her several friendly well-dressed Martians, and jump out in front of her serveral friendly well-dressed Martians there did.
(Rochemont and Culicover 1990, 119)
- (44) a. ?We were warned that someone unusual might enter the room, and enter the room there did a tall man with blue spiked hair.
b. ??Mary said that something unusual might jump out in front of us, and jump out in front of us there did several friendly well dressed Martians.
(Rochemont and Culicover 1990, 121)

(iii) Pseudoclefting. Similarly, we expect that if the noun phrase and the VP were one constituent, it should be possible for the two to be clefted together, but again this is ungrammatical.

- (45) a. *What there might do is walk into the room someone who would be perfect for the part.
b. *What there did was jump out in front of her several friendly well-dressed Martians.
(Rochemont and Culicover 1990, 119)

(iv) Parentheticals. Finally, Rochemont and Culicover (1990) note that in regular clauses, a parenthetical can occur after the subject, while this is not possible with *there*.²⁰

²⁰Rochemont and Culicover (1990) also present a difference between *there-V* structures derived by HNPS and other cases of HNPS. The former do not allow *wh*-movement of the locational/directional NP/PP over which the NP has been moved, while this is possible with HNPS. I am not sure what these examples show. I suspect that the occurrence of a direction of movement is dependent on the meaning of the verb (see the next section). Furthermore, the question of preposition stranding has to be addressed here as well. *Into which room did there walk a man with long blond hair* is more acceptable than the example with preposition stranding.

- (i) a. *Which room did there enter a man with long blond hair?
b. *I don't remember which room there walked into a man with long blond hair.
c. Did there walk into the room a man with long blond hair?
d. *This is the room that there walked into a man with long blond hair.
(Rochemont and Culicover 1990, 132)
- (ii) a. For whom did Bill purchase last week an all expense paid ticket to Europe?
b. I don't remember for which of his sisters Bill bought in Europe a fourteenth-century gold ring.
c. Did Bill buy for his mother anything she really liked?
d. This is the woman from whom Bill purchased last week a brand new convertible with red trim.
(Rochemont and Culicover 1990, 132)

- (46) a. John, I think, bought for Mary a picture of her father in a weird costume.
 b. *There, I think, entered the room behind her several uniformed officers.
 (Rochemont and Culicover 1990, 119)

On the assumption that parentheticals have to be followed by one single constituent (cf. Emonds 1976, 45ff), Rochemont and Culicover (1990) suggest that these data further support their analysis: in (46-a) the extraposed noun phrase is adjoined to VP, thus the constituent following the parenthetical is VP, a single constituent. In (46-b) the extraposed noun phrase is adjoined to IP and thus there are two constituents following the parenthetical, VP and the extraposed noun phrase.

Rochemont and Culicover (1990) conclude from these data that the adjunction site of the noun phrase has to be higher than VP, namely IP, and the noun phrase moves via Spec,IP. However, there are several theoretical and empirical problems with their proposal, which I will discuss next.

(i) The possibility of the base order. First of all, the HNPS version of the structures that Rochemont and Culicover give is not the only option for *there*-V structures. Even though disputed, the word order *there V NP PP* does occur with at least some of the verbs. Thus HNPS is not an obligatory process, and we need another source for *there*-V structures, anyway.²¹

From the results of my Magnitude Estimation Experiment (see appendix A.3.2), it is clear that the structures of the form *there V NP PP* are just as acceptable as *there V NP* structures (but less acceptable than *there*-BE structures).

- (47) a. +There came an empty lift down the dark well.
 b. +There came an empty lift.

This set of data is rather disputed, though. For instance, Chomsky (2001, 20) claimed on the basis of (48) that the noun phrase can only occur at the right edge of the clause. However, Julien (2002) found that the very same sentences are acceptable (Julien reports that 7 out of nine speakers preferred the order *there V NP PP* or found both of them equally good, whereas 2 native speakers did not accept either of the two structures), cf. (49).

- (48) a. *There came several angry men into the room.
 b. ?There came into the room several angry men.
 (Chomsky 2001, 20)
- (49) a. ?There came several angry men into the room.
 b. ?(?)There came into the room several angry men.
 (Julien 2002, 9)

²¹Note that Rochemont and Culicover (1990) put aside the verbs of existence and appearance as a separate class. I will discuss the possible distinctions in the next section.

I will come back to the variation in the data in the next section. The relevant point here is that *there V NP PP* examples do occur. Thus, we need to have an analysis for these structures, independent of HNPS.

(ii) ***There* in lexically governed positions.** A second problem for Rochemont and Culicover (1990) is that if *there* is inserted in subject position as a last resort, to replace traces in subject positions that are not lexically governed, the question is why *there* can occur in the complement of *expect* type of verbs, as seen in (50), where the matrix verb lexically governs the subject position of the embedded clause.

- (50) I expect there to be hung a portrait of our funder.
(Bresnan 1994, 109)

A similar problem arises if we additionally allow for the same HNPS analysis of a subgroup of locative inversion (*heavy inversion*) as proposed by Culicover and Levine (2001). There, they claim that a PP can also license a trace of a HNP-shifted noun phrase in subject position. But if this is true, it is unclear why *there* can still occur with a preposed PP as seen in (51) and (52).²² If *there* is inserted as a last resort, and a PP could license the trace left behind by HNPS, this is unexpected.

- (51) The Frisque are an aggressive, exploitative, worker species. [...] *At the centre of their hive there sits a queen, radiating her implacable commands through the labyrinthine tunnels.*
(BNC text="CJA" n="2381")
- (52) a. Into the room, there came a man.
b. Through the window, there flew a bat.
c. Into the room, there walked a man.

(iii) **Adjunction site need not be IP.** Third, the evidence that the noun phrase is adjoined to IP is not as conclusive as Rochemont and Culicover (1990) suggest. The reason for the ungrammaticality of VP ellipsis and VP preposing might be due to a different restriction on *there-V* structures: the discourse function of the *there-V* structure is the introduction of an entity in a given/known situation. From this discourse function it follows that it is impossible to delete the noun phrase, or prepose it. Similarly, the focus accompanying pseudoclefting is a different type of focus than with *there-V* structures. Taken together, the evidence brought forward to show that the adjunction site of the noun phrase has to be higher than VP might just be evidence for the special focus properties of the noun phrase in *there-V* structures.

²²The examples in (52) are judged perfectly grammatical by 4 native speakers of British English and one native speaker of American English; one native speaker of British English judged (52-a) grammatical, (52-b) ungrammatical and (52-c) with a question mark.

(iv) Negative Polarity Items. Furthermore there is evidence from negative polarity items (NPIs) that suggests that the adjunction site of the noun phrase is lower than Spec,IP. This in turn implies that the noun phrase cannot be moved via Spec,IP. It is generally assumed that NPIs need to occur in the c-command domain of a negative element at the surface to be properly licensed (cf. Ladusaw 1979, Linebarger 1980 and follow-up work). As we see in (53), a negative polarity item is grammatical in an extraposed noun phrase. The only licenser available is the adverbial *never*, which is adjoined to VP. For the licensing to work, the noun phrase has to be lower than the negative adverbial, which means that it cannot be adjoined to Spec,IP.

- (53) a. There will never hang on this wall a picture of any Marxist.
 b. *A picture of any Marxist will never hang on this wall.
 (Guéron 1980, 672:fn)

(v) The role of heaviness. It is not clear whether it is indeed HNPS that is involved in the structure. It is not so clear whether the noun phrase needs to be heavy to turn up at the right edge. My informants accept a simple indefinite noun phrase quite easily, as seen in (54).²³ Nevertheless, a maximally light noun phrase (monosyllabic bare plural) is much less acceptable. This, however, could be due to the non-referential nature of the bare plural, which could clash with the presentational function of the structure.

- (54) a. There came into the room a man.
 b. There walked into the room a man.
 c. ?There arrived at the station a bus.
- (55) a. *There came into the room pigs.
 b. *There walked into the room kids.
 c. *?There arrived at the station trains.

(iv) Theoretical concerns. Finally, Rochemont and Culicover's proposal of *there* replacing a trace of a noun phrase raises a theoretical problem as well. In the Minimalist Framework, in which traces are no longer independent items but rather copies of features of the moved item, the process cannot be straightforwardly phrased. Substitution would be a new operation besides Agree, Merge and Move. The only possibility to understand this process is in terms of resumption. Resumptive pronouns can be understood as the expression of a subset of the features left behind by the moved item. However, if replacement of the trace of the noun phrase in *there-V* structures were resumption, it remains completely unclear why *there* expresses these properties, and

²³These sentences were tested with 5 native speakers of British English, and 1 native speaker of American English. Even though there was some variation with respect to the acceptability of the indefinite, all of my informants reported a contrast between the indefinite and the bare plural.

not *it*, which usually turns up as resumptive pronoun in the position of a noun phrase.

Summarizing the discussion so far, we have seen that the *there-V* structures allow for an option in which the noun phrase moves to the right of the clause. Rochemont and Culicover (1990) took this phenomenon as the core case of *there-V* structures and proposed that *there* replaces a trace left behind by the noun phrase which moved via Spec,IP to adjoin to IP. This proposal has several problems. First of all, *there-V* structures do occur in the order *there V NP PP*, which means that not every *there-V* structure is derived by HNPS. Second, *there* occurs in lexically governed positions, which is unexpected if *there* is inserted as a last resort to save the structure by eliminating an illicit trace. Third, the evidence put forward in support of the claim that the noun phrase is adjoined to IP is not conclusive. Fourth, evidence from structures with negative polarity items suggests that the noun phrase cannot be adjoined to IP, but has to occur lower in the structure. Fifth, it is not entirely clear that the process involved in *there-V* structures is indeed HNPS: native speakers also allow the order *there V PP NP* when the noun phrase is not obviously heavy (e.g. indefinite noun phrases). Finally, the process of substituting a trace with *there* is an otherwise unattested mechanism. Thus, I conclude that the analysis by Rochemont and Culicover (1990) is not on the right track; I assume that the word order *there V PP NP* is derived from the base order *there V NP PP*. As this issue of word order is also relevant for the different verb classes occurring in *there-V* structures, I discuss these first, and then I come back to the derivation of *there V PP NP* cases briefly at the end of this subsection.

3.2.6. Notes on the verb classes of *there-V* structures

Several studies make a distinction between two or three verb classes that occur with *there-V* structures. My aim here is to clarify the data, as there are several generalizations in the literature that I think are not entirely adequate. Note, however, that part of the problem is that judgements vary considerably.

Milsark (1974) distinguished between two classes of *there-V* structures: *inside verbals* and *outside verbals*. Inside verbals occur with the verbs of existence or appearance, with the core cases given in (56). All other verbs, unaccusative and unergative (and even a few transitive verbs) fall in a separate class (Verbs of Outside Verbals in Milsark's terms).

- (56) *Verbs of inside verbals:*
 arise, emerge, develop, ensue, begin, exist, occur, *start
 (Milsark 1974, 247, quoting Kimball 1973)
- (57) *Verbs of outside verbals* (among many others):
 amble, fly, stand, walk

According to Milsark (1974), this difference in verb class correlates with two other features: word order possibilities and the definiteness restriction. Milsark claims that inside verbals occur with the order *there V NP (PP)* while outside verbals occur only in the order *there V PP NP*, as seen in (58).

- (58) a. *Inside verbals*
 There ensued a bloodletting.
 b. *Outside verbals*
 There walked into the room a babbling linguist.
 (Milsark 1974, 9)

However, we have already seen above that the first correlation between verb class and word order does not hold in general. Verbs like *sit*, *stand*, *come* do occur with the *there V NP PP* order (see also Aissen 1975).

Furthermore, Milsark (1974) observes that inside *there*-V structures exhibit the definiteness effect while outside verbals do not.

- (59) a. *There arose that huge riot.
 b. *There developed John's objections.
 (Milsark 1974, 245)
- (60) a. At the meeting, there were introduced into the record all of Scun-
 worth's ridiculous objections.
 b. Suddenly, there flew through the window that shoe on the table.
 (Milsark 1974, 246)

However, there are a few examples from the British National Corpus (BNC) that go against this claim. Even though definite noun phrases are rare with the first class of verbs, they do occur, as the following examples illustrate.²⁴

- (61) Nor was he neurotically sensitive about babies. . . . He had long ago got the whole business of Ecalpemos under tight control and lived in high hopes of never having to refer to it again in word or thought - and then there had appeared this paragraph. (BNC text="CDB" n="225")
- (62) *There arose within me without warning, and as if from a depth not of years but of centuries, the memory of that earlier morning* at the Old House when my brother had brought his toy garden into the nursery. (BNC text="ARG" n="1424")
- (63) It is from these uncertain interstices that *there emerge Fanon's challenges to Enlightenment* 'Man'. (BNC text="A6D" n="1660")

Rochemont and Culicover (1990) suggest a third difference between the two verb types. Yes-no question formation seems possible with verbs of existence

²⁴Note, however, that these examples seem to be HNPS examples as Henk van Riemsdijk (p.c.) pointed out. Thus there might be a link between the definiteness of the noun phrase and HNPS.

or appearance, while they suggest that this is impossible with the other class of verbs.

- (64) a. Did there arise during the meeting any unresolved issue?
 b. *Did there walk into the room a man with long blond hair?
 (Rochemont and Culicover 1990, 132)

However, I found that judgements vary in this respect as well, as seen in (65) (cf. 23).

- (65) a. ?Did there sit where the roads crossed an old woman resting on a stone?
 b. Does there lie a certain fear behind this exchange?
 c. Did there come into his face an intense adoration?

Aissen (1975) further divides Milsark's outside verbals in two subclasses: *stative* (e.g. *sit*, *stand*, or *lie* and *active* verbs as e.g. *walk*, *run*). The crucial factor for her is whether they allow both the base order *there V NP PP* and the shifted order *there V PP NP* (stative verbs) or only for the shifted order (active verbs). Aissen (1975) provides the following examples, similar judgements are found in Levin (1993).

- (66) a. There hangs a picture of George Washington on this wall.
 b. He says there stands a billboard at the intersection.
 (Aissen 1975, 2)
- (67) ??There ran a grizzly bear out of the bushes.
 (Aissen 1975, 2)
- (68) a. There darted into the room a little boy.
 b. ??There darted a little boy into the room.
 c. ??Into the room, there darted a little boy.
 (Levin 1993, 89)

In order to understand what is going on, let me briefly list what I consider to be the important observations about the differences in the verb classes. First, there seems to be an interaction of verb class and word order. Taken together we can distinguish three different verb classes. Second, there is quite some variation among speakers as to which verbs they allow at all, and which verbs they allow in which word order. Even though there seems to be some general tendency, there is no clear-cut agreement. Three different classes can be roughly distinguished.

- (i) Verbs of existence and appearance are the class that is most readily accepted and most speakers allow for three word orders - *there V NP (PP)*, *there V PP NP*, *PP there V NP*.
- (ii) The second class is mostly Aissen's class of stative verbs like *sit*, *stand*, *lie* plus the class of inherently directed motion verbs, which includes verbs like *come* or *arrive*. In this class, speakers vary with respect to

whether they allow either all word orders, or only the word order *there V PP NP*.

- (iii) With the manner of motion verbs like *run* or *dart* the dominant pattern is that they are strongly preferred to occur in the word order *there V PP NP* (although a few speakers also allow *PP there V NP* order).

The reason for these tendencies, I think, lies in an interaction of the presentational nature of the structure and the interpretation possibilities of the respective verb classes (cf. among others Bolinger 1977, Birner 1992, Bresnan 1994, Rochemont 1986 and Levin and Rappaport Hovav 1995 for a similar approach to the restriction of verbs in locative inversion structures). As we have seen above, both the locative inversion structure and the *there-V* structures are used to introduce a theme argument on the scene. In accordance with this, Levin and Rappaport Hovav (1995) classify the class of verbs that occur with both structures as the verbs of existence and appearance in a broad sense. Obviously, the first class of verbs that we have specified above, the verbs of existence and appearance in a narrow sense are the core members of the group.

The second class of verbs, the locational verbs, can be interpreted as verbs of existence and appearance, if their core meaning is bleached: for instance the important aspect of *sit* in its general use is the *manner* of being present at a certain location, bleaching the meaning results in an emphasis on the *presence* of the theme argument at a location. Similarly, verbs of inherently directed motion can be used in this way, if their meaning is reduced to a *appearance on the scene* part instead of the manner of motion part. Support for this claim comes from the observation that these verbs are only felicitous if they are interpreted from the point of view of the narrator, or a specific reference point (cf. Kimball 1973, 265). Thus, a sentence like *There came a man into the room* is only felicitous if the speaker/narrator/reference point was in the room as well.

This leaves us with motion verbs like *walk* or *run*. These are different from the others, as no inherent part of their meaning gives rise to an appear-or-be-present-on-a-scene reading. For this reading to arise, they crucially rely on the presence of a directional PP. With the PP present, these verbs become directional verbs and again the appropriate meaning of appearance on the scene can be derived. This is clearly supported by the fact that examples like **there ran a man* or **there ran a man around the track* (Kimball 1973, 265) are ungrammatical.²⁵

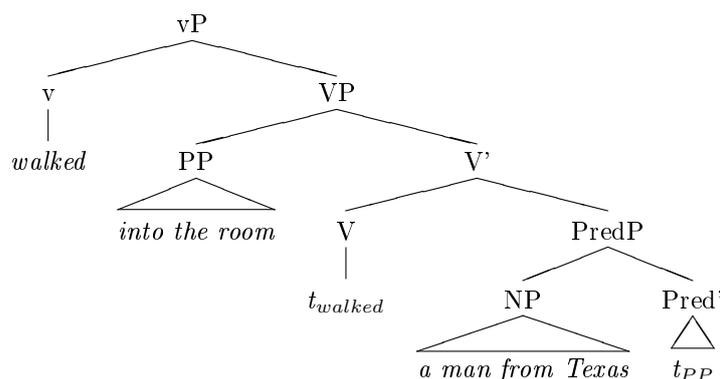
²⁵In the British National Corpus, a few examples with *run* occur, but none of them with a human noun phrase in the meaning of directed manner of motion with an endpoint. Rather, all of them have a more abstract meaning in which *runs* is interpreted rather as 'being present', cf. (i)-(iii). This further supports the idea that the bleaching of the meaning is an important aspect of the interpretation of these verbs.

- (i) Her films are by no means as simple as they may have first appeared. They make deceptively subtle demands on their audience, and *through all of them there runs a strong sense of humour*. (BNC text="A0E" n="174")

Let me briefly (though inconclusively) discuss how syntax might be involved in the interaction of verb class and word order, with respect to the word order *there V PP NP* with the second and third word class. Intuitively speaking, the verb and the PP form a complex predicate that can be interpreted as a verb of existence or appearance.

The question is whether this is a syntactic process with the PP moving to form a complex predicate with the verb, as proposed for complex predicate formation by Hegedűs (forthcoming). Such a syntactic derivation is given in (69). We assume that the noun phrase and the directional PP form a small clause that is selected by the directional verb (as suggested for directional verbs in Hoekstra and Mulder 1990 and references therein, see also Hale and Keyser 2002). the PP moves across the noun phrase to a VP-related position (for complex predicate formation). As a result of this movement, the PP and the verb are in an adjacent position that allows for the two to be interpreted as a complex predicate.

(69) Analysis of *there V PP NP* (to be discarded)



However, the proposal in (69) has several shortcomings. First of all, this analysis implies that *there* is not the predicate of the structure but is inserted in the subject position as a copy of the directional PP, a possibility that we did not need to consider before. Second, it does not account for the fact that the noun phrase is located at the right edge of the clause: it is not possible to adjoin another secondary predicate to the right of it.

-
- (ii) Still, his borrowings and his changes do at least define his area of interest. In *The Silmarillion* Tolkien played through once more the drama of 'paradise lost'; [...] and *through the story there runs a delight in mutability*, as languages change and treasures pass from hand to hand; (BNC text="CDV" n="1522")
- (iii) For many miles along the Leicestershire-Lincolnshire border *there runs a green lane known as Sewstern Lane or The Drift*. (BNC text="FAG" n="1159")

- (70) *There walked into the room a man no one knew nude.
(Julien 2002, 35)

Furthermore, Guéron (1980) provides an interesting set of data that seems to suggest that the PP is base-generated higher than the noun phrase, and that the noun phrase does not move across it. Consider the contrast in (71). (71-a) is ambiguous between a narrow- and wide-scope reading of the strong quantifier with respect to the indefinite inside the PP. In contrast, (71-b) is not ambiguous: it only has the reading that there is a (specific) house in the neighbourhood, to which every child walked.

- (71) a. Every child in the neighborhood walked up to a neighbor's house.
 $\exists > \forall / \forall > \exists$
 b. There walked up to a neighbor's house every child in the neighborhood.
 $\exists > \forall / * \forall > \exists$
 (Guéron 1980, 672)

Now if scope is related to c-command conditions, this means that the PP is base-generated higher than the noun phrase and the noun phrase does not and cannot move across the PP, or vice versa. These findings are again incompatible with the proposal in (69).²⁶ They are only compatible with the structure in (72), which is what I proposed above.

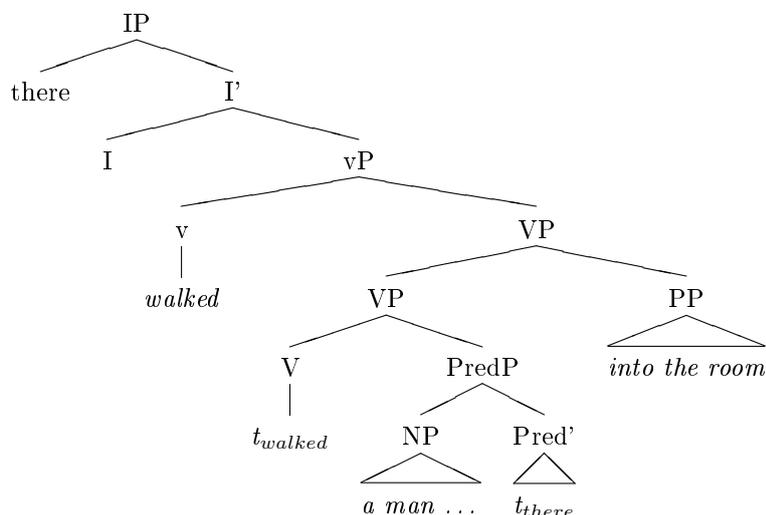
The word order *there* V PP NP could then be derived with the adverbial left-adjoined. The word-order *there* V NP PP would arise either through right-adjunction of the PP or short-object shift of the noun phrase (for discussion on short object shift, see Broekhuis 2008).

Thus, even though the proposal in (69) is promising for accounting for the intuition that we are dealing with complex predicates, it raises several problems and I think it has to be rejected. Instead we need to assume a structure like (72). Thus this approach to derive a complex predicate in the syntax fails. As a licit alternative to idea of syntactic predicate formation, the restriction on the word order with the third verb class may be of pragmatic nature: the word order restrictions may be due to pragmatic accommodation of the meaning of

²⁶This set of data is problematic for most types of approaches, in which the noun phrase moves higher than VP. An approach along the lines of Den Dikken (1995b) and Kayne (1998) might be feasible, provided that the noun phrase is heavy-NP shifted to a position that is lower than the adjunction site of the PP, as seen in (i). This requires a large number of movements to get the word order right. Alternatively, HNPS could be phonological movement with no interpretative effects as suggested by Göbbel (2006) for extraposition.

- (i) a. [VP walk [every child ...] there] → HNPS
 b. [XP [DP every child]_i X [VP walk t there]] → Adjoin PP
 c. [YP [PP up to a neighbor's house] Y [XP [DP every child]_i X [VP walk t there]]]
 → remnant move VP
 d. [ZP [VP walk t there] Z [YP [PP up to a neighbor's house] Y [XP [DP every child]_i X]]]

(72)



the verb, an issue that I leave to future research.

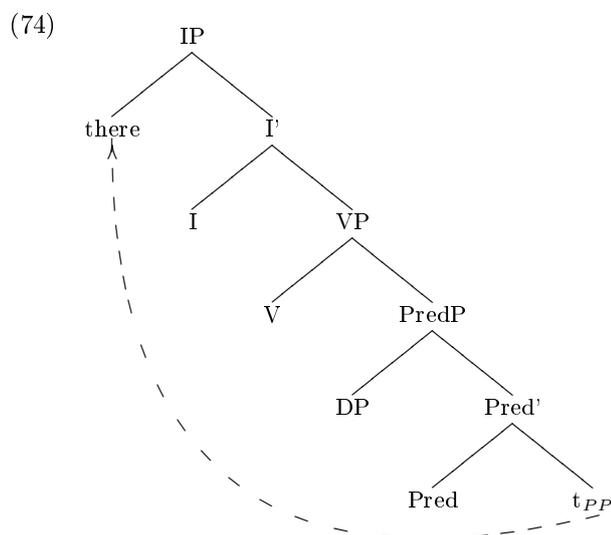
3.2.7. Conclusion

In this section, I have shown that the *there-V* structures behave very similarly to locative inversion structures as summarized in (73).

- (73) Similarities between locative inversion and *there-V* structures:
- (i) *Wh*-movement of the noun phrase is ungrammatical;
 - (ii) *Wh*-movement from the noun phrase is ungrammatical;
 - (iii) No embedding under comparative *than* clauses, in indirect questions and sentential subjects;
 - (iv) Occur with the same restricted verb classes;
 - (v) Presentational focus on the noun phrase;
 - (vi) No sentential negation.

These similarities are best accounted for in a common analysis. Following previous proposals on locative inversion, I proposed the structure in (35) in which locative inversion is derived by moving a predicative PP from its base position via the subject position into Spec,TopP. The same structure can be extended to *there-V* structures as seen in (74). *There* is a proform for a predicative PP, and it moves to Spec,IP. The PP that occurs with *there-V* structures is an adjunct.

The differences between locative inversion and *there-V* structures that arise with respect to embedding under *expect*, yes-no question formation and *wh*-movement of the PP, can all be related to the difference that the PP in locative inversion structures obligatorily topicalizes, while *there* does not.



Furthermore, I have argued that the *there-V* structures cannot be derived by means of HNPS as proposed by Rochemont and Culicover (1990). They suggest that the subject noun phrase right-adjoins to IP. The illicit trace left behind in subject position (it is not properly governed), is replaced by *there* in order to save the structure. I have shown that their analysis cannot be upheld. Instead, I suggested that the cases that look like HNPS are derived from the general structure of *there-V*, with the noun phrase shifted independently. In the final section, we have discussed some issues relating to the verb classes that occur with *there-V* structures and their word-order possibilities.

With respect to the nature of the so-called expletive *there*, we have seen in this section that there is no need to assume that it is inserted into the Spec,IP position as a meaningless element. *There* is a proform replacing a predicative PP. The reason why it seems to be meaningless on its own is that it can co-occur with another PP in the structure. The PP can precede *there* in first position, in which case, *there* acts as a weak pronoun picking up the reference of the PP (just as pronominals do in left dislocation structures). The PP can also be the adjunct of the clause, in which case the PP further modifies the reference of *there*. Thus, I conclude that there are two types of the proform *there* in subject position: a predicative proform with the *there-V* structures and a non-predicative proform with the *there-BE* structures.

3.3. Existential vs. locative *there be NP PP*?

In chapter 2, I dealt with examples of true existential structures. In these cases, the prepositional phrase is an adjunct. Some researchers suggest that this type of analysis is not the only one available for sentences of the type *there be NP PP*. Instead, it is suggested that the structure *there be NP PP* is ambiguous

between an existential structure and a locative structure, suggesting for the latter an analysis along the lines of Stowell (1978), in which *there* is inserted in the subject position. The difference boils down to the question of whether the PP is ambiguous between an adjunct (in the existential reading) and a predicate (in a locative reading). It is often brought up that sentences like *there is a man* sound rather odd, due to a missing predicative PP. However, I think these sentences are not syntactically ungrammatical but rather, pragmatically uninformative (violating the Gricean maxim of quantity, cf. Grice 1989). As soon as the nominal phrase becomes more complex, as for example in *there's a man who has been looking for a job for at least five years*, the structure is fine. Thus, it is not the PP that is missing but relevant information. This in turn means that this sentence type does not require an alternative analysis.²⁷

With the lack of any supporting evidence for assuming that *there be NP PP* are ambiguous, I follow the null hypothesis that there is only one structure, the one proposed in chapter 2.²⁸

3.4. *There-BE* and adjectives

3.4.1. Introduction

English *there-BE* sentences also occur with a subclass of adjectives following the noun phrase, those adjectives that are known as stage-level predicates. Stage-level predicates are predicates that are true of an individual for a limited time span only, e.g. *tired*, or *be in the kitchen*. Individual-level predicates express inherent properties of an individual, they hold for a lifetime, e.g. *intelligent*, *have blue eyes*. This distinction proved to be relevant in natural language, as several structures are sensitive to it (cf. Milsark 1977, Carlson 1977b, Kratzer 1995). This holds for the *there-BE* construction as well: it only occurs with stage-level predicates.

²⁷Moro (1997) presents one piece of evidence to show that the locative phrase can only be an adjunct. Consider the possible interpretations of the distributive quantifier *each* in the following sentences:

- (i) a. Two pictures of the wall are on three magazines each.
 b. *There are two pictures of the wall on three magazines each.
 (Moro 1997, 119)

The first clause allows for a reading in which we deal with 6 pictures of the wall: two different pictures per each of the three magazines. This reading can only arise, if *two* is structurally higher than the combination of *three* and *each*. This reading is excluded in *there-BE* sentences, therefore, the PP has to be structurally higher than the noun phrase, which is only the case in the adjunct analysis. However, my informants find it pretty difficult to get the relevant reading for the a.-sentence to begin with. It therefore was not possible to confirm the data.

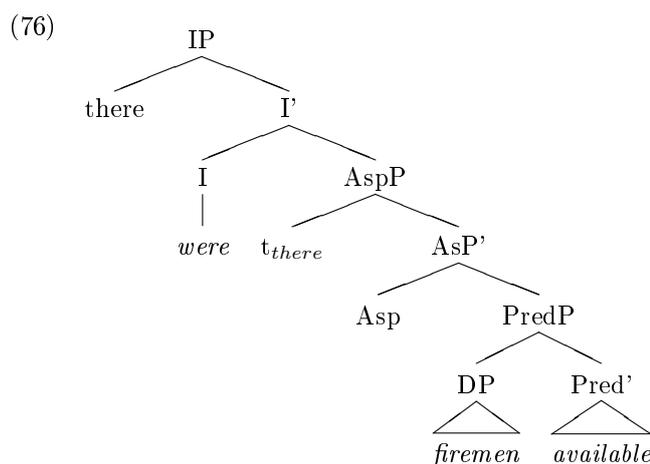
²⁸Francez (2007) presents several arguments why the PP in *there*-sentences has to be an adjunct. As his thesis was brought to my attention only after the submission of the manuscript, I have to refer the reader to the original.

- (75) a. There are firemen available. (stage-level)
 b. *There are firemen intelligent. (individual-level)
 (Milsark 1977)

This section will discuss two questions: (i) What syntactic structure do we assign to these sentences? and (ii) How do we account for the restriction on the type of predicates available? I address the two issues in turn.

3.4.2. Syntactic analysis

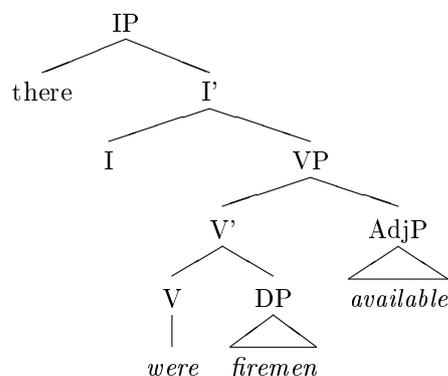
There are two competing analyses that I want to take under closer scrutiny. The first one is Stowell's (1978) small clause analysis revived in various later studies (cf. Felser and Rupp 1997, 2001, Kallulli to appear among others). In this type of analysis the noun phrase and the adjective are base-generated in a small clause structure, and *there* is introduced in the subject position of the clause. A representative structure is given in (76), adapted from Felser and Rupp (2001, 315).



The second analysis, proposed by McNally (1997), takes the adjectives in *there*-BE structure to be depictives (i.e. secondary predicates that are not resultatives) adjoined to VP, cf. (77), adapted from McNally (1997, 167).²⁹

²⁹In Moro (1991, 1997) the adjective would also be an adjunct, and thus, his study would fall under McNally's approach (disregarding the internal structure of the VP).

(77)



As the two structures differ in whether the predicate is an adjunct or a predicative complement to PredP, *wh*-movement is a useful test to decide between them. Ever since Cinque's (1990) observations on A-bar dependencies we know that extraction from untensed adjunct clauses is possible if the extracted item is a complement.³⁰

- (78) a. Which topic did John ask [whether to talk about __]?
 b. *How did John ask [whether to behave __]?
 c. Which topic did you leave [without talking about __]?
 d. *How did you leave [without behaving __]?
- (Szabolcsi 2006, 483)

If we find the same pattern with extraction from these adjectival phrases we can conclude that these phrases are adjuncts. This is indeed what we find.³¹ Consider the examples in (79).

- (79) a. I had the impression that there were hands anxious to tidy up, but never succeeding. (BNC, text="CHG" n="1721")
 b. ?What were there people anxious to do?
 c. *How thoroughly were there people anxious to tidy up?

Extraction of a complement out of the adjectival phrase in the *there-BE* sentences is possible, while extraction of an adjunct is not. This in turn suggests that the adjectival phrase itself is an adjunct, rather than a predicative complement.³²As we will also see below, the analysis is further supported by data from participles. Participles can also be used predicatively, therefore they are also

³⁰Cinque (1990) also makes the distinction between complement DPs and complement PPs. This distinction is not relevant here.

³¹It is rather difficult to find good test examples as many of the adjectives that allow complements do not readily occur in the *there-BE* construction (due to the predicate restriction, see the next section).

³²I do not discuss the question whether they are adjoined to IP or VP.

possible in the position of adjectives in *there*-BE sentences. Again we find that arguments can be extracted from participle phrases, cf. (80), but extracting adjuncts from these participle phrases is much worse, cf. (81).

- (80) a. To whom has there just been a celebrity introduced?
 b. ?How many cookies have there been children baking?
 (McNally 1997, 68)
- (81) a. *How many miles a day are there people running?
 b. *How badly has there been a man shot?
 c. *How much headway could there be people making?
 (McNally 1997, 68)

Thus, I conclude that the adjectives that can occur with *there*-BE sentences are adjuncts and not complements suggesting that the analysis by McNally (1997) in (77) is the correct one.

3.4.3. The predicate restriction

One striking fact about the English *there*-BE construction is that it only allows for stage-level predicates, but not individual-level predicates.

- (82) a. There are firemen available. (stage-level)
 b. *There are firemen intelligent. (individual-level)

There are several accounts of this fact. Milsark (1977) proposes that the predicate restriction is linked to the definiteness restriction (see also Ladusaw 1994 among others) in the following way. Individual-level predicates require strong subjects (definites, generics, strong quantifiers); these cannot occur in *there*-BE sentences, therefore individual-level predicates are not possible with *there*-BE sentences.

Alternatively, Felser and Rupp (1997, 2001) and Kallulli (to appear) follow Kratzer's (1995) analysis, according to which only stage-level predicates co-occur with a spatio-temporal argument. As these proposals take *there* to be the expression of this spatio-temporal argument, individual-level predicates cannot occur with *there*.

A third approach is proposed by McNally (1997). She suggests that the restriction to stage-level predicates is linked to their status as depictives. Depictives cannot be individual-level predicates as the following examples show.

- (83) a. Margaret is drinking her tea cold.
 b. *Margaret is drinking her tea green.
 (McNally 1997, 157)

In the syntactic analysis above, I followed McNally (1997) in taking these predicates to be adjuncts. Here, I follow her in her account for the predicate re-

striction as well, leaving open the precise nature of the restriction.³³

3.5. Seemingly passives

3.5.1. Introduction

There also occurs in structures with a past participle form, as illustrated in (84).

(84) There were several books put on the table.

This type of examples can be analyzed in several ways, all of which have been proposed in the literature.

(i) First, these structures have been analyzed as passive structures with *there* inserted in the Spec,IP position (cf. Lasnik 1995, Boeckx 1999, Rezac 2004 among others).

(ii) Alternatively, it has been proposed that the participle is a reduced relative clause adjoined to the noun phrase (cf. Williams 1984). Obviously, there is no reason to exclude the reduced relative clause analysis: *there*-structures (existential or not) always contain a noun phrase, and this noun phrase can be modified.

(iii) Finally, McNally (1997) argued that these participles are adjectival and they behave the same way as the adjectives with *there*-BE structures: they are depictives (secondary predicates that are not resultatives). As passive participles can be adjectival (cf. for an overview Emonds 2006 and references therein) and adjectives can occur with *there*, this analysis cannot be excluded either.

Thus, the analyses in (ii) and (iii) cannot be excluded. The important question is therefore whether there is an additional structure needed for these passive participles, namely a true passive structure. We will see in the next section that the answer to this question is negative.

3.5.2. Against a passive analysis: Law (1999)

Law (1999) argues against an analysis of structures like (84) as passives for the following reasons. First, we need to assume a complex-NP analysis with the participle heading a reduced relative clause anyway. This can be seen from the fact that adverbials which are incompatible with the matrix tense can modify the participle phrase (cf. Law 1999, 195). Consider (85): the adverbial *two weeks*

³³Note that some data suggest that the restrictions on adjectives is more rigid than just stage-level predicates as the oddness of **There are firemen hungry* shows. I have nothing interesting to say about this.

ago is incompatible with a matrix perfect tense. In a true passive clause this clash leads to an unacceptable structure. However, the adverbial is possible in *there*-BE sentences, because it is construed with the participle heading a reduced relative clause, and thus it does not modify the matrix tense.

- (85) a. *A debate on foreign policy has been initiated by Senator Smith two weeks ago.
 b. There has been a debate initiated by Senator Smith two weeks ago.
 (Law 1999, 195)

The same point can be made with data including multiple adverbials, both locative and temporal: with passives these adverbials have to be construed as one complex entity; in the *there*-BE construction, one adverbial can modify the matrix tense, while the second one can modify the participle heading a reduced relative clause. Consider the passive structure in (86). The two locative PPs, *in the box* and *on the table* can only be construed as one complex PP, with the box being located on the table. This is evident both from the meaning as well as from the syntactic behaviour of the structure; (86-c) shows that *wh*-extraction of the complement of one of the PPs is impossible.

- (86) a. Many books will be put in the box on the table by John.
 b. [_{PP} in [_{DP} the [_{NP} box [_{PP} on the table]]]]
 c. *Which box will many books be put in on the table by John?
 (Law 1999, 196)

With the *there*-BE construction, the two locative adverbials can be construed separately. The PP *in this box* specifies the location of the books, while the adverbial *on the table* specifies where John put the books yesterday.

- (87) There are in this box several books put on the table by John yesterday.
 (Law 1999, 197)

A parallel argument can be made for adverbials whose meaning is not construable as one entity, as e.g. *in the seventies* and *in the June 1997 issue of *Philosophus** in (88). With both adverbials present, the example with a true passive becomes unacceptable. Again, the structure is licit in the *there*-BE construction: the adverbial *in the June 1997 issue of *Philosophus** is construed with the matrix clause, whereas the adverbial *in the seventies* is construed with the participle heading the reduced relative clause.

- (88) a. *Several articles were written by Chomsky in the seventies in the June 1997 issue of *Philosophus*.
 b. There were several articles in the June 1997 issue of *Philosophus* written by Chomsky in the seventies.
 (Law 1999, 197f)

These data show that there has to be an analysis for the passive participles with *there*-BE sentences in which the structure is not passive. Instead, the participle heads a reduced relative clause that has its own tense domain and allows for separate modifiers. This is not even surprising given that participle phrases adjoined to noun phrases are generally available.

A second reason for Law (1999) to reject the passive analysis comes from *wh*-movement: it is possible to extract a complement or adjunct PP from true passive structures (with or without PP stranding). The same type of movement is impossible in the *there*-BE construction.³⁴

- (89) a. Where were the presents put by Santa Claus?
 b. Which table were the presents put on by Santa Claus?
 c. On which table were the presents put by Santa Claus?
- (90) a. *Where has there been a book put by John?
 b. *On which table has there been a book put by John?
 c. *Which table has there been a book put on by John?
 (Law 1999, 189)

There seems to be some noise in the data, however. Rezac (2004) claims that both an adjunct and a complement to the participle phrase can be extracted, as seen in (91) (his judgements). My informants, however, judged the sentence with extraction of an adjunct much less acceptable (??) than extraction from a complement position.

- (91) a. ?How were there some men arrested?
 b. To whom was there a present given t?
 (Rezac 2004, 686)

Additionally, the differences between passive participles in *there*-BE structures and regular passive structures can be seen in (93) vs. (92). An adjunct to the passive participle cannot be extracted from the *there*-BE structures, but it can be extracted in regular passives.³⁵

- (92) a. The president was shot very badly.
 b. How badly was the president shot?
- (93) a. There was a man shot very badly.
 b. *How badly was there a man shot?

Thus, we see a clear difference between passive structures and *there*-BE sentences: in *there*-BE structures an adjunct to the participle cannot be extracted, while this is possible with the true passives. This fact is surprising

³⁴The argument goes back to Law (1999, 2), however, his point is slightly different as he argues against Lasnik's (1995) approach, in which the participle and the noun phrase form a small clause.

³⁵Thanks to Edwin Williams (p.c.) for pointing out the relevance of these examples to the issue of passives with *there*.

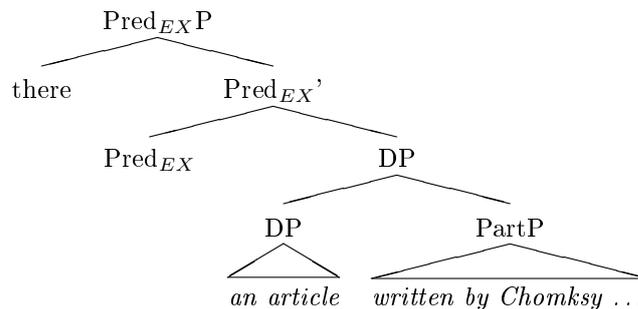
if both are instantiations of passive. Taken together, I conclude that passive structures are not available in the *there*-BE construction.³⁶

3.5.3. Passive participles sorted out

So far we have seen that structures of the type *there be NP Participle* are not regular passive structures. In this section, I turn to the question what these structures are instead.

We have already seen above, that participles can occur as heads of reduced relative clauses with *there*-BE structures and there is no reason to exclude this analysis. Furthermore, we have seen that adjectives can occur with *there*-BE structures as secondary predicates (as long as they are stage-level). Participles can be adjectival, hence they can also be secondary predicates. I propose that when participles occur in *there*-BE structures they are ambiguous between the two structures in (94) and (95) (I label the phrases of the participles PartP for convenience, without excluding the possibility that other functional projections are necessary).

(94) Complex-NP analysis

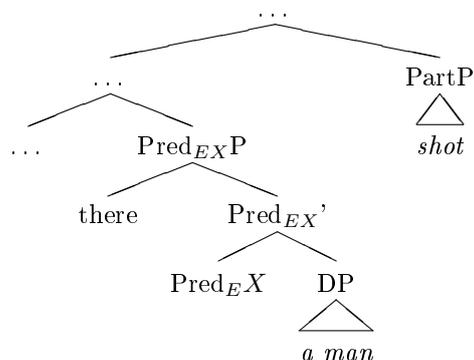


Let us now investigate whether the two structures can account for the facts that we discussed in the previous section.

³⁶In principle, passive structures could occur as *there*-V structures. However, as we saw above, *there*-V structures only allow verbs that can be interpreted as verbs of appearance/existence in a broad sense. Passive verbs are hardly possible to be interpreted in this way, thus they generally do not appear. Furthermore, we would expect them to occur in the word order *there V Part NP*. Note that I found some cases of such a word order in the BNC, however, these cases seem to be HNPS cases throughout.

- (i) Since that cannot be effectively done under the law as it stands, there must be created a new body of law of the sort that has come to be called administrative law. (BNC text="EAJ" n="1650")
- (ii) In the Anglican cathedral of St John the Divine in New York there was placed a female figure on a cross. (BNC, text="EF0" n="1286")

(95) Participle adjoined to a higher category



(i) **Adverbials.** The first set of data showed that a passive participle in a *there-BE* structure can be modified for time and location independent of the matrix clause. This is expected under both the reduced relative clause analysis and the adjunct analysis as the participle heads an independent verbal projection in both structures.

(ii) **Extraction of adjuncts from the participle phrase.** We have seen that *wh*-extraction of adjuncts to the participle is not possible. Again this is expected under both analyses. With the reduced relative clause, we deal with a complex-NP and they are known to be islands to movement (cf. Ross 1967). Under the adjunct analysis, we do not expect extraction of adjuncts out of adjuncts to be possible either, as untensed adjuncts do not allow extraction of adjuncts in general (cf. Cinque 1990).

(iii) **Extraction of complements from the participle phrase.** Turning to the extraction of complements out of the participle phrase, we saw that extraction seems possible in some cases but not others. In (90), it is impossible to extract the complement to the participle *put*, while in (91-b) extraction of the complement seems possible. The contrast is given again in (96).

- (96) a. *On which table has there been a book put by John?
 b. *Which table has there been a book put on by John?
 c. To whom was there a present given t?

The reduced relative clause analysis predicts that no extraction is possible in either case. Since extraction of complements from untensed adjuncts is normally possible, the adjunct analysis predicts at most a minor violation. I think that the diverging judgments occur when the adjunct analysis is not

available.³⁷

I conclude that there are only two possible structures of passive participles with *there*-BE sentences illustrated in (94) and (95). A true passive analysis is not tenable.

3.6. *There*-BE sentences with present participles

The English *there*-BE construction also occurs with present participles (phrases) following the noun phrase.

- (97) a. There was steam coming out of Jack's ears,' said Mrs Molloy, 49, who was ladies' captain. (BNC text="CBF" n="10553")
 b. Then there were travellers coming every week. (BNC text="K6R" n="256")
 c. There's a wooden plinth screwed into the wall, just on the inside of this door by the light switch. There are torches hanging on it. (BNC text="G0E" n="1926")

Apart from the obvious use as present participle in complex tenses, present participle phrases occur elsewhere as reduced relative clauses or adjunct phrases, just as the past participle.³⁸

- (98) a. *Progressive tense*
 Your history teacher was writing in his notebook, when ...
 b. *Reduced relative*
 The woman standing in the corner is my history teacher.
 c. *Secondary predicate*
 John painted her standing in the corner.

So the question is whether all of these structures are also available for the English *there*-BE sentences. I will show that both the reduced relative clause structure and the adjunct structure analysis are available, while the present participle with *there*-BE structures cannot be analysed as a present progressive tense form.³⁹

³⁷I suspect that the adjunct analysis is not possible for those participles that do not have an adjectival form/interpretation (for the distinction of verbal vs. adjectival passive see Emonds 2006 and references therein). I leave this issue to future research.

³⁸I do not include the gerund here which is traditionally distinguished from the present participle, as it readily occurs in positions usually occupied by noun phrases: *Standing in the corner is annoying.*

³⁹We cannot straightforwardly use modification by tense/location as test, as present participle phrases are dependent on the matrix clause tense as shown in (i).

- (i) a. *Standing in the corner without moving yesterday, the girl waves at me today.
 b. *Publishing with MIT Press in future, Chomsky could not make an exception last year.

There are two arguments that suggest that the complex-NP analysis cannot be the only analysis for these phrases. First, Barwise and Cooper (1981) and Safir (1987a) pointed out that not every noun phrase + participle phrase that can occur in the *there-BE* structure can occur in regular noun phrase positions.

- (99) a. There is a girl who knows you standing in the corner.
 b. *A girl who knows you standing in the corner waved to me.
 c. Standing in the corner, there is a girl who knows you.
 (Barwise and Cooper 1981, 116)

Chomsky (1995a) provides a second argument against an analysis of these structures in terms of a reduced relative clause alone. He states the following about (100):

Note that we must distinguish *there be NP* constructions with strong existential import from the expletive constructions with small clauses, such as [(100)], which are much weaker in this respect, differing in other properties as well. For example [(100-a)] may be true even if there is no book, just a space on the shelf where a book should be, in contrast to *there is a book that is missing from the shelf*, which is only true if the book exists. Similarly, *John has a tooth missing* does not entail the existence of a tooth, now or ever. (Chomsky 1995b, 272)

- (100) a. There is [_{SC} a book missing from the shelf.]
 b. There seem t to be [_{SC} some books on the table.]
 (Chomsky 1995b, 272)

Chomsky takes the example to show that we need a small clause analysis for these cases. However, this argument only speaks against considering a complex-NP analysis the only available analysis. I agree with that part of Chomsky's argument. I disagree with him that the alternative analysis has to be a small clause structure.

Let me consider some extraction data, which proved to be the most insightful facts with the passive participle. As Safir (1987a) already pointed out, extraction of a complement of the participle phrase is possible in English *there-BE* structures, though slightly degraded, cf. (101).

- (101) ?To what sorts of colleges are there many students applying?
 (Safir 1987a)

Turning to adjuncts we see that extraction of an adjunct out of the participle phrase is ungrammatical.

- (102) a. *How many miles a day are there people running?
 b. *How much headway could there be people making?
 (McNally 1997, 68)

Thus, we see the same pattern as we have seen with the past participles: it is possible to extract complements from the present participle phrases, but not adjuncts. This means (i) that a complex-NP analysis cannot be the only analysis and (ii) that the participles are not part of a present progressive tense. The facts therefore suggest that the adjunct analysis is correct, as it straightforwardly derives the extraction patterns. In a small clause analysis, on the other hand, we would not expect a difference between extraction of adjuncts and extraction of complements of the participle phrase.

3.7. The list reading

English *there* also occurs with the so-called list reading exemplified in (103).

- (103) A: Did we call everyone?
B: No, there is still John and Mary.

These sentences have received much less attention in syntactic and semantic analyses than the existential structures (see Safir 1985, Belletti 1988 for notable exceptions, for a pragmatic approach see Birner and Ward 1998). In many syntactic and semantic analyses, these structures are mostly considered exceptional, due to their specific meaning and the restricted contexts in which they occur. This type of *there*-BE sentences expresses that there is a list (which is established/given in the context) and the post-copular noun phrase(s) name items on this list. These sentences have three properties that distinguish them from existential structures. First, they usually occur with a proper name or a definite phrase (which can be discourse-old).

- (104) A: What could I give my sister for her birthday?
B: There's John's book on birdwatching.

Second, the sentences need to be contextualized, i.e. they cannot occur out of the blue.

- (105) #There is John. (# in the relevant reading)

Third, list readings cannot be negated or questioned, as Keenan (2003) pointed out attributing the observation to Anna Szabolcsi.⁴⁰

- (106) A: How do I get to UCLA from here?
B: #Well there isn't always the bus.
(Keenan 2003, 188)

- (107) A: How do I get to UCLA from here?
B: #Is there the bus?
(Keenan 2003, 188)

⁴⁰One of my informants marginally accepts negated list readings in a context in which a certain item would be assumed to be part of the list by both the speaker and addressee, and the negation denies that the item is on the list.

I would like to propose that the list reading originates in the same type of predicative structure as the existential structure with the crucial difference that the DP-layer is not empty, but filled. Thus, the existential reading does not arise. Furthermore, *there* is not interpreted as referring to the general context, but it picks up the list present in the context, with this list being a mental location, and the post-copular noun phrase is added to this open list, as suggested by Veronika Hegedűs (p.c.).

This analysis explains the core properties of the list reading structures. First, *there* can only refer to a list if this list is provided by the context, which accounts for the fact that these sentences need to be contextualized. Second, the list reading usually arises with definite DPs and proper names. In these cases, the D-layer is not empty, existential closure does not apply and the existential reading does not arise. Finally, the restriction on questioning and negation seems to be a pragmatic restriction: the structure is used to *establish* the items that belong to this list. Thus, it is impossible to use the same structure to deny that a certain item is on this list. The same holds for questioning the items on the list.

Taken together, I propose that the list reading is derived from the same predication structure as existential sentences, with two crucial differences. On the list reading, *there* picks up an open list from the context (as e.g. the list of who to call in (103)) explaining the need for the contextualization of list structures. Furthermore, the noun phrase in list reading sentences does not contain an empty D-layer, and with the lack of existential closure, no existential reading arises. The restriction on negation and questioning is taken to be a pragmatic restriction: list structures are used to *establish* items on the list, thus it is impossible to question or negate them.

3.8. Conclusion

In this chapter, I have looked at three types of *there*-sentences, the *there-V* structures, the *there-BE* structures followed by participle/adjective and the list reading sentences. I have shown that the *there-V* structures are a sub-case of locative inversion structures as they behave the same in a number of environments summarized in (108).

- (108) Similarities between locative inversion and *there-V* structures:
- (i) *Wh*-movement of the noun phrase is ungrammatical;
 - (ii) *Wh*-movement from the noun phrase is ungrammatical;
 - (iii) No embedding under comparative *than* clauses, in indirect questions and sentential subjects;
 - (iv) Occur with the same restricted verb classes;
 - (v) Presentational focus on the noun phrase;
 - (vi) No sentential negation.

Following previous research on locative inversion structures (mainly Hoekstra and Mulder 1990, Broekhuis 2005, 2008), I proposed that locative inversion structures are derived by moving a predicative PP from a small clause (PredP) configuration via the Spec,IP position to a topic position, Spec,TopP. In *there-V* structures, *there* is a proform that stands for the predicative PP, and *there* moves from this position into the Spec,IP position where it can stay. *There* is perceived to be an expletive (with no meaning of its own), due to the fact that it can co-occur with other PPs. However, this does not necessarily mean that we are dealing with an expletive, it could as well mean that *there* behaves like a weak pronoun in this respect.

Turning to the *there-BE* structures of the type *there be NP Participle/ Adjective*, I investigated whether these structures belong to the category *there-BE* structures or to the *there-V* structures, and what kind of analysis is appropriate. I found that these structures belong to the *there-BE* structures and that the participle/adjective is an adjunct to the structure. The major evidence for this comes from *wh*-movement out of complex participle/adjectival phrases: it is possible to extract a complement, but not an adjunct of these structures, which is a pattern that we know from untensed adjuncts.

Finally, I have argued that the list reading is an instance of the predicative configuration that we saw at work with existential sentences. The difference in meaning arises from the lack of existential closure, and the fact that *there* picks up a list from the context as a mental location on which the post-copular noun phrase is placed.

German *da*: Expletive in Existentials

4.1. Introduction

The aim of this chapter is to evaluate the claim that German *da* ‘there’ is an expletive (in some uses) on a par with English *there* and Dutch *er* (cf. Bayer and Suchsland 1997). I will show that one part of the claim is correct, namely, that *da* is indeed similar to English *there* in some of its uses. However, since I have argued in chapter 2 and 3 that *there* is not an expletive, this does not mean that *da* is an expletive. The parallel use cannot be an argument for the expletive status of *da*.

In order to reach this conclusion, I will first look at the general use of *da* and its syntax in section 4.2, which has not been studied in great detail so far (with the exception of Ehrich 1982, 1992). I will show that *da* is generally used as a proform for adverbial phrases (mostly PPs) picking up its meaning from the context. *Da* can refer to a time, location or complex situation in the context. Syntactically, it behaves like a proform and occurs in the same positions as pronouns in German generally do, which will be shown in section 4.3. Apart from this general use, *da* also turns up in sentences that derive an existential meaning. These are the cases in which *da* and *there* can be considered the same item, see section 4.4. Furthermore, I will look at the specific arguments put forward by Bayer and Suchsland (1997) for the expletive status of *da*. We will see that their arguments only show (i) that *da*’s meaning is bleached, and (ii) that *da* can be used in similar structures as *there* and *er*. However, their arguments do not show that *da* is an expletive according to the working definition repeated here for convenience.

- (1) *Working Definition of Expletive*
 Expletives are elements that do not compositionally contribute to the meaning of the clause. They are semantically empty.

Finally, I will look at a number of contexts in which *da* does not refer to a time/situation/location in the discourse in section 4.5. I will show how these uses are still a subgroup of the general use of *da*. From this I conclude that on the definition of *expletive* in (1), *da* is not an expletive.

4.2. German *da* - the data

4.2.1. Introduction

Since the syntax of *da* ‘there’ has not been studied in much detail so far, I will provide an overview and an analysis of its general use. I will concentrate on a description of the data based on a qualitative search in the IDS Corpora with COSMAS II, Version 3.6.1 (IDS 2006).¹ I searched this corpus for sentences containing the lexical item *da* and looked at 1500 randomly selected examples from 859.576 hits. From this set about 500 examples in which *da* appears as a complementizer were excluded. For the remaining 1000 hits, the overall generalization is that *da* is mostly used as a proform, picking up its reference from the discourse. As such it can act as an adverbial, as an argument or as a predicate in copula structures. Furthermore *da* is also used as a verbal particle in which case it does not pick up any reference from the discourse. I will illustrate these different uses in the following subsections.

4.2.2. Adverbial *da*

German *da* can be used as a pronoun for adverbial meanings. It can pick up locations, temporal expressions as well as full situations from the context.

(i) **Locative *da*.** *Da* can refer to a location present in the discourse, and as such it can be used inside its clause as frame adverbial, external or internal modifier. This three-way distinction was made by Maienborn (2001) and is shown in (2).

¹By qualitative search, I mean that I was only interested to look at a subset of the data to find out what uses turn up in the corpus. I was not aiming at establishing and explaining the frequency of the various uses of *da*.

- (2) a. *External modifier*
Eva signed the contract in Argentina.
b. *internal modifier*
Eva signed the contract on the last page.
c. *frame adverbial*
In Argentina, Eva still is very popular.
(Maienborn 2001, 191)

External modifiers locate an event including all its participants at a certain location. Internal modifiers locate a subpart of the event at a certain location. In (2-b), for example, the contract signature ends up on the last page, but it is not the full event including Eva that is located on the last page. Frame adverbials are different from internal and external modifiers: they do not locate (parts of) the event but rather limit the domain for which the proposition given in the clause is evaluated. This can be shown by their different interpretations with respect to possible inferences. With internal or external modifiers, the event without the modifier is entailed.

- (3) a. Eva signed the contract in Argentina.
→ Eva signed the contract.
b. Eva signed the contract on the last page.
→ Eva signed the contract.
(Maienborn 2001, 194)

However, this entailment cannot be made with a frame adverbial, as can be seen in the following example.

- (4) In Argentina, Eva still is very popular.
 $\neq \rightarrow$ Eva still is very popular
(Maienborn 2001, 194)

Note that this test only works clearly with copula structures. As Maienborn (2001) claims, copula structures express states and not events, therefore they cannot co-occur with modifiers that relate to (a part of) an event. Hence the locative phrase cannot be interpreted as external or internal modifier, but only as frame adverbial. As the PP can only have this single interpretation in copula structures, the test gives clear results.

A second difference between frame adverbials and external/internal modifiers is that the former but not the latter can be interpreted temporally, cf. (5).

- (5) In Italy, Lothar bought his suits in France.
(Maienborn 2001, 197)

In this sentence, the information is not contradictory despite the two different locations. We can interpret the first PP as a temporal limit: during the time that Lothar lived in Italy, he bought his suits in France.

In the data that I was looking at, I found examples of German *da* as external modifier, cf. (6), and frame adverbial, as seen in (7), but no example of *da* as internal modifier. (I indicate the referent in the preceding discourse with square brackets.)

- (6) Context: *Anja Richter ist bereits heute abend [bei der Europa meisterschaft in Sevilla] im Einsatz.*
 ‘A. R. is already active [at the European Championship in Sevilla] tonight.’
 Da bestreitet sie ihren Vorkampf im Turmspringen [...]
 DA contests she her pre-contest in high-diving
 ‘There, she springs in the pre-contest in high-diving.’
 (COSMAS II, O97/AUG.83126 Neue Kronen-Zeitung, 13.08.1997)
- (7) [In Italien], [...], ist Derrick eine Art Volksheld, da ist er der
 [In Italy], [...] is Derrick a sort national-hero, DA is he the
 Inbegriff des korrekt-anständigen Deutschen
 embodiment the_{GEN} correct-decent_{GEN} German_{GEN}
 ‘In Italy, Derrick is a sort of national hero, there he is the embodiment of the correct and decent German.’
 (COSMAS II, M04/403.19621 Mannheimer Morgen, 20.03.2004)

Da can be used as internal modifier nevertheless, as seen in (8).

- (8) Lies den Vertrag bis [zur letzten Seite] durch. Da musst du
 Read the contract until to.the last page through. DA must you
 ihn unterschreiben.
 him sign
 ‘Read the contract until the last page. You have to sign it there.’

(ii) Temporal *da*. *Da* can also pick up temporal meanings from the context, locating the event of the clause at a time that was mentioned in the previous discourse.

- (9) Schon [um 6 Uhr] früh kann man einkaufen, [...] da bauen die
 already [at 6 hour] early can one shop, [...] DA build the
 Händler ihre Stände auf, [...].
 vendors their stands up, [...]
 ‘You can shop here as early as 6 am when the vendors set up their stands.’
 (COSMAS II, M01/105.40021 Mannheimer Morgen, 30.05.2001)

Such temporal interpretations are also available in copula structures.

- (10) [1920]: *da* war Milena Jesenska noch nicht 24 Jahre alt
 1920: DA was M. J. not yet 24 years old
 ‘In 1920, Milena Jesenska was not yet 24 years old.’
 (COSMAS II, H85/KZ1.16343, Die ZEIT, 29.03.85)

(iii) **Situational *da*.** A further interesting use of *da* is that it can pick up a complex situation from the previous discourse.² I call these uses *situational*. In (11), the discourse establishes a number of assertions about the *Bundesrat* (the Federal Council in Switzerland), namely that it readily postpones issues and formulates pleas when things get out of hand. *Da* picks up this information and the rest of the sentence asserts that in this situation, call for action (on the part of the Bundesrat) sounds inconsistent.

- (11) CONTEXT: [*Doch Aufschieben und Appellieren fällt auch dem Bundesrat leichter, wenn's unbequem wird: Auf den Entscheid für oder wider Mutterschaftsversicherung warten wir weiter - seit Jahren schon. Und den Entscheid über den Moorschutz an der Grimsel hat er gestern aufs nächste Jahrtausend verschoben, obwohl der Fall für externe Experten wie die bundeseigenen Juristen klar war.*]

‘Yet, the Bundesrat more easily postpones issues and appeals to the public when things become uncomfortable: We are still waiting for a decision for or against a maternity insurance - for years now. And the decision on the marsh protection at the Grimsel was postponed until the next century only yesterday, even though the case is clear both for external experts as well as for lawyers.’

Aufrufe zum Handeln wirken *da* inkonsequent[...]

Call to.the action seem DA inconsistent

‘In this context, call for action sounds inconsistent.’

(COSMAS II, A97/JUN.09751 St. Galler Tagblatt, 17.06.1997)

Example (12) illustrates the same point: *da* picks up a complex situation from the discourse and the assertion of the clause is presented with respect to this situation.

- (12) CONTEXT: [*Die Stadt muß abwägen zwischen dem Interesse der Bürger und den wirtschaftlichen Zielen des privaten Investors.*]

‘The town has to balance the interests of the citizens and the economic objectives of the private investor.’

Und *da* hatte es beim Hochhausprojekt der Dresdner Bank

And DA had it with.the skyscraper.project the.GEN Dresdner Bank

von Anfang an eine Schiefelage gegeben.

from beginning on a crookedness given

²I use the notion situation here as a term for describing complex relations between individuals, properties and events. For a more systematic approach on situation semantics see Kratzer (2007) and references therein.

‘From the beginning, there were difficulties in this respect with the Dresdner Bank’s skyscraper project’.

(COSMAS II, R97/APR.32753 Frankfurter Rundschau, 29.04.1997)

4.2.3. *Da* as argument

Da can also occur as a (PP) argument to locative verbs.³ The verbs *bleiben* ‘stay’, *sitzen* ‘sit’ or *liegen* ‘lie’ select for a locational PP and *da* can stand for this PP.

- (13) Der 58jährige lebte schon als Baby [auf einem Boot], und *da blieb er bis heute*.

‘Already as a baby, the 58-year-old man lived on a boat, and he has stayed there until today.’

(COSMAS II, O96/MAI.47781 Neue Kronen-Zeitung, 11.05.1996)

- (14) CONTEXT: *Am Sonntag ist Alfred gestorben. ... Die Leiche lag [im Stall]. Und der Bauer, der 61jährige Franz F. hat auch nicht gleich die Gendarmerie oder Rettung angerufen, ...*

‘On Sunday, Alfred died. The body lay in the barn. And the farmer, the 61-year old Franz F. didn’t call police or emergency ...’

... als er Alfred *da* liegen gesehen hat.

as he A. DA lie seen has

‘... as he saw Alfred lie there.’

(COSMAS II, P99/APR.15405 Die Presse, 20.04.1999)

- (15) CONTEXT: *[Im Wartezimmer von Dr. Schwarz], einem der Schnecken-tempo-Aktivisten, sieht man eine verschworene Gemeinschaft sitzen, den ‘Verein zur Verzögerung der Zeit’.*

‘In the waiting room of Dr. Schwarz, a slow-motion activist, you can see sitting a conspiring community, the "Association for slowing down the time".’

Führungskräfte und Arzthelferinnen säßen *da* gemeinsam ...

Executives and receptionists sit-CON there together

‘Executives and receptionists sit there together ...’

(COSMAS II, R97/AUG.61811 Frankfurter Rundschau, 08.08.1997)

Turning to directional verbs that also select for a PP argument, we observe that here, *da* cannot replace the prepositional phrase; instead a more complex form like *dahin* or *daher* has to be used.⁴

³Depending on the analysis, the PP is not an argument but predicative in these contexts, cf. e.g. Mulder and Wehrmann (1989). I remain agnostic about this analysis and simply use the traditional term.

⁴*Dahin* is the proform that is used for direction away from the speaker’s perspective, *daher* is used when the direction is towards the speaker, i.e. *Ich gehe dahin* ‘I go there’ vs. *Ich komme daher/von da*. ‘I come from there’.

- (16) Der Heiko wohnt schon seit drei Jahren [in Hamburg].
 The Heiko lives already since three years in Hamburg. Maria
 Maria geht bald auch *da/dahin.
 goes soon also DA/DA-HIN
 ‘Heiko has lived in Hamburg for three years already. Maria will go
 there soon as well.’

Apart from the pattern in which *da* stands for the entire PP, another pattern, namely *da*-doubling occurs as well. In these cases, *da* moves to the first position or the middle field position while a complex element containing *d(a)* and a preposition (*d(a)rin*, *d(a)rauf*, *d(a)runter*, *d(a)ran*) remains behind.

- (17) CONTEXT: *Aber weil der Weihnachtsmann vielleicht wiederkehrt, durfte er [den Teller] nochmals, nun bescheiden hinstellen.*
 ‘However, as Santa Clause might come back, he [the boy] was allowed to put out the plate, modest this time.’

Da lag dann auch die Mütze **drauf**.

DA lay then too the cap DRAUF

‘Then, the cap lay on it’

(COSMAS II, M03/312.82651 Mannheimer Morgen, 08.12.2003)

- (18) CONTEXT: *[Viele Bücher] hat die 15jährige Janine durchgeblättert, nachdem ihr Geschichtslehrer sie auf das Reiseangebot der Jugendbegegnungsstätte Anne Frank aufmerksam gemacht hatte.*
 ‘The 15-year old Janine leafed through a lot of books, after her history teacher has pointed her to the travel packages of the ‘Jugendbegegnungsstätte Anne Frank.’

Doch **da** stand einfach nichts **drin**, sagt ...

But DA stood simply nothing DRIN, says ...

‘But nothing at all stood in there, says ...’

(COSMAS II, R98/NOV.89485 Frankfurter Rundschau, 09.11.1998)

- (19) CONTEXT: *Noch laufen die Vorbereitungen nicht auf Hochtouren, aber es steht einiges an.*
 ‘The preparations are not running at full speed yet, but there is a lot to do.’

Da steckt eine gigantische Logistik **dahinter**.’

DA sits a gigantic logistic DAHINTER

‘Gigantic logistics are behind it.’

(COSMAS II, M02/208.59270 Mannheimer Morgen, 10.08.2002)

Despite the fact that these cases are interesting in various respects, I will not dwell on them. For analyses of these cases see Oppenrieder (1991), Müller (2000), Fleischer (2001, 2002) and Noonan (2005). On the Dutch facts see Van Riemsdijk (1978).

4.2.4. *Da* in copula structures

Da can also be a proform for a locative predicate in copula structures.

- (20) ‘Ich komme seit 60 Jahren, da waren schon immer Stühl’, sagt
 ‘I come since 60 years, DA was.pl already always chairs’, says
 die Lindenhöferin Lilly Heil ...
 the Lindenhof-person Lilly Heil ...
 ‘I’ve been coming here for 60 years, and there have always been chairs
 there, says the Lindenhof-person Lilly Heil’
 (COSMAS II, M01/108.61778 Mannheimer Morgen, 21.08.2001)
- (21) ‘[Im Wald], da sind nicht nur die Räuber’
 in-the woods, DA are not only the thieves
 ‘In the woods, you find not only the thieves.’
 (COSMAS II, M03/311.74778 Mannheimer Morgen, 10.11.2003)

4.2.5. Verbal particle *da*

Finally *da* can also be used as a verbal particle, either with *sein* ‘be’ or a number of locational verbs. These instances of *da* as verbal particles are clearly distinct from the previous uses of *da* (adverbial, argument, in copula structures): as verbal particle *da* has to occur to the immediate left of the verb(’s base position). Furthermore, the verb and *da* together give rise to a special meaning. For instance *da sein* can either mean ‘be available’ or ‘be present’, as seen in (22)-(24). Thus, *da* as a verbal particle does not pick up a location, time or situation in the context but instead combines with the verb to form a new meaning.

- (22) Insgesamt vier Prozent seien an Verteilungsmasse da, verkündeten sie
 -
 ‘All in all, four percent of money to be distributed is available, they
 announced.’
 (COSMAS II, R98/OKT.83734 Frankf. Rundschau, 20.10.1998)
- (23) *Neben den stimmberechtigten Vertretern ... waren Gäste aus den Rathäusern
 des Einzugsbereichs der Bank da*, und einhundert Mitarbeiter verfolg-
 ten das Geschehen.
 ‘Besides the representatives that are allowed to vote, guests from the
 cityhalls in the bank’s catchment area were present [lit.: were there],
 and one hundred employees observed the event.’
 (COSMAS II, R99/Mär.24654 Frankf. Rundschau, 26.03.1999)
- (24) Was erhofft sich die St. Gallerin vom Miss-Titel? ... Man müsse die
 Schweiz repräsentieren und *ein Jahr lang für die Öffentlichkeit da sein*.
 ‘What does the woman from St. Gallen expect from the title Miss
 [Switzerland]? ... The task is to represent Switzerland and be available

[lit.: be there] for the public for one year.’
(COSMAS II, A99/AUG.53827 St. Galler Tagblatt, 06.08.1999)

Da as a verbal particle can also combine with other (locative) verbs. Again the verb-particle structure derives a special meaning, as seen in the translations of (25)-(27). For example *da stehen* can mean something like ‘being left’ or ‘make an impression/appearance of some kind,’ usually in combination with a PP or adjective.

- (25) *Was Regisseur und Ausstatter Peter Mussbach hier szenisch angerichtet hat, ... steht einzigartig da* und braucht weiterhin keinerlei Vergleich zu scheuen.
‘It is a singularity [lit.: stands singular there] what the director and set designer Peter Mussbach brought about here, and it stands up to any comparison.’
(COSMAS II, R97/JUL.52018 Frankf. Rundschau, 07.07.1997)
- (26) *Der Topspieler stand nach der Auflösung von Schwechat ohne Klub da* und spielt um eine relativ geringe Gage für Salzburg.
‘The top player was left without a club [lit.: stood there without a club] after Schwechat broke up, now he plays for a relatively small salary for Salzburg.’
(COSMAS II, N99/NOV.47814 Salzburger Nachrichten, 11.11.1999)
- (27) Alle waren zuversichtlich, *am Ende standen wir mit leeren Händen da*.
‘Everyone was confident, and in the end we had nothing [lit.: we stood there with empty hands]’
(COSMAS II, O95/AUG.77295 Neue Kronen-Zeitung, 07.08.1995)

4.2.6. *Da* adjoined to PP or NP

Da has two further uses that I want to mention here, although I will not discuss them in detail. First, it can occur as an adjunct to a nominal phrase. In most of these cases, *NP da* is contrasted with *NP dort* ‘NP there’, or *NP hier* ‘NP here’.

- (28) *Ob Christian Mayer und Werner Franz da, ob Renate Götschl (und Anja Haas) dort*, die neue Generation wedelt in der Spur, die von der alten gezogen wird. ...
‘Whether Christian Mayer and Werner Franz DA, or Renate Götschl (and Anja Haas) DORT, the new generation waggels in the tracks that the old generation cut, ...’
(COSMAS II, P93/DEZ.40820 Die Presse, 20.12.1993)

The contrast is not necessarily related to a location as the following example illustrates. *Da* and *dort* refer to meetings and times rather than to a location within or outside the speaker’s space.

- (29) Wir verzetteln uns oft: *Da eine Programmdiskussion, dort eine.*
 ‘We often get bogged down: DA a programme discussion, DORT one.’
 (COSMAS II, P96/APR.15691 Die Presse, 22.04.1996)

Finally, *da* can occur as an adjunct to prepositional phrases like *unten* ‘down’ or *oben* ‘up’.

- (30) *Von dort oben*, so berichtete er, schauten die Probleme *da unten* alle nichtig und klein, bedeutungslos aus.
 ‘From DORT up, so reported he, the problems DA down all appear insignificant and small, meaningless.’
 (COSMAS II, X97/DEZ.38578 Oberösterr. Nachrichten, 04.12.1997)

This use of *da* is a subcase of a general pattern in which a PP and another locational phrase like *unten* or *oben* co-occur. Consider the examples in (31).

- (31) Dein Hemd findest Du im Schrank oben.
 Your shirt find you in-the wardrobe up
 (i) ‘You’ll find your shirt upstairs in the wardrobe’
 (ii) ‘You’ll find your shirt in the upper part of the wardrobe’

These examples are generally ambiguous. The ambiguity arises from two options of adjunction. In (31), the first reading arises by adjoining the PP *im Schrank* to *oben* and the former specifies the place more precisely as the wardrobe. In the second reading, *oben* is adjoined *im Schrank* and it specifies the location inside the wardrobe.⁵ When the proform *da* occurs with *oben* or *unten* the same ambiguity arises, though in (30) this ambiguity does not surface due to our knowledge about the world.⁶

4.3. The syntax of *da*

4.3.1. Introduction

The main aim of this section is to discuss the syntax of *da* in its use as adverbial, argument or predicate in copula structures.⁷ We will see that the syntactic behaviour of *da* is parallel to the behaviour of pronominals in German. After looking at some restrictions on the base positions of adverbial *da*, we will look at some differences between *da* and the other two deictic proforms *hier* ‘here’ and *dort* ‘there’. These sections will provide the background knowledge required for addressing the question whether *da* also has uses as an expletive pronoun.

⁵Note that the alternative order *oben im Schrank* is also possible and gives rise to the same ambiguity.

⁶Thanks to Henk van Riemsdijk for bringing these facts to my attention.

⁷I exclude *da* as verbal particle as its behaviour should rather find an explanation in analyses of verbal particles. Furthermore, I will not discuss the doubling cases as the issues involved are rather intricate and go beyond the scope of this investigation.

4.3.2. The main generalization

Before discussing the syntax of *da* let me comment on its categorial nature. It is clear that it cannot be a noun phrase as it cannot occur in noun phrase positions (cf. Bayer and Bader 2007).

- (32) a. **Da* ist schön.
 there is nice
 b. **Ich* habe *da* angeschaut.
 I have there looked-at
 (Bayer and Bader 2007, 162)

Furthermore, *da* cannot occur as complement to prepositions that select for a noun phrase complement: **mit da*, **seit da* (Henk van Riemsdijk, p.c.). This suggests that *da* is rather of the category PP. Support for this claim comes from the fact that it can be combined with postpositions of the type *hinauf* ‘up’, as the following parallel shows.⁸

- (33) a. [*PP* auf den Berg] *hinauf* ‘[on the mountain] up’
 b. *da* *hinauf* ‘there up’

Thus I conclude that *da* has the categorial status of a PP, though nothing particular in the following discussion hinges on that.

Turning to the syntax of *da*, the generalization is that *da* is a proform that refers back to either a location, time or situation in the context. Additionally, it can refer to a location in relation to the speaker’s location in its deictic use. Syntactically, *da* behaves on a par with pronouns in German: it occurs at the left edge of the middle field after the tensed verb in V2 clauses, after the complementizer in V-final clauses, or after a (definite) subject, just as regular pronouns do (cf. Lenerz 1993 on neutral positions of pronouns). In V2 clauses it may also occur in first position. *Da* cannot occur further to the right in neutral sentences. These syntactic possibilities are illustrated (34)-(36). (Square brackets indicate what *da* is meant to refer back to.)⁹

- Locative Context: Adjunct *da*

- (34) *Einmal die Woche besuchen wir [die Schwimmhalle der Schule für Körperbehinderte].*
 ‘Once a week, we visit the swimming pool of the school for physically handicapped people.’

⁸On the status of these circumpositions see Van Riemsdijk (1990) and Hegedűs (forthcoming) and references therein.

⁹The findings of this section are the result of two questionnaire studies. The examples used in the questionnaire were taken from the corpus query. In the questionnaire study concerning temporal and locative contexts, 17 native speakers of German took part (written questionnaires). For the questionnaire investigating situational contexts, I spoke to 5 native speakers of German in person to collect their judgements.

- a. Da bietet der Sportverein für ein paar Euro seine
DA offers the sports-club for a few Euros its
Schwimmkurse für Körperbehinderte regelmäßig an.
swimming-lesson for physically-handicapped regularly PRT.
'The sports-club offers swimming lessons for handicapped people
there for a few Euros.'
- b. Für ein paar Euro bietet da der Sportverein seine Schwimmkurse
für Körperbehinderte regelmäßig an.
- c. Für ein paar Euro bietet der Sportverein da seine Schwimmkurse
für Körperbehinderte regelmäßig an.
- d. #Für ein paar Euro bietet der Sportverein seine Schwimmkurse für
Körperbehinderte [da] regelmäßig an.
- e. #Für ein paar Euro bietet der Sportverein seine Schwimmkurse für
Körperbehinderte regelmäßig da an.

- Locative Context: Argument *da*

- (35) Der 58jährige lebte schon als Baby [auf einem Boot],
(The 58-year-old lived already as a baby on a boot,)
- a. da blieb er bis heute.
DA stayed he till today
and he has stayed there until today.'
 - b. und nach allem was ich weiss blieb er da bis heute
and after all what I know stayed he there until today
'and as far as I know, he has stayed there until today.'
 - c. #und nach allem was ich weiss blieb er bis heute da.¹⁰

- Locative Context: *da* as predicate in copula structures.

- (36) a. Da waren schon immer Stühle.
DA were already always chairs
b. Stühle waren da schon immer.
c. #Stühle waren schon immer da.¹⁰

- Temporal Context: Adjunct *da*

- (37) *Der wichtigste Tag in der Besatzungszeit war [der 28. Juni 1946].*
'The most important day of the occupation was June 28, 1946.'
- a. Da haben die Alliierten schlussendlich das neue
DA have the allies finally the new
Kontrollabkommen feierlich unterzeichnet.
control-treaty ceremoniously signed
'Then, the allies finally signed the new control-treaty ceremoni-
ously.'

¹⁰Note that this sentence can be a neutral sentence when *da* is interpreted as particle. As already mentioned above, in these cases *da* patterns with the class of verbal particles and should be analysed as such.

- b. Schlussendlich haben da die Alliierten das neue Kontrollabkommen feierlich unterzeichnet.
- c. Schlussendlich haben die Alliierten da das neue Kontrollabkommen feierlich unterzeichnet.
- d. #Schlussendlich haben die Alliierten das neue Kontrollabkommen da feierlich unterzeichnet.
- e. #Schlussendlich haben die Alliierten das neue Kontrollabkommen feierlich da unterzeichnet.

- Situational Context

- (38) CONTEXT: [*Als der Bus noch 300 Meter vom WTC entfernt war, kamen immer mehr Menschen aus dieser Richtung, denen das Entsetzen ins Gesicht geschrieben war. Auch der Qualm wurde immer dichter.*] ‘As the Bus was 300 meters from the WTC, more and more people were coming from that direction who were horrified. The smoke was becoming thicker, too.’
- a. Da bekamen die Businsassen offensichtlich Angst.
DA got the bus-passengers obviously fear
‘At that point, the passengers of the bus became obviously afraid.’
 - b. Die Businsassen bekamen da offensichtlich Angst.
 - c. #Die Businsassen bekamen offensichtlich da Angst.

Thus, adverbial *da*, *da* in argument and *da* as predicate in copular clauses all behave like a pronoun with respect to their placement in the clause.

When *da* occurs with argument pronouns in the pronominal cluster, it has to follow all of them. If it precedes or intervenes between the argument pronouns, the structure becomes ungrammatical (independent of the interpretation that *da* picks up from the context).¹¹ This is illustrated for a locative context in (39), for a temporal context in (40), and for a situational context in (41).

- (39) *Die geistig Fitten treffen sich einmal pro Woche [in der Bibliothek] für das Kreuzworträtsel der ZEIT.*
‘The mentally fit people meet once a week [in the library] to solve the crossword puzzle of the weekly ZEIT.’
- a. Oft können sie es da gemeinsam lösen.
often can they it DA together solve
‘There, they can often solve it together’
 - b. *Oft können sie da es gemeinsam lösen.
 - c. *Oft können da sie es gemeinsam lösen.

¹¹Note that *da* in principle can precede pronouns, if the latter receive heavy stress. See below for some discussion as to under what conditions pronouns can occur lower in the middle field.

- (40) *[Am Freitag] dauert das Gebet des Imams wegen seiner Ansprache länger.*
 ‘Due to his speech, the prayer by the Imam takes a bit longer on Friday.’
- a. In der Moschee hält er sie da frei.
 In the Mosque gives he it DA free
 ‘Then, he holds it without notes in the Mosque.’
- b. *In der Moschee hält er da sie frei.
- c. *In der Moschee hält da er sie frei.
- (41) *Doch die paar ‘Groschen’ reichten dem schwer Süchtigen nicht: ‘Gib mir mehr, oder ich schieße’, soll der Heroinabhängige gedroht haben.*
 ‘But a few pennies were not enough for the heavily addicted guy: ‘Give me more, or I’ll shoot,’ he was reported to threaten.’
- a. Mit aller Kraft sind wir da um unser Leben gerannt, aber
 with all strength are we DA for our life run, but
 eine Waffe haben wir nicht gesehen.
 a weapon have we not seen
 ‘So we ran for our life with all our strength, but we didn’t see a weapon.’
- b. *Mit aller Kraft sind da wir um unser Leben gerannt, aber eine
 Waffe haben wir nicht gesehen.

Taking together, the main generalization about *da* is that it behaves syntactically as a proform and moves to the left edge of the middle field just as argument pronouns do. In the cluster of pronominals, *da* has to follow subject and object pronouns.

4.3.3. Some notes on the base position of adverbial *da*

Now that we found the main generalization, let me look at the question whether the interpretation that *da* can pick up from the context is restricted by its syntax.

As a starting point, I follow Frey and Pittner (1998) and assume that different classes of adverbials originate in different adjunction sites in the middle field in the German clause. They argue for five base positions, each associated with a distinct group of adverbials.

1. process-related adverbials, i.e. manner adverbials, minimally c-command the (complex) predicate; they follow the objects (except for some incorporated objects), e.g. *schüchtern* ‘timidly’, *langsam* ‘slowly’, or *sorgfältig* ‘carefully’;¹²

¹²That the adverbial indeed has to follow the object can be seen with indefinite *wh*-pronouns. These can only occur in their base position. Process-related adverbials follow these pronouns.

2. event-internal adverbials, i.e. locative and instrumental adverbials, are in the c-command domain of the highest argument; examples are *mit dem Schraubenzieher* ‘with the screwdriver’, *mit einer Freundin* ‘with a friend’, *zusammen* ‘together’, *absichtlich* ‘intentionally’, *im Garten* ‘in the garden’;
3. event-related adverbials, i.e. temporal and causal adverbials, c-command all arguments and the base-position of the predicate, e.g. *vor zwei Tagen* ‘two days ago’, *gestern* ‘yesterday’, *wegen etwas* ‘because of sth.’, *gewöhnlich* ‘usually’, *oft* ‘often’;
4. sentence adverbials c-command the event-related adverbials; examples are *vermutlich* ‘presumably’, *wahrscheinlich* ‘probably’, *leider* ‘unfortunately’, *anscheinend* ‘apparently’, *glücklicherweise* ‘luckily’, *klugerweise* ‘wisely’;
5. frame adverbials, adverbials that restrict the domain for which the proposition holds (cf. Maienborn 2001) c-command the sentence adverbials; frame adverbials are usually locative PPs.

In the following, I will try to show that the hypothesis in (42) is indeed true.

- (42) Hypothesis about the syntax of *da*
- (i) adverbial *da* can be base-generated in the different base positions of adverbials and
 - (ii) the base-position decides what kind of meaning *da* can pick up from the context.

Under this hypothesis, we expect locative *da* to have the options of either a process related adverbial (internal modifier in Maienborn 2001), an event-internal modifier (external modifier in Maienborn 2001) or a frame adverbial. In its temporal reading, *da* belongs to the group of sentence-adverbials. In the contextual reading *da* is expected to be base-generated as a frame adverbial. Testing this hypothesis is a complicated matter due to the pronominal nature of *da*: it generally moves to the left periphery of the middle field (cf. Van Riemsdijk 1996, 2003 on the possibility for adverbials to scramble).¹³

In order to test these predictions, we need to ensure that both the arguments and adverbial *da* are in their base position. Frey and Pittner (1998) use indefinite *wh*-pronouns like *was* ‘something’ to ensure that the arguments are in their base position. The test is illustrated in (43), where a manner adverbial

-
- (i) weil Maria heute was sorgfältig durchgearbeitet hat
because Maria today something carefully through.worked has
‘because today, Maria worked on something carefully.’

¹³That the position of *da* is a dislocated position is not obvious, though. However, if (42) turns out to be true, *da* is indeed dislocated.

can occur after an indefinite *wh*-pronoun as object, whereas this is not possible for an evaluative sentence adverbial like *erfreulicherweise* ‘fortunately’.

- (43) a. weil Maria heute was sorgfältig durchgelesen hat.
 b. ??weil Maria was erfreulicherweise durchgelesen hat.

Now we need to find a way to ensure that *da* occurs in its base position. According to Lenerz (1977), elements in focus cannot be scrambled, with focus understood as new information. As pronouns are generally treated as old information - they refer back to items in the discourse - they cannot introduce new information. However, there are two ways for pronouns to receive stress which makes it possible for them to stay in their base position: (i) when they are used to switch reference as seen in (44-a) and (ii) when they are used deictically (cf. Erteschik-Shir 1997, 81), as (44-b) shows.

- (44) CONTEXT: Letzte Woche hat der Hans den Martin geschlagen.
 ‘Last week, Hans hit Martin.’
 a. Und morgen wird wahrscheinlich ER IHN verprügeln.
 And tomorrow will probably he him beat-up.
 ‘And tomorrow, HE will probably beat HIM up.’
 b. Und morgen wird er wahrscheinlich IHN verprügeln.
 and tomorrow will he probably HIM beat-up
 ‘And tomorrow, he will probably beat HIM up. [pointing to someone]’

In (44-a), the stress on the two pronouns switches the reference, whereas the verb is out of focus, which is possible as the event of *schlagen* ‘hit’ and the event of *verprügeln* ‘beat up’ are conceptually the same. Both pronouns are in focus and they can occur after a sentence adverbial, which can be taken to mean that they did not move to the left edge of the middle field. In the second example the accusative pronoun receives stress and it is interpreted as a deictic pronoun, pointing to an individual present in the speaker’s context. Thus, pronouns can occur in a lower position (presumably their base position) if they receive stress.

There might be a link to Lenerz’s generalization that new information cannot be scrambled. Under these specific conditions, the pronouns are ‘new’ in a very broad sense: in (44-a) both pronouns are ‘new’ in their respective argument positions of an old event type. In (44-b), the pronoun is ‘new’, as the referent present in the discourse is new and the pronoun is used as a deictic pointer, however, I am not going into detail here.¹⁴

Now, the question is to what extent we can use this insight to establish the base position of the adverbial pronoun *da* in its readings. The switch

¹⁴This seems to me to be the link between deictic pronouns and obligatory stress assignment to them. When pronouns are used deictically they are used to introduce new information, which usually attracts stress. Thus, the situation when the referent of the pronoun is new to the discourse is exactly the situation when the pronoun is used deictically.

reference version is hardly possible to use since it is hard to have *da* twice in one sentence, as seen in (45-a). The only way to have *da* occur twice is with the lower one being interpreted as a deictic pronoun with a pointing gesture, as seen in (45-b). The first *da* can be interpreted as referring to the topic time ‘once a week’ or the swimming pool, and the second *da* as a deictic pronoun pointing to a separate pool for the youngsters and a separate pool for the older children.

- (45) CONTEXT: *Einmal die Woche besuchen wir die Schwimmhalle hier.*
 ‘Once a week we go to the swimming pool here’
- a. ??*Da* können *da* sich die Kinder ordentlich austoben.
 DA can DA REFL the children properly romp-about
- b. *Da* können sich die kleinen Kinder DA ordentlich
 DA can REFL the small kids DA properly
 austoben und die Großen DA schwimmen.
 romp-about and the big DA swim
 ‘There, the small kids can properly romp about over there [pointing]
 and the big one can swim over there [pointing].’

As *da* can only be deictic with respect to location (and not time), the combination of all these factors leads to two predictions that we can test.

- Temporal interpretations are not possible with *da* following indefinite objects or process-related adverbials.
- Contextual interpretations are not possible with *da* following indefinite subjects, event- or process-related adverbials.

These predictions are indeed borne out. Looking at temporal interpretations of *da* first, it is clear that they are possible in first position, in the pronominal cluster (but only after other pronominals) and following a definite subject. Temporal *da* can also occur after definite objects (with the object not in its base position) and *da* receiving stress (indicated by small capitals) but temporal reference cannot be readily established after a manner adverbial like *mit einer kurzen Rede* ‘with a short speech.’

- (46) CONTEXT: *Mit einer Stunde Verspätung trafen die letzten Gäste [UM 20 UHR] beim Gastgeber ein.* ‘With one hour delay, the last guests arrived at their host at 8p.m.’
- a. DA hatte er ohne zu warten das Büffet mit einer kurzen Rede eröffnet.
 DA has he without to wait the buffet with a short speech opened
 ‘By then, he had already opened the buffet with a short speech.’
- b. Ohne zu warten hatte er DA das Büffet mit einer kurzen Rede eröffnet.

- c. Ohne zu warten hatte er das Büffet DA mit einer kurzen Rede eröffnet.
- d. #Ohne zu warten hatte er das Büffet mit einer kurzen Rede DA eröffnet.

If we strengthen the sentences according to the last available test, the one with indefinite *wh*-pronouns, the temporal interpretation of *da* is hardly available after an indefinite object.

- (47) Context: as in (46)
- a. Ohne zu warten hatte er DA was wichtiges offen gesagt.
without to wait has he DA what important openly said
'Without waiting, he said something important openly.'
 - b. #Ohne zu warten hatte er was wichtiges DA offen gesagt.
 - c. #Ohne zu warten hatte er was wichtiges offen DA gesagt.

Thus, it seems that the prediction with respect to temporal interpretations is indeed on the right track.

The same seems to be true for contextual *da*. *Da* cannot easily pick up a full context when it is lower than an indefinite subject.

- (48) CONTEXT: *Trotz eines empfindlichen Produzentenpreisverfalles für bäuerliche Produkte gab es in den letzten Monaten nur unerhebliche Preisvorteile für die Konsumenten. Den 'Rahm' schöpft der Handel ab.*
'Despite a severe fall in producer's price for farming products, there was hardly any price reduction for consumers. The 'cream' goes to the dealers.'
- a. Da muß sich was ändern.
DA must REFL what change
 - b. Bis zur nächsten Sitzung muß sich DA was ändern.
Until to-the next meeting must REFL DA what change
'Until the next meeting, something must change with respect to this.'
 - c. #Bis zur nächsten Sitzung muß sich was DA ändern.

Summarizing this section, I have tried to establish that the meanings that *da* can pick up from the discourse are linked to where it is base generated. *Da* can only pick up temporal or contextual meanings if it is base-generated in an adverbial position to which such a meaning can be linked.

4.3.4. *Da* vs. *dort* and *hier*

German has a three-fold system of locative deixis dividing it into *hier* 'hier', *da* 'there' and *dort* 'there'. As Ehrich (1982, 1992) has shown, *hier* always refers to the speaker's place, while *da* and *dort* are outside the speaker's place. The

difference between *da* and *dort* is that *da* denotes a place that is closer and more accessible to the speaker than *dort*.

Ehrich (1982, 1992) provides another important insight that is relevant to the study here. She shows that *da* can be interpreted as a *bound variable* in various environments (cf. Reinhart 1983 and the references given in Ehrich 1992, 28). A bound variable reading of *dort* or *hier* is less readily available, if at all. Furthermore, she shows that in these circumstances *dort* and *hier* keep their deictic meaning (closeness or distance to the speaker's place), while *da* loses it and can be interpreted independent of the speaker's place.

First of all, *da* can be used to express *sloppy identity* readings. Consider the following examples:

- (49) Hans pflanzt [in seinem Garten]_i Tulpen und Paul pflanzt
 Hans grows [in his garden] tulips and Paul grows
 *hier_i/da_i/*dort_i Rosen
 here/DA/there roses
 'Hans grows tulips in his garden and Paul grows tulips there.'
 (Ehrich 1992, 29, my translation)

Da can be used to refer to the PP [in his garden] with both a strict (Paul grows roses in Hans' garden) and a sloppy reading (Paul grows roses in Paul's garden) of the pronoun. Neither *hier* nor *dort* can be used to refer back to the PP with a sloppy reading of the pronoun.¹⁵ The same holds for (50).¹⁶

- (50) Die englischen Abgeordneten liefern sich [im Parlament]_i heftige De-
 batten, und die deutschen halten *hier_i/da_i/*dort_i langatmige Reden.
 'The English members of parliament fight intense debates [in the parliam-
 ent] und the German ones give here/DA/dort long-winded speeches.'
 (Ehrich 1992, 29, my translation)

Another difference between *da* and *hier/dort* is that the former can be used as a proform in left dislocation structures, while *dort* and *hier* are excluded.^{17,18}

¹⁵Ehrich gives stars for the sloppy identity reading. I find it hard to get a co-referential reading for *hier* and *dort* in general.

¹⁶Note that it is not clear how a sloppy reading arises in this case, as we do not have an overt pronoun (Hans Broekhuis, p.c.), an issue that I am not addressing here.

¹⁷Note that *dort* and *hier* are possible with Hanging Topic/Free Topic constructions. One criteria to distinguish hanging topic and left dislocation is intonation (for details see Alexiadou (2006)). hanging topic has a rising tone at the end of the dislocated phrase, followed by an intonational break. Left dislocated constituents do not have this intonation contour, which I indicate here with →. I presented the same sentences with two intonations to three native speakers. They all judged *hier* and *dort* unacceptable with the left dislocation intonation.

¹⁸I found a similar example in the corpus, in which the verb is impersonalized, and the pronoun 'es' occurs as the subject of the verb.

- (i) Im Unbewußten, da spricht es-
 In-the subconscious DA talks it
 'the subconscious talks' (COSMAS II, P95/JAN.01040 Die Presse, 12.01.1995;)

- (51) In einer Kleinstadt, *hier/da/*dort hat ein Künstler wenig
 In a small-town, here/DA/there has an artist little
 Möglichkeiten.
 opportunities
 ‘In a small town, an artist has only a few opportunities.’
 (Ehrich 1992, 28)
- (52) a. In Australien, → da/*dort sind alle Schwäne schwarz.
 In Australia, DA/*DORT are all swans black
 ‘In Australia, all swans are black.’
 b. Im Garten, → da/*dort spielen die Kinder Verstecken.
 In the garden, DA/*DORT play the children hide
 ‘In the garden, the children play hide-and-seek.’
- (53) a. In Hamburg, → da/*dort wohnt Maria schon lange.
 In Hamburg, DA/*DORT lives Maria already long
 ‘Mary has lived in Hamburg already for quite some time.’
 b. In Hamburg, → da/*dort ist Hans seit Tagen.
 In Hamburg, DA/*DORT is Hans since days.
 ‘Hans has been in Hamburg for a few days already.’

Note, however, that *da* seems not to be able to pick up directional meanings in left dislocation structure as readily as in other cases, just as it cannot pick them up from the context.¹⁹

- (54) a. Nach Bayern, da fahren wir jedes Jahr mindestens einmal *(hin).
 b. In diesen Korb, da werfe ich meinen Müll *(hinein).
 c. Auf diesen Berg, da laufe ich jeden Tag *(hinauf).

¹⁹In my dialect, Oberschwäbisch (Upper Swabian), left dislocation restricts the use of *da* doubling with directional phrases, though it seems rather productive in other environments (Note that these are my judgements and have not been tested with other native speakers of the dialect).

- (i) a. Noch Stuttgart, do fahre mer jeds johr hechstens oimal *(na).
 To Stuttgart, DA drive we each year at-most once
 b. *Noch Stuttgart, da fahre mer jeds johr hechstens oimal dona.
 to stuttgart DA drive we each year at-most once DA-to
 ‘To Stuttgart, we drive each year at most once.’

Furthermore, *da* doubling in fronted position (in non-directional contexts) is only acceptable under a clear hanging topic intonation (raising pitch at the end of the phrase, clear prosodic break after the first phrase).

- (ii) a. ?Vo so me gschwaetz, do davon halt I nix.
 Of such a gossip, DA DA-of hold I nothing
 ‘I consider such gossip useless’
 b. ?Mit so re sach, da damit will i nix zum tue hon.
 With such a thing, DA DA-with want I nothing to do have
 ‘I do not want to have anything to do with such stuff.’

Whether this restriction is due to the directionality of the PPs, or the fact that directional PPs have a more extended PP structure (cf. Van Riemsdijk 1990, Van Riemsdijk and Huijbregts to appear, Svenonius to appear, 2006, Koopman 2000, Hegedús forthcoming among others), needs to be investigated further. It seems to me that the size of the PP matters, as in other complex (non-directional) locations the particle must be present as well. A more complex PP structure seems preferable, as there is independent support for this claim.²⁰

These data from left dislocation and the bound anaphora reading indicate that *da* can occur as a anaphoric proform. It shows, just as much as the data from temporal and situational *da*, that *da*'s deictic/locative meaning is bleached in all of these cases, and it simply acts as a proform.

4.3.5. Conclusion

In this section, I presented the various uses of *da*. It is a proform that picks up its reference from the discourse. *Da* can refer to either a location, time or a more or less complex situation. It can function as an adverbial, argument or predicate in copula structures - in the latter two cases it refers back to locations only. The syntactic behaviour of *da* is due to its status as a proform: in neutral clauses, *da* occurs in the pronominal cluster (after the complementizer, the tensed verb or a definite subject), just as pronominals do. Inside the pronominal cluster it always follows the argument pronominals. I also showed that *da* is different from *dort* and *hier*, because it is not only part of the locative deictic system in German, but it also acts as a bound anaphor in *sloppy identity* readings and left-dislocation structures. Taken together, *da* is a proform that can have a deictic reading, but in most of its uses, it behaves as a proform referring to a location in the discourse.

²⁰This might also account for the observation that *da* cannot pick up an internal modifier in left dislocation structures (cf. Fritsche 2005, 60).

(i) *In einer Ingwer-Marinade, → da hat der Koch das Hähnchen zubereitet.

4.4. *Da* in existential sentences

After this overview of the most common uses of *da* let me turn to a number of other uses in which *there* might be considered an expletive. German *da* behaves similarly to English *there* in one context: in sentences of the type *da be NP* an existential reading can arise, just as it does with English *there-BE* sentences. Relevant examples are given in (55)-(57).

That we are really dealing with existential sentences can be seen from the following tests: (i) substitution with *es gibt* (the verb that is generally used for expressing *existence*) is possible, cf. the b-examples; (ii) leaving out *da* leads to an ungrammatical sentence, cf. the c-examples; (iii) strong quantifiers (*alle*, *jede*) cannot occur in these structures, cf. the d- and e-examples.

- (55) a. Ändert sich das jetzt? Ich glaube schon, denn *da ist*
Changes REFL that now? I think already, because DA is
eine ganze Generation, nämlich die meine, die arbeiten will.
a whole generation, namely the mine, that work wants.
'Will that change now? I think so, because there is a whole generation, namely mine, that wants to work.'
(COSMAS II, R97/SEP.73106 Frankfurter Rundschau, 18.09.1997)
- b. ...denn es gibt eine ganze Generation, nämlich die meine, die arbeiten will.
- c. *Eine ganze Generation ist, die arbeiten will
- d. *...denn da ist jede Generation, die arbeiten will.
- e. *...denn da sind alle Generationen, die arbeiten wollen.
- (56) a. Und *da sind die Menschen, die sich ein paar Kohlen*
And DA are the people, REL REFL a few coal
wünschen, damit sie zum Fest nicht frieren.
wish, sothat they for-the feast not freeze
'And there are those people who wish for a bit of coal so that they won't freeze on the holidays.'
(COSMAS II, R99/DEZ.103416 Frankfurter Rundschau, 20.12.1999)
- b. Und es gibt die Menschen, die sich ein paar Kohlen wünschen. . .
- c. *Und die Menschen sind, die . . .
- d. *Und da sind alle Menschen, die sich ein paar Kohlen wünschen. . .
- e. *Und da ist jeder Mensch, der sich ein paar Kohlen wünscht. . .
- (57) a. [...] *weit und breit ist da niemand, der Antwort geben*
[...] far and broad is DA noone, REL answer give
könnte.
could
'There is no one in reach that would be able to provide an answer.'
(COSMAS II, P93/APR.11926 Die Presse, 24.04.1993)
- b. weit und breit gibt es niemanden, der Antwort geben könnte.

- c. *Weit und breit ist niemand, der Antwort geben könnte.²¹
 d. *Da sind alle, die Antwort geben könnten.
 e. *Da ist jeder, der Antwort geben könnte.
- (58) a. *Da war ein Verdacht*, aber seien wir froh, dass der
 DA was a suspicion, but *be_{CON}* we happy that that
 ausgeräumt ist.
 put-aside is
 ‘There was some suspicion, but let’s be glad that it didn’t prove
 true.’
 (COSMAS II, K98/JUN.45320 Kleine Zeitung, 13.06.1998)
- b. Es gab einen Verdacht.
 c. *Ein Verdacht war.
 d. *Da war jeder Verdacht.

That *da* does not act as a locative predicate here can be seen from the meaning shift that arises - in those cases where it is possible - when we replace *da* with *dort* ‘there’ or *hier* ‘here’ in the above sentences.

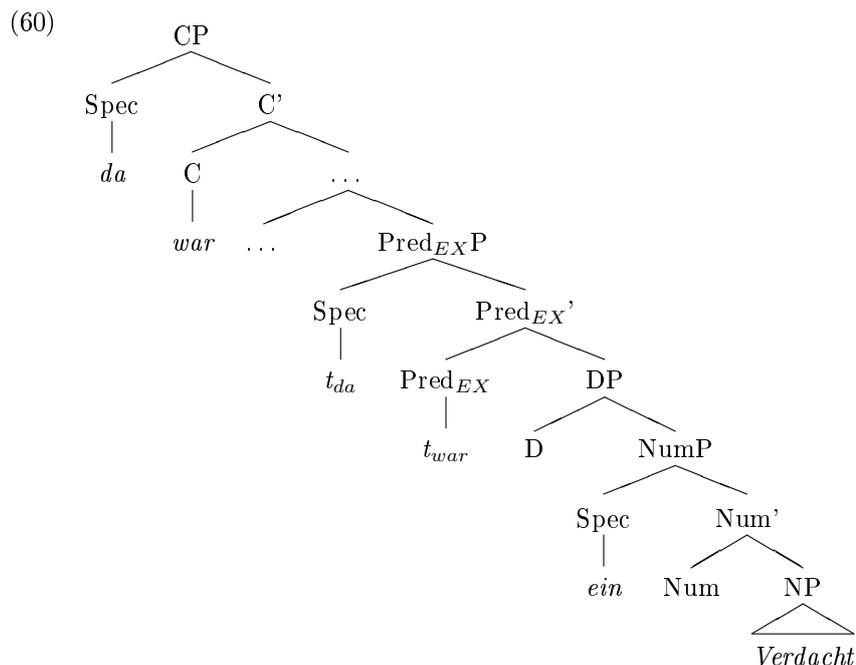
- (59) a. ?Denn dort/hier ist eine ganze Generation, die arbeiten
 Because there/here is a whole generation, that work
 will.
 wants
 ‘Because a whole generation is there/here that wants to work.’
- b. Dort/hier sind die Menschen, die sich ein paar Kohlen
 There/here are the people, that REFL a few coals
 wünschen.
 wish
 ‘Those people that wish for a bit of coal are there/here.’
- c. ??Weit und breit ist dort niemand der Antwort geben
 far and broad is there/here noone that answer give
 könnte.
 can
 ‘Noone who could provide an answer is there.’
- d. ?Dort/hier war ein Verdacht
 there/here was a suspicion
 ‘?A suspicion was there/here’

Furthermore, the sentences with *da* in an existential reading may be used out-of-the-blue, thus, *da* does not need to pick up a context from the discourse (as adverbial *da* does), but it can also just refer to the here and now of the speaker.

These facts show two things. First, the existential reading is not the same as the locative reading, and second, *da* is a proform that has a sufficiently bleached meaning to be the subject in an existential structure with *be*. For

²¹Note that this sentence is grammatical if *weit und breit* is interpreted as a predicative locative phrase, but not under the intended interpretation.

these cases of *da*, I suggest the same analysis as proposed for English *there*-BE structures, illustrated in (60) for a V2 clause. I assume V2 clauses to be CPs with the verb moved to C. I leave out intermediate projections indicated by ‘...’ which are not relevant for the overall structure here.



Note however, that even though *es gibt* can easily replace *da* in these environments, the opposite is not possible in all cases. Czinglar (2000, 3) gives the following example.²²

- (61) a. ??Da ist genau eine gerade Primzahl.
 DA is only one even prime-number
 ‘There is only one even prime number.’
 b. Es gibt genau eine gerade Primzahl.

In sum, we saw that *da* indeed has a use in which it is parallel to English *there*, which shows that they can have the same status. I claimed above that *there* cannot be seen as an expletive in this use, thus, this parallel structure does not mean that *da* is an expletive. It only means that its locative/deictic meaning is bleached and so that it can act as a proform of a different type.

²²It is not entirely clear to me why this is the case. I suspect that there is a stronger intervention effect with *es gibt* when the location of the existence is not relevant. Furthermore, it is unclear why the English existential *there* structure can express this meaning, *There is only one even prime number*, despite the fact that, as Czinglar (2000) suggests, English *there* belongs to the locative existential type.

Let me now turn to other cases in which *da* cannot be straightforwardly linked to a locative meaning, and an expletive analysis might be possible or even necessary.

4.5. Seemingly expletive *da*

4.5.1. Introduction

In some studies, *da* is assumed to be an expletive parallel to *there* in English, but there are very few studies that address the issue directly (with the exception of Bayer and Suchsland 1997). This is what I want to do in this section. The major criteria for analysing an element as expletive is the lack of meaning. Sometimes, researchers take the occurrence in Spec,IP (parallel to English *there*) as another criterion for the expletive status of an item. The latter criterion cannot be straightforwardly established for German. First of all, the Spec,IP position has been argued not to be present in German. The empirical observation that underlies this discussion is that in German subjects can remain inside the vP (cf. Diesing 1992 and references therein) and that there is no clear evidence for an independent Infl head (modals are rather lexical categories, no dummy *do* among others), cf. Haider (1997) and Sternefeld (2006, Vol.2) and references therein for discussion. Alternatively, it has been proposed that the Spec,IP position is not filled by a noun phrase in German, but by the vP (cf. Biberauer 2003, 2004, Mohr 2005, Biberauer and Richards 2006 and references therein). Given the problems in establishing the presence and nature of Spec,Infl in German, the second criterion is not very useful.

Alternatively, the fact that *da* behaves on a par with expletives in other languages, such as English *there* or Dutch *er* was taken as evidence for *da*'s possible status as an expletive (cf. Bayer and Suchsland 1997). However, from my point of view, the fact that *da* is similar to English *there* is not an argument for its status as expletive, as I have argued that *there* is not an expletive either.

This section is structured as follows: I will first review the arguments that Bayer and Suchsland (1997) have put forward to argue for *da*'s expletive status. After this, I will turn to a number of cases in which *da* seems not to have a straightforward meaning, as e.g. in left dislocation structures. Furthermore, I will address a number of cases in which *da* cannot be straightforwardly taken to pick up a referent from the context. I will show that most of these cases are structures that just need to be accommodated pragmatically, but they are not examples of expletive uses.

4.5.2. Bayer and Suchsland (1997)

Bayer and Suchsland (1997) argue that German *da* can be considered an expletive in the same way as English *there* or Dutch *er*. They have two main arguments for this claim. First of all, they point out that *da* can co-occur with

other PPs with a locative or temporal meaning. Thus, they argue, *da* is not necessarily interpreted as a locative (deictic) pronoun.

- (62) ... weil da vor vielen Jahren in diesem Land ein alter König
 ... since DA before many years in this country an old king
 regiert hat.
 governed has
 '... since an old king governed this country many years ago.'

This argument is not very strong (as they admit as well), as it is possible for several PPs, either locative or temporal or both, to co-occur or iterate.

- (63) weil da der Schuster aus der Hörlgassen an Weihnachten zwei
 because da the shoemaker from the Hörlgassen at Christmas two
 Gänse verdrückt hat.
 geese polished-off has
 'because the shoemaker from the Hörlgassen polished off two geese at
 Christmas.'
 (Bayer and Suchsland 1997, 18)
- (64) Ich kaufe meine Schuhe immer in Deutschland. Da kenne ich einen
 I buy my shoes always in Germany. DA know I a
 Schuhladen in Köln in der Breiten Strasse.
 shoe.shop in Cologne in the Breite Strasse
 'I always buy my shoes in Germany. There, I know a shoe shop in
 Cologne in Breite Strasse.'

However, as Bayer and Suchsland (1997) correctly point out, when *da* co-occurs with other locative and temporal PPs, it cannot easily occur after the other PPs (this observation is due to Martin Prinzhorn).²³

- (65) a. ??weil vor vielen Jahren da in diesem Land ein alter König
 since before many years DA in this country an old king
 regiert hat.
 governed has
 'since an old king governed this country many years ago.'
- b. *weil vor vielen Jahren in diesem Land da ein alter König
 since before many years in this country DA an old king
 regiert hat.
 governed has
 'since an old king governed this country many years ago.'

The reason for this effect, however, is not due to non-locative properties of *da*. As we have seen in the previous section, *da* generally moves to the left-edge

²³Note that the sentences in (65) can be grammatical in an analysis in which *da* and the PP are in an adjunction structure. I assume that in this case, the complex PP structure does not follow the rules for pronominal movement.

of the middle field, and it can only occur further to the right under its deictic interpretation. As the example in (66) shows, it is possible for *da* to occur to the right of another locative phrase, when it is used deictically (and receives stress).

- (66) Der Hans hat hier in der Scheune DA geschlafen.
 The Hans has here in the barn DA slept
 ‘Hans slept here in the barn over there [pointing to one specific corner]’

Alternatively, the restriction in (65) could be due to an observation by Kirsner (1979): when several PPs co-occur the bigger location has to precede the smaller location.

- (67) #Im Schwarzwald fiel heute in Deutschland viel Schnee.
 In.the Black.Forest fell today in Germany lots.of snow
 ‘A lot of snow fell today in Germany, in the Black Forest.’

Da usually picks up the bigger location/situation from the context, hence it cannot occur to the right of PPs that further specify this contextually given location. Thus, the fact that *da* does not easily occur to the right of other PPs has an independent explanation.

However, one part of Bayer and Suchsland’s (1997) observation is true: as we saw above, *da* is not restricted to its locative/deictic interpretation in the same way as *hier* and *dort* are (cf. the discussion in 4.3.4). Thus, the meaning of *da* is bleached in comparison to these proforms.

The second argument that Bayer and Suchsland (1997) bring up is that *da* cannot co-occur with generic subjects, just like Dutch *er* and English *there*. Based on the parallelism in behaviour with these expletive structures, they conclude that *da* can also be used as an expletive element.

- (68) a. *weil da Pferde Einhufer sind.
 since DA horses solipeds are
 ‘*since there are horses solipeds.’ ‘
 b. *weil da normalerweise Sonaten dreisätzlich sind.
 since DA normally sonatas in-three-movements are
 ‘*since there are normally sonatas in three movements.’
 (Bayer and Suchsland 1997, 18, my gloss and translation)
- (69) a. *Er zijn paarden eenhoevige dieren.
 ER are horses soliped animals
 ‘*There are horses solipeds.’
 b. *There are horses solipeds.
 (Bayer and Suchsland 1997, 19)

Note, however, that the examples in (68) are not ungrammatical. *Da* can be interpreted as referring back to a location, let’s say Australia, and the sentence then states that it is true for Australia that horses are solipeds. However, this

interpretation is not compatible with our world knowledge.²⁴ In this reading, *da* is a frame adverbial - in the sense of Maienborn (2003) - that restricts the frame for which the proposition is evaluated as true or false.²⁵

We can conclude from this that *da* is similar to *there* in English and *er* in Dutch in the sense that it can co-occur with a locative or a temporal PP. This, however, only shows that *da* is not only a deictic pronoun (as e.g. *hier* 'here' or *dort* 'there' are, see 4.3.4)- it does not mean that *da* is an expletive, devoid of meaning.

4.5.3. Cataphoric *da*

Situational *da* also occurs as a cataphoric proform, referring to a situation that is specified in a clause following the matrix clause. For example, in (70), *da* refers to the situation that is expressed by the *when*-clause.

- (70) Bürgermeister Michael Kessler war von dem Besucheransturm sehr angetan: '*Da lacht mir das Herz*, wenn ich so viel Menschen sehe.'
 'Mayor Michael Kessler was impressed by the masses of visitors: My heart is laughing [lit: DA laughs to-me my heart], when I see so many people.'
 (COSMAS II, M01/110.80125 Mannheimer Morgen, 23.10.2001)

The constituent that *da* can cataphorically refer to is not necessarily a finite clause as above. In the examples (71) and (72), the situation *da* picks up is expressed in an infinitival *um* clause.

- (71) Und weil es gerade so in die Stimmungslage paßt, sind auch die Presseagenturen nicht faul. *Da darf schon ins tiefe Mittelalter zurückgegriffen werden, um Stimulierendes auszugraben*. Freilich, mit den Hexen sind auch meist die Rezepte für Liebestränk und Wunderpulver verbrannt worden.
 'And as it fits the general mood, the press agencies are not lazy either. You may fall back to the dark Middle Ages [lit.: DA may PRT in-the deep Middle-Ages back-grasp], to dig up stimulating material.'
 (COSMAS II, K98/JAN.06304 Kleine Zeitung, 25.01.1998)
- (72) Sie ist auch Beraterin der Gemeinden, wenn es um die Neuerrichtung von Reitwegen geht. *Da muss man die Konstitution eines Pferdes gut kennen, um zu beurteilen, ob ein Weg zu steil oder zu steinig ist*.
 'She is also counselor for the local administration, when it comes to

²⁴In the Dutch clause this interpretation is not available. *Er* in first position cannot be interpreted as a proform referring to a location, but can only be expletive *er*, see Huijbregts (1991), Broekhuis (2002) and references therein.

²⁵It is true for German as well that it is not possible to have an existential interpretation of the noun phrase (in the sense of *there are horses that are solipeds*). This, however, is a general restriction on the interpretation of bare plurals as subjects of individual-level predicates, and it should not be linked to the presence vs. absence of the expletive.

establishing new routes for horseback-riding. You have to know the constitution of a horse quite well, in order to be able to judge whether a path is too steep, or too stony.’
(COSMAS II, K00/JUL.56706 Kleine Zeitung, 30.07.2000)

In all of these cases, the clause can replace *da* in first position without any loss of meaning, see e.g. (73) which is an adapted version of (72).

- (73) Um zu beurteilen, ob ein Weg zu steil oder zu steinig ist,
For to judge whether a path too steep or too stony is,
muss man die Konstitution eines Pferdes gut kennen.
must one the constitution a_{GEN} horse_{GEN} good know
‘In order to judge whether a path is too steep, or too stony, you have to know the constitution of a horse quite well.’

In this respect the relation between *da* and the clause seems to be similar to the relation between *it* and a clause in so-called correlate constructions in English and German (cf. Eisenberg 2001, 176,318ff), cf. (74). The major difference is that *da* stands for a clause in adverbial position, while *it* (or *es* in German) occur in argument position.

- (74) a. It was good that you called.
b. That you called was good.

Furthermore, in German sentences of this type, *es* + clause cannot co-occur in the middle field as (75) shows, but the clause is extraposed to the right. The same holds for *da* + clause, cf. (76). The judgements with *da* are not as clear-cut as they are with *es*, however. The reason for this lies in the adjunct/argument distinction between the two clauses. As an adjunct, the clause with *da* can be interpreted as an apposition (with the relevant pause and intonation). This reading is not readily available for the clause with *es*.

- (75) a. ... dass es gut war, [dass Du angerufen hast].
... that it good was that you called have
‘... that it was good that you called’
b. *dass es [dass du angerufen hast] gut war.
- (76) ?dass man da_i [um zu beurteilen, ob ein Weg zu steil oder
that one DA [for to judge whether a path too steep or
zu steinig ist]_i die Konstitution eines Pferdes gut kennen muss.
too stony is] the constitution a_{GEN} horse_{GEN} good know must
‘In order to judge whether a path is too steep, or too stony, you have to know the constitution of a horse quite well.’

The same restriction seems to hold with *da* when it is co-referential with a PP, though the facts are more complicated. It is impossible to construe *da* with a PP in the middle field, with *da* being co-referential with the PP. There

are, however, two possible readings that interfere. Just as with the clauses above, the PP can be read as an interjection, again with the relevant pause and intonation. Additionally, *da* and the PP can be interpreted as an adjunction structure, in which case *da* is further modified by the PP. Excluding these readings, we get the following judgement:

- (77) ??Sonic Youth hat [da]_i [in St. Petersburg]_i ein hervorragendes
 DA has Sonic Youth in [St. Petersburg] an outstanding
 Konzert gegeben.
 concert given
 ‘Sonic Youth presented an outstanding concert in St. Petersburg.’

If we reorder the sentence such that *da* and the PP are no longer adjacent, those interfering readings are not possible and the sentence is clearly ungrammatical (under a co-reference reading of *da* and the PP).

- (78) *Vor drei Monaten haben [da]_i Sonic Youth [in St. Petersburg]_i
 before three months have DA Sonic Youth [in St. Petersburg]
 ein hervorragendes Konzert gegeben.
 an outstanding concert given
 ‘Three months ago, Sonic Youth gave an outstanding concert in St. Petersburg.’

As soon as the PP is extraposed to the right, *da* can again pick up the meaning of the PP, as example (79) illustrates. Note that there is an intonational break after the verb.

- (79) KONTEXT: *Die Grün-Weißen spielten trotz dieses frühen Rückstandes keineswegs schlecht. Nach einer Viertelstunde wäre der Anschluß möglich gewesen, als Klinger alleine auf Torhüter Martine zustürmte, an diesem jedoch hängenblieb. Und nur vier Minuten später kam Benjamin Moos am Elfmeterpunkt völlig frei zum Schuß, verzog allerdings knapp.*
 ‘Despite being one point back from early on, the team in green and white didn’t play bad at all. After a quarter of an hour, it was possible to catch up, as Klinger bore down alone on the goal keeper Martine, but got caught by him. And only four minutes later, Benjamin Moss had the chance to freely shoot from around the penalty spot, but he missed by just a little.’

Die Gäste waren da schon konsequenter mit ihrer
 the guest were DA PRT more-consequent with their
 Chancenverwertung.
 chances-finalizing

‘The guests were more effective in cashing in on their chances’
 (M98/804.33704 Mannheimer Morgen, 21.04.1998)

The same can be shown by the following pair of sentences. When the PP occurs in the middle field with *da* the two cannot be co-referential and *da* has to refer to something additional in the context. With the PP extraposed, *da* and the PP can be co-referential.²⁶

- (80) a. ??*Da*_i bleibt man [bei diesem Sauwetter]_i schon lieber zu Hause.
 DA stays one [with this pig-weather] PRT preferably at home
 ‘Given this, one rather stays at home with this bloody weather.’
 b. *Da* bleibt man schon lieber zu Hause, bei diesem Sauwetter.

Taken together, we have seen that *da* can refer back to situations described in the context. In some restricted cases, the situation can also be given by a clause extraposed to the right edge of the clause. A similar relation can hold between *da* and a PP. These cases could be considered to be an expletive use: *da* does not contribute to the meaning of the clause in this case. This type of expletive use, however, should be investigated in more detail, as the relation between the proform and the referent is rather striking but it could fall under a general relation between proforms and their antecedents/referents, for which the notion of expletive would only be misleading.

4.5.4. *Da* introducing a topic situation

Da seems not to behave like a typical proform in another set of data, given in (81) to (83). In these cases, *da* does not have a clear antecedent in the previous discourse. Instead, it introduces a topic situation, and the rest of the clause describes this situation. This mostly occurs with *da* in first position (but see below). These cases are similar to the cataphoric use of *da* as *da* precedes its antecedent, but the syntax is very different: in the cataphoric cases, the situation that *da* referred to was given in an adjoined clause. Here, the situation is described in the very same matrix sentence. Therefore, I treat them separately here.²⁷

- (81) So eine Woche habe ich noch nie erlebt. *Da stehe ich als Trainer erstmals in einem Europacup-Finale - und habe keinen gesunden Stürmer mehr.*
 ‘I have never had such a week. I reach the Eurocup finals for the first time as coach, and I don’t have a single healthy forward.’
 (COSMAS II, K97/APR.31812 Kleine Zeitung, 27.04.1997)
- (82) KONTEXT: *Bevor Sie jetzt nach Salzburg kamen, wirkten Sie auch in Paris in einer ‘Don Giovanni’-Inszenierung mit. Ist Umsteigen in*

²⁶Thanks to Henk van Riemsdijk for providing these examples.

²⁷Note that the first two examples are instances of asymmetric coordination (see Höhle 1990, Thiersch 1993, Büring and Hartmann 1998, Sternefeld 2006 and references therein).

solchen Fällen leicht? FRITTOLI: Überhaupt nicht. ‘Before you came to Salzburg, you were also involved in a Don Giovanni production in Paris. Is it easy to switch in such cases? FRITTOLLI: Not at all.’

Da hat man in einer Stadt viele Abende gespielt, hat noch
DA has one in one town many evenings played, has still
alles intus und auf einmal singt man in einer anderen Stadt
everything by-heart and at once sings one in a different town
dieselben Arien, ...

the-same arias, ...

‘You play in one city many evenings and you know everything by heart, and suddenly, you sing the same arias in a different city, ...’

(COSMAS II, K99/AUG.58064 Kleine Zeitung, 05.08.1999)

- (83) KONTEXT: ... *mit dem Computer kennt sie sich bestens aus.*
‘She already knows her way around with the computer.’

Da soll der große Bruder bloß noch einmal behaupten, sie
DA should the big brother PRT again once claim she
mache seinen PC kaputt.

makes_{CON} his PC destroyed

‘May her brother come and tell her that she gonna break his computer.’

(COSMAS II, R99/AUG.62604 Frankfurter Rundschau, 07.08.1999)

That *da* is indeed able to introduce a topic situation can be seen from the following sentences that occur out-of-the-blue. These cases are restricted to *da* in first position, cf. (84) - (87).

- (84) Gratulation - *Da staunen wir aber, und nicht zu knapp.* Einer ‘Medienmitteilung’ des Basler Theaters zufolge darf sich das Schauspiel dieser Bühne - wie gestern gemeldet - ‘Theater des Jahres’ nennen.
‘Congratulations - DA we are amazed, and not too little! The theatre of Basel, according to a ‘media report’ of the theatre in Basel, may call itself - as reported yesterday - ‘Theater of the year’.’
(COSMAS II, R99/SEP.70203 Frankfurter Rundschau, 02.09.1999)
- (85) *Da heißt es anpacken:* Bananenernte im Kibbuz.
‘A helping hand is needed [literally: DA calls it to.set.about]: banana harvest in the Kibbuz.’
(COSMAS II, M98/806.47839 Mannheimer Morgen, 12.06.1998)
- (86) Also: *Da erscheint eine Frau auf der Leinwand mit einem Päckli Kondome* und erzählt den Kindern (oder vielleicht den paar Begleitpersonen?), wie herrlich es ist, mit diesen Kondomen zu bumsen, ...
‘Well, DA a woman appears on the screen with a package of condoms and she tells the kids (or maybe their accompanying adults), how great it is to screw with these condoms.’
(COSMAS II, E96/SEP.22905 Züricher Tagesanzeiger, 26.09.1996)

- (87) Und dazu hält die Klostersgeschichte nun folgende Begebenheit fest: *Da wurde eines Tages auf einem Karren eine Gestalt herangefahren*, die sich bemühte, möglichst elend auszusehen.
 ‘About this, the history of the cloister records the following story: [DA] one day, a figure was brought on a carriage, that tried to look as dreadful as possible.’
 (COSMAS II, A99/JUL.50205 St. Galler Tagblatt, 17.07.1999)

The question now is whether these instances of *da* can be seen as expletive uses of *da* or whether they fall under a different category. My hunch on this is that *da* expresses the topic situation, and as such it falls under the general use of situational *da*. The major difference is that it does not refer to a situation in a context, but introduces a new one. In that sense, *da* is not a proform in the strict sense. Instead, these seem to me to be the core cases of *da* being a situation variable as suggested by Kratzer (2005).²⁸

4.5.5. *Da* as a discourse particle

In my corpus, there was one example in which *da* seems to be used as a discourse particle, expressing a negative attitude towards the proposition expressed in the clause.²⁹ Even though a locative interpretation of *da* is possible with the sentence, it is not supported by the context.

- (88) Wenn dann die Eltern sagen: ‘*Das ist doch alles Mist, was ihr da an Kartoffelchips und Popcorn fressst, esst doch mal dies und jenes*’, dann mögen sie es schon gar nicht.
 ‘If then the parents say ‘That is PRT all crap, what you DA of potato crisps and popcorn devour. Eat something else for a change’, then they won’t like it at all.’
 (COSMAS II, E99/OKT.28568 Züricher Tagesanzeiger, 30.10.1999)

One of the hallmarks of discourse particles is that they do not occur in the first position in German clauses (cf. Ormelius-Sandblom 1997; see also Meibauer

²⁸It might be possible to interpret *da* as a situation variable in all other cases of the situational and temporal use, with *da* introducing a situation that is specified by the context (as opposed to the approach suggested above that *da* refers to this situation). To what extent these two interpretations are different is not clear to me and I leave the issue to future research.

²⁹The same might be true for the following example (Berit Gehrke, p.c.).

- (i) Am Mittwoch gegen 22.30 Uhr setzte er sich beim Linzer Schillerplatz in ein Taxi-Grün und gab als Fahrziel Ebelsberg an. Der 48jährige Hermann Märzinger hatte keine Ahnung, *welch gefährliche ‘Fracht’ er sich da eingehandelt hatte*.
 ‘On Wednesday around 10.30 p.m., he got in a Taxi-Grün at the Linzer Schillerplatz and gave Ebelsberg as his destination. The 48-year-old Hermann Märzinger had no idea what dangerous ‘goods’ he got DA in his car.’
 (COSMAS II, X97/MAI.16682 Oberösterreichische Nachrichten, 23.05.1997)

1994 and references therein). In the sentence above, *da* is embedded in a relative clause, which makes it difficult to test the possibility of positioning it in first position as we have to adjust the sentence first to a V2 clause. The meaning of the clause changes as soon as we move *da* to the first position, cf. (89). *Da* introduces a topic situation (as with the cases discussed above), and it no longer expresses a negative attitude of the speaker.

- (89) Da fressst ihr Unmengen an Popcorn und Kartoffelchips und
 DA devour you un-amounts of popcorn and potato crisps
 wundert Euch, dass ihr dick werdet.
 and wonder REFL that you fat become
 ‘You eat a lot of popcorn and potato crisps and at the same time, you
 wonder why you are becoming fat.’

Another hallmark of the discourse particles is that they are not referring expressions, and their meaning expresses either emphasis, a positive or negative attitude of the speaker to the proposition. This seems to be definitely true for *da* in (88): *da* does not refer to anything, and the attitude of the speaking parents to the contents of the clause is definitely negative. Obviously, the selection of the verb *fressen* ‘devour’ instead of *essen* ‘eat’ also expresses the negative attitude of the speaker, but it only adds to it, otherwise, we would not expect the switch in meaning in (89).

Mohr (2005) discusses an example that I think is similar to those above. She claims for (90) that *da* ‘can restrict the referent of a subject *wh*-phrase to an indefinite entity.’ (Mohr 2005, 155).³⁰

- (90) a. Wer hat gelacht?
 ‘Who has laughed?’
 b. Wer hat da gelacht?
 who has DA laughed
 roughly: ‘Who has dared to laugh?’
 (Mohr 2005, 155)

She suggests that in a context in which a teacher stands in front of the class and utters either (90-a) or (90-b), he asks two different questions:

In [(90-a)], the teacher asks for the name(s) of the student(s) who laughed without any other semantic or pragmatic implications. So the question without *da* requires a definite referent as an answer. In [(90-b)], on the contrary, the teacher does not necessarily ask for names; instead [(90-b)] is more or less a reproach which implies that some student(s) laughed, thus referring to an indefinite number of students out of a definite set of students.

³⁰Note that it is possible for *da* to refer to a particular situation specified in the discourse, however, this reading is not relevant here.

I agree with her claim that there is a difference between the two questions, and that there is a restriction on the set of people this question is about. I also agree that the second question expresses disagreement with someone laughing. However, I think that in the context that she gives *da* expresses this disagreement and the restriction of the context set arises independently. In this sense *da* behaves like a discourse particle. It is impossible to test this claim by moving *da* to the first position as this position is necessarily occupied by the *wh*-pronouns. Indirect support for this interpretation of the clause comes from two facts. First of all, I cannot utter the question in (90-b) with the same meaning for the classroom situation, if I am not present in the classroom. This indicates that *da* indeed expresses an attitude towards a given situation. If *da* restricts the context set of the questions, as proposed by Mohr, I do not see a reason why this should change, if I am not in the class room. Second, I find it hard to put (90-b) in past tense without a context which *da* refers to.³¹

I conclude that *da* can be very restrictedly used as a discourse particle expressing a negative attitude with respect to the proposition expressed in the clause. *Da* contributes some type of meaning to the clause and certainly cannot be called an expletive in these cases.

4.5.6. Summary

In this section, I looked at a number of cases in which *da* might act as an expletive and I arrived at the following results.

(i) The arguments that Bayer and Suchsland (1997) brought forward for the expletive status of *da* only show that *da* can occur without its locative/deictic meaning. It can act as a proform picking up its reference from the context, just as in the general case described in 4.2.

(ii) Cataphoric *da* is similar to correlate clauses, i.e. clauses in which *it* or *es* are in the argument position of an extraposed clause. Cataphoric *da* can be replaced by the respective clause, but cannot co-occur with it in the middle field; the same holds for correlate clauses with *es* 'it'. *Da* is different

³¹The following cases seem to fall into the same category.

- (i) Ein Vorschlag: Die Weisheit des Predigers Salomo beachten, die da lautet: ...
'A proposal: to follow the wise saying by the preacher Solomon, that DA goes like this: ...'
(COSMAS II, P92/DEZ.37997 Die Presse, 17.12.1992)
- (ii) Wer da meint, das neue Geld sei mit Jubel und Vorschusslorbeeren begrüßt worden, der irrt.
'Who DA thinks that the new currency was greeted with jubilation and advance laurels, is wrong.'
(COSMAS II, M01/112.95624 Mannheimer Morgen, 31.12.2001)

from correlate *es* in that it stands for adjunct clauses or prepositional phrases, whereas *es* is a place-holder for clauses in argument position. This use of *da* can be considered expletive, under the definition of expletive given above. Note, however, that these are exactly those cases in which it is not clear to what extent this is just a function of proforms in general. I leave this question to future research.

(iii) In out-of-the-blue contexts, *da* introduces a topic situation and does not pick up a referent from the previous discourse. The topic situation is specified/elaborated on in the rest of the clause. *Da* introducing a topic situation is different from cataphoric *da* in that in the latter case, an independent clause is related to *da* whereas in the former case *da* and what is said about it are part of the same clause. In this case, *da* is the expression of a situation variable, as proposed by Kratzer (2004).

(iv) In very few cases, *da* can be used as a discourse particle to express a negative attitude towards the proposition expressed in the clause. In these cases, *da* cannot occur in first position, just as discourse particles cannot in general.

Taken together, we have seen that there is only one potential use of *da* as an expletive, namely cataphoric *da*. However, this type of use might be a general use of pronouns and proforms, and does not necessarily say anything about the expletive nature of the proform.

4.6. Conclusion

This chapter was devoted to the investigation of the possible expletive nature of German *da*. I have shown that it is not an expletive in most of its uses. *Da* is a proform in adverbial, predicative or PP argument positions. It picks up its referent from the discourse, which can be a location, time, or even a complex situation. The syntactic behaviour of *da* derives from its nature as a proform. Just as argument pronouns, *da* occurs in the pronominal cluster (after the tensed verb, the complementizer or a definite subject). It only appears further to the right in the middle field if it receives stress, just like argument pronouns. The major difference between *da* on the one hand, and *dort* and *hier* on the other, is that *da* can act as a proform independent of its original deictic meaning. This becomes clear especially in sloppy identity contexts and left dislocation constructions.

There are two uses of *da* which might be considered expletive. The first one is that *da* gives rise to an existential reading in the structure *da be NP*, on a par with *there-BE* structures in English. However, as *there* is not an expletive in these cases, this use of *da* is not an argument for the expletive status of it. The second potential expletive use is in cataphoric structures, in which *da* acts

as a place-holder for an extraposed clause. Under the definition of expletive given above and repeated for convenience in (91), *da* is an expletive in this use.

(91) *Working Definition of Expletive*

Expletives are elements that do not compositionally contribute to the meaning of the clause. They are semantically empty.

However, it is not entirely clear to what extent this is just another function of pronouns in general, so this might not justify a special status as expletive. Apart from this single use of *da*, I conclude that *da* is not an expletive, but merely a proform that is bleached of its original deictic meaning and picks up its reference from the discourse or the context.

Implications and Extensions

5.1. Introduction

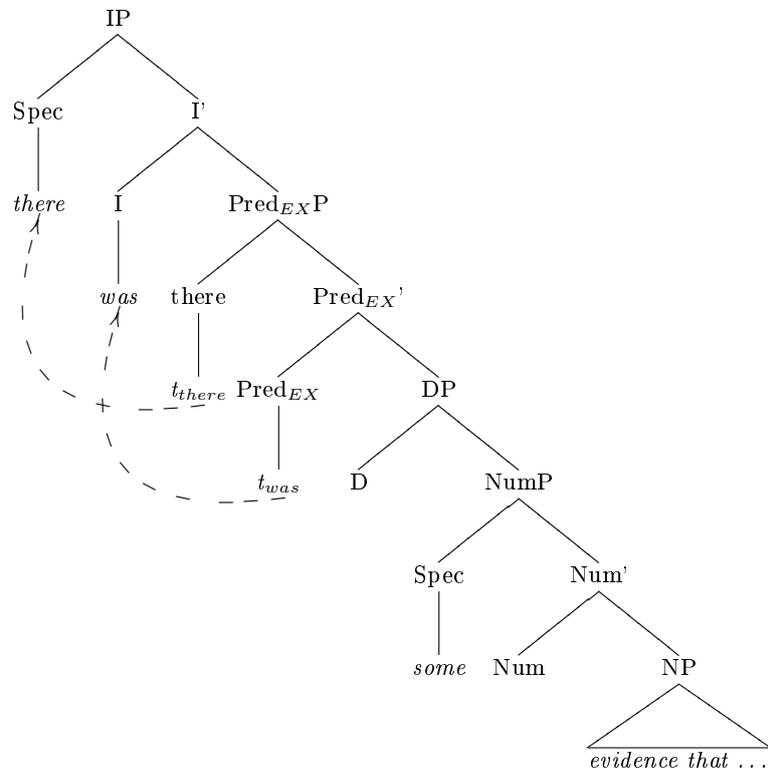
The previous chapters have shown that the study of existential sentences help us to understand the nature of expletive elements. The aim of this chapter is to address several issues for which the presented data and analysis are relevant.

We have seen that English *there* occurs in first position either as a proform for a situation (in the *there*-BE cases) or as a (weak) proform in its predicative function (in the *there*-V cases). In either case, *there* is part of the core predication structure in the clause. I have argued for an analysis of *there*-BE sentences as an information-structural predication, derived from a predicative configuration (Pred_{EXP}). The expletive is the subject of this predication. It acts as pro-form for a spatio-temporal situation/stage topic. The full structure is repeated below in (1) for convenience.

For German *da* we have seen that it mostly originates in adverbial positions and acts as a proform for situations, time and location, picking the respective meaning from the discourse. It is similar to English *there* in only one configuration: when *da* occurs in a structure with the copula and a noun phrase, an existential reading arises, just as in English *there*-BE sentences.

This analysis of existential sentences implies that they are different from locative structures (i.e. structures with a predicational PP) not only on the surface but crucially in their core predication structure. This contrasts with Freeze's (1992) claim that cross-linguistically, the difference between locative sentences and existential sentences merely involves a difference in surface word orders; both orders are derived from the same base-structure. Freeze considers English existential sentences to be the odd ones out, with a more complicated structure. However, English is not an exceptional case: we have seen already that the same analysis that I proposed for English can be applied to some cases of German *da*. In section 5.2, I will show that it holds for Serbian existential

(1)



sentences as well. Serbian is an interesting case, because it does not have a proform like English *there*. Existential sentences nevertheless differ from locative structures in more respects than just word order.

Section 5.3 discusses the relevance of expletive elements for the so-called Extended Projection Principle, which requires that all sentences have a subject. Expletive elements, and *there* especially, feature prominently in the discussion for two reasons. When an expletive is present in Spec,IP the external argument of the verb cannot occur in this position. Second, expletives turn up in exactly this Spec,IP position. Therefore I will discuss what the analysis of English *there* and German *da* can contribute to the understanding of the EPP in section 5.3.

Finally, I will discuss in section 5.4 the classification of expletives in the Germanic languages, which vary with respect to the number of so-called expletive elements and the possible structures that they occur in. I will review these facts relying on previous work and derive a classification of expletive elements. We will see that the so-called expletive in existential structures is different from the other expletive elements in the respective languages.

5.2. Existential vs. locative sentences

5.2.1. The issue

Freeze (1992) distinguishes two types of existential structures: existential sentences that contain a proform (e.g. Catalan, Palestinian Arabic, Palauan among others) and existential sentences that have a locative (PP) subject, the so-called *locative subject existentials* (e.g. Chamorro, Tagalog, Finnish, among others). In the first group, a proform is adjoined to the T-head, while in the second group the locative PP moves to the subject position. In both types of languages, the core predication is a PP structure containing a noun phrase subject as seen in (2).

- (2) $[_{PP} NP_{subject} [_{P'} P NP]]$

For the languages with locative subject existentials, Freeze claims that the main difference between existential and locative sentences lies in word order: while locative structures usually follow the regular word order of the language, existential sentences turn up in an irregular word order. As illustration consider the data he provides for Chamorro, given in (3). Chamorro is a VOS language, and the locative structure follows this pattern with the word order *copula PP NP*, cf. (3-a), with the noun phrase being the subject and the PP being the object (VOS-order). The existential structure comes with a different, irregular, word order: *copula NP PP* as seen in (3-b).¹

- (3) a. Gaige gi gima' si Juan
 be P house UNM John
 'John is in the house'
 b. guäha lahi gi gima'
 be man P house
 'There's a man in the house.' CHAMORRO
 (Freeze 1992, 556)

The same pattern (regular word order for locative, irregular word order for existential sentences) holds for a number of other languages (e.g. Russian, Finnish, Tagalog and Hindi). Freeze claims that in these languages, existential and locative structures are built from the same core predication structure and either the (definite) subject moves into the subject position, which leads to a locative structure, or the PP moves, leading to an existential sentence.² Freeze's generalization seems correct based on the data that he provides. However, once we look at languages in more detail, we find that existential sentences do differ from locative sentences in more respects than just word order. The aim of this section is therefore two-fold. On the one hand, I will show that

¹Note that there is a difference in the copula with the two structures, which Freeze does not gloss and seems to ignore in general. UNM stands for unmarked case.

²Strictly speaking it is P' that moves to the first position as the noun phrase is base-generated in the specifier of the PP in Freeze's analysis.

in Serbian - a language that uses locative subject existentials - there are more differences between locative and existential structures than just word order. Thus, existential and locative sentences are ultimately not as closely related as Freeze suggests. Second, by applying the analysis developed for English and German to Serbian, I will show that the proposal presented in chapter 2 goes beyond the limited domain of Germanic languages.

5.2.2. Serbian existential and locative sentences

In Serbian, existentials differ from locatives in several respects.³ In line with Freeze's observation, they differ with respect to word order in neutral sentences. In existential structures, the position in front of the verb is empty, in locative structures, the subject appears in the first position.⁴

- (4) Ima nekih studenata (ovde) koji hoće samo diplomu.
 Has some students_{GEN} here who want just certificate
 'There are some students (here) who just want the certificate.'
 (Existential) SERBIAN
- (5) Neki studenti su *(ovde) koji hoće samo diplomu .
 some students_{NOM} are here who want just certificate
 'Some students are here who just want the certificate.'
 (Locative) SERBIAN

Apart from this difference in word order, however, there are five other striking differences between existential and locative sentences in Serbian. First, just like in English, the PP (or any PP proform) is optional in existential sentences, cf. (4) whereas in locative sentences it has to be overtly present, cf. (5).

Second, in present tense, existentials use the verb *ima* 'have', while locatives are formed with the copula *je* 'be', cf. (4) vs. (5). In past tense both paradigms use AUX + *l*-participle of 'be', cf. (6) for the existential and (7) for the locative structure.

- (6) Bilo je nekih knjiga (u sobi).
 Be_{PART.N.SG} aux_{3SG} some_{GEN} books_{GEN.F.PL} in room
 'There were some books in the room.'
 (Existential) SERBIAN
- (7) Knjige su bile *(na stolu).
 Books_{NOM.F.PL} aux_{3PL} be_{PART.F.3PL} (on table)
 '(The) books were on the table.'
 (Locative) SERBIAN

³This and the following subsection are the result of earlier work with N. Milićević presented at FASL 16, Stony Brook that will appear in *Proceedings of FASL 16*.

⁴I use the following glosses: GEN-genitive case, NOM-nominative case, SG-singular, PL-plural, PART-participle, F-feminine, M-masculine, N-neuter.

Third, in past tense, the participle moves to the first position in the existential structure, while it is preferably the subject that moves in the locative structure.⁵

Fourth, in existential sentences, the verb and the noun phrase cannot agree in ϕ -features, cf. (8): it has to turn up in 3SG.N (see examples above). In locative sentences the verb and subject have to agree, cf. (9).

- (8) a. *Imaju dobrih razloga da se to uradi.
 have_{PL} good_{GEN} reasons_{PL.GEN} that SE it does
 ‘There are good reasons to do it.’
 b. *Bile su nekih knjiga (u sobi).
 Be_{PART.F.PL} aux_{3PL} some_{GEN} books_{GEN.F.PL} in room
 ‘There were some books in the room.’
 (Existential) SERBIAN
- (9) a. *Dobri razlozi da se to uradi je u ovoj tabeli.
 good_{PL.NOM} reasons_{NOM} that SE it does is in this chart
 ‘The good reasons to do it are in this chart.’
 b. *Knjige je bilo *(na stolu).
 Books_{NOM.F.PL} aux_{3SG} be_{PART.N.SG} on table
 ‘(The) books were on the table.’
 (Locative) SERBIAN

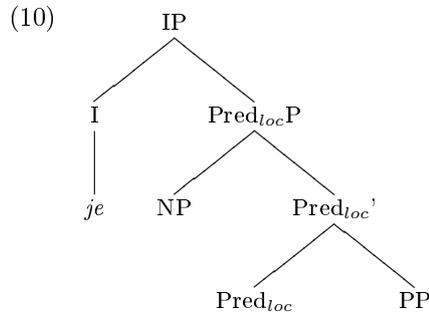
Finally, in locative structures the agreeing noun phrase is case-marked nominative, while in existential sentences, the noun phrase is usually marked genitive as seen in all the examples above.⁶

5.2.3. The analysis

The data above shows that existential and locative structures differ substantially in Serbian. The differences can be accounted for, if we assume two different types of structures for these sentences. For the locative structure, we assume a standard PredP analysis following Bowers (1993) and follow-up work, as illustrated in (10).

⁵See Migdalski (2006) for an overview and analysis of l-participle movement in Slavic. I do not discuss this difference in detail below, but just note it as another difference between existential and locative structures.

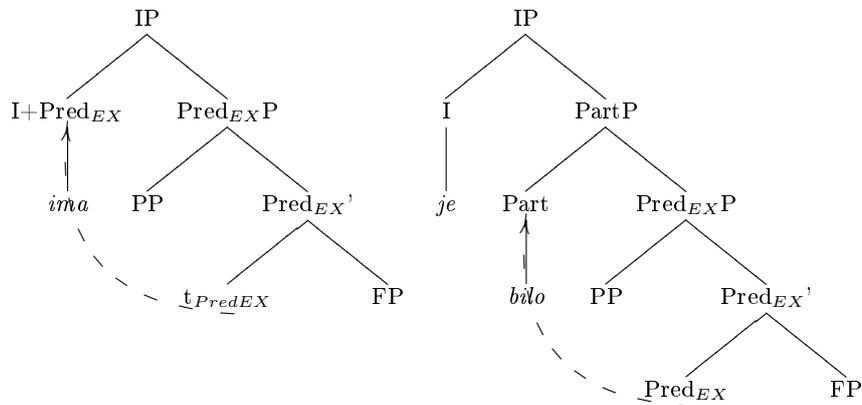
⁶There are a few exceptions to this rule, however. The noun phrase can be nominative when the phrase is 3rd singular and is preceded either by *jedna* ‘one’ or *neka* ‘some’. This, however, is not surprising as neither *jedna* nor *neka* give rise to the genitive of quantification, see below.



The subject moves from the base position to the pre-verbal position, just as subjects of verbs do. Subject-verb agreement applies the same way it does with other subject-verb structures, and nominative case is assigned. As the PP is the predicate in these structures, it is obligatory.

For the existential structures, the analysis proposed for English can be successfully applied to Serbian as well. The differences between the English existential structure and the Serbian existential (genitive on the noun phrase, no agreement, *ima* 'has' in present tense) will be shown to be (mostly) due to general differences between the languages. The structures that we propose for Serbian existentials is given in (11).⁷

(11) a. Present Tense b. Past Tense



⁷Note that I label the projection of the noun phrase FP instead of DP as I did for English because Serbian does not have definite determiners (just like other Slavic languages), therefore DP is not commonly used in the Slavic literature. Furthermore, FP is the projection that Bošković (2003) argues to be responsible for the genitive of quantification. It hosts strong quantifiers and numerals in their strong/partitive reading and is equivalent to the empty D-layer proposed for English. F is quite possibly a semi-lexical head in the sense of Van Riemsdijk (1998).

These structures account for the major properties of the existential structure. As Serbian is a pro-drop language, no expletive appears in the subject position. When a PP is present, it is spelled-out in Spec,PredP, which can be seen from the following data from the synthetic future. In Serbian, the synthetic future only allows the word order V Subj (Obj), as seen in (12).

- (12) a. Stićiće {naši gosti/ oni} vrlo brzo.
 will-arrive_{3.PL} our guests_{NOM}/ they very soon
 ‘Our guests/They will arrive very soon.’
 b. *{Naši gosti/ Oni} stićiće vrlo brzo.
 our guests_{NOM}/ they_{NOM} will-arrive_{3.PL} very soon
 ‘Our guests/ They will arrive soon.’ SERBIAN

We can use this restriction as a test for subjecthood in existential sentences. (13) shows that in existential sentences in the synthetic future, the PP follows the verb, thus the PP has to be the subject of the structure. In locative structure the noun phrase follows the verb, cf. (14).

- (13) a. Biće (tu) ljudi.
 Be_{FUT.3SG} (there) people_{GEN.PL}
 ‘There will be people’
 b. *Biće ljudi tu. (* on the neutral reading)
 (Existential) SERBIAN
- (14) Biće (Ana i Marko) tu.
 Will-be_{3.PL} Ana and Marco_{NOM} there
 ‘Ana and Marco will be there.’
 (Locative) SERBIAN

Based on this evidence, we assume that the PP is indeed the subject or PredP in existential sentences.⁸

The genitive case on the noun phrase in existential sentences is due to a general fact about Serbian quantified noun phrases: they always appear in genitive case as can be seen in (15).

- (15) a. Većina knjiga je dosadna.
 Most_{NOM} books_{GEN} is boring
 ‘Most books are boring.’
 b. Ivan uze nekoliko cvetova.
 Ivan took several flowers_{GEN}
 ‘Ivan took several (of the) flowers.’
 c. Vidim pet prijatelja
 see_{1.SG.} five friends_{GEN}
 ‘I see five friends.’ SERBIAN

⁸Note that it is not entirely clear what occupies the subject position when the PP is absent. As we are dealing with a PP subject, it is rather unlikely that *pro* turns up. Rather, we would expect it to be PP-*pro*, which is the equivalent of the English expletive *there*.

As I have argued in chapter 2, section 2.6, the existential reading arises through existential closure, which can be seen as obligatory existential quantification in existential sentences; therefore the noun phrase appears in genitive in this context as well.⁹

Let me finally turn to a major difference between English and Serbian, namely that in Serbian the copula is *have* in the present tense, and *be* in the past tense. We take this to be a surface effect of the spell-out of the combination of Pred_{EX} and tense, which is *ima* (see (11) for illustration). In past tense, Pred_{EX} incorporates into the participle head, and is spelled out as the neuter third person singular participle (the least marked form) of the verb ‘be’, which is *bito*. Under this analysis, *ima* ‘have’ is not the existential copula, but the tensed realization of the existential Pred -head. Thus, the past tense paradigm can be different depending on language-specific syntax/morphology. This analysis has the advantage that we do not need to assume two lexical copulas ‘be’ and ‘have’ and stipulate the restrictions on their occurrence.¹⁰

5.2.4. Conclusion

The Serbian data show that apart from word order differences, languages that do not have an overt expletive in the existential structure nevertheless make a clear syntactic distinction between existential and locative structures (contra Freeze 1992). And despite the difference with respect to the expletive, structural existential sentences have the same base structure cross-linguistically. Thus, the analysis presented for English is further supported.

5.3. Expletives, subject positions and the EPP

5.3.1. Introduction

English *there*-sentences are often used as supporting evidence for the so-called Extended Projection Principle, which requires clauses to have subjects. The Extended Projection Principle has a semantic side, namely the requirement that each predicate have a subject. This semantic requirement accounts for many cases of obligatory subjects. Yet there is also a syntactic side to the Extended Projection Principle, which was taken to mean for English that Spec,IP has to be filled. The latter part of the EPP is closely linked to the treatment of *there*-sentences in the standard Chomskyan analysis. As I rejected this analysis

⁹Hartmann and Milićević (to appear) argue that the existential quantifier is present in the specifier of FP in Serbian, whereas I assumed for English that the noun phrase is bound by existential closure. As the two alternatives have essentially the same effect with respect to the structure at hand, I remain agnostic as to which analysis will prove to be the correct one.

¹⁰As no preposition is involved but a special PredP structure, this proposal is different from *be+P=have* approaches (cf. Benveniste 1966, Freeze 1992, Kayne 1993). For a critique of the latter type of proposal see Blaszcak to appear.

for both the *there-V* and the *there-BE* sentences, it is the aim of this chapter to discuss the implications of my analysis for the EPP.

I will first provide a short overview of the history of the Extended Projection Principle in the last two decades (mostly based on McCloskey 1997 and Mohr 2005), as its content underwent substantial changes. Originally, it was phrased as a principle of grammar, requiring sentences to have subjects (in the Spec,IP position). The necessity for Spec,IP to be filled is now taken to be due to a separate feature, the EPP feature. After this overview, I will concentrate on those discussions in which the *there*-sentences figured prominently, and I will reconsider them in light of the findings of the previous chapters.

5.3.2. Subject positions and the EPP: A short overview

The Extended Projection Principle (EPP) was first proposed in Chomsky (1981, 26) and acquired its current name in Chomsky (1982, 10). The EPP requires that all clauses have subjects.¹¹ It accounts for the fact that in English, the so-called subject position, Spec,IP, is always filled, both in finite and in non-finite structures. Note that the notion of subject is not a primitive notion in Chomskyan theory, but rather a cover-term for a number of diverse properties of subjects. These properties are the following (cf. McCloskey 1997, 197f and references therein; see also Harley 1995):

- (16) Subject properties
- (i) Subjects are obligatory;
 - (ii) Subjects are typically AGENTS or CAUSERS;
 - (iii) Subjects are prominent with respect to scope and binding possibilities;
 - (iv) Special marking obtains on the noun phrase subject and/or the finite verb;
 - (v) Subjects are (almost) always nominal;
 - (vi) Noun phrase objects can be promoted to subject (in passive structures, raising, among others).

In the Government and Binding approach, a wide range of these properties could be linked to the Spec,IP position. The fact that the subject is in a structurally high position explained its various scope and binding possibilities (in combination with the notion *c-command*), that is, property (iii). Case and agreement marking were inherently linked to the Spec,IP position, explaining the special marking on the subject (nominative case) and the finite verb (agreement), i.e. property (iv). As only nominals can be assigned case, and elements in Spec,IP have to be assigned nominative, the restriction to noun phrases also fell out, c.f. property (v). As the Spec,IP position was linked to case

¹¹Note that the obligatoriness of the subject was already implicit in the early phrase structure rules building clauses: $S \rightarrow NP VP$ (Hans Broekhuis, p.c.).

assignment, noun phrases could be derived subjects by moving into Spec,IP, i.e. property (vi).

The only two properties that were not directly linked to the Spec,IP position are the obligatoriness of the subject (property (i)), and the correlation with AGENT/EXPERIENCER theta-roles (property (ii)). The Extended Projection Principle was meant to account for the former by stipulation and various researchers suggested that it can be derived from a semantic requirement (cf. Williams 1980 among others): predicates need to be saturated, and hence require a subject. As noted above, *there*-sentences did not fall under this semantic requirement in the Chomskyan *there*-insertion analysis.

Property (ii) - subjects typically bearing an AGENT or CAUSER theta-roles - is more complicated, as the notion of subject in Chomskyan theories is different from the one in other theories: on the standard analysis of passive, a THEME object can be promoted to subject, i.e. occupy Spec,IP, thus, THEME (or some GOAL) objects can also be subjects in this sense. However, whenever an AGENT/CAUSER argument is present in a clause, this argument will occupy Spec,IP, leaving a direct relation of subject and θ -roles rather blurred.

With the arrival of the subject-in-VP hypothesis,¹² this complication could be straightforwardly dispensed with. All arguments receive their thematic roles in the V-domain. The roles of AGENT and EXPERIENCER are assigned in the highest position of the VP, and when these arguments are present, they move into Spec,IP (other arguments cannot cross the subject due to locality conditions). With the introduction of this analysis, the properties related to subjects were spread over two different positions in the structure: the VP-internal position accounts for the thematic properties, while case and agreement are still linked to Spec,IP. But the differentiation of positions did not stop there. If the typical properties of subjects can be spread across projections, the question arises whether there might be actually more than two projections that can host subjects. Reasoning along these lines led to the further ‘deconstruction’ (McCloskey 1997) of the subject position. Researchers proposed that agreement and case-checking are licensed not in one but in two separate projections (cf. Pollock 1989, Belletti 1990, Chomsky 1993, Koizumi 1995 among others). This resulted in at least three subject positions: a thematic position (Spec,vP), a position for case (Spec,IP), and one for agreement (Spec,AgrSP) (and possibly more, cf. Cardinaletti 2004 for a large range of subject positions), each linked to a separate property of the (traditional) concept of subject.¹³

The introduction of separate positions for the subject, also known as the split-INFL hypothesis, raises at least three questions. (i) Can separate items occupy these positions, or does the subject need to go through all of them?

¹²According to McCloskey (1997, 227) various researchers provided arguments for such a proposal independently: Kitagawa (1986), Koopman and Sportiche (1985, 1991), Kuroda (1988), Rosen (1989), Speas (1986), Wible (1990) Woolford (1991), Zagona (1982); for the various arguments for the subject-in-VP-hypothesis see McCloskey (1997, 204ff).

¹³Alternatively, case could be linked to the C position (as Chomsky 2001 hypothesizes) which would leave agreement features to T.

(ii) Do all subjects surface in the same position cross-linguistically? (iii) And finally, which of the positions is the surface position of subjects in English?

Concerning the first question, transitive expletive constructions (TECs) have been taken to show precisely that two lexical items can occupy the different subject positions. Jonas and Bobaljik (1993) proposed for Icelandic TECs that the expletive is hosted in Spec,AgrS, while the external argument of the transitive verb occupies the lower position, Spec,IP. As we will see below in 5.4, however, the expletive in Icelandic TECs is linked to the Spec,CP position, and not to any of the subject positions (cf. Platzack 1983, Vangsnes 2002 and references therein). Thus, TECs do not provide conclusive evidence for the split-INFL hypothesis.

A different argument for at least two subject positions in the INFL domain in English comes from É. Kiss (1996) elaborating on Diesing's (1992) approach. Diesing (1992) explores the possibility that the two subject positions (Spec,VP and Spec,IP) have different interpretations. She establishes a mapping hypothesis from syntax to semantics, according to which the low subject position is reserved for so-called weak/existential readings, while the higher one is linked to strong/generic/quantificational properties of the subject. Diesing illustrates with the different interpretation of bare plurals within and outside the VP (the particle *ja doch* is taken to mark the VP boundary). The bare plural *Linguisten* 'linguists' is interpreted existentially in (17-a), but generically in (17-b).

- (17) a. ... weil ja doch Linguisten Kammermusik spielen
 ... since PRT PRT linguists chamber-music play
 '... since there are linguists playing chamber music'
 b. ... weil Linguisten ja doch Kammermusik spielen
 ... since linguists PRT PRT chamber-music play
 '... since (in general) linguists play chamber music'
 (Diesing 1992, 36) GERMAN

É. Kiss (1996) suggests that Diesing's analysis implies the existence of two subject positions on top of the vP internal position in English, one for the existential interpretation and one for a quantificational/strong/generic reading. Subjects preceding the tensed verb can either have an existential or a generic interpretation. In the former case the subject precedes sentential adverbials, while in the latter it follows them.¹⁴

- (18) a. Boys luckily know the novels of Karl May. generic
 b. Luckily boys were born. existential

É. Kiss (1996) suggests that the low subject position is Spec,T. The higher position, which she labels Spec,RefP (following Stowell and Beghelli 1994) hosts subjects with strong/generic/quantificational readings. If the position of sen-

¹⁴Note that Diesing accounts for these facts by obligatory lowering, but she cannot provide a straightforward treatment of sentential adverbials.

tence adverbials is indeed fixed (and not due to scope properties), this set of data provides evidence for the two positions.

Turning to the second question, whether all subjects end up in the INFL domain cross-linguistically (both at S-structure and LF), Diesing's work suggests a negative answer: in German subjects can remain inside vP. If this is true, however, it must also be possible for nominative case to be assigned/checked in a vP-internal position. That this is a general option in German has been noted by Lenerz (1977) on the basis of so-called experiencer verbs, in which the base and surface order of the arguments is a dative-marked experiencer preceding a nominative marked theme, cf. Lenerz (1977) (for similar facts in Dutch see Den Besten 1985, Broekhuis 1992 and references therein).

- (19) Ich glaube, dass meinem Freund das Buch gefallen wird.
 I believe that my_{DAT} friend_{DAT} the_{NOM} book_{NOM} please will
 'I believe that my friend will like the book'
 (Lenerz 1977, 113, my gloss) GERMAN

The question how a noun phrase can be assigned nominative case and still remain inside vP was an important issue in the last years. The first proposal was that the strength of a feature determines whether a noun phrase can remain in vP in overt syntax, and move covertly to the nominative position: Strong features need to be checked in overt syntax, weak features give rise to LF movement. In more recent Minimalist work (starting with Chomsky 2000, 2001), Chomsky proposes the operation Agree: a probe, carrying uninterpretable/unvalued features, searches its c-command domain for a matching pair of features in order to value/check its own features.¹⁵

This operation simplifies the mechanism for case assignment to low nominatives, but it makes it rather difficult to account for the fact that in English (and other languages) the Spec,IP position cannot remain empty and is typically occupied by a noun phrase. If case and agreement can be checked at a distance under the operation Agree, the need for checking case or agreement is not sufficient for an item to move. Thus, Chomsky needs to stipulate a mechanism that decides whether an item moves to a specific specifier or not. He suggests that a special D-feature on the INFL head, later named EPP feature and most recently OCC-feature, requires its specifier position to be filled. Thus, a stipulated feature is responsible for a fairly clear generalization in English, namely that a noun phrase must precede the tensed verb.¹⁶

In need of more fundamental justification, the research on the nature of the EPP feature with respect to the subject position took two opposite routes.

¹⁵Chomsky (2000, 2001) does not decide whether features are in need of checking, or in need of valuation. The difference is whether a set of features is present and needs to disappear via checking, or whether an item has an open slot for features that needs to be filled. For an approach that exploits both notions of uninterpretable and unvalued features, see Pesetsky and Torrego (2007) and follow-up work.

¹⁶The introduction of the EPP also has repercussions for successive cyclic movement, cf. Epstein and Seely (2006), Bošković (to appear) and references therein.

One line of research investigates the hypothesis that the EPP feature on T is a cross-linguistic principle and that there are parametric differences concerning the ways it can be satisfied (proposed by Alexiadou and Anagnostopoulou 1998, Roberts and Roussou 2002, Mohr 2005, Biberauer and Richards 2006 among others; see also Rosengren 2002). In this line of research the EPP is used to cover empirical facts outside English, though it remains unclear why the T-projection should be special in this way.

An alternative strand wants to eliminate the EPP altogether by trying to show essentially that Spec,IP does not necessarily project (in non-finite clauses) and eliminating A-movement chains (cf. Grohmann et al. 2000, Bošković 2002, Epstein and Seely 2006 among others; see Broekhuis 1992, Broekhuis 2008 for a different proposal).

5.3.3. Expletives and the EPP

In Chomskyan research, expletive structures have been a major piece of evidence in support of the EPP. First, they are taken to show that the Spec,IP position has to be occupied largely independently of the semantic requirement that predicates have subjects. This type of analysis relies on the assumption that in sentences like *There is a man in the garden*, or *There arrived a man*, an independent subject-predication relation is available. From this view on the data, *there* appears to be in first position for reasons other than the subject-predicate relationship.

However, I have rejected this type of approach to the *there*-structures, showing that the underlying assumption of an independent predication relationship is not correct. Instead, I have argued that in English *there*-BE sentences, *there* is indeed the true subject of the structure. Thus, its occurrence is due to a requirement that sentences have at least one subject-predicate relationship. Since *there* is the subject of this predication structure, it is expected to occur in the subject position in line with the general rules that apply to subjects. Thus, no extra syntactic rules or features are needed to account for the *there*-BE structures.

A second issue in which English *there* has featured prominently in the discussion of the EPP is the nature of the feature that makes the highest noun phrase argument move into the first position. Chomsky argues that *there* is not involved in checking case and agreement features, thus its presence and raising capabilities are taken to show that there must be another feature, the EPP feature (see also the discussion of the issue in chapter 1, section 1.2.7). However, we have seen in chapter 2, section 2.9 that *there* takes part in agreement feature checking. That means that agreement features can be held responsible for the observation that Spec,IP is always filled in English. Then the option for checking case or agreement at a distance could be parametrized with English choosing local checking and German checking at a distance. Thus, the analysis of English *there*-BE sentences cannot be taken as evidence for postulating an

independent EPP feature.

The issue is less clear with *there* in *there-V* structures, and (locative) inversion structures in general. In these structures, the subject of predication occurs post-verbally whereas the first position is occupied by (a constituent containing) the predicate. In these inversion structures nominative case assignment is not straightforward and these are the cases that are relevant for the nature of the EPP (or rather the underlying generalization) in English. This issue, however, can and should be handled independently of the nature of so-called expletive elements. An investigation of this goes beyond the aim of this thesis and will be left to future research (see Broekhuis (2008) for a recent proposal).

5.3.4. Conclusion

We have seen in this section that *there*-sentences played a crucial role in the formulation of the Extended Projection Principle - the EPP. This principle is basically stipulated to account for the fact that the Spec,IP position is always filled in English. The fact that *there* can also occur in this position was traditionally taken to show that the position is not always filled by an argument, and hence cannot be related to a semantic requirement on sentences to have subjects. Obviously, this approach relies on the Chomskyan analysis of *there* as an expletive, in which *there* is not part of a predication relationship. The analysis of *there*-BE sentences in chapter 2, however, denies that and shows that *there* is part of a syntactic and semantic predication relationship. Thus, the *there*-BE sentences do not support the stipulation of the EPP (principle or feature). However, we have seen that the *there*-V construction is a subspecies of the locative inversion structure and that these inversion structures are much more interesting for the investigation of the nature of the requirement of Spec,IP to be filled: in these cases it is not the highest argument that moves to the first position, but the more deeply embedded predicate (see Broekhuis (2008) for a recent proposal that accounts for these data without appealing to EPP features). Thus, the nature of the underlying generalization that Spec,IP has to be filled in English cannot be investigated by looking at *there*-BE structures.

5.4. The classification of expletives in Germanic

5.4.1. Introduction

The study of expletive elements in existential sentences presented here is also relevant for the study of expletive elements across the Germanic languages. These languages vary with respect to the number of expletive elements and the types of structures in which they occur. The aim of this section is to provide a brief overview of the data presented in other studies (most prominently Vikner 1995 and Mohr 2005). I take these data as a basis for a classification of expletive elements. I will discuss the implications of my study for this classification, and

show that the so-called expletive in existential structures has to be a category of its own in Germanic (and potentially cross-linguistically).

5.4.2. The types of expletive structures

Germanic languages differ with respect to what type of expletive constructions they allow, how many different expletive elements they have, and which expletive occurs in which structure. Here, I will provide an overview of the constructions available in the following Germanic Languages: Afrikaans, Danish, Dutch, English, German, Icelandic, Norwegian and Swedish.

(i) Transitive Expletive Constructions. Transitive Expletive Constructions (TECs) are structures in which an expletive occurs with a transitive main verb that has both arguments satisfied by lexical noun phrases. TECs occur in Afrikaans, Dutch, German and Icelandic, but are ungrammatical in Danish, English, Norwegian and Swedish.¹⁷

- | | | |
|------|---|-----------|
| (20) | Daar het heelwat kinders spinasie geëet.
Expl have several children spinach eaten
'Several children have eaten spinach.'
(Mohr 2005, 116) | AFRIKAANS |
| (21) | *at der har spist nogen et æble
that Expl has eaten someone an apple
'Someone has eaten an apple.'
(Vikner 1995, 198) | DANISH |
| (22) | Er heeft iemand een appel gegeten.
Expl has someone an apple eaten
'Someone has eaten an apple.'
(Mohr 2005, 116) | DUTCH |
| (23) | *There has someone eaten an apple. | ENGLISH |
| (24) | Es haben einige Kinder Spinat gegessen.
Expl have several children spinach eaten
'Several children have eaten spinach.'
(Mohr 2005, 116) | GERMAN |
| (25) | Það hafa margir jólasveinir borðað þúðing
Expl have many Christmas.trolls eaten pudding
'Many Christmas trolls have eaten pudding.'
(Bobaljik and Jonas 1996, 209) | ICELANDIC |

¹⁷ Among the Germanic languages not discussed here, at least Faroese and Yiddish also allow TECs. Different accounts have been presented by Cardinaletti (1990), Brandner (1993), Vikner (1995), Bobaljik and Jonas (1996), Bobaljik and Thráinsson (1998), Koenenman and Neeleman (2001), Vangsnes (2002), Mohr (2005) among others.

- (26) *Det har ein katt ete mysene.
 Expl has a cat eaten mice.the
 ‘There has a cat eaten the mice.’ NORWEGIAN
 (Vangsnes 2002, 45)
- (27) *Det har någon ätit ett äpple.
 Expl has someone eaten an apple
 ‘Someone has eaten an apple.’ SWEDISH
 (Mohr 2005, 116)

Those languages that allow TECs vary in three respects: (i) with respect to the number and type of subject positions (preceding or following sentential adverb positions) that are available for the subject (see Vikner 1995, Vangsnes 2002 and references therein for discussion); (ii) with respect to whether the structures give rise to a definiteness effect (see Mohr 2005 and references therein); (iii) with respect to whether the expletive occurs in Spec,CP only or also in Spec,IP.

The first two variations do not concern us here, but the last one mentioned figured prominently in Chomskyan analyses. Chomsky (1995b, 2000, 2001) follows Jonas and Bobaljik (1993) in assuming for Icelandic that the expletive occupies a specifier in the INFL domain. Originally, this position was Spec,AgrSP, and since AGR-phrases have been discarded, the expletive has been assumed to occur in a second specifier adjoined to IP. However, the assumption that the Icelandic expletive occurs in the INFL domain is rather questionable (cf. Vangsnes 2002 among others). Instead, there are empirical reasons to assume that the Germanic languages that do allow TECs (Afrikaans, Dutch, German and Icelandic) fall into two classes: one group, namely Afrikaans and Dutch, allows the expletive to occur both in Spec,CP and Spec,IP. The second group, German and Icelandic, allows the expletive to be present only in Spec,CP (cf. Tomaselli 1990 cited in Vikner 1995, 185, Vangsnes 2002, Mohr 2005 and references therein). We can see this from the following examples. In Dutch and Afrikaans, the expletive can occur after the tensed verb in main clauses, while this is impossible in German and Icelandic.

- (28) a. Gister het daar iemand 'n appel geëet AFRIKAANS
 b. Gisteren heeft er iemand een appel gegeten. DUTCH
 c. *Gestern hat es jemand einen Apfel gegessen
 yesterday has Expl someone an appel eaten
 ‘Yesterday, someone ate an apple.’ GERMAN
 d. *Í gaer hafa það margir jólasveinir borðað búðing
 Yesterday have Expl many Christmas.trolls eaten pudding
 ‘Yesterday, many Christmas trolls ate pudding.’ ICELANDIC

In line with this generalization, the German expletive *es* does not occur with transitive verbs in embedded clauses, while again, this is possible in Afrikaans and Dutch.

- (29) a. ... dat daar iemand 'n appel geëet het AFRIKAANS
 b. ... dat er iemand een appel gegeten heeft DUTCH
 c. ... *dass es jemand einen Apfel gegessen hat
 ... that it someone an apple eaten has
 ... that someone ate an apple GERMAN

Icelandic is a special case: it allows the expletive to occur after the complementizer *það* 'that', which seems surprising at first sight if *það* always occupies Spec,CP.

- (30) ... að það hefur einhver borðað epli
 ... that EX has someone eaten apple
 'Someone has eaten an apple' ICELANDIC

However, Icelandic allows embedded V2 with *það*, as can be seen in (31), where the adverbial *kanski* 'maybe' occupies the first position preceding the finite verb.¹⁸

- (31) Hann veit að kanski las Jón aldrei bókina.
 He knows that maybe read Jon never book-the
 'He knows that maybe, John didn't read the book.'
 (Vikner 1995, 91) ICELANDIC

Thus we can conclude, along with Vikner (1995) and Mohr (2005), that the expletive occurs only in Spec,CP (at surface structure) in German and Icelandic, while it is also available in Spec,IP in Dutch and Afrikaans.¹⁹

We will see the same pattern with the other expletive structures below: In German expletive *es* does not occur after the tensed verb or in embedded structures, while in Icelandic it does not occur after the tensed verb, but it does in embedded structures, due to the possibility of embedded V2.

(ii) Unaccusative Structures. All Germanic languages except English allow for an expletive to occur with unaccusative verbs as illustrated in (32)-(36). English is the exception because, as we have seen in 2.2 and 3.2, these *there-V* structures have a special status. This is not the case for the structures in the other Germanic languages (cf. Vikner 1995, 197).²⁰

¹⁸Note that Afrikaans also allows embedded V2 after the complementizer *dat*. The data in (28) shows, however, that the expletive can occur lower in the structure.

¹⁹Vikner (1995) argues along with Cardinaletti (1990) that the expletive in Icelandic and German is nevertheless base generated in Spec,IP, and is also present in Spec,IP in embedded clauses (see also Grewendorf 1989). In the latter case, such an element contributes neither to the phonological nor the semantic interpretation; it has no effect at all and therefore, it is an impossible element for theory-internal reasons. For more discussion see Brandner (1993) and Mohr (2005, 122ff).

²⁰I assume that regular passives of transitives fall into this class as well. Again, English is the exception among the Germanic languages: as we have seen in 3.5, what looks like passive structures are not. For some interesting issues arising with participle agreement and word order in the Scandinavian languages, cf. Holmberg (2002) and references therein.

- (32) a. ... at der er komet en dreng
 ...that Expl is come a boy
 'that a boy came' DANISH
- b. ... að það hefur komið strákur
 ...that Expl has come boy
 'that a boy came.' ICELANDIC
 (Vikner 1995, 197)
- (33) a. ... dat daar 'n man kom/ gekom het
 ...that Expl a man came/ come have
 'that a man came' AFRIKAANS
- b. ... dat er een man kwam
 ...that Expl a man came
 'A man came.' DUTCH
- (34) There came a man. [inversion structure] ENGLISH
- (35) Det har kommet tre menn.
 Expl have come three men
 'Three men came.' NORWEGIAN
 (Mohr 2005, 161)
- (36) Idag har det komit många lingvister hit.
 today have Expl come many linguists here
 'Many linguists came here today.' SWEDISH
 (Platzack 1987, 377)

Note that in German, as discussed above, expletive *es* only occurs in first position in V2 clauses and not in the middle field after the tensed verb or the complementizer. In Icelandic, the expletive cannot occur after the tensed verb, only after the complementizer. I give the data for completeness' sake.

- (37) a. Gestern kam (*es) ein Junge.
 Yesterday came Expl a boy
 'A boy came yesterday.'
- b. ... dass (*es) ein Junge kam
 ...that Expl a boy came
 '...that a boy came' GERMAN
- (38) *Í gær hefur það komið strákur.
 yesterday has Expl has come boy
 'Yesterday, a boy came.' ICELANDIC
 (Vikner 1995, 185)

(iii) **Impersonal passives.** The so-called impersonal passives are passive structures in which an unergative verb is passivised. These structures are available in all Germanic languages under discussion here except English. Note that in Afrikaans (and some Dutch dialects), the expletive can be dropped in embedded structures in these cases.

- (39) a. Daar word gedanst.
 Expl was danced
 ‘There was dancing.’
 b. dat (daar) gedanst word.
 that Expl danced was
 ‘that there was dancing’
 (Mohr 2005, 150) AFRIKAANS
- (40) a. ...at der er blevet danset.
 ...that Expl was been_{PASS} danced
 ‘that there was dancing’ DANISH
 b. *There has been danced ENGLISH
 c. ...að það hefur verið dansað
 ...that Expl has been danced
 ‘that here was dancing’ ICELANDIC
 (Vikner 1995, 209)
- (41) a. ...dat er gedanst wordt.
 ...that Expl danced was
 ‘that there was dancing’ DUTCH
 b. ...at det ble danset
 ...that Expl was danced
 ‘that there was dancing’ NORWEGIAN
 (Mohr 2005, 120f)
- (42) Det dansades.
 Expl danced
 ‘There was dancing.’ SWEDISH

Again, the German expletive does not occur in an embedded position but only in the first position in matrix clauses. In Icelandic it cannot follow the tensed verb.

- (43) a. Es wurde getanzt.
 Expl was danced
 ‘There was dancing.’
 b. ...dass (*es) getanzt wurde
 ...that Expl danced was
 ‘There was dancing.’ GERMAN

(iv) Weather-verb expletives. Expletives also occur with so-called weather-verbs, like *rain* or *snow*. Those Germanic languages that do have two types of expletives use a different expletive for these cases than for the previous three structures (see below).

- (44) Dit het gister gereën.
Expl has yesterday rained
'It rained yesterday.'
(Mohr 2005, 176) AFRIKAANS
- (45) Det regner.
Expl rains
'It rains.'
(Vikner 1995, 225) DANISH
- (46) a. Gisteren heeft *(het) geregend
b. Gestern hat *(es) geregnet
Yesterday has it rained
'It rained yesterday.'
GERMAN
- (47) Yesterday, it rained. ENGLISH
- (48) a. Det har regnet.
b. Det har regnat.
Expl has rained
'It rained.'
SWEDISH

The expletive is obligatory in all Germanic languages in both V2 and embedded clauses except for Icelandic. Icelandic *það* cannot occur in the middle field with weather-verbs, either (similar facts hold for Yiddish).²¹

- (49) a. Það rignidi (í gær).
Expl rained (yesterday)
b. Í gær rignidi (*það).
(Mohr 2005, 177) ICELANDIC

(v) Expletives as correlates. Expletives also occur as place-holders for sentential arguments, so-called correlates (cf. Eisenberg 2001, 117,318f). They can occur both in subject and object position, illustrated in the following examples.

- (50) Dit was dom dat jy laat huis toe gegaan het.
Expl was stupid that you late home to come have
'It was stupid that you came home late.'
AFRIKAANS
- (51) Det er godt at du er kommet.
Expl is good that you are come
'It is good that you came.'
(Vikner 1995, 225) DANISH
- (52) a. It_i was stupid [that you came home late]_i.
b. He made it_i clear [that he prefers to come home late]_i.
ENGLISH

²¹For an account of this fact, see Platzack (1987).

- (53) a. Het is goed dat jij gekomen bent.
It is good that you come are
'It is good that you came.'
(Vikner 1995, 225)
- b. Hij ontkende het dat hij daar geweest was.
He denied it that he there been was
'He denied that he has been there.'
- DUTCH
- (54) a. Er sagte, dass es gut war dass du gekommen bist.
He said that it good was that you come are
'He said that it was good that you came.'
- b. Sie hat es bedauert, dass Du abgefahren bist.
She has it regretted, that you away-driven were
'She regretted it, that you went away.'
- GERMAN
- (Eisenberg 2001, 176)
- (55) Það er gott að þú ert kominn.
Expl is good that you are come
'It is good that you came'
- ICELANDIC
- (Vikner 1995, 223)
- (56) a. Nu är det uppenbart att John har slagit Maria. SWEDISH
- b. Nå er det åpenbart at John har slått Maria.
Now is it obvious that John has beaten Maria
'It is obvious now that John has beaten Mary.'
- NORWEGIAN
- (Platzack 1987, 387)

Note that the expletive only occurs if the clause is extraposed to the right (and not when it occurs in the first position or in the middle field) as the following data from Dutch, English, and German illustrate.

- (57) Dat jij gekomen bent <(*het)> is <(*het)> goed.
That you come are Expl is Expl good
'It is good that you came.'
- DUTCH
- (58) a. *[When John is shaved]_i, Mary likes it_i.
- b. [That you came] (*it) is good.
- ENGLISH
- (59) Dass du gekommen bist <(*es)> ist <(*es)> gut.
That you come are Expl is Expl good
'It is good that you came.'
- GERMAN

Furthermore, the expletive can be dropped with some predicates, as seen in the example from Dutch (cf. Bennis 1986, and Vikner 1995, 236f for details)

and German.²²

- (60) Tijdens de les is (het) duidelijk geworden dat de aarde rond
 during the lesson is (it) clear become that the earth round
 is.
 is
 ‘It became clear during the lesson that the earth is round.’
 DUTCH
- (61) Sie hat (es) bedauert, dass Du abgefahren bist.
 She has (it) regretted that you away-driven are
 ‘She regretted (it) that you left.’
 GERMAN

5.4.3. The number and types of expletives

Chomsky (1981) makes a distinction between quasi-arguments that occur with *weather*-verbs (*it* in English) and expletive subjects (*there* in English). The Germanic languages vary as to whether the distinction is overtly realized with two different lexical items. As Vikner (1995) points out, English, Dutch and Danish have two expletives: one *it*-type, which is linked to a third person personal pronoun, and one *there*-type that is linked to a locative pronoun. The *it*-type expletives occur with *weather*-verbs and as correlates, whereas the *there*-type expletives are only used in non- θ -positions (Spec,IP or Spec,CP - depending on the analysis).

- (62) a. Mary likes it/*there when John is shaved.
 b. It/*there is cold here.
 c. It/*there rains.
 d. It/*there was good that you came to the party.
- (63) a. Maria vindt het/*er prettig als Jan geschoren is.
 Maria finds it/there nice when Jan shaved is.
 b. Het/*Er is koud hier.
 It/There is cold here.
 c. Het/*Er regent.
 It/There rains.
 d. Het/*Er was goed dat jij gekomen bent.
 It/There was good dat you come are.

Icelandic, Yiddish, German, as well as Norwegian and Swedish have only one lexical item, the *it*-type.

²²The optionality of the expletive could also be taken as evidence that the position to the right of the verb might be reanalysed as an argument position (instead of an adjoined position). I do not pursue this possibility here. Furthermore, Dutch *er* can co-occur with clausal complements with some types of predicates, Reuland (1983) for data and discussion.

Hoekstra (1983), Bennis (1986), Vikner (1995) argue that the *it*-type expletive is used as (quasi-)argument and needs to be assigned a θ -role. For correlate expletives this means that the clause itself is an adjunct. The *there*-type expletive occurs in non-thematic positions and cannot be assigned a θ -role. The main argument for assuming that the *it*-expletive occupies an argument position is that it can be a controller of PRO, cf. Chomsky (1981, 323f), Bennis (1986, 99ff), Vikner (1995, 228):²³

- (64) Dit is duidelik [sonder om PRO triviaal te wees] dat dié
 Expl is clear [without COMPL PRO trivial to be] that this
 oplossing nie reg kan wees nie.
 solution NEG true can be NEG
 ‘It is clear without being trivial that this solution cannot be true.’
AFRIKAANS
- (65) Han mente at det nu [efter PRO at vaere blevet forklaret ti
 He thought that it now [after PRO to having been explained ten
 gange] matte vaere klart for enhver at jorden er rund.
 times] must be clear to everyone that earth-the is round
 ‘He thought that it should be clear now [after PRO having been ex-
 plained ten times] that the earth is round.’
 (Vikner 1995, 228) DANISH
- (66) a. Het regende [alvorens PRO te sneeuwen].
 It rained before to snow
 ‘It rained before snowing.’
 b. Het is duidelijk [zonder PRO trivial te zijn] dat deze oplossing
 It is clear [without PRO trivial to be] that this solution
 niet kan kloppen.
 not can be-true
 ‘It is clear without being trivial that this solution cannot be true.’
DUTCH
- (67) a. It rained after PRO snowing.
 b. It was hoped without PRO being expected that you would come.

²³Bennis (1986) presented another argument for the non-argument status of the clause: in Dutch, it is impossible to extract from it. Vikner (1995) shows that this argument is not conclusive, however. Extraction from an adjoined clause across *it* varies among the Germanic languages: it is ungrammatical in Dutch and German, but possible in English and Danish, see Vikner (1995, 229ff) for details.

5.4.4. Summary of the data

The collection of the data from the previous sections is summarized in table 5.1. As we have seen above in several instances, not all types of expletives can occur in the middlefield in all languages. The summary here is only for the expletive in first position as this is the least restricted position in all Germanic languages, independent of whether they are V2 or not. Several notes are necessary to complement the main information in the table.

	NO.	TECs	imp. pass	unacc.	wea- ther	corre- late
Afrikaans	2	<i>daar</i>	<i>daar</i>	<i>daar</i>	dit	dit
Dutch	2	<i>er</i>	<i>er</i>	<i>er</i>	<i>het</i>	<i>het</i>
Danish	2	*	<i>der</i>	<i>der</i>	<i>det</i>	<i>det</i>
English	2	*	*	*	<i>it</i>	<i>it</i>
German	1	<i>es</i>	<i>es</i>	<i>es</i>	<i>es</i>	<i>es</i>
Icelandic	1	<i>það</i>	<i>það</i>	<i>það</i>	<i>það</i>	<i>það</i>
Norwegian	1	*	<i>det</i>	<i>det</i>	<i>det</i>	<i>det</i>
Swedish	1	*	<i>det</i>	<i>det</i>	<i>det</i>	<i>det</i>

Table 5.1.: Expletive elements in first position in Germanic

(i) In German, expletive *es* does not occur in embedded clauses or after the tensed verb in TECs, impersonal passive structures and with unaccusative verbs. In these cases, it is base-generated in Spec,CP (cf. Tomaselli 1990 cited in Vikner 1995, 185, Mohr 2005 and references therein).

(ii) In Icelandic the expletive *það* does not occur after the tensed verb with TECs, impersonal passives, unaccusative verbs and *weather*-verbs. I take this as evidence that *það* is base-generated in Spec,CP. The fact that *það* occurs after the complementizer (i.e. unlike German) is due to the general property

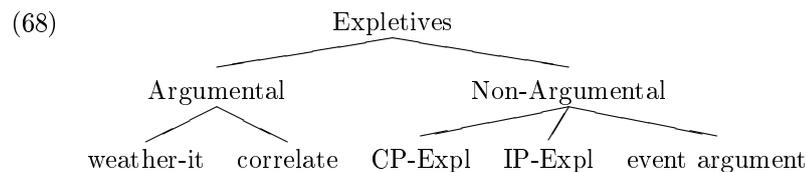
of Icelandic to allow embedded V2, cf. Sigurðsson (1989, 11,165,182), Mohr (2005) and references therein.

(iii) Correlate *es/het* in German and Dutch is optional if it is not in sentence initial position (cf. Bennis 1986 and (Vikner 1995, 236f) for details). Furthermore the expletive and the correlate clause cannot both occur in the middle field, and if the correlate clause is in first position, the expletive cannot appear at all. (The data for the other Germanic languages was not available.)

5.4.5. A classification of expletive elements

The summary of the data above shows that some of the Germanic languages make a clear lexical distinction between expletives that occur in argument positions (of weather-verbs or as correlate), and expletives in non-argument position, most notably Dutch and Danish. Within the argument expletives it seems necessary to distinguish between the weather-it expressions and the correlates as the data in (46), (61) and (60) from German and Dutch suggest: whereas weather-*it* has to always be present, the correlates are optional with some predicates.

With respect to the non-argument expletive elements we have to distinguish two types: (i) those that are base-generated/end-up in a subject-related position (Spec,IP on standard analyses) like Afrikaans *daar*, Dutch *er*, Danish *der*, Swedish/ Norwegian *det* and (ii) those items that necessarily occur in Spec,CP (Icelandic *það* and German *es*. Note that some of the subject expletives in the first group can be seen as overt expressions of the Kratzerian spatio-temporal event argument, as argued for Dutch *er* by Mohr (2005). As it has not been investigated yet, whether this holds for all Spec,IP expletives, I treat the two cases separately. These considerations lead to the classification in (68)).



So far the classification of expletive elements relies fully on previous studies. What do the findings from this thesis add to this classification? First of all, it is clear that the proform that occurs in existential sentences falls into a separate category: English *there* only occurs in existential sentences (putting aside *there* in *there-V* structures which belongs to inversion structures), and the same holds for German *da*. Whether we should include these items in a classification of expletive elements depends on the definition of expletive. Under the definition

of expletive presented in the introduction to this thesis, I have shown that neither English *there* nor German *da* should be treated as expletives. Instead, they are proforms that contribute a topic location/situation to the meaning of the clause.

5.4.6. Summary

This section has shown that the Germanic languages differ considerably with respect to expletive constructions: both in the type of expletive constructions they allow, and in the number of expletive elements that they have. Danish, English, Norwegian and Swedish do not allow the so-called Transitive Expletive Constructions, in which the expletive co-occurs with a transitive verb that has all its arguments saturated. In Afrikaans, Dutch, German and Icelandic these structures do occur, even though there is some variation with respect to the position available to the expletive: in German and Icelandic, it can only occupy the Spec,CP position, while it can also occur in Spec,IP in Afrikaans and Dutch. Furthermore we have seen that in all Germanic languages except English expletives occur with impersonal passives and unaccusative verbs (English *there-V* structures are different as these are inversion structures, as discussed in 3.2). Finally, expletives also occur in all Germanic languages with weather-verb constructions and as correlates, i.e. as a place-holder for clauses.

The Germanic languages have either one or two lexically different expletive elements. Afrikaans, English, Dutch and Danish have two expletives, while German, Icelandic, Norwegian and Swedish only have one item. For the former languages we have seen that one expletive is used in non-argument positions, while the other expletive is used for (quasi)-argument, i.e., θ -, positions.

The study presented in this thesis adds to this classification the insight that not all the items classified as expletives are expletives in the strict sense: English *there* has been shown to be a proform that acts as subject in the existential structure. As such it belongs to a separate category. Thus, English has only the expletive element *it* and no other expletive, especially not the kind that occurs in the other Germanic languages.

5.5. Conclusion

In this chapter, I discussed a number of consequences and implications of the analysis of English *there* and German *da*, which I argued not to be expletives in the sense of the working definition repeated in (69) for convenience.

- (69) *Working Definition of Expletive*
Expletives are elements that do not compositionally contribute to the meaning of the clause. They are semantically empty.

Instead, English *there* is a proform for a situation and it acts as a subject of predication in existential sentences. I showed in section 5.2 that the structure

of existential sentences as presented in chapter 2 can be straightforwardly applied to Serbian. This is interesting because it shows that the proposal is valid beyond the Germanic languages. Furthermore, Serbian makes a clear distinction between locative and existential sentences, which provides evidence against analyses in which existential sentences are derived from locative sentences - an analysis which is especially popular for languages without an expletive. The analysis of Serbian existentials, further supports the approach taken here, which assumes two entirely different analyses for locative and existentials structures.

Section 5.3 was dedicated to the discussion of the Extended Projection Principle according to which Spec,IP has to be filled. In the Chomskyan analyses, the fact that so-called expletive *there* can occur in this position, leaving the subject low, was taken to argue for a structural requirement on Spec,IP to be filled. However, as I argued *there* in *there*-BE sentences to be part of a syntactic and semantic predication structure, *there*-BE structures can no longer be taken as support for the EPP. On the other hand, we have seen that the *there*-V structures are a subspecies of locative inversion structures (or predicate inversion structures in general) and that these are indeed the interesting cases to look at. In these structures, the predicate moves into Spec,IP and whatever allows both the predicate as well as the highest argument of the structure to move to the first position must be responsible for the requirement that Spec,IP has to be filled in English.

Finally, I looked at expletive structures in several Germanic languages, deriving a classification that splits expletive elements in two groups (following Bennis 1986, Vikner 1995, Ruys 2007): expletive elements in argument (or θ -)positions, and expletives in other positions. The present study adds to this classification another class of elements, namely elements like English *there* and German *da* which are proforms that refer to a location/situation in the context. They are the subject of predication in existential sentences. They are similar to the Germanic non- θ expletives as they cannot occur in θ -positions either. Yet, they are not expletives according to our working definition above, but proforms that pick up a situation from the context. Thus the fact that English does not have the same expletive constructions as the other Germanic languages is related to the fact that it also lacks the relevant expletive.

Conclusion

This thesis investigated the role of expletive elements in existential sentences focusing on English *there* and German *da*. The study raised the question to what extent these elements can be called expletive under the working definition given in (1).

- (1) *Working Definition of Expletive*
Expletives are elements that do not compositionally contribute to the meaning of the clause. They are semantically empty.

Starting off with an overview of the literature on English *there*, I showed that the approaches so far proposed are not satisfactory or adequate. The *there*-insertion approaches (Stowell 1978, Chomsky 1981, 1993, 1995b, 2000, 2001, Lasnik 1992, 1995 among others) straightforwardly account for the fact that *there* does not occur in argument position: *there* is a meaningless element, and for that reason, it cannot receive a θ -role. However, the approaches of this type face two serious problems (among others). First, the fact that in *there*-sentences the PP (or any other predicative phrase) is optional, i.e. that *there be NP* sentences are grammatical, remains unaccounted for. Second, they cannot predict that *there* is obligatory in these sentences: a sentence like **Dinosaurs are* is ungrammatical outside ellipsis contexts, and cannot be interpreted as *There are dinosaurs*. Looking at the alternative *there*-in-core-predication approaches, I demonstrated that they can straightforwardly account for these two facts. *There* is taken to be part of the core predication, explaining its obligatory presence, and the optionality of the PP (or any other predicative element) which is taken to be an adjunct. In Moro's (1997) approach, *there* is the predicate, and it moves into the subject position. His analysis straightforwardly predicts that *there* cannot occur in regular argument positions: it is a predicate. However, we have seen that *there*-BE sentences (*there*-sentences in which the tensed/main verb is *be*) do not pattern with other predicate inversion structures like specificational copula sentences and locative inversion. Turning to Jenkins' (1975) and Williams' (1994) approach, which take the noun phrase to be the main predicate in *there*-BE sentences, we have seen that they share the advantages of Moro's predicate inversion structure in accounting for the

optionality of the PP and the obligatoriness of *there* in *there be NP* sentences. However, they also face two serious problems. First, the noun phrase does not pattern with other predicate nominals: it can be modified by non-restrictive relative clauses with *who* and it cannot be embedded without a verb after the *consider*-type verbs. Second, they cannot explain why *there* cannot be the subject of other predicates, i.e. why **There is cold* is ungrammatical. In sum, the existing approaches to the *there*-sentences are not satisfactory.

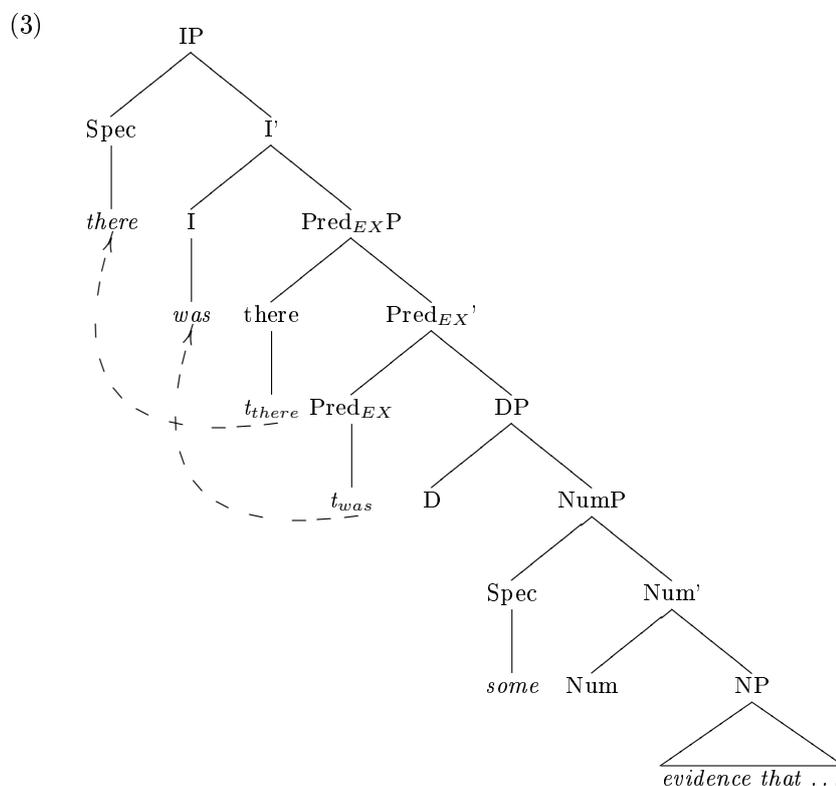
The thesis presented here adds an important insight to the structure under discussion, verifying the data presented by Aissen (1975): We need to distinguish between two types of *there*-sentences - *there-V* sentences and *there-BE* sentences. They differ in several respects (see also Milsark 1974 and Aissen 1975): *wh*-movement, embedding, control possibilities and negation. I proposed that we need two different analyses for these structures, discussing first the *there-BE* sentences.

For the analysis of *there-BE* sentences, we need to account at least for the following core properties:

- (2) Core properties of *there-BE* structures
- (i) The PP (or any other predicate) is optional;
 - (ii) *There* is obligatory present;
 - (iii) *There* cannot occur in argument/ θ -positions;
 - (iv) *There* is not a predicate;
 - (v) *There* is not an argument.

I proposed that the core predication structure in English *there-BE* sentences involves a PredP of a special type, Pred_{EXP}. *There* originates in the specifier position of this projection, and is a proform referring to a situation/location, which is either specified by adjunct phrases, given in the context, or, if nothing else is available, the here and now of the speaker. The complement position of Pred_{EXP} is occupied by a complex DP structure. Neither *there* nor the DP is a predicate in this structure, i.e. no direct predication relationship arises. Instead, the structure is read off as information-structural predication, athetic predication, which is a statement about a location. The existential meaning arises mostly through the complex DP structure: I proposed that the noun phrase contains an empty D-layer that semantically introduces a variable which must be bound by existential closure. The complete structure that I proposed is given in (3). It is interpreted as athetic statement about the location/situation referred to by *there* of which it is true that it contains an entity of the type given by the NP and the amount specified by Num/Spec, NumP.

This structure straightforwardly accounts for the core properties of *there-BE* structures, namely (i) as an adjunct, the PP is optional; (ii) *there* is obligatory as it is the subject of predication; (iii) *there* is restricted to this configuration as it cannot be assigned a θ -role; (iv) *there* is not the predicate but the subject



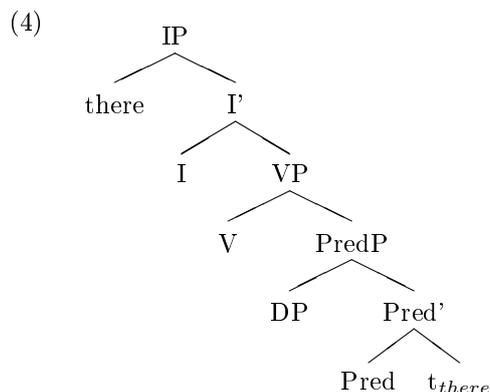
in the structure; (v) and finally, the noun phrase is not a predicate nominal: it contains a D-layer, and predicate nominals do not contain such a layer (under the assumption that there is a one-to-one relationship between size of noun phrase structure and respective interpretation).

Following approaches in the analysis of DP structure in which argument noun phrases project a full DP structure while predicate nominals lack a D-projection, i.e. they are at most as big as NumP, I showed that the structure in (3) can account for the similarities and differences of *there*-BE sentences and other copula structures with predicate nominals. Noun phrases in *there*-BE sentences and predicate nominals are similar since the overt material, until the projection of NumP, is the same. They differ with respect to the presence vs. absence of the D-layer. Predicate nominals lack the D-layer, while the noun phrase in *there*-BE structures contains an empty D-layer. The proposed analysis also accounts for the limited possibility of *wh*-extraction and the existential interpretation of bare plurals in *there*-sentences. Furthermore, the analysis defended here opens the possibility to account for the definiteness effect in terms of DP structure, i.e. the definiteness effect arises from an interaction of syntactic structure and semantic interpretation. As the D-layer has to be empty

for the existential reading to arise, and as strong readings of quantifiers are linked to Spec,DP; strong readings are impossible. Weak readings are linked to a lower projection, NumP in the present approach, and thus they are correctly predicted to be possible with *there*-BE sentences.

Turning to definite phrases with the determiner *the* occurring in *there*-BE structures, we saw that they are of a specific class. They do not refer to discourse-old items, but instead, they give rise either to uniqueness readings or amount/degree readings. To account for these facts, I extended the weak vs. strong distinction to definite determiners as well. The strong reading of *the* arises when it occurs in the D-layer and then, it refers to discourse-old items; when the determiner occurs in NumP, the weak reading arises, which is a uniqueness/amount reading. In the latter case, *the* can also combine with an additional projection hosting an overt or silent semi-lexical noun (cf. Van Riemsdijk 1998, Tănase-Dogaru 2007) specifying amount/quantity.

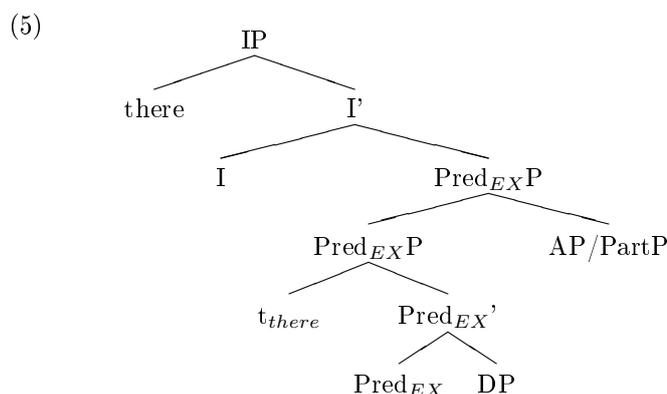
For the *there*-V sentences, I showed in chapter 3 that they pattern with locative inversion structures in various respects, most prominently w.r.t. *wh*-movement: extraction of or from the post-verbal noun phrase is impossible. The two structures differ mostly in two respects: (i) *there*-V structures can be embedded under *expect*-type verbs, while locative inversion structures cannot and, (ii) *there*-V structures allow yes-no-question formation which is not possible for locative inversion structures. On the basis of a locative inversion analysis adapted from Hoekstra and Mulder (1990) and Broekhuis (2005), I proposed that *there*-V structures are to be analysed as in (4).



The major difference between *there*-V structures and locative inversion is that the PP in locative inversion structures topicalizes, i.e. it moves to a higher TopP projection, while *there* in *there*-BE structures can remain in Spec,IP.

There-BE constructions with adjectives, present and past tense participles have been argued to be ambiguous between a complex-NP analysis and an

analysis in which these constituents are adjuncts to Pred_{EX}P (or possibly IP) as given in (5).



The crucial criterion for this analysis is *wh*-extraction from AP or PartP. It shows that complements to the adjective or participle are more or less extractable, while adjuncts are not. Thus, neither a small clause analysis nor a passive/present progressive analysis is possible for these structures.

Taken together, the two chapters on English *there* showed that *there* is a proform. In *there*-BE structures it is the subject of predication, and it either refers to a situation/location in the context or the here and now of the speaker. The situation/location can be further specified by a PP adjunct. In *there*-V structures, *there* is a predicate and it either refers to a location provided by the discourse or it is related to a PP in the same clause. Thus, *there* is not an expletive in either the *there*-BE or the *there*-V structures. Its perceived lack of meaning arises from the fact that it can have a non-deictic interpretation and be further specified/linked to a PP in the same clause.

Chapter 4, investigated to what extent German *da* can be an expletive. I showed that *da* in its general use mostly acts as a proform and is used either as an adverbial or predicate (it also can be used as a verbal particle). It can pick up locations, times and complex situations from the context. Syntactically, it behaves like argument pronouns in that it prefers to move to the left edge of the middle field. With respect to the question whether *da* is like English *there*, the answer is yes to the extent that *da* can also give rise to existential meanings when it occurs in the structure *da be NP*. Since I have argued that *there* is not an expletive in these structures in the strict sense, *da* is not an expletive in the strict sense in these structures, either. Finally, I looked at a number of other cases in which *da* seems not to refer back to a situation in the context, and I showed that they are best understood by analyzing *da* as an element that introduces a topic situation which is further modified in the clause. There is one case in which *da* can be argued to be an expletive: cataphoric *da* can act

as a place-holder for adverbial clauses (and to some extent PPs). In this use it behaves just like the correlates *es* and *it*. Under the definition that we started off with, *da* is an expletive in these cases.

Chapter 5 discussed the implications of the results of the study for research in other fields. First, the analysis implies that *existential* structures are entirely different from locative structures. In languages that do not have an expletive, the difference between existential and locative sentences seems to be nothing more than a difference in word order (cf. Freeze 1992). However, this is not true. Investigating existential sentences in Serbian, a language that lacks an expletive element, I showed that existential structures differ from locative sentences in more respects than just word order: (i) the prepositional phrase is optional; (ii) in the present tense the verb used is *ima* while in the past tense it is *be*; (iii) the verb and the noun phrase do not agree in ϕ -features; (iv) the noun phrase appears in genitive case. I showed that the core proposal given for English existential sentences also accounts for the Serbian data, with only a few adjustments. First, in Serbian, the present tense expression of Pred_{EX} is *ima* ‘has’. Second, the fact that the noun phrase and the verb do not agree is expected, as agreement in English has been shown to be a special property of *there*, which is not present in Serbian. Third, the genitive case is a result of a special property of Serbian, where quantified noun phrases are case-marked genitive in general. The successful extension of the analysis to English further supports the proposal.

The findings of the present study also have repercussions for the investigation of the Extended Projection Principle. *There*-sentences figure prominently in the analysis of the observation that in English, Spec,IP is always filled. *There*-sentences are taken to show that it is not always the subject that moves into this position and therefore, the driving force of movement cannot be a property of the subject. Instead, recent theoretical work has proposed that a special feature, the so-called EPP or OCC-feature is responsible for this type of movement. From the analysis presented in this study, we have seen that *there* in *there*-BE sentences acts as the subject of predication, thus, these structures are not a good argument for a special feature that cannot be directly linked to subject properties. However, we have also seen that in *there*-V structures, and predicate inversion structures in more general, it is indeed not the subject of predication that moves to the first position. Thus, these structures are the crucial ones to investigate the nature of the observation that Spec,IP is always filled in English.

The analysis of English *there* and German *da* suggests that we have to add a further type of element to the classification of expletive elements in Germanic. Expletives in existentials are a separate category, limited to the special predication structure of these structures. English *there* and German *da* occur in these positions, but not with other expletive constructions.

Taken together, the present study has shown that English *there* and German *da* are not expletives in the sense that they do not have a meaning of their own. Rather, they are proforms that stand for a situation and can be modified by further prepositional phrases in the noun phrase. This latter fact gives the (wrong) impression that they are meaningless. However, a careful study of these structures shows that the so-called expletive is a meaningful element that is necessarily present in existential structures while the additional PP is optional.

Magnitude Estimation Experiment

A.1. Introduction

Aissen (1975) observed that there is a difference between *there*-sentences with the verb ‘be’ (*there*-BE structures) and *there*-sentences with an unaccusative verb (*there*-V structures), with respect to *wh*-movement, embedding under non-assertive predicates, comparative deletion and negation.¹ In these respects, the *there*-V sentences pattern with locative inversion. This is illustrated in (1) for *wh*-movement in pseudocleft structures and embedding under non-assertive predicates in (2).

- (1) *Wh*-movement from *there*-V and locative inversion sentences
- a. *What there lives next door to me is a talking parrot.
 - b. *What on the front lawn of the church stands is three oak crosses.
 - c. What is there in the refrigerator?
- (Aissen 1975, 7)
- (2) Embedding under non-assertive predicates
- a. *The driver regrets that [...] there stepped out in front of his car a pedestrian.
 - b. *The newsman is reluctant to come because he doubts that in the middle of the courtyard stands a giant lipstick.

¹Aissen (1975) also distinguishes between verb types (stative verbs of location vs. active verbs of direction), a difference that is not relevant in this experiment; see the original paper for discussion. Furthermore, many of her examples are of the type *there V PP NP*. As these examples seem rather similar to heavy-NP-shift, I concentrate on the cases of *there V NP (PP)*.

- c. We regret that there is no possibility of a job here.
(Aissen 1975, 5)

This appendix reports the results of a Magnitude Estimation experiment (cf. Bard et al. 1996), which was set up mainly to test Aissen's findings with respect to *wh*-movement in question formation. I focus on *wh*-movement for the following two reasons. First, the discussion of the difference between *there-V* and *there-BE* structures is crucial to the analysis presented by Moro (1997) and thus, a broad empirical basis is necessary to argue against his approach. Second, *wh*-movement of the noun phrase is not entirely unrestricted with *there-BE* structures; extraction with *which XP* is regarded considerably worse than extraction with *what* and *how many* (due to the definiteness restriction cf. Heim 1987).

- (3) a. ??Which actors were there in the room? (Heim 1987, 27)
b. What is there in the refrigerator? (Aissen 1975, 7)
c. How many men do you think that there were t in the room?
(Moro 1997, 126)

The Magnitude Estimation technique is a useful tool to examine the question whether the *there-V* structure exhibits a similar sensitivity to the type of *wh*-item which might be overseen in traditional studies: Fine-grained judgements without a categorical grammatical/ungrammatical distinction allow us to see such constraints at work even in the range of what would traditionally be considered ungrammatical.

The study is set up to examine the following three questions with respect to *wh*-movement:

1. Is there a difference between *there-BE* and *there-V* structures?
2. Does the *there-V* structure pattern with locative inversion?
3. Is there a difference between existential structures of the type *there be/V NP* and structures of the type *there be/V NP PP*?

If the findings by Aissen (1975) are correct, the answer to the first question will be affirmative: we expect *there-BE* sentences to be sensitive to the type of *wh*-item extracted, cf. (3), but there should not be such a difference with the *there-V* construction. Furthermore, we expect that the answer to the second question will be negative: *there-V* structure and the locative inversion structures are expected not to allow for the extraction of the post-verbal noun phrase, independent of the type of *wh*-item. Finally, the last question was included as some studies assume a difference between true existential structures of the type *there be/V NP* (see 3.1 for discussion), and a structure of the type *there be/V NP PP* with a locative PP present. The null hypothesis is that there is no such difference.

A.2. The experimental set up

A.2.1. Magnitude Estimation

The Magnitude Estimation technique was developed in psychophysics to investigate gradedness in perception. It is used in this domain to test to what degree people perceive the increase/decrease in sounds or visual stimuli. Participants are presented with sounds of different loudness and asked to value the loudness in different grades. These values of perception are compared to the value of loudness measured. Thus, there is a major difference between these types of experiments and experiments that elicit grammaticality judgements: the former can be compared to independently obtained measurements, whereas this comparison is not available in the latter case. There is, however, a way to adjust the technique, exploiting cross-modality matching (Lodge 1981). The idea of cross-modality matching is that it is possible to express the grades of one modality, say loudness of a set of stimuli, in another modality, say length of lines. If participants can do this task, we can reasonably assume that they manage to use one of the two modalities to express the gradedness of a third. This is basically what is done in Magnitude Estimation, and it was shown to be applicable to grammaticality judgements in Sorace (1992), Bard et al. (1996), Sorace and Keller (2005), Cowart (1997), Keller (2000), Featherston (2005) (among others). Before participants are given sentences to be judged in numerical values, they have to express the gradedness of one modality (typically the length of lines) in numerical values. If they manage to do that, they can also match grammaticality with numerical values.

One advantage of this technique (over asking participants for judgements in an ordinal scale - for example 'ok ? *' is such a scale) is that the scores provided are numerical, and thus, can be subjected to much more advanced statistical procedures. A second advantage of the technique is that it makes it possible to measure fine-grained judgements for both grammatical and ungrammatical sentences, and in this way measure to what extent a violation of some principle of grammar gives rise to a decrease in grammaticality without resulting in a completely ungrammatical sentence. For example it has been shown that superiority effects are also at work in German, however, they do not lead to categorical ungrammaticality (Featherston 2005).²

The second advantage was decisive for choosing Magnitude Estimation for the present study. We know from previous studies that the *there-V* structures are considered less acceptable than the *there-BE* structures. The latter allows some types of *wh*-movement but not others, see (3). With Magnitude Estimation we can test whether the same effect is present with *there-V* structures or not, even if all the examples are less grammatical than the *there-BE* structures

²Not all principles of grammar seem to work the same way as superiority does, however. Keller (2000) distinguishes between hard constraints which lead to categorical ungrammaticality versus soft constraints which lead to a decrease in grammaticality that is not necessarily fatal.

to begin with. Additionally, it was reported that locative inversion structures are insensitive to the type of *wh*-item. If the *there-V* structure patterns with locative inversion, we expect all extraction types to be unacceptable to the same degree. Thus, this technique can provide us with further insights into the relations between the three constructions under discussion.

A.2.2. Design

In order to investigate the interaction of *there-V*, *there-BE* and the locative inversion construction with *wh*-movement experimentally, three independent variables were set up: Movement Type, Verb Type, and Construction Type. Each variable has several levels as illustrated in (4), (5), and (6). Movement Type distinguishes between the base order and three different types of *wh*-items extracted: *what*, *which NP* and *how many NP*.

- (4) Levels of Movement Type
- a. base (no movement)
 - b. what (extraction with *what*)
 - c. which (extraction with *which NP*)
 - d. howmany (extraction with *how many NP*)

The variable Verb Type distinguishes between sentences in which the main verb is the copula verb *be* and structures in which the main verb is an unaccusative verb (*appear*, *come* or *arrive*).

- (5) Levels of Verb Type
- a. be (with *be*)
 - b. verb (with an unaccusative verb)

Finally the variable *Construction Type* distinguishes between three different structures, given in (6). I label the third structure *inversion* but it is usually referred to as locative inversion. Henceforth I speak of the inversion construction referring to these locative inversion cases.

- (6) Levels of Construction Type
- a. existential: there V/be NP
 - b. locative: there V/be NP PP
 - c. inversion: PP V/be NP

Crossing these 3 variables results in 24 conditions, which are the following 24 different sentence structures. Each of the participants rated each of the conditions twice.

- (7) Movement Type: Base
- a. there be NP (existential BE)
 - b. there be NP PP (locative BE)

- c. PP be NP (inversion BE)
 - d. there V NP (existential V)
 - e. there V NP PP (locative V)
 - f. PP V NP (inversion V)
- (8) Movement Type: Extraction with *what*
- a. what bridge-V there be t (existential BE)
 - b. what bridge-V there be t PP (locative BE)
 - c. what bridge-V PP be t (inversion BE)
 - d. what did there V t (existential V)
 - e. what did there V t PP (locative V)
 - f. what did PP V t (inversion V)
- (9) Movement Type: Extraction with *which X*
- a. which X bridge-V there be t (existential BE)
 - b. which X bridge-V there be t (locative BE)
 - c. which X bridge-V PP be t (inversion BE)
 - d. which X did there V t (existential V)
 - e. which X did there V t PP (locative V)
 - f. which X did PP V t (inversion V)
- (10) Extraction with *how many X*
- a. how many X bridge-V there be t (existential BE)
 - b. how many X bridge-V there be t PP (locative BE)
 - c. how many X bridge-V PP be t (inversion BE)
 - d. how many X did there V t (existential V)
 - e. how many X did there V t PP (locative V)
 - f. how many X did PP V t (inversion V)

The 24 structures are illustrated with (different) lexical sentences in the following:

- (11)
 - a. There was an error message.
 - b. There was a white rabbit in the dark blue hat.
 - c. Down the quiet street was an army truck.
 - d. There came a real burglar.
 - e. There arrived an extra coach in front of the main station.
 - f. At the last hearing arrived a new witness.
- (12)
 - a. What did you reckon there was?
 - b. What did you think there was at the scene of the crime?
 - c. What did you suppose down the dark well was?
 - d. What did there come?
 - e. What did there appear in the arena?
 - f. What did on the noticeboard appear?
- (13)
 - a. Which message did you suppose there was?
 - b. Which rabbit did you reckon there was in the dark blue hat?

- c. Which truck did you say down the quiet street was?
 - d. Which burglar did there come?
 - e. Which coach did there arrive in front of the main station?
 - f. Which witness did at the last hearing arrive?
- (14)
- a. How many cranes did you reckon there were?
 - b. How many policemen did you think there were at the scene of the crime?
 - c. How many lifts did you suppose down the dark well were?
 - d. How many miners did there come?
 - e. How many cubs did there appear in the arena?
 - f. How many advertisements did on the noticeboard appear?

Note that in the cases of extraction from the structures with the copula *be* an additional layer of embedding with a bridge verb was used in order to ensure that the participants have the correct interpretation of the sentences. To illustrate this point consider the locative *there*-BE structure given in (15-a) and the corresponding *wh*-question in (15-b). The question is ambiguous between the intended base structure and another in which *there* is interpreted as the predicate in the structure, illustrated in (15-c). This ambiguity disappears when the relevant example is embedded under a bridge verb.

- (15)
- a. There were five witnesses at the last hearing.
 - b. How many witnesses were there at the last hearing?
 - c. Five witness were there, at the last hearing.
 - d. How many witness did you say there were at the last hearing?

With the *there*-V sentences this adjustment was not necessary, as *do*-support ensures that no ambiguity arises:

- (16)
- a. There came an army truck down the street.
 - b. What did there come down the street?

However, this disambiguation comes with the cost of embedding adding a complication that is not entirely controlled for. This seems unproblematic for the structures with *there be NP (PP)*, as these may occur with all types of embedding. However, in locative inversion structures with the verb *be* this might have an effect. We know that embedding under non-assertive predicates is problematic, however, embedding under bridge verbs is acceptable as the following examples show.

- (17) Mary pointed out that under the awning could be seen an old piano.
(Rochemont and Culicover 1990, 88)

As the main focus of the experiment was on the differences between *there*-V vs. *there*-BE, this possible effect was tolerated. Another alternative would have been to use complex tenses. However, these are reported to be problematic for

locative inversion structures (see Levine 1989, 729). Thus, the possible effect of embedding is less disruptive for the major focus of this experiment and was therefore chosen.³

A.2.3. The lexical material

For the lexical material, I used 12 different sentences, which were controlled for syllable length (NP: 2-4; V:1-2, PP: 4-7; bridge verb: 1-2), word frequency (CELEX lemma lexicon⁴) and plausibility.

- (18) a. There arrived/was an extra coach in front of the main station.
 b. There arrived/was a new witness at the last hearing.
 c. There arrived/was a big crane at the construction site.
 d. There arrived/was a policeman at the scene of the crime.
- (19) a. There came/was an empty lift down the dark well.
 b. There came/was an old miner down the narrow shaft.
 c. There came/was an army truck down the street.
 d. There came/was a burglar down the hot chimney.
- (20) a. There appeared/was a tiger cub in the arena.
 b. There appeared/was an advertisement on the noticeboard.
 c. There appeared/was an error message on the blank screen.
 d. There appeared/was a white rabbit in the dark blue hat.

The choice for 12 different lexical variants is driven by the need to reduce the repetition of one and the same sentence as much as possible. As I tested each participant on all 24 conditions (the syntactic structures in (7)-(10)) twice, each participant had to judge 48 test sentences. With the 12 lexical variants, each lexical variant of the sentences above appeared 4 times per participant. Each lexical variant appeared in all 24 conditions ($12 \times 24 = 288$ sentences), which were equally distributed over 6 different lists with 48 sentences each ($288 : 6 = 48$).

In addition to the 48 test sentences each participant judged the following 5 filler sentences:

- (21) a. What Mandy want read next? (multiple violations)
 b. What did Jack eat it for breakfast? (resumptive)
 c. What did Mary ask who had taken? (subjacency)
 d. What did Nicky do in the holidays? (good1)
 e. Who did you meet in Tuscany? (good2)

³Alternatively, embedding could have been made another factor for investigation. However, this would have increased the complexity of the experiment and would have lead to 48 conditions instead of 24. If I had opted for this, it would not have been possible to check the structures twice with each participant.

⁴The CELEX Lexical Database, Release 2, 1995. Centre for Lexical Information, Max Planck Institute for Psycholinguistics, Nijmegen

These sentences provide us with a broad scale of very good to ungrammatical sentences, which makes it possible to interpret the relative judgements in a more absolute way as well. Even though this might be counterintuitive to the idea of Magnitude Estimation, it is nevertheless a useful procedure, and allows me to present the judgements to an audience that is not familiar with the statistical method and outcome of the experiment.

A.2.4. Procedure

The experiment was conducted in March 2005, with the help of the WebExp Software (cf. Keller et al. 1998).⁵ The software is a tool to collect data via the Internet. Participants can access and go through the experiment from their home computer. In order to control for distraction, participants that took too long to finish the questionnaire were excluded altogether. When logging on to the address of the experiment, participants were given an outline of the experiment, which described the tasks both for the two training sessions as well as for the experimental session. Before starting the experiment, participants had to fill in some personal data such as name, age, sex, handedness, and language region. The next step was the first training session, in which participants were asked to judge the relative length of lines in numerical values. To do this they had to assign a random non-zero positive value to the reference line. Then, they had to judge the length of seven further stimulus lines in relation to the reference line by giving numerical values. In a second training phase, participants were asked to give a value of their choice to a reference sentence and then judge the ‘naturalness’ of seven stimulus sentences in relation to this sentence in numbers, with larger numbers for more natural sounding sentences, smaller numbers for less natural ones. After the two training sessions, the experimental session started. The participants were given the same instructions, namely to judge the ‘naturalness’ of the relevant sentences in relation to the reference sentence. The reference sentence for the training phase and the experiment was the following:

(22) Which room don't you know where is?

A.2.5. Subjects

Participants were recruited by email with the help of colleagues in the UK, the US, the Netherlands and Belgium. Participation was incited by a drawing for one gift certificate worth 20EUR. 46 people participated in the online study, of which 5 were excluded as there were inconsistencies in the personal data that

⁵I would like to express my gratitude to Sam Featherston, who helped both with the conceptual outline as well as with the technical implementation of the experiment, and who ran the program on the server in Tübingen for me. Without his generous help, I would not have been able to conduct this experiment. Thanks to Tanja Kiziak as well who discussed the outline of the experiment with me as well. Any shortcomings are of course mine.

they provided. Two more participants were excluded as the scale they employed suggested rather categorical judgements (one participant used 0 and 1 as his/her scale, a second participant used 1, 50, 100). The 39 remaining participants were between 19 and 60 years old. There was a bias towards younger people with the overall mean age being 25.2 years, and 74.3% of all participants being 25 or younger. Furthermore 64% of the participants were female.

A.3. Results

A.3.1. Task comprehension

With the first training session - judging the length of lines in relation to a reference line - the participants were tested for the comprehension of the task. If they were able to judge the length of lines in numerical values appropriately, they can be taken to be able to express one type of modality (line length) in a different modality (numerical value). In order to test the adequacy of the judgements, the values given by the participants were divided through the value they provided for the reference line. If the ratio values correlate with the real ratio, participants satisfactorily fulfilled the task. And indeed, they did (Correlation coefficient: 0.947 (Pearson's Correlation), $p < 0.001$ both for all participants together and individually). Thus, we can safely conclude that the participants understood the concept of proportion as required and consider them able to express this concept in numerical values.

A.3.2. Overall results

In order to make the judgements by the participants comparable, the numerical results were transformed into z-scores, i.e., for each subject the mean of their judgements is set to zero and the standard deviation to 1.⁶ The advantage of this way of normalizing the judgements is that it not only sets the value of comparison to a common value across subjects, but also controls for differences in the scales that the subjects employed.

The results of the experiment in terms of z-scores are given in table A.1. Higher values express that the participants judged this type of sentence more natural than others. Note that the values do not present absolute values of grammaticality but judgements in relation to each other. Thus, sentence types are better or worse than others; an absolute score in terms of grammaticality as such cannot be read off the values. Furthermore zero does not express an absolute border of ungrammaticality but is the mean value of the judgements per participant.

In order to have a better impression of the scale that the participants provided, consider the mean judgements given for the filler sentences.

⁶I would like to thank Carel van Wijk for his precious help with the statistical analysis of the data. The remaining shortcomings are of course all mine.

		base	what	which NP	howmany NP
BE	existential	1.299	0.636	-0.173	1.110
	locative	1.261	0.763	0.060	0.904
	inversion	0.917	- 0.794	-0.795	- 0.744
VERB	existential	0.208	-0.706	- 0.704	-0.563
	locative	0.232	-0.526	- 0.510	-0.201
	inversion	0.576	-0.708	- 0.725	-0.752

Table A.1.: Judgements of Verb Type, Construction Type, and Movement Type (in mean z-scores)

- (23) a. What did Nicky do in the holidays? (good1): 1.239
 b. Who did you meet in Tuscany? (good2): 1.291
 c. What did Jack eat it for breakfast? (resumptive): -0.362
 d. What did Mary ask who had taken? (subjacency): -1.000
 e. What Mandy want read next? (bad): -1.348

The normalized judgements on the experimental items were subjected to an ANOVA with repeated measurements with four within factors:

- (24) Within factors for ANOVA for repeated measures
 (i) Movement Type (4 levels: Base, What, Which, Howmany)
 (ii) Verb Type (2 levels: Be, Verb)
 (iii) Construction Type (3 levels: Existential, Locative, Inversion)
 (iv) Order (2 levels: First and Second)

The first three factors come from the experimental design as described in (4) to (6). The factor Order takes into account that participants were tested on each structure twice. All factors showed a significant effect on the judgements (see below). The interactions of Verb Type, Movement Type and Construction Type are significant in all combinations at the $p < .001$ level. The interaction of the factors with Order is not significant⁷ except for the interaction of Verb

⁷Movement Type * Order: $F_1(3,36)=0.75$, $p=.52$; Construction Type * Order: $F_1(2,37)=1.26$, $p=.29$;

Type and Order ($F_1(1,38)=5.33$, $p<0.05$). Investigating the details by means of pairwise comparisons, the interaction proved to be significant only in the base form of the inversion structure ($F_1(1,38)=5.87$, $p<0.025$). The interaction of all other factors with Order is not significant.

A.3.3. The factor Verb Type

The factor Verb Type was set up to distinguish between the *there*-V structures and the *there*-BE structures, represented in the following pairs of examples. Recall that I refer to the *there*-structures without a PP (*there be/V NP*) as *existential* and the structures with a PP (*there be/V NP PP*) as *locative*; the structures of the type *PP be/V NP* I call *inversion* structures.

- (25) Existential
- a. There was a new witness.
 - b. There arrived a new witness.
- (26) Locative
- a. There was an empty lift down the dark well.
 - b. There came an empty lift down the dark well.
- (27) Inversion
- a. In the arena was a tiger cub.
 - b. In the arena appeared a tiger cub.

The contrasts between the a. and b. examples (and the respective extraction cases) are the concern of this section. There was a significant main effect of Verb Type ($F_1(1,38)=294.23$, $p<.001$).

The differences between the two types were evaluated in several pairwise comparisons, in order to see which differences are in fact statistically significant. As my major interest in this section is the contrast between the *there*-structures with *be* or an unaccusative verb (cf. (25) and (26)), let me consider this first. The structures with the verb were judged less acceptable than the structures with 'be'. This effect was significant in all combinations (for all $p<.001$) and is shown in (29) to (36).

For illustration purposes, I give judgements on sentences here and throughout this appendix as shown in table (28). The values are clustered to represent significant differences. Note that these values do not represent the mean judgement of the particular example, but the mean judgement of the respective example type.

Movement Type * Construction Type * Order: $F_1(6,33)=0.64$, $p=.70$; Verb Type * Construction Type * Order: $F_1(2,37)=0.33$, $p=.71$;
 Movement Type * Verb Type * Construction Type * Order: $F_1(6,33)=1.07$, $p=.38$

(28) Scale for Magnitude Estimation judgements

1.0 - 1.3	+++	0.0 - -0.1	-
0.6 - 0.9	++	-0.2 - -0.4	--
0.3 - 0.5	+	-0.5 - -0.8	---
0.1 - 0.2	+/-		

- (29) a. +++ There was a new witness.
 b. +/- There arrived a new witness.
- (30) a. +++ There was an empty lift down the dark well.
 b. +/- There came an empty lift down the dark well.
- (31) a. ++ What did you suppose there was?
 b. --- What did there come?
- (32) a. +++ What did you reckon there was in the dark blue hat?
 b. --- What did there arrive in front of the main station?
- (33) a. - Which crane did you reckon there was?
 b. --- Which miner did there come?
- (34) a. +/- Which policeman did you think there was at the scene of the crime?
 b. --- Which cub did there appear in the arena?
- (35) a. +++ How many messages did you suppose there were?
 b. --- How many burglars did there come?
- (36) a. ++ How many rabbits did you reckon there were in the dark blue hat?
 b. -- How many coaches did there arrive in front of the main station?

Thus, we find a first difference between *there*-BE and *there*-V structures: the latter were judged less natural than the former in all paradigms.

Turning to the inversion structure (*PP be/V NP*), the structure with an unaccusative verb was judged less natural than the one with the *be* ($p < .001$).

- (37) a. ++ In the arena was a tiger cub.
 b. + In the arena appeared a tiger cub.

This difference disappeared under *wh*-movement. This is illustrated in (38) for the extraction with *what*, but it also holds for the extraction with *how many X* and *which X*:⁸

- (38) a. --- What did you say down the quiet street was?
 b. --- What did at the building site arrive?

⁸Pairwise comparison of BE vs. V under (i) extraction with *what*: $p = .95$; (ii) extraction with *which*: $p = .26$; (iii) extraction with *how many*: $p = .92$.

Note that the significant difference in the base form versus the non-significant difference under extraction might also be due to a further layer of embedding with the inversion structure with *be* as described above, cf. (8)-(10). Thus, no conclusion can be drawn from this fact.

Summarising the major findings in a different way, we can say that in inversion structures, the factor Verb Type had a significant effect only in the base form, but not in the *wh*-extraction cases, a fact that might be due to the setup of the study. However, what is clear from the study here is that there is indeed a difference between the *there*-BE constructions and the *there*-V constructions all across the paradigm, with *there*-BE consistently judged higher than the corresponding *there*-V cases.

A.3.4. The factor Movement Type

The factor Movement Type was set up in order to investigate two relevant sets of data. First of all, it has been reported that the definiteness effect with the *there*-BE structures also shows up under *wh*-movement (Heim 1987) with *which*-extraction being less acceptable than extraction with *how many* and *what*. Secondly, the factor Movement Type allows us to establish whether the *there*-V structures pattern with the *there*-BE structures or the inversion structure. If they pattern with the *there*-BE structure we expect them to exhibit the definiteness restriction as well. If they pattern with the locative inversion construction we expect no differences between the various types of extraction. The factor Movement Type had a significant main effect ($F_1(3,36)=215.42$, $p<.001$). The results are illustrated in figure A.1.⁹

(i) Existential *there*-BE. In a number of pairwise comparisons, the structures were found to be significantly different from each other in the existential *there*-BE structure ($p<.005$) except for the pair base vs. *howmany* ($p=.28$). Thus, the base order and *how many* extraction are judged equally acceptable, whereas *what*-extraction is slightly worse than those. *Which*-extraction is judged considerably less natural. This is illustrated in the following examples:

- (39) a. +++There was an extra coach.
 b. ++What did you say there was?
 c. -Which witness did you suppose there was?
 d. +++How many advertisements did you say there were?

(ii) Locative *there*-BE. With the locative *there*-BE construction I found a similar pattern. The base structure was judged more natural than all the extraction types ($p<.025$). Within the extraction types, *which*-extraction was

⁹The lines in the figures here and below do not represent a continuum, but link two (or more) separate points. The lines are chosen for ease of illustration.

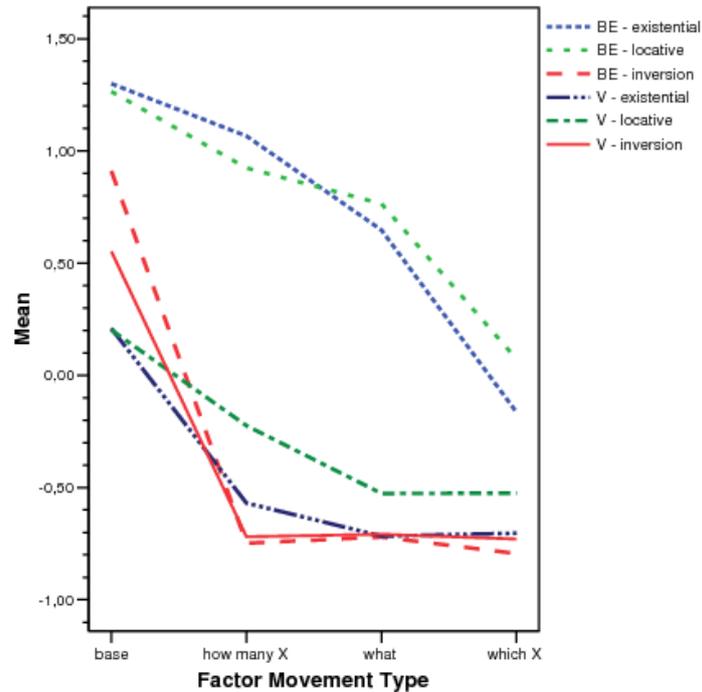


Figure A.1.: For all combinations of Verb Type and Construction Type, judgements by Movement Type

judged far less natural than extraction with *what* and *how many* ($p < .001$). Differences between *what* and *how many* turned out to be not significant ($p = .79$). The effects are illustrated in the following examples:

- (40)
- a. +++ There was a policeman at the scene of the crime.
 - b. ++ What did you reckon there was in the dark blue hat?
 - c. +/- Which lift did you suppose there was down the dark well?
 - d. ++ How many rabbits did you reckon there were in the dark blue hat?

Thus, the *there*-BE structures exhibit the definiteness effect as reported by Heim (1987), with *which*-extraction being considerably worse than the other extraction types.

(iii) **Existential *there*-V.** Turning to the existential *there*-V construction, we see that the base was significantly different from the *wh*-extractions ($p < .001$), but the *wh*-items themselves were not statistically different. The base structure

was judged considerably more natural than the extraction structures.¹⁰

- (41) a. +/- There came an old miner.
 b. --- What did there come?
 c. --- Which miner did there come?
 d. --- How many burglars did there come?

(iv) Locative *there-V*. With the locative *there-V* construction, the base structure was judged significantly more natural than the extraction structures ($p < .001$). Between the *wh*-items, *how many* differed significantly from *what* and *which* ($p < .001$), whereas *what* and *which* did not ($p = .80$).

- (42) a. + There appeared an advertisement on the noticeboard.
 b. --- What did there arrive at the last hearing?
 c. --- Which advertisement did there appear on the noticeboard?
 d. -- How many coaches did there arrive in front of the main station?

(v) Inversion structures. Finally, in the inversion constructions, the base was judged significantly more natural than all extraction cases, with the individual *wh*-items not being different from each other. This generalization holds for both the *be*- and verbal variant.¹¹ Note again that the judgements in (43-b)-(43-d) might be influenced by the further layer of embedding with the BE-structures.

- (43) a. ++ At the station was an extra coach.
 b. --- What did you say on the noticeboard was?
 c. --- Which witness did you suppose at the last hearing was?
 d. --- How many advertisements did you say on the noticeboard were?
- (44) a. + At the station arrived an extra coach.
 b. --- What did on the noticeboard appear?
 c. --- Which witness did at the last hearing arrive?
 d. --- How many advertisements did on the noticeboard appear?

Summarising, we can say that the *there*-BE constructions (both locative and existential) are sensitive to the type of *wh*-item extracted, whereas the inversion constructions are sensitive to *wh*-movement in general, but not to the type of *wh*-item extracted. The existential *there-V* construction clearly patterns with

¹⁰P-values for existential *there-V* structures: What vs. Which: $p = .87$; What vs. Howmany: $p = .06$; Which vs. Howmany: $p = .07$.

¹¹P-values for the inversion cases with the verb *be*: Base vs. What/ How Many/ Which: $p < .001$; What vs. Which: $p = .17$; What vs. Howmany: $p = .83$; Which vs. Howmany: $p = .35$.
 P-values for the inversion cases with unaccusative verb: Base vs. What/ How Many/ Which: $p < .001$; What vs. Which: $p = 1$; What vs. Howmany: $p = 1$; Which vs. Howmany: $p = 1$.

the inversion structures in this way. The locative *there*-V construction is the odd one out, as *how many X* extraction is judged better than *which*- or *what*-extraction.

A post-hoc test revealed that this effect is due to the different verb classes involved: Extraction with *how many* in the existential *there*-V structure was judged better with *appear* (mean z-score: -0.29) than with *arrive* (mean z-score: -.55) than with *come* (mean z-score: -0.78), $p < .005$.

Thus, it seems that *wh*-extraction with *appear* is judged slightly more acceptable which is in line with the distinction made in 3.2.6. Despite these differences, it can still be maintained that *wh*-movement has a stronger effect on the *there*-V structures than on the *there*-BE structures. Thus the minor difference does not change the overall conclusions of the results presented in this appendix.

A.3.5. The factor Construction Type

The factor Construction Type was set up in order to investigate two sets of differences. First, I wanted to know whether the *there*-structures differ from the inversion structures. Second, I wanted to find out whether there is a difference between the existential structure (*there be/V NP*) and the locative structure (*there be/V NP PP*). The contrasts that we are interested in are illustrated with the following sets of examples:

- (45) BE-structures
- a. There was a new witness.
 - b. There was an empty lift down the dark well.
 - c. In the arena was a tiger cub.
- (46) V-structures
- a. There arrived a new witness.
 - b. There came an empty lift down the dark well.
 - c. In the arena appeared a tiger cub.

The factor Construction Type had a significant main effect ($F_1(2,37) = 103.96$, $p < .001$). The outcome is illustrated in figure A.2.

In multiple pairwise comparisons, there was no significant difference between existential and locative structures with the *there*-BE structures except for the following case: under extraction with *which* in the *there*-BE version, the locative structure was judged more natural than the existential structure ($p < .05$), illustrated in the following pair.¹²

- (47) a. -Which witness did you suppose there was?
 b. +/-Which crane did you reckon there was at the building site?

¹²P-values for the *there*-BE structures: base $p=1.0$; extraction with *what*: $p=.48$; extraction with *how many* $p=.17$

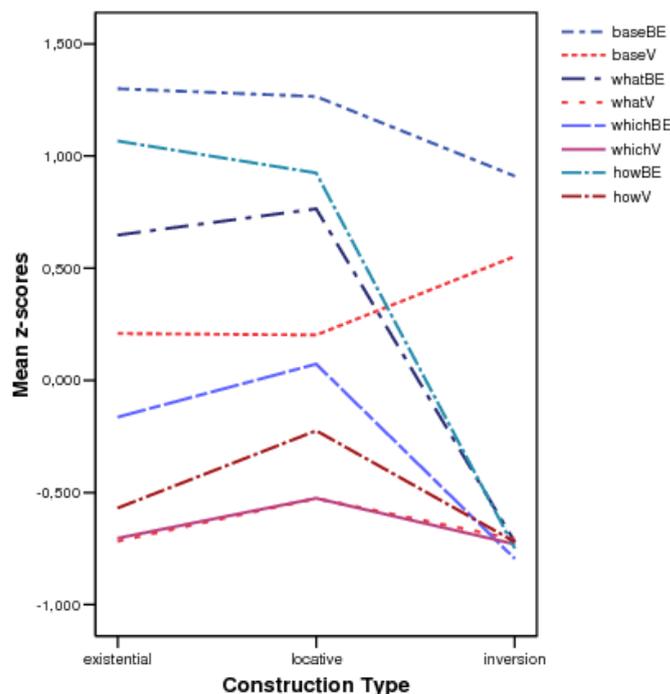


Figure A.2.: For each combination of Movement Type and Verb Type, judgements by Construction Type

In the *there*-V paradigm, the differences between the existential and the locative structure turned out to be significant only under extraction of *how many* ($p < .001$).¹³ In this case, the locative structure was judged more natural than the existential *there*-V structure ($p = .001$) as illustrated in the following example. Note that this is the same effect as we saw in the movement type.

- (48) a. ---How many coaches did there arrive?
 b. --How many witnesses did there arrive at the last hearing?

Turning to the inversion structures, they received significantly lower scores than the existential and locative *there*-BE construction throughout the paradigm ($p < .005$). This is illustrated in the following examples:

- (49) a. +++There was an advertisement.
 b. +++There was an error message on the blank screen.
 c. ++In the dark blue hat was a white rabbit.

¹³P-values for the *there*-V structures: base $p = 1.0$; extraction with *what* $p = .32$; extraction with *which* $p = .06$;

- (50) a. ++What did you suppose there was?
 b. ++What did you reckon there was at the building site?
 c. ---What did you think at the scene of the crime was?
- (51) a. -Which advertisement did you say there was?
 b. +/-Which message did you suppose there was on the blank screen?
 c. ---Which rabbit did you reckon in the dark blue hat was?

The inversion structure was different from both the existential and locative *there-V* in the base-form, with the *there-V* structures judged less natural ($p < .005$).

- (52) a. +There appeared a white rabbit.
 b. +There came an army truck down the quiet street.
 c. ++Down the hot chimney came a real burglar.

Under extraction the inversion structure was not significantly different from the existential *there-V* structure.¹⁴

- (53) a. ---Which rabbit did there appear?
 b. ---Which burglar did down the hot chimney come?

However, the inversion structure was different from the locative *there-V* structure under extraction of *how many* ($p < .001$) and *which* ($p = .050$).¹⁵ In the latter case, the locative *there-V* structure was judged more natural than the inversion structure, illustrated in the following examples:

- (54) a. --How many trucks did there come down the quiet street?
 b. ---How many burglars did down the hot chimney come?

What the results presented here show is first, that the existential *there-BE* structure is not entirely equivalent to the locative *there-BE* structure. The former is judged more natural than the latter under extraction with *which*. I suspect that the differences observed here are due to the presence vs. absence of more lexical material with the PP. This makes it easier to find a context for the example. Furthermore, the same holds for the existential vs. the locative *there-V* structures, where under extraction with *how many* the locative structure is judged more natural.

The inversion structure is clearly different from the existential and locative *there-BE* structure in all cases. In comparison to the *there-V* structure, the differences are not as clear-cut. In the base-form the locative inversion structure was judged better than both the existential and the locative *there-V* structure. This difference from the existential *there-V* structure disappeared under extraction. Compared to the locative *there-V* structure, the inversion

¹⁴P-values inversion structure vs. existential *there-V* structure: extraction with *what* $p = 1$; extraction with *which* $p = 1$; extraction with *how many* $p = .11$;

¹⁵P-values locative *there-V* vs. inversion: extraction with *what* $p = .16$; extraction with *which* $p = .065$;

structure is different as it was judged less natural than *which*-extraction and *how many*-extraction.

A.3.6. The factor Order

All participants were tested on each condition twice. Overall, participants judged the second occurrence of a construction better ($F_1(1,38) = 9,700$, $p < .005$). In a number of pair-wise comparisons, the difference between the first and second type of example proved to be significant only in the existential *there*-BE structure under *which*-extraction ($p < .025$), where the first occurrence was judged on average considerably worse (mean z-score: $-.358$) than the second occurrence (mean z-score: $.013$). The interaction of order and verb type is significant only in the base of the inversion structure ($F_1(1,38) = 5,869$, $p < .025$). That order is a relevant factor in judgements has been reported (cf. Schütze 1996, 134), but the random presentation of sentences should have balanced the overall effect of order.

A.4. Summary

A.4.1. *There*-BE vs. *there*-V

One of the major questions underlying this study was the following: are there differences between the *there*-BE construction and the *there*-V construction? The results of the experiment give an answer in the affirmative. First of all, they clearly differ in the level of acceptability. Thus, the *there*-BE construction consistently received higher absolute judgments (in mean z-scores) than the respective *there*-V constructions (cf. (29) and (30)).

A second difference between the *there*-V constructions and the *there*-BE constructions is that the latter are sensitive to the type of extracted *wh*-item in a way that the *there*-V constructions are not. Thus, while the acceptability of the *there*-BE constructions varies with the type of the *wh*-item extracted (cf. (39) and (40)), the level of acceptability decreases through *wh*-movement with the *there*-V constructions (cf. (41) and (42)). In other words, *wh*-movement is possible but restricted with *there*-BE structures, while it is categorically ruled out with the *there*-V structure.¹⁶

A.4.2. *There*-V vs. inversion

The second question of the study was whether the *there*-V structure patterns with the inversion structure. The overall answer is affirmative, even though there is one difference between the existential *there*-V structure and the locative *there*-V structure. The former patterns with the inversion construction in

¹⁶The only exception from this pattern is *how many*-extraction with the locative *there*-V construction, which is slightly more natural than the other extractions. As pointed out already earlier, the reason for this is not entirely clear to me.

that the level of grammaticality is the same under *wh*-movement. They differ in the base construction where the inversion construction is judged higher. Furthermore, both of the constructions are insensitive to the type of *wh*-item that is extracted ((41) vs. (44)).

The locative *there*-V construction is similar to the inversion construction but not entirely the same: they do not differ in the base and under *what*-extraction. However, both with *which X* and with *how many X* extraction the locative *there*-V construction is judged slightly but significantly better. Thus, it seems that the locative *there*-V construction is the odd one out, neither patterning with the inversion structures nor with the *there*-BE structures.

A.4.3. *There*-BE vs. inversion

Considering the differences between the *there*-BE construction and the inversion structures, we saw that neither the existential nor the locative *there*-BE construction has much in common with the inversion construction. The inversion construction is consistently judged lower than the respective *there*-BE constructions. Furthermore, the two constructions behave differently under *wh*-movement: whereas the *there*-BE constructions are sensitive to the type of *wh*-movement (cf. (40) and (40)), the inversion construction is not (cf. (43)).

A.4.4. Existential vs. locative structures

The last goal of the experiment was to find out whether there is a difference between an existential construction (*there be/V NP*) and an locative construction (*there be/V NP PP*). The answer that the experiment provides is not entirely clear, however.

The data above show that the two variants of the *there*-BE construction, existential and locative, are judged similarly in most cases. The only exception is extraction of *which X* where the locative construction scores higher than the existential construction. Now the question is whether this effect gives us reason enough to think that the two structures should be considered different. I think not. The locative structure contains a PP that provides speakers with more information, which makes it easier to locate the sentence in a context. This might be more important with *which X* as they are discourse-linked (cf. Pesetsky 1987a). Even though this is speculative and requires further investigation, I think it is reason enough not to draw conclusions from this result of the study here.

The existential and locative structures are much more similar in other respects. First, they pattern similarly with respect to the overall pattern with *wh*-movement: *which*-extraction gives rise to a severe decrease in naturalness in both cases (see the illustration in figure A.1), a fact that has been linked to the so-called definiteness effect (cf. Heim 1987 among others).

Similarly, the evidence for a difference between the existential *there*-V construction and the locative variant is not clear-cut, either. On the one hand,

the judgements are not significantly different in the base form and with *what*-extraction. However, both under *which X*-extraction and *how many X* extraction, the locative construction score slightly but significantly better than the existential construction (cf. (48)).

Finally, the two structures differ not only in the level of acceptability, but also in the sensitivity to the type of *wh*-item extracted: whereas the differences with respect to *wh*-movement are not significant for the existential *there-V* construction (cf. (41)), *how many* extraction is judged significantly better than *what*- or *which*-extraction in the locative *there-V* construction (cf. (42)).

I suspect that this unclear picture is due to the additional information that the PP provides. This effect was not controlled for in the setup of the experiment. Therefore, the results do not allow us to draw firm conclusions about the differences between locative and existential structures.

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Samenvatting in het Nederlands

Dit proefschrift onderzoekt in hoeverre het Engelse *there* en het Duitse *da* in existentiële constructies expletief genoemd kunnen worden. Uitgangspunt voor het onderzoek is de definitie van *expletief* als betekenisloos element. Bijzondere nadruk wordt gelegd op existentiële constructies, omdat deze vaak met expletieve elementen voorkomen, terwijl er nog maar relatief weinig onderzoek gedaan is naar de precieze rol die expletieve elementen in deze constructies spelen.

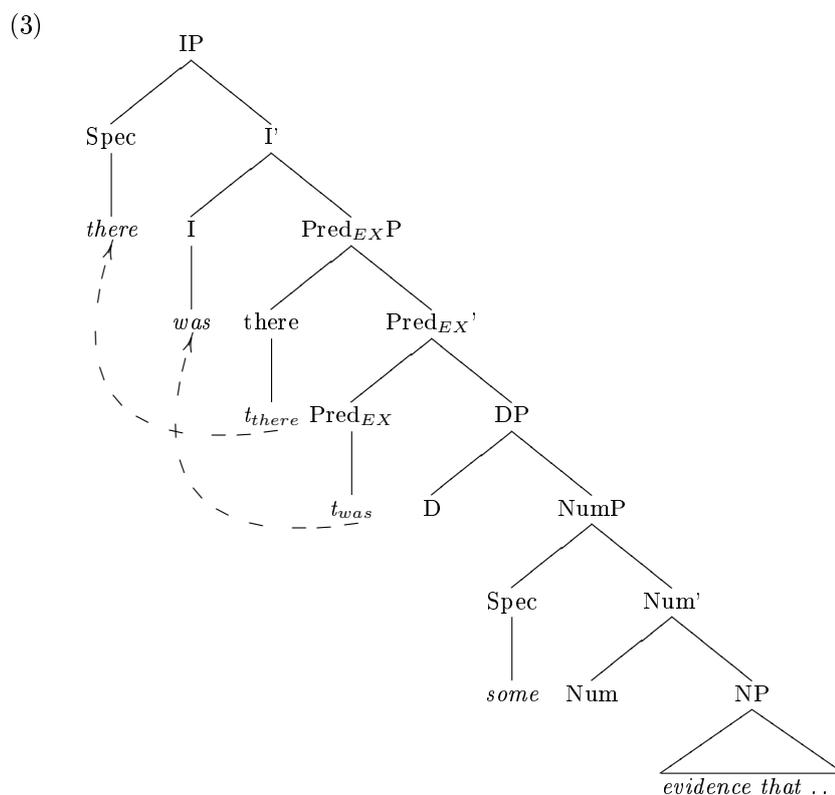
Voor het Engelse *there* moeten twee verschillende constructies onderscheiden worden: de *there-BE* constructie en de *there-V* constructie. Zoals de naam al zegt, verschijnt *there* in de eerste constructie met het koppelwerkwoord *be*, en in de tweede constructie met een ander hoofdwkwoord dat meestal onaccusatief is. Deze twee constructies verschillen ook in andere opzichten. Uit een ‘Magnitude Estimation’ experiment wordt bijvoorbeeld duidelijk dat het onderwerp van een *there-BE* constructie *wh*-verplaatsing kan ondergaan, terwijl dit onmogelijk is in de *there-V* constructie. Dit wordt geïllustreerd in de volgende voorbeelden, waarbij de oordelen variëren van — (meest gemarkeerd) tot +++ (minst gemarkeerd):

- (1) *Wh*-verplaatsing in *there-BE* zinnen
 - a. ++What did you say there was?
 - b. -Which witness did you suppose there was?
 - c. +++How many advertisements did you say there were?
- (2) *Wh*-verplaatsing in *there-V* zinnen
 - a. ---What did there come?
 - b. ---Which miner did there come?
 - c. ---How many burglars did there come?

Verder verschillen de twee constructies in (i) de mogelijkheid van subextractie uit het postverbale subject, (ii) de mogelijkheid om de constructie in bepaalde

contexten in te bedden, en (iii) de mogelijkheid van VP-vooropplaatsing en VP-deletie. De *there*-BE constructie staat dit allemaal wel toe, maar de *there*-V constructie niet.

Op grond van deze empirische verschillen wordt voorgesteld de twee constructies op verschillende wijzen te analyseren. De complete structuur van de *there*-BE zinnen is te vinden in (3).



De *there*-BE constructie is een existentiële constructie waarin *there* een belangrijke rol speelt: *There* is een pro-vorm voor de spatio-temporale locatie en de constructie drukt uit dat er een bepaalde hoeveelheid materiaal of aantal individuen met een bepaalde 'eigenschap' in deze situatie aanwezig is/zijn. In (4), bijvoorbeeld, wordt een spatio-temporale situatie, namelijk het hier-en-nu van de spreker, gekarakteriseerd als een situatie waarin een aantal behandelingen mogelijk zijn die de kwaliteit van het leven van bepaalde mensen kan verbeteren.

- (4) But there are a number of treatments which can make an enormous difference to the quality of people's lives. (BNC, text="CF5" n="10")

Deze betekenis van de *there*-BE constructie suggereert dat we te maken hebben

met een speciale predicatieve structuur: *there* is het subject van een predicatief hoofd van een bijzondere type, $\text{Pred}_{EX}P$. Het complement van dit hoofd is een complexe DP en het bijzondere aan dit hoofd is dat het het complement, dat niet van zichzelf predicatief is, in een predicatieve relatie met het subject brengt. Het resultaat van deze configuratie is dat de constructie geïnterpreteerd wordt als informatie-structurele predicatie: het is een thetische uitspraak over een situatie.

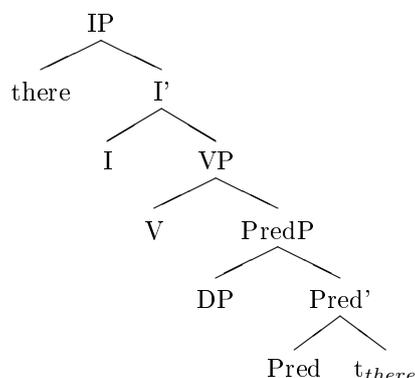
De existentiële betekenis van de *there*-BE constructie ontstaat door de complexe DP-structuur. Volgens o.m. Higginbotham (1987) introduceert het D-niveau een variabele, die door existentiële afsluiting wordt gebonden. Dit proces is, per definitie, alleen mogelijk als het D-niveau geen fonetisch gerealiseerd materiaal bevat (en er dus geen bepaald lidwoord of kwantificeerder aanwezig is). Deze aanname wordt ondersteund door het feit dat de existentiële betekenis verdwijnt zodra het D-niveau wel fonetisch gerealiseerd materiaal element bevat: we krijgen dan de zogenaamde ‘lijst’ lezing in (5).

- (5) A: Did we call everyone?
B: No, There’s still John and Bill.

De aanname dat het D-niveau leeg moet zijn, stelt ons in staat de overeenkomsten en de verschillen tussen de *there*-BE zinnen en de koppelwerkwoordconstructies te verklaren. Verder kunnen we op deze wijze een syntactische analyse van het definitie-effect geven.

There-V zinnen gedragen zich anders dan *there*-BE zinnen. Zij hebben een aantal kenmerken gemeen met de zogenaamde locatief inversie-constructies (zoals *Down the hill rolled a baby carriage*). Op grond van deze observatie wordt voorgesteld deze twee constructies op dezelfde wijze te analyseren. Er zijn meerdere analyses voor de locatief inversie-constructie beschikbaar en ik volg de analyse van Hoekstra en Mulder (1990) en Broekhuis (2008). In deze analyses is de PP een predicatief element, dat vanuit zijn basispositie naar de Spec,IP positie (subjectpositie) verplaatst wordt. Wanneer de PP functioneert als topic, wat meestal het geval is, verplaatst hij vanuit Spec,IP door naar Spec,TopP. Deze analyse kan op volgende wijze op de *there*-V constructie toegepast worden. De pro-vorm *there* wordt in dezelfde positie gegenereerd als de predicatieve PP in de locatief inversie-constructie en wordt vervolgens naar Spec,IP verplaatst. Deze analyse komt overeen met wat Moro (1997) voor *there* in het algemeen voorstelt, maar ik laat zien dat ze alleen voor de *there*-V constructie adequaat is. De volledige structuur van de *there*-V constructie is gegeven in (6).

(6)



Samenvattend kunnen we zeggen dat het Engelse *there* in beide constructies betekenis heeft en dus volgens de hierboven gegeven definitie niet expletief is: het is een pro-vorm voor een spatio-temporele locatie. Deze spatio-temporele locatie kan door andere PPs verder gespecificeerd worden, maar dat laat alleen maar zien dat *there* een deiktische vorm is en niet dat het geen betekenis zou hebben.

Tegen de achtergrond van de resultaten met betrekking tot het Engelse *there* wordt het Duitse *da* geanalyseerd. Omdat er nog geen gedetailleerde syntactische analyse van het Duitse *da* bestaat, wordt eerst de algemene syntaxis van *da* beschreven en geanalyseerd. *Da* is in het algemeen een pro-vorm, die naar een locatie, temporele of complexe situatie in de context verwijst. Syntactisch gedraagt het zich als een pronomina: het wordt net als de pronomina voorin in het middelveld geplaatst, hoewel het de pronomina wel moet volgen. In de meeste gevallen kan een antecedent in de context gevonden worden. De voor dit proefschrift interessantere gevallen zijn echter die voorbeelden waarin *da* geen antecedent blijkt te hebben. Dit is mogelijk in koppelwoordconstructies met een existentiële lezing. Dit type zinnen kan op dezelfde manier als de *there*-BE constructie geanalyseerd worden. Verder zijn er nog zinnen waarin *da* niet naar een situatie verwijst die in de context gespecificeerd is, maar deze situatie zelf introduceert, die dan nader beschreven wordt in de zin. Er is slechts één constructie waarin *da* geen eigen betekenis blijkt te hebben: in deze constructie, die geïllustreerd wordt in (7), verwijst *da* naar een bijzin die later volgt.

- (7) Da lacht mir das Herz, [wenn ich so viel Menschen sehe].
 DA lacht mij.DAT het hart, wanneer ik zo vele mensen zie
 'Ik word er helemaal opgetogen/vrolijk van als ik zoveel mensen zie!
 (COSMAS II, M01/110.80125 Mannheimer Morgen, 23.10.2001)

Deze mogelijkheid voor *da* blijkt overeen te komen met die van *it*, *het* of *es* in bijvoorbeeld *He made it clear that he prefers to come home late*. Verschil is

wel dat *it* alleen naar argumenten kan verwijzen, terwijl de bijzin in (7) een adverbiale bepaling is.

Omdat dit soort verwijsrelatie tussen pro-vorm en antecedent een algemene eigenschap van pro-vormen lijkt te zijn, is het niet zinvol in dit geval van een expletief *da* te spreken. Samenvattend kunnen wij daarom zeggen, dat *da* geen expletief is. Het gedraagt zich in sommige gevallen hetzelfde als het Engelse *there* (namelijk in existentiële constructies), maar dat is geen reden om *da* expletief te noemen, omdat we gezien hebben dat *there* in deze constructies evenmin een expletief is.

De resultaten van dit proefschrift roepen verschillende vragen op. Is de gegeven analyse voor existentiële constructies ook van toepassing op talen die geen pro-vormen zoals *there* hebben? En wat betekenen deze resultaten voor de syntactische theorie in het algemeen en meer in het bijzonder voor de analyse van expletieve elementen? De eerste vraag kan positief beantwoord worden, wat in detail geïllustreerd wordt aan de hand van het Servisch: op de positie van het Engelse *there* kan in het Servisch een PP staan of, als die niet aanwezig is, een lege pro-vorm. Voor de tweede vraag is in het bijzonder de vraag naar de consequenties voor het EPP interessant. Het Engelse *there* wordt vaak als argument gebruikt voor de aanname van een dergelijk principe; het gebruik van *there* wordt gemotiveerd door aan te nemen dat het inflectionele hoofd een EPP kenmerk heeft (het Extended Projection Principle, het principe dat onder meer verantwoordelijk geacht wordt te zijn voor de verplichte aanwezigheid van een subject in de zin), dat de aanwezigheid van een specificieerder afdwingt zodat insertie van *there* nodig is, om deze positie te vullen. De resultaten van dit proefschrift maken echter duidelijk, dat *there* in de *there*-BE constructie niet in Spec,IP wordt basisgegenereerd, maar in een lagere positie. Het moet op dezelfde manier verplaatst worden als subjecten van andere werkwoorden. Alleen de *there*-V structuren, en locatief inversie-constructies in het algemeen, kunnen meer zeggen over de aard van het EPP. Dit is echter een onderwerp dat het bestek van dit proefschrift te buiten gaat en daarom in toekomstig onderzoek behandeld moet worden. Voor de analyse van expletieve elementen in de Germaanse talen is in ieder geval duidelijk dat het Engelse *there* in een aparte groep opgenomen moet worden: het is een pro-vorm voor spatio-temporale locaties en geen expletief.