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THE RESTRICTION ON PREDICATIVE
CODAS IN EXISTENTIAL
THERE-CLAUSES
THEORETICAL AND EMPIRICAL PERSPECTIVES

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The Restriction on Predicative Codas
in Existential *There*-Clauses

Theoretical and Empirical Perspectives

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Abbreviations and Conventions

BNC	British National Corpus
CED	Condition on Extraction Domains
DR	definiteness restriction
ES	existential sentence(s)
ILP	individual-level predicate
L1	first language
L2	second language
LR	logical representation
NNS	non-native speaker / learner
NS	native speaker
ODD	object-oriented depictive
PR	predicate restriction
SC	Small Clause
SLP	stage-level predicate
TI	<i>there</i> -insertion

Abbreviations of clausal constituents follow Haegeman and Guéron (1999) and Radford (2009), except a preference of IP over TP, following the majority of the literature discussed. No theoretical statement is intended. In the discussion of nominals, NP is generally preferred over DP (except in sections where the literature explicitly uses the term DP). For the coda position, this follows Delfitto (2006:214) in considering non-argument nominals as NP rather than full DPs.

The original numbering for quoted example sentences follows the citation of the source in square brackets. Thus, (Milsark 1974:113 [58]) refers to the example labeled (58) on page 113 of Milsark's 1974 thesis.

Modified and adapted example sentences are indicated accordingly. Example sentences without citations are by the present author and are usually common ES constructions with an NP and an AP plus a frame adverbial (e.g. *At Mike's party, there were many guests drunk*).

Judgments usually follow the sources unless noted otherwise; judgments for own examples are intuitions by the author.

Sentences taken from the BNC corpus and the rating study are also marked accordingly.

Graphs have been created with IBM® SPSS® Statistics 22.

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Abstract

The Predicate Restriction (PR) is a term used to describe the ban on certain kinds of predicates from occurring in the coda XP of existential sentences (ES) of the type *there be NP XP*. A common approach to the PR is that only stage-level predicates (SLP) are allowed in the XP position, whereas individual-level predicates (and especially NPs) are not allowed. This thesis will analyze and evaluate the different approaches to this restriction, starting with the work of Milsark (1974), who claims that the PR is directly connected to the Definiteness Restriction (DR) that allows only certain kinds of NPs in the existential construction. Other analyses argue that the difference in acceptability lies in the different argument structure of both ILP and SLP, the latter having an additional (“Davidsonian”) event argument (Kratzer 1995) that allows them to appear in the coda of existentials (among other constructions). This position is expanded in terms of a more detailed distinction between predicate classes (Jäger 2001) and questioned with regards to the Davidsonian analysis in general (Maienborn 2005; Katz 2000). Other analyses draw a connection to depictive adjuncts and derive the PR by a licensing mechanism thereon (McNally 1997; 2011).

This thesis pursues several questions, both theoretical and empirical: on the theoretical side, there are questions regarding the syntactic status of the XP, the distinction between SLP and ILP, as well as thoughts on the permissibility of NPs in coda position. The main empirical questions are whether the distinction between ILP and SLP that is suggested by Kratzer (1995) and further differentiated by Jäger (2001) is represented in the British National Corpus (BNC) for the existential construction and whether the contrast between predicates is also reflected in the ratings of a grammaticality judgment task.

Two empirical investigations pursue these questions: on the one hand, a corpus study using the BNC aims at testing the claim that only SLP occur in the coda of existential sentences. Evidence from the BNC shows that the traditional distinction into ILP and SLP is indeed reflected in the corpus material; there are, however, a few exceptions where ILP seem to appear as the coda either on their own or if they are followed by further material (such as constructions with *enough*) and even some potential NP predicates.

The second empirical investigation consists of a grammaticality rating study that tests for the difference in acceptability of SLP, ILP and NP in the construction. Results show that there is indeed a clear distinction in the ratings of the conditions under investigation, but also that the results were not exactly as predicted by the theories.

The overarching question of the empirical investigations is whether the results in both studies allow for a decision between one of the theories discussed in this thesis. Based on the evidence from the corpus and rating study, this is possible at least to a certain degree.

1 Introduction – The Predicate Restriction

1.1 The Phenomenon

This thesis is concerned with the Predicate Restriction (PR) on English existential sentences (ES), a restriction that allows only certain types of predicates to occur in the XP position after the NP in structures of the form *there be NP XP*. The contrast in acceptability is exemplified in the following examples:

- (1) There are some people sick. (Williams 1984:131 [1a])
- (2) *There are people tall. (Milsark 1977:11 [20a])
- (3) *There was a friend of mine an impostor. (Williams 1984:132 [6])

Despite their similar structure, the sentences show a clear difference in acceptability. (1) is perfectly fine whereas (2) is not acceptable for standard English. It is argued in the literature that the reason for this is the fact that these adjectives are of two different types, namely stage-level and individual-level predicates, respectively. (3) is not acceptable because NP like *an impostor* are generally not allowed to appear in this position.

Before going into the details of the PR, a definition and delimitation of the term *existential sentence* for the purpose of this thesis is called for. The definition of the term existential sentence employed here will largely be based on the definitions and properties described by Milsark (1974:3)¹ and Moro (2006:211). They both define the ES as having the following basic structure:

- (4) there – *be* – NP (– coda)

An existential sentence is introduced by existential *there*, which differs from deictic *there* in that it does not explicitly refer to a location. *there* in this position is often described as a ‘dummy’ or ‘expletive’ subject that does not contain any semantic meaning of its own and is only used to fill in the missing subject position of the sentence (cf. Huddleston and Pullum 2002:1391; Moro 2006:212 among others). It is followed by some form of the copula *be* (which may be accompanied by modals, forms of *have* and combinations thereof). The central constituent of the ES is the NP after the form of *be*. It is usually considered the true logical subject of the sentence (Huddleston and Pullum 2002:1391 for example use the term ‘displaced subject’ to refer to this NP; the term ‘pivot’ is also common, cf. McNally 2011:1831), which is represented in the structural subject position by the expletive (cf. Moro 2006:212). The NP is followed by an optional coda, which can take various forms (cf. below), but which is not necessary in the structure. A very basic ES may thus take the form exemplified in (5):

- (5) a. there *be* NP.
b. There are people.
(own examples)

¹ Page references are to the reprint by the Indiana University Linguistics Club (1976).

ES of this type are not very common² because they do not contain more information than just the fact that it is the property of people that they exist (cf. also Hartmann 2008:36, 170). This is why this ‘bare’ ES is usually followed by the optional coda,³ which adds information and thus specifies “the domain of existence of the individual or set of individuals” (Moro 2006:211). Note, however, that the bare existential is not ungrammatical, but may appear odd in some contexts. Huddleston and Pullum (2002:1393–1394) list five different forms the coda (which they call *extension*) might take:

- (6)
- a. bare existentials where the coda is \emptyset .
 - b. locative and temporal PP extensions.
 - c. predicative AP extensions.
 - d. infinitival extensions.
 - e. participial extensions.

In the version with the coda (7)a, the existential can be roughly paraphrased as (7)b:

- (7)
- a. There is NP XP.
 - b. An individual which is an instantiation of [NP] has property XP.
(McNally 1997:81)

The most important extensions for the purpose of this thesis are extensions of type (6)c, but there will also be occasional references to participial extensions of type (6)e. As far as locative and temporal PP extensions of type (6)b are concerned, there are no obvious limitations on temporal or locative modifications of the sentence (though note the few exceptions mentioned for non-existential sentences in McNally 1997:163–164). PP extensions also behave differently in respect to preposing, as the contrast between (8) and (9) shows. This is why they will only be referenced when they provide interesting arguments to the discussion at hand or for comparison issues.

- (8)
- a. There are girls at the party.
 - b. At the party, there are girls.
- (9)
- a. There are girls drunk.
 - b. *Drunk, there are girls.
(own examples)

ES with codas of types (6)c,e are collected in one of the subclasses of ES by Milsark called “Periphrastic ES”.⁴ They take the following form:

- (10) [_S there – AUX – *be* – NP – [_{VP} {V-ing / V-en / [_{PRED} AP]}] – Y] (Milsark 1974:90)

Returning to the PR, this classification excludes NP predicates in coda position right from the start. In fact, Stowell (1978:461–462) takes the restriction on NPs to be of a different nature than the restriction

² A narrow BNC search string <s>[pos="EX0"] [pos="VBB|VBD|VBZ"] [pos="NN0|NN1|NN2"] [pos="PUN"]</s> looking for the combination “There *be* NP.” yielded only 106 results.

³ Keep in mind that Milsark’s (1974:8) definition of “coda” included the postcopular NP. Moro’s (2006:211) definition of the coda is followed here, which includes only the constituent(s) after the NP and is equivalent to Huddleston and Pullum’s (2002:1393–1394) term *extension*.

⁴ Bare existentials of type a) are classified as “ontological ES”, whereas locative extensions in b) fall under “location-al ES”.

that is imposed on adjectives. In his view, the fact that NPs are banned in the coda position is a syntactic restraint as opposed to a semantic restriction that allows only certain kinds of AP predicates to occur in the coda. In the more recent framework of the distinction between stage- and individual-level predicates, however, these separate restrictions can be summarized under one semantic constraint banning ILP from occurring in the coda position; since NP are taken to be invariably ILP (cf. Carlson 1977:107), the restriction on NP follows automatically (cf. Jäger 2001:98).

Virtually no part of the ES is completely uncontested: there are debates about the nature and origin of expletive *there*, agreement facts of *be*, issues with regards to the nature of the postcopular NP (the definiteness restriction) and finally on the types of predicates allowed in the coda (cf. Hartmann 2008:9–12). This shows that ES are still an interesting subject despite the long debate that has been going on. The PR may seem to be less polarizing than the debates about the origin of *there* and the reasons for the DR, but a closer examination of the topic will show that there is still the need for further clarification and that the different approaches still make radically different assumptions in certain respects.

1.2 Aim and Scope

The main goal of this thesis is to arrive at an analysis of the PR that is able to explain all of the relevant facts about this specific restriction on existential constructions. This will be achieved by both analyzing and evaluating the most prominent previous approaches to the PR, but also by comparing the phenomenon in ES with constructions that are subject to the same (or at least a similar) restriction, such as depictive secondary predicates (cf. Rothstein 2006b; Winkler 1997) or James's (1979) analysis on the restrictions of postnominal adjectives in general. Research in these fields will certainly be important for an analysis of the PR in ES, but they will only be dealt with in order to explain the situation in ES. It is interesting that the PR occurs in a much wider range of constructions, pointing at the fact that the contrast between SLP and ILP in English is a general feature of the language (and maybe other languages as well).

The main theoretical challenges are (a) finding out which syntactic status can be assigned to the postnominal XP (an alternative description for the coda), (b) analyzing whether the PR is a purely syntactic or semantic (as is usually argued by the literature) phenomenon or whether pragmatic aspects need to be considered as well and (c) what explanation can be offered for the contrast between permissible and disallowed predicates in the coda, also regarding NP predicates.

However, this thesis is not limited to theoretical analyses of the PR. Two empirical investigations into this field have been conducted, one being a BNC corpus study and the other a grammaticality judgment study. The research question for the corpus study is whether the PR as proposed by the various authors dealt with in this thesis does actually show up in corpus texts. As will be seen, there are a few interesting examples that the theory does explicitly prohibit, namely NPs in postnominal position. The main aim of the rating study was to examine whether the theoretical contrast of SLP–ILP (both AP and NP) is also

reflected in the judgments of the participants. The overall research question for the two empirical studies is whether their results can lead to a decision in favor of one of the theories discussed in the theoretical chapter.

In order to sum up, the main questions that this thesis will deal with are the following:

- What is the syntactic status of the postnominal XP?
- Is the PR more likely to be syntactic, semantic or pragmatic in nature?
- Is there a uniform contrast between SLP and ILP?
- Are all NPs banned from occurring in the coda?
- Do the results from the empirical studies let us choose between one of the theories for the PR?

A limitation to the scope of this thesis concerns existential sentences themselves. Hartmann (2008) makes a systematic distinction between ES that have *be* as the main verb and sentences that contain a verb other than *be*. She shows that they behave differently in a number of characteristics and should thus be treated separately (Hartmann 2008:90–98). This is one of the reasons this thesis will be concerned primarily with what she terms *there*-BE sentences, as opposed to *there*-V sentences, which have also been called “presentational” sentences by Huddleston and Pullum (2002:1390) among others (cf. Williams 1984:146).

The second limitation in the scope is that predicative (AP) codas (type (6)c in Huddleston and Pullum’s 2002 terminology) are the focus here; I follow Huddleston and Pullum (2002:1393–1394) in distinguishing them from locative or temporal PP codas (type (6)b). The question whether they are adjoined in the same position as AP codas will not be fully discussed here, but I believe that they appear higher up in the structure (possibly as a frame-setting adverbial to CP).

1.3 Structure of the Thesis

This thesis consists of three main parts: a theoretical discussion of ES, the postnominal XP and the PR; an empirical investigation employing a corpus study and a grammaticality judgment task; and an evaluation of how the studies can be linked to the theoretical parts. Chapter 2 forms the first theoretical part, a general discussion of how *there*-sentences are analyzed syntactically. It will explore the two major classes of approaches to ES, namely *there*-insertion approaches (cf. Stowell 1978; Milsark 1974) and theories that analyze *there* as part of the predication structure (cf. Moro 2006; Hartmann 2008), which could be called ‘*there*-raising’ approaches.

As a preliminary approach to the PR, chapter 3 starts with an account of possible explanations for the syntactic status of the postnominal XP, exploring the options of reduced relative clauses, a complex NP (cf. Williams 1984) and syntactic adjuncts (cf. Moro 2006; McNally 1997).

In a third step, chapter 4 will discuss the different theoretical approaches to the PR, ranging from Milsark’s (1974; 1977) distinction between state-descriptive and property predicates to approaches that argue for a different argument structure for predicates (Kratzer 1995; Jäger 2001). There are also approaches that

analyze the postcopular material as a Small Clause with secondary predication (Kallulli 2008) or as secondary predication in the form of depictive adjuncts (McNally 1997). Moro's adjunct analysis (Moro 2006) and James's (1979) constraints on postnominal adjectives in the light of Williams's (1984) complex NP analysis will also be treated briefly. The main goal of this chapter is to find arguments for the most appropriate alternative for an analysis of the PR, but also to find out which component of the grammar is most likely responsible for the PR.

Chapters 5 and 6 contain two independent empirical investigations into the PR. The first one is a BNC corpus research, which is intended to show that the distinction into SLP and ILP does in fact hold for the actual usage of English. While the vast majority of results fit into the SLP–ILP pattern, there are a few examples that reflect Jäger's (2001) further distinction of predicates, but also possible NP predicates, which should not be permissible. The second empirical work for this thesis consists of a grammaticality judgment test based on a questionnaire for non-native learners of English and a native speaker control group. The results of this study are interesting because they can give insights about learner's intuitive knowledge of the difference in grammaticality of the construction.

These two investigations will be evaluated together in chapter 7, which will also compare them with the theoretical approaches. Chapter 8 offers a short conclusion to the thesis.

2 Syntactic Analyses of Existential Sentences

Several theories have been proposed for an analysis of existential sentences in general. This is why it is important to briefly discuss these approaches before moving on to the PR. Having an overview over the field of the discussion is helpful in order to locate the approaches to the PR described in chapter 4 within the larger framework. In general terms, there are two distinct classes of theoretical approaches to existential sentences that can be distinguished. On the one side, *there*-insertion (TI) approaches, which treat ES as sentences that are transformationally related to non-existential counterparts and ultimately have the same D-structure, with the difference that *there* is inserted in the subject position according to a general TI rule. On the other side, there are approaches that argue for a different D-structure of predicative copular and existential sentences, with *there* originating within the predication structure and thus carrying at least some semantic content as opposed to the semantically empty ‘dummy’ *there* of *there*-insertion approaches.

The approaches that belong to *there*-insertion that will be treated here are Milsark’s (1974) analysis of ES and Stowell’s (1978) Small Clause approach. The subsection on approaches that consider *there* to be part of the predication will discuss Moro’s (2006) analysis within the framework of inverse copular sentences and Hartmann’s (2008) Pred_{EX}P analysis. The focus here will be on the basic characteristics of the theories; their individual advantages and explanatory problems will be discussed only shortly.

2.1 ‘*There*’-Insertion

The analyses that fall into this class share the basic assumption that ES are derived from the same D-structure as their non-existential counterparts (cf. Milsark 1974:11). Thus, the two sentences in (11) are ultimately derived from the same source:

- (11) a. Many girls are in the garden. (cf. Moro 2006:212 [7b])
 b. There are many girls in the garden. (Moro 2006:211 [4])

How exactly these sentences are related depends on the specific theory, but in all cases, *there* is inserted into the canonical subject position [spec,IP] instead of the ‘logical subject NP’ *many girls* in the example (cf. Milsark 1977:1). In this position, *there* does not have semantic content (as opposed to its deictic or anaphoric use, cf. Milsark 1974:5–6) and is thus labeled an “expletive” or “dummy” subject (McNally 2011:1830; Harbert 2007:224). Chomsky argues that *there* carries neither the structural features of Case or φ -features; these features are provided by the logical subject associated with *there* (1995:273, 286–288). The phenomenon of expletives to replace the logical subject is not a peculiarity of English, but is present across the spectrum of Germanic languages (Breivik 1991:40).

Breivik (1991) actually tries to derive *there*-insertion diachronically by proposing that *there* was inserted in Old English sentences as a dummy subject to force V2 sentence structure. Later, when English shifted

from V2 to a verb-medial language, *there* was re-analyzed as the subject NP. A similar argument is made by Chomsky (1995:289), who claims that *there* is used in the Phonetic Form (PF) to fulfil the V2-requirement. Whether this theory can be upheld is not the concern of this thesis, but such views show that *there*-sentences are still a subject worth of consideration, especially in a diachronic syntactic perspective.

In the following subsections, two of the most prominent and classical *there*-insertion approaches will be briefly discussed. Despite their origin in the 1970s, they are still valuable sources for discussion. Milsark's (1974) extensive analysis of the English existential construction argues for a rule of syntactic transformation that turns copular sentences into existential sentences, whereas Stowell (1978) explains the construction by analyzing the subcategorization features of a transitive verb *be* that is also a raising verb, allowing either copular sentences or existential sentences with expletive *there* to be formed. The two approaches will be discussed in turn.

2.1.1 Syntactic Transformation (Milsark 1974)

In his work on the English existential construction, Milsark (1974) defends the theory of the so-called *there*-insertion rule, which is applied to derive existential sentences from their non-existential counterparts. This rule involves the re-ordering of constituents in a sentence and the insertion of *there* in subject position, as formulated in (12):

- (12) *There*-insertion
 SD: X NP Y *be* Z SC: 1 *there* 3 4 2 5
 1 2 3 4 5
 (Milsark 1974:113 [57])

The subject NP constituent [2] is moved to the right between the copula [4] and an optional constituent Z [5]. In the previous position of [2], *there* is inserted to fill this otherwise empty position. *There*-insertion (TI) is an optional transformation (cf. Milsark 1977:103) that may or may not apply to copular sentences (except in cases where there is no grammatical source sentence, cf. below). The two following sentences are examples of a copular sentence (13)a and a derivation of this sentence where *there*-insertion has applied (13)b. The general principle behind TI is then illustrated in (14):

- (13) a. People are on the street.
 b. There are people on the street.
 (own examples)
 (14) D-structure → S-Structure (13)a
 → TI (optional) → S-Structure (13)b

Both sentences in (13) are ultimately derived from a common D-structure source (Milsark 1974:11, 103). The exact point for the application of TI is probably somewhere between D- and S-structures; under Chomsky's Standard Theory of syntax, transformational rules apply to D-structures yielding S-structures which are then processed by the phonological component (cf. Horrocks 1987:27). A structural change (SC) can apply either to a D-structure (structural description / SD) or to a structure that has already been

transformed; in the case of the TI, the latter appears to be the case: an intermediate non-ES structure has already been created by transformations and the TI optionally applies to this intermediate structure, yielding an ES if it applies or the non-ES if it does not apply, respectively (cf. Horrocks 1987:45).

Most versions of TI theory claim that an ES needs a corresponding copular sentence, which can lead to problems for the theory because there are some ES where the corresponding copular sentence is ungrammatical. Under Milsark's analysis, this is one of the more obvious problems for TI analyses. TI obligatorily applies in sentences like (15)a because the copular counterpart of the ES is not grammatical:

- (15) a. *Several difficulties are in this analysis.
 b. There are several difficulties in this analysis.
 (Milsark 1974:21 [77])

This is also one of the reasons Milsark refutes Jenkins's (1972) Phrase Structure Hypothesis, because Jenkins claims that all the material to the right of *be* is an NP and that the NP is complex if it has a following AP or PP (Jenkins 1972:102, 106–107; Milsark 1974:33). But examples with AP codas show that at least some of the proposed complex NPs are odd or even ungrammatical in copular constructions:

- (16) a. There were many people sick at Mike's party.
 b. *Many people sick were at Mike's party.
 (own examples)

This example shows that for this particular grammatical AP coda in an ES, the complex NP analysis fails to provide a grammatical source NP because the necessary NP *many people sick* is not independently attested (Milsark 1974:39). This point is relevant for the grammatical outcomes of TI with regards to different types of predicates, as will be seen below. This so-called 'sourcelessness' problem where no independently attested NP is available to undergo TI is just one of the many difficulties that TI approaches face. Another challenge is the fact that the TI rule overgenerates sentences from grammatical copular sentences where the ES is not grammatical. For example, the application of TI to (17)a yields the ungrammatical (17)b:

- (17) a. Linguists are intelligent.
 b. *There are linguists intelligent.
 (Milsark 1977:11 [18a,b])

Overgeneration is, however, a problem that can be overcome by adding restrictions on surface structures to the framework. To rule out examples like (17)b, Milsark for example suggests a rule that prevents TI in contexts of NP – *be* – PRED, which would apply to cases where the PRED is either dominating an AP or an NP (Milsark 1974:19–20; 1977:2, 11). But this leaves us with the awkward situation that precisely the constructions under investigation in this thesis should be excluded (see the discussion of Milsark's distinction between predicates in chapter 4.2.1). A sentence like (18)a which is clearly such a construction cannot (under Milsark's initial claim) undergo TI to form (18)b:

- (18) a. Many dogs are intelligent.
 b. *There are many dogs intelligent.
 (own examples)

When TI is prevented in such predicational sentences, then grammatical sentences of the form in (19)b have to be considered as an ‘exception to the exception’ somehow allowing TI for certain kinds of adjectives (cf. Milsark 1977:11):

- (19) a. Many dogs are tired.
 b. There are many dogs tired.
 (own examples)

As becomes clear in the course of Milsark’s analysis, there has to be some further restriction on this kind of phenomenon to allow grammatical sentences to be formed under TI while excluding ungrammatical sentences. Since in the case of predicative codas, this is precisely the topic under discussion in this thesis, I refer to the respective section in 4.2.1 below.

An inadequate generation of ES, either in the form of undergeneration or overgeneration, poses a major challenge to all theories of the existential construction. This is why it will be a point of consideration in several parts of this thesis. A theory that undergenerates is clearly problematic in that it has to account for grammatical structures that cannot be derived from the rule in some other way, for example by claiming that they are derived from other structures (such as relative clause reduction, etc.). Theories that initially overgenerate can handle this problem more easily by means of further restrictions.

A general critique on the principle of a TI rule is that it is considered way too complex to be part of any natural grammar (Stowell 1978:458). Even splitting it up into several smaller and more general rules⁵ as Milsark does with his revised rules for “NP Downgrading” in (20), which moves the NP in subject position to the right of the copula and “Trace Removal” in (21), which inserts *there* in the vacated position, still generate sentences that have to be filtered out in S-structure by the interpretive “E-Rule” in (22). Milsark’s formulations are as follows:

- (20) NP downgrading
 SD: X NP Y *be* Z SC: 1 t 3 4 2 5
 (Milsark 1974:115 [61])
- (21) Trace Removal
 SD: X t AUX Y SC: 2 → *there*
 (Milsark 1974:115 [62])
- (22) E-Rule:
there AUX (have-en) *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 1974:125 [90])

If this E-Rule fails to apply, the sentence is ruled out as ungrammatical. The E-Rule is part of a larger interpretive framework Milsark proposes for natural languages. Such a theoretical framework that subjects syntactic formations to interpretive rules is one of the tools to rule out ungrammatical sentences that arise out of the free application of TI, meaning that sentence formation allows for a large number of sentences

⁵ This rule splitting is (among others) a result of arguments from verbal ES (cf. Milsark 1974:115).

to be syntactically constructed, but not all of them can be interpreted according to the rules and are thus filtered out (cf. Milsark 1974:93). At the same time, the E-Rule is necessary to assign an existential interpretation to the sentence (Milsark 1974:104–105). Despite the fact that TI approaches are generally considered to assume a semantically empty element, Milsark admits in connection to the E-Rule that *there* might have some meaning: “it makes some sense to say that *there* means something and that a rule similar to (26)⁶ must therefore be part of the grammar of English” (Milsark 1974:107).

Stowell’s critique of this complex theoretical machinery (cf. also the next subsection below) seems warranted given that the rules are taken to apply freely to structures and have to be part of the grammar on some level (if not in UG than at least in the language families that allow for similar constructions). In comparison with, for example, Jenkins’s Phrase Structure Hypothesis, which claims that ES are virtually present in D-structure, this machinery has to be considered extremely complex. It is of course not a necessity that the simplest theory is the most adequate one, but with regards to learnability, extremely complex theories tend to be problematic (cf. Horrocks 1987:18–19, 56)

In spite of all the difficulties that TI approaches face, Milsark concludes that some version of TI is the most appropriate solution to the puzzle of existential sentences, especially in comparison to the approaches he refutes in his thesis (such as the Phrase-Structure-Hypothesis or Cleft-Reduction). Despite arguments brought up against the additional assumptions that theories of TI have to make, he argues that those can be explained as being “an artifact of our lack of understanding of certain principles about English and about the form of grammars” (Milsark 1977:3, cf. Milsark 1974:11–12). The re-organization of constituents in a sentence is the crucial part of his analysis and in his discussion he rejects all theories that try to find analyses that derive ES from an independent structure (Milsark 1977:64).

Since the proposal of various versions of *there*-insertion, there has also been a vast number of arguments against such a theory. Two discussions of the historical development of these theories and their inadequacies can be found in Hartmann (2008; 2011) and Moro (2006), who both arrive at alternative approaches that share a common principle, but still draw different conclusions, as will be seen in the course of this chapter.

2.1.2 Small Clause Analysis (Stowell 1978)

Stowell (1978) criticizes the Milsark’s (1974) approach by claiming that he needs complicated additional assumptions in addition to the rule of *there*-insertion (such as the E-rule and the exceptional licensing of certain adjectives). In his view, there is no evident necessity for such complicated stipulations (Stowell 1978:458), which is why he argues that the most suitable theory for ES should be the one that employs “the simplest possible characterization of individual constructions” (Stowell 1978:460).

⁶ His example refers to a preliminary statement of the E-Rule in (22).

In his own proposal, Stowell follows Jenkins (1972) to a certain extent by proposing that the coda of ES follows the pattern of other types of verb complements (i.e. cleft reductions and perception verb complements⁷), but differs from Jenkins in that he takes *be* to be transitive and subcategorizing for an NP followed by either a PP, AP or participle, analogous to verbs like *keep*, *like*, *want* and *need* (Stowell 1978:465). Stowell's formulation comes close to accounts of secondary predication (which is often described in terms of Small Clauses) because he not only claims that the postcopular material is interpreted as a "situation or event", but also that there is a close connection (i.e. that between a subject and its predicate) between the postcopular NP and the constituent that follows (Stowell 1978:464–465). The result is that *be* selects for a Small Clause (SC) complement that has the NP as its first constituent and the AP / PP / participle as the second constituent, reflecting the close connection between the two SC constituents (Stowell 1978:465, footnote 12).

In addition to being a transitive verb selecting for a SC complement, Stowell proposes that *be* is also a raising verb, allowing the NP constituent to be moved out of the SC into higher positions, such as the empty subject position in [spec,IP]. Alternatively, when the NP is not raised, this simplified rule of *there*-insertion applies:

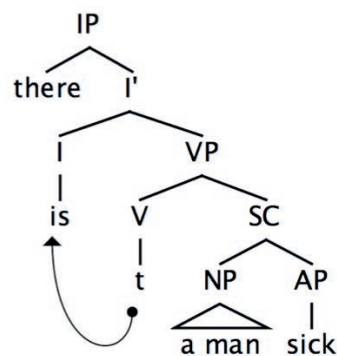
$$(23) \quad \emptyset \rightarrow \text{there} / [\text{NP}______] - \text{Aux (Stowell 1978:458 [5])}$$

So if the NP from the SC is not moved into this position, *there* is inserted in its place, serving as a semantically empty placeholder. Existential sentences and their non-existential counterparts thus have the same deep structure, but differ in their surface structure. Stowell's SC approach to ES has the advantage that it is an elegant and apparently easy way to explain the structural characteristics of ES. A problem with this theory is, however, that Stowell has to introduce a second verb *be* to the lexicon that accounts for the structures of the form *there be NP*, since this structure cannot be derived from a SC complement (Hartmann 2008:15, 37–38). Since Stowell criticizes Milsark for his complex rule machinery, these separate lexical entries for two very similar constructions are a weak point of his theory, which solves the complexity in one area by shifting it to another one.

The basic structure of Stowell's proposal with a SC containing an AP is shown in Tree 1:

⁷ Note that the relation to perception verb complements will be taken up by Jäger (2001) in his test framework for SLP and ILP, cf. 4.3.3 below.

(24) Tree 1. SC with AP (Stowell).



(structure cf. McNally 1997:17 [26])

SC approaches to ES have been shown to face severe problems with regards to operations such as the impossibility of *wh*-extraction from the coda and Heavy-NP shift. The extraction from SC complements (for example under *consider*-type verbs) usually works, as the sentence (25)a shows; this is not the case in ES: sentences like (25)b are generally considered ungrammatical (cf. Williams 1984). More arguments against Stowell's theory and *there*-insertion approaches in general are given in Hartmann (2008:16–17, 34–40).

- (25) a. How attractive do you consider John?
 b. *How attractive were there some people?

Despite the fact that Stowell's proposal for the analysis does in fact explain the five restrictions on the existential construction that he mentions, the SC approach has been largely abandoned over the past decades. Especially extraction facts have shown that the coda has to be of a different syntactic nature than a Small Clause, as will be discussed below in chapter 3.

2.1.3 A Note on Expletive Constructions in Minimalism

Current approaches to existential sentences in the framework of Minimalism employ a derivation of expletive constructions similar to Stowell (1978): there is a choice between either Moving the VP-internal subject (in [spec,*v*P] under a split VP framework) to [spec,TP] or Merging expletive *there* to satisfy the strong Extended Projection Principle (EPP) feature on T (or a “strong uninterpretable N feature” [*u*N*] in the terminology of Adger 2003:215). The advantage over standard TI-approaches is that there need not be a transformational relation between expletive and copular structures as proposed by Milsark (1974), which obviates the sourcelessness problem and the need for an intermediate level of derivation. In contrast to Stowell (1978), *be* does not require two lexical entries either. The difference between expletive and non-expletive constructions begins in the selection of lexical items (“numeration”, cf. Adger 2003:216), where, for the expletive construction, the expletive appears in addition to the other items. Since two subject positions are available in the sentence (VP internal and as specifier of TP, respectively), the semantic subject (the postcopular NP) can stay in its base position and the expletive is Merged to [spec,TP] as the structural

subject. For embedded *there*-clauses, Merge is preferred over Move as a reflection of an economy condition, solving the problematic case of **There seems a man to be in the room* (cf. Adger 2003:322; Hornstein, Nunes and Grohmann 2005:335–339).

This approach has advantages both in terms of the VPISH as well as Case marking (in agreement with Chomsky's 1995:273, 286–288 claim that *there* lacks Case features) and feature checking (cf. Boeckx 2006:186–190 for the value of existential constructions to Minimalist considerations). While this basic approach to ES is able to account for the most important facts, more elaborate theories such as those proposed in Hartmann (2008, following Bowers 1993; 2001, cf. below) go in a different direction, assuming that predication in its different forms merits a separate functional layer.

2.2 'There'-Raising

In stark contrast to the *there*-insertion approaches discussed in the previous subsection, analyses in this class treat *there* not simply as a dummy constituent inserted wherever no other subject is raised to the structural subject position in [spec,IP]. Rather, it is part of the predication structure itself and raised during the derivation. As will be seen, this does not only have ramifications on the overall syntactic analysis of ES, but also on the question whether *there* carries any semantic meaning, which is doubted, if not strictly negated, by most *there*-insertion approaches.

When *there* is considered part of the predication structure, there are at least two possibilities for its analysis: *there* as the predicate or *there* as the subject of predication. These two approaches will be treated in turn, basing the discussion on the works of Moro (2006) and Hartmann (2008), respectively.

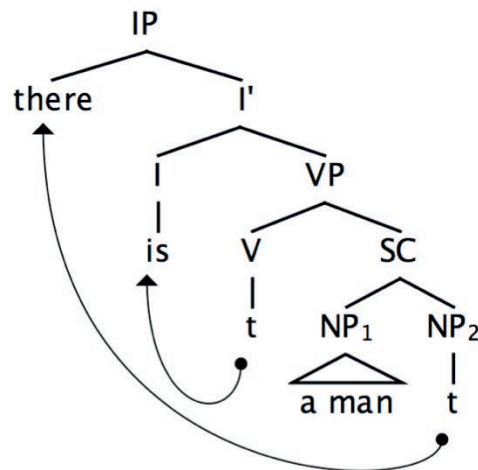
2.2.1 'There' as the Raised Predicate (Moro 2006)

In his 2006 paper on existential sentences, Moro tries to argue that they are manifestations of what he calls 'inverse copular sentences'. His main assumption is that either the subject or the predicate of a Small Clause complement of VP can raise to [spec,IP] position and fill the structural subject position there. This results in either a canonical sentence where the subject is raised or in an inverse structure where the predicate is raised. A sentence of the form in (26)a thus has the two possible sources in (26)b and (26)c:

- (26) a. DP V DP
 b. DP₁ V [_{SC} t₁ DP₂]
 c. DP₂ V [_{SC} DP₁ t₂]
 (adapted from Moro 2006:222)

A tree structure for a simple sentence is given in Tree 2:

- (27) Tree 2. Predicate raising (Moro).



(structure cf. Hartmann 2008:41 [67])

With regards to ES, Moro argues that *there* is in fact a placeholder for the predicate (DP₂ in (26)) of the SC that has raised to [spec,IP] (Moro 2006:223). This approach differs from others that consider *there* as a part of the predication in that *there* is seen to represent the predicate of the SC (cf. below). Moro's argument is based on the analysis of several empirical facts that he claims are best explained by his inverse structure analysis. These facts include restrictions on extraction from the predicate as opposed to the coda, which he takes to be an adjunct (more on this issue is discussed in chapter 3); the optionality of the coda, which serves as prove that it is indeed an adjunct and not the predicate of the sentence, as has been claimed by other theories (cf. Hartmann 2008:37 for the case of PP codas); restrictions on DP adjuncts; and, most importantly, the fact that the copula is obligatory when the ES is the compliment of *consider*-type verbs (cf. Moro 2006:213).

The first two tests mentioned will be discussed later in this thesis since they are relevant for the PR. Moro's main argument in support for an inverse analysis is the non-optionality of copular *be* in embedded contexts. He claims that this is one of the characteristic facts about inverse copular sentences. In order to be able to raise, the predicate needs a "landing site" higher up in the structure, but still below the VP that is occupied by the consider-type verb (Moro 2006:225). This landing site is the specifier position of an additional, inserted IP. The difference between canonical structures (without movement) and inverse structures (with raised predicate *there* represented by DP₂) can be seen in the examples (28)–(30) (similar to Moro 2006:213 [8s,t]):⁸

- (28) a. [_{VP} consider [_{SC} [DP₁] [DP₂]]] (canonical)
 b. I consider [John] [the culprit].
- (29) a. [_{VP} consider [_{IP} [DP₂] [_{I'} to [_{VP} be [_{SC} [DP₁] [t₂]]]]]]] (inverse; IP as landing site)
 b. I consider [the culprit] to be [John].

⁸ Cf. also the figures in Hartmann (2008:43 [69]–[70]).

- (30) a. [_{VP} consider [_{XP} [_{DP₂}] [_{SC} [_{DP₁}] [_{t₂}]]]] (inverse; no landing site)
 b. *I consider [the culprit] [John].

In (29), the landing site in IP is provided, whereas it is not in (30), represented by the missing labeling of XP (which is taken to be an unspecified phrase other than IP). If there is no landing site below *consider* where the DP can move to, movement is not possible in this case and results in ungrammaticality. In Moro's framework, this is one of the characteristics of inverse structures and leads him to consider ES as part of this larger class because it corresponds to his evidence in this case.

The strongest point in Moro's argument is that, in contrast to *there*-insertion approaches, his theory can explain the ungrammaticality of the following sentence:

- (31) *There seems a man to be *t* in the room. (Moro 2006:220 [28a])

Under a standard theory with *there*-insertion, the only way to account for the ungrammaticality of this example would be in terms of illicit movement,⁹ which Moro argues is not the case here (Moro 2006:220). His explanation is simple within his framework: since *there* has already moved out of the SC, the subject DP *a man* cannot move as well. Note that the coda *in the room* is an adjunct in this case, not a predicate. A simplified structure for Moro's analysis is provided in (32):

- (32) [There]₂ seems [a man]₁ to be [_{SC} *t₁* *t₂*] [in the room].
 (based on Moro 2006:220 [28a])

This situation would violate the Empty Category Principle requiring that all traces in the SC be properly governed and is thus ungrammatical (cf. Moro 2006:225–226; Haegeman and Guéron 1999:398; Hartmann 2008:23, footnote 16). In contrast to other theories, Moro's is the simplest to account for this ungrammaticality.

While Moro's theory is at first sight an elegant solution that puts ES into the larger, more general framework of inverse copular structures, the approach also faces several empirical difficulties.

One of these problems is that the canonical counterpart of ES does not appear to carry an existential meaning (cf. Felser and Rupp 2001:294). This would be an odd fact that requires either an additional restriction or another explanation. The sentences in (33)b,c differ with regards to the existential interpretability, despite the fact that they are both derived from (33)a:

- (33) a. are [_{SC} [girls] [there]]
 b. There are girls *t*. (existential reading) (similar to Moro 2006:211 [3])
 c. Girls are *t* there. (locative reading)

Whereas the existential interpretation for the case with raised predicate *there* yields a clear existential interpretation (33)b, the example with the raised subject (33)c does not (for a similar observation, cf. Hartmann 2008:50–51). It would stretch the concept of ES to assign an existential interpretation to (33)c, even if *girls* is taken to be a focused constituent (which is most likely an ungrammatical reading). This con-

⁹ Chomsky (1995:157–158), however, proposes other explanations, for further references see Hartmann (2008:35–36).

trast is also relevant for a more general interpretation of *there* in these contexts: if *there* can have either an existential or a locative reading, depending on which constituent is raised out of the SC, then both readings should be part of the lexical entry of *there*, resulting in ambiguity. That this ambiguity can be resolved depending on the movement of constituents does not seem likely (but cf. Goldberg 1992 for the theory of structural meaning). Matters are not clearer if an additional locative coda is provided (*There are girls in the garden.* vs. *Girls are there in the garden.*); in the second example, the locative reading of *there* is still the only valid one. Additional evidence for the difference between these two readings of *there* comes from stress: since existential *there* is inherently unstressed, the existential reading is excluded if it is stressed (?**THERE are girls*, judgment for the existential reading). In its locative (deictic) reading, stress can be assigned in both positions (cf. *Girls are THERE*).

Even more serious empirical problems are raised in Hartmann (2011), mainly focusing on the fact that Moro's analysis does not account for the differences between *there*-BE and *there*-V structures,¹⁰ which Hartmann shows to be relevant in several aspects (2008; 2011). While Moro's analysis holds for *there*-sentences with a verb other than *be*, it is not suitable for the type of ES under consideration in this thesis. In addition to these counter-arguments, Rothstein (2001:250–266) also argues against the predicate-raising approach in general, which casts further doubt on Moro's analysis of existential sentences. Hazout (2004:396–397) also offers arguments against an SC analysis with *there* as the predicate, based on *there*-V structures.

It has to be concluded that Moro's (2006) framework does not provide a sufficient explanation for the structures discussed here. However, his framework will be under consideration with regards to the PR because it is able to solve at least one of the questions of this thesis.

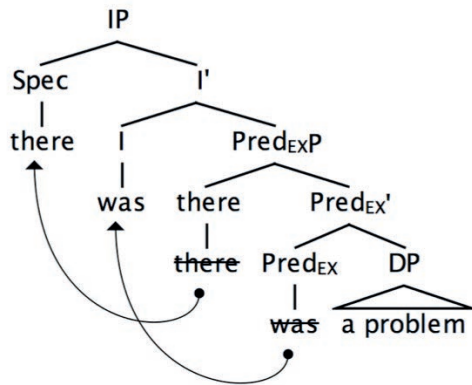
¹⁰ The terminology for *there*-BE and *there*-V sentences is due to Hartmann (2008; 2011); Huddleston and Pullum (2002:1390) introduce the terminology of *existential* and *presentational* constructions, respectively, for the same distinction. The term *presentational*, however, conflicts with Comorovski's (1995) terminology, who assigns different interpretations to *there*-BE structures depending on intonation, calling one the *existential* and the other the *presentational* use.

2.2.2 ‘There’ as the Subject of Predication (Hartmann 2008)

The proposal for the syntactic structure of ES presented in Hartmann (2008) shows similarities to Moro’s (2006) approach. The proposal is located in the group of theories that assume a special predication configuration for ES, where *there* is present in the predication structure in its own right and not just inserted as a dummy placeholder if the subject is not raised to [spec,IP]. Similar to Moro, Hartmann proposes that *there* is raised out of its position in D-structure to appear in [spec,IP] position at S-structure; the major difference is that *there* is not taken to be the predicate of a SC, but rather the subject of a PredP similar to that proposed by Bowers (1993; 2001) (cf. Hartmann 2008:98–99). This PredP is taken to be of a slightly different kind than that in other predication structures and is thus labeled *Pred_{EX}P* (Hartmann 2008:99).

Not only the position in which *there* is base-generated differs from Moro’s approach, but also the overall analysis of the configuration. Moro’s SC analysis within the framework of inverse copular clauses assumes the second constituent of the SC to be a predicate, which is not the case in Hartmann’s analysis, where *there* is the subject of the *Pred_{EX}P* and the logical subject the complement of this phrase (cf. Hartmann 2008:103). The structure she assumes for the sentence *There was a problem* is the following:

(34) Tree 3. *Pred_{EX}P* (Hartmann).



(structure cf. Hartmann 2008:99 [36])

It can be seen that *there* is already present in the D-structure of the *Pred_{EX}P* and that it is raised to the subject position in S-structure; this is similar to the movement operation found in Moro’s framework, where *there* is the raised second constituent of the SC.

The starting point for Hartmann’s critique on Moro’s analysis was that she found his approach to be empirically insufficient for *there*-BE structures, i.e. ES that have the copula *be* as their main verb; she conceded that an inverse copular analysis was, however, suitable for ES that contain a verb other than *be* (cf. Hartmann 2011). That these two structures need to be distinguished has been shown by Hartmann (2008; 2011) based on various facts such as acceptability under extraction, among others. Especially the contrast of *wh*-extraction yielded considerable differences in grammaticality judgments and thus provides evidence that the two structures have a different configuration despite their obvious parallels in S-structure (Hartmann 2011:226). This empirically adequate treatment of these two structures is one of the core advantages

of Hartmann's proposal. Taking Moro's inverse copular analysis as the basis of *there-V* structures while taking a different approach to *there-BE* structures is thus one of the possible consequences of this distinction.

The analysis of *there* as the raised subject in the larger framework of a predication clause gives of course rise to the question of an analysis of *there* and its meaning. Since it is already present in D-structure, it should be reasonable to assume that it carries at least some semantic meaning on its own. This has been generally doubted by TI approaches, where *there* is only a placeholder to fulfill the need of English to have an overt subject (cf. Rothstein 2006a). As the subject of the predication structure, Hartmann analyzes *there* as a "proform that picks up the situation/location from the context" (Hartmann 2008:103). Referring to the situation of the context (or to a delimited spatiotemporal location provided by a frame-adverbial) also provides an efficient tool for the interpretation of ES: if the unmodified 'value' of *there* is taken to be the present time and location, an ES is then interpreted as referring to the existence of the logical subject at this time in this location. If a frame-adverbial is given, then the spatiotemporal location is altered to fit the adverbial. As will be seen later on, this has also interesting ramifications for the analysis of the PR, which in certain theories is also related to a spatiotemporal location in form of an additional event argument in the argument structure of the predicates in the sentence (cf. Hartmann 2008:64).

In addition to these interpretive advantages of Hartmann's proposal, her analysis of the internal structure of the DP subject is also quite useful with respect to the existential meaning of ES: she assumes that the postcopular NP is in fact a full DP with an empty D-layer, which introduces a variable that has to be bound by existential closure; the result is the existential interpretation (cf. Hartmann 2008:104–107; 2011:236). This assumption is also helpful for an explanation of the definiteness restriction, because the empty D-layer means that strong quantifiers (like *the*, *all*, etc.) cannot co-occur with the existential interpretation (cf. Hartmann 2008:127). The internal structure of the DP thus has two advantages, which are not explicitly present in Moro's approach. Moro assumes that *there*-sentences are "the minimal syntactic device that is able to turn a DP into a clausal structure" (Moro 2006:226), but does not go into more detail. His explanation of the DR are also very complex (cf. Moro 2006:227–230).

One of the core arguments in Moro's theory is that the coda is an optional constituent in the form of an adjunct. In Hartmann, this is also assumed, based on McNally's (1997) interpretation of AP codas as depictive adjuncts (cf. Hartmann 2008:170–174), which will be discussed in more detail below in the chapter on the PR. With this advantage incorporated in the theory and other adequate features, Hartmann's proposal is one of the more current theories in accordance with the empirical data on ES that has been collected during the last decades, also with respect to the development of more reliable empirical methods in linguistics.

2.3 Summary

Of the four approaches to existential sentences, two have become largely outdated during the past decades. Both transformative TI approaches as well as Stowell's Small Clause analysis have been shown to contain many inadequacies, including arguments from over- and undergeneration as well as more damaging theoretical issues and the complexity of assumptions they need to make. The problem of overgeneration is a general problem of TI, which needs further stipulations to filter out ungrammatical sentences (cf. Milsark 1977:1–2; Hartmann 2008:13). Arguments from sourceless sentences and the fact that the coda is optional in ES also point in the direction that these transformative accounts are inadequate.

The optionality of the coda, as little important as it might seem at a first glance, is also one of the reasons that the SC analysis has been superseded. Stowell's further assumption that there are two separate forms of *be* in ES structures is unnecessarily complex and can be avoided in other frameworks. *there be NP* structures are thus a general problem; current SC approaches to ES (for example Kallulli 2008; cf. section 4.4.1 below) assume that the second SC constituent is implicit in the structure and that the SC is thus still a valid source for ES. One of the merits of these transformational analyses is that they assume an identical D-structure for both ES and their non-ES counterparts based on the argument that they contain identical propositions if *there* is taken to be a semantically empty element that serves only to fill the syntactic subject position if the NP is not raised there.

On the other hand, there are the alternative approaches by Moro and Hartmann, who claim that *there* is not simply inserted into the otherwise empty subject position, but rather is part of the predication and has been raised from its original position in D-structure. Moro takes *there* to be the raised predicate, whereas Hartmann considers it to be the subject of a Pred_{EXP} . While Moro's approach has been shown to be unsuitable for *there*-BE structures, which are the main focus of this thesis, Hartmann's analysis is more empirically adequate and has less theoretical issues with regards to these facts.

All these approaches basically try to achieve the same thing: providing descriptive and explanatory adequate explanations for the empirical phenomenon of ES while at the same time restricting the assumptions and mechanisms involved to a minimally required set (cf. Milsark 1974:32). It has become apparent that TI approaches need to make several additional assumptions in order to filter out ungrammatical examples or to prevent undergeneration (e.g. Stowell's second form of *be* to account for ES without a coda). Evidence shows that non-TI approaches are explanatory adequate with a less complex rule system. Simplicity is not an argument *per se*, but economy should also be considered with respect to theories of UG and learnability (cf. Horrocks 1987:18–19, 56).

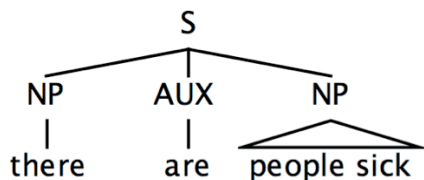
3 The Status of the Postnominal XP

It has already become clear in the previous chapter that the different explanations of existential sentences also make different assumptions about the syntactic status of the XP constituents in ES of the form *there be NP XP*.¹¹ In these frameworks, it is considered either a postnominal modifier, a reduced relative clause or cleft construction or a syntactic adjunct that is merged to the sentence structure at some point. Stowell's (1978) analysis, where the XP is the second constituent of a SC together with the subject NP, will not be discussed again in this chapter because the evidence above has already shown that an SC approach is empirically inadequate (especially with regards to extraction and *there be NP ∅* constructions). This chapter will briefly show that the postnominal XP is most likely a syntactic adjunct, a position that is supported both by arguments from optionality of the XP and extraction facts, but also by ramifications on the PR, which will be discussed in the next chapter. The sentence *There are (many) people sick* will serve as an example for all three assumptions.

3.1 Postnominal Modifier

One of the possible positions open for the postnominal constituent in ES is that it is in fact part of this NP, resulting in a complex NP with a postnominal modifier. This argument has been made by Williams (1984) and Jenkins (1972), among others and is an alternative to the Small Clause approach by Stowell (1978) and others. Under this framework, the example sentence for this chapter has the following structure:

- (35) [_S [_{NP} There] [_{AUX} are] [_{NP} people sick]] (cf. Williams 1984:135 [26])
 (36) Tree 4. Complex NP (Williams).



(cf. Williams 1984:135 [26])

The ternary branching of $S \rightarrow NP \text{ AUX } NP$ is one of the characteristic features of Williams's analysis (reflecting the current theory at that time) and especially since Larson's (1988) influential paper this is no longer considered state-of-the-art. But even if another structure is proposed to fit into a binary branching framework, the complex NP analysis faces several difficulties. In consequence, Jenkins later abandoned the complex NP hypothesis in favor of a cleft reduction approach (cf. Williams 1984:147).

¹¹ Comorovski (1995:146) argues that the entire "postcopular string" is not a single syntactic constituent, but is still analyzed as one semantic constituent.

First, the extraction facts that Williams employs to argue for his theory do not provide sufficient evidence to claim that the constituents to the right of the NP are necessarily part of it. Milsark and McNally have both shown that Williams's arguments only show that the XP cannot be a complement to the NP (Milsark 1974:64; McNally 1997:55). Williams's example in (37) does only show that the XP is not an NP complement because *wh*-movement is blocked (in accordance with the CED), still leaving open the possibility of XP being a separate constituent, a possibility that he discards in favor of a complex NP analysis. As the discussion on McNally (1999) will later show, assuming a separate XP constituent solves more problems than it creates.

(37) *How happy was there someone? (Williams 1984:133 [14])

Second, the complex NP analysis in itself does not offer an explanation for the distinction between adjectives in postnominal position (cf. Milsark 1974:39). This can be solved by proposing additional (semantic) restrictions on the postnominal XP to filter out ungrammatical sentences (cf. James 1979). More on this issue will be discussed below.

Still, there are some points that Williams is able to explain at a first glance, for example why *there be NP NP* structures are ungrammatical. According to Williams, the reason for this is that an NP is not available as the "terminus" of neither a TI sentence nor an NP (Williams 1984:132), which means that the post-copular material in ES has to be available as an independently attested NP. It has already been shown above that this is not completely true for ES codas (cf. Milsark 1974:39); also, there are other possibilities to explain this fact. A complex NP with the appropriate restrictions in this place, however, has an advantage over SC approaches, because these need additional restrictions to filter out *there be NP NP* structures, NP NP structures being available as Small Clauses (cf. *I consider Mary a genius*).

In light of these facts, a complex NP analysis for existential sentences (especially with AP codas) seems to be without proper evidence.

3.2 Reduced Relative Clauses and Cleft Reduction

One of the proposals for the postnominal XP that has been discussed for many decades but has generally been abandoned is to analyze the XP as a reduced relative clause or a reduced cleft construction. Both constructions are closely related in sharing many structural and semantic features (Huddleston and Pullum 2002:1035; Lehmann 1995:1211). In work following his thesis, Jenkins drew a connection between the behavior of ES codas with cleft constructions and perception verb complements, exemplified in the following sentences (examples taken from Milsark 1974:51):

- (38) There were many people (who were) sick. (ES)
- (39) It were many people *(who were) sick. (cleft construction)
- (40) We saw many people (who were) sick. (perception verb complement)

One thing that is immediately apparent is that *wh+be* cannot be left out in cleft constructions whereas the construction can be reduced for both ES and perception verb complements. There is thus an asymmetry between ES and clefts, which generally do not allow APs in postnominal position if the construction is reduced (Milsark 1974:55). This is why the relation to cleft constructions has been considered to have insufficient descriptive value to be applied to ES in general.

If a general rule of *wh+be* deletion is at work in ES, then it should only yield grammatical outcomes. However, this is not the case, as examples with different AP predicates show:

- (41) a. There were people (who were) drunk.
 b. There were people *(who were) tall.
 c. There were people *(who were) cowards.
 (own examples)

All of these examples are grammatical when *wh+be* is in place, but only specific adjectives allow it to be deleted; this class of adjectives is exactly the class that are allowed in the coda of ES. The same goes for potential NP predicates, which are generally not allowed as ES codas. This leaves open the question why the reduced relative clause analysis appears to work for some predicates but not for others (cf. Milsark 1974:27). In addition, James (1979) has shown that relative clauses with present participles cannot be the source for postnominal participles because the non-reduced counterpart would be ungrammatical:

- (42) a. All students knowing the answer raised their hands.
 b. *All students who are knowing the answer raised their hands.
 (James 1979:698)

Present participles behave slightly different than adjectives in coda position, but the evidence of reduced relative clauses is still convincing. With regards to nominal predicates, Stowell comes to the same conclusion, showing that a reduced relative clause construction cannot be the right analysis; in these cases the non-reduced counterpart is grammatical whereas the reduced sentence with a nominal complement is ungrammatical (Stowell 1978:462); this has been also shown above in (41)c.

In addition to the empirical evidence just pointed out, there are further theoretical issues that make a reduced RC analysis less likely; this has to do with the syntactic status of relative clauses: if the postcopular material is indeed an NP with a following RC, this would make the RC a complement of the NP as a modifying clause to it (Huddleston and Pullum 2002:1034, 1061; Nikolaeva 2006:501–502). There is a strong relationship between the head (the head noun of the NP) and the modifying constituent, more precisely the integrated RC is “adnominal” to the external head outside the RC (Nikolaeva 2006:503; Lehmann 1995:1202; cf. Borsley 1997). If the RC is adjoined to the NP, this means that the analysis is incorrect for the same reasons that the complex NP analysis is wrong, namely because of extraction facts showing that the postnominal XP cannot be a complement (cf. McNally 1997:55).

A second option for relative clauses are non-restrictive or “supplementary” relatives (Huddleston and Pullum 2002:1034), which, in contrast to integrated RCs, are not part of the main sentence and are thus

also not part of the NP (Nikolaeva 2006:505–506). But considering the close relationship between the NP and the coda material, a supplementary RC analysis does not seem promising.

This evidence against a reduced RC analysis still leaves open that ES with an AP coda can be ‘extended’ to a RC (i.e. *wh+be* can be added) and that for the sentence in (43)a, there are thus the two possible readings (43)b and (43)c available:

- (43) a. There were many men dead / available / happy.
 b. There were many men and the men were dead / available / happy.
 c. There were many men who were dead / available / happy.
 (Susanne Winkler, personal communication, 7 July 2013)

Whereas the second reading in (43)c is clearly a reduced RC reading, the first reading is rather the intersection of two sets referring to the predication relations:

- (44) $\{\text{many men}\} \in \{\text{things that exist}\}^{12} \cap$
 $\{\text{many men}\} \in \{\text{things that are dead / available / happy}\}$

While all the predicates in this example are SLP, the ‘expanded’ RC is also possible for ILP (cf. (41)b). In this respect, Winkler also notes that “[a] possibility of ensuring that the relative clause reading is excluded is to assign a focus accent to the subject and leave the coda unaccented” (Winkler 1997:256), as is done in the following examples:

- (45) a. There were four dúcks on the corner.
 b. There were several wómen discussing the fight.
 c. There was a riot put down by the ACLU.
 (Winkler 1997:256 [131])

Whether this mechanism works for all constructions under discussion here is beyond the scope of this thesis, but would be interesting material for an intonation experiment.

For these reasons, it has to be concluded that the postnominal constituent XP is most likely not a reduced relative clause because extraction shows that it cannot be a postnominal complement and the rule of *wh+be* deletion does not work in all cases and cannot be the source of all grammatical ES constructions. It is, however, still possible that a RC analysis of postnominal constituents is the right way to deal with examples such as *There were several men tall enough to play basketball* or *There were three women taller than the hostess*. The precise semantic difference to predicative AP codas is hard to get intuitively, but should be visible in a semantic decomposition.

¹² The existence is, of course, bound to the spatiotemporal parameters provided by the context.

3.3 Syntactic Adjunct

Of the three possible structures for the postnominal XP proposed at the beginning of this chapter, two have already been shown to be inadequate descriptions or at least that they pose problematic cases which makes it hard to believe that they are correct. This section will show that the XP is most likely an adjunct to the ES structure (without making a precise statement about the place of adjunction in the structure yet).

The first type of evidence that hints at the fact that the XP is an adjunct comes from Moro (2006). He describes the difference in acceptability of constructions were the coda has been left out:

- (46) a. There are many girls (in the garden). (Moro 2006:212 [8k])
 b. Many girls are *(in the garden). (Moro 2006:212 [8l])

In the first case (an ES), the PP *in the garden* can be easily left out, but in the second case (a copular sentence), the sentence becomes ungrammatical if the PP is left out. Moro explains this difference with the nature of the PP constituent, which is an adjunct in the first sentence and can thus be left out by definition, whereas it is the main predicate in the copular sentence and thus an essential part of the sentence that cannot be left out (Moro 2006:225).

A further point in the direction of an adjunct is the fact that it is possible to catenate adjuncts in existential sentences, as the following example shows:

- (47) There were many people [_{AP} drunk] [_{PP} at the party] [_{PP} last week].
 (own example)

The exact position of the adjuncts in the structure is not clear, but Ernst (2002) describes the different possible positions for adjuncts exhaustively (cf. Haegeman and Guéron 1999:79–81). Interestingly enough, any of the adjuncts in the sentence above can be left out, the resulting combination is always grammatical. However, there can only be one AP adjunct to the NP; the spatial and temporal adjuncts are more flexible because they can have adjuncts themselves (for example *at the party in Paris* and *last week on Thursday*). In addition, it appears that the AP has to occupy the first adjunct position whereas the other modifiers are freer in their order (cf. *?There were many people at the party last week drunk*). This is due to the fact that the PP adjuncts above are frame-setting adverbials that are not event-related (cf. the discussion of Maienborn in 4.3.4 below) but rather “restrict the overall proposition” (Maienborn 2004:161). Again, the level of adjunction in the sentence is the decisive factor, which points at the AP being located deeper inside the VP than frame-setting adverbials (cf. Maienborn 2004:161); Williams (1984:137) also considered the possibility that spatial and temporal adverbials are not part of the NP and are rather adjuncts located outside of his complex NP.

With this analysis, it has to be kept in mind that spatial and temporal adjuncts behave differently from the AP adjunct to the NP. Milsark (1974:57) notes that extraction from locative PP codas is possible be-

cause they are sentential locatives that are outside the domain of the NP.^{13, 14} This appears to be the case since there are no obvious restrictions on PP codas in ES whereas other predicates are strongly restricted. The question of whether AP and PP codas differ semantically in ES because they are different kinds of adjuncts is not the main topic here. Still, if AP codas are indeed depictive adjuncts of secondary predication as McNally (1997) argues, there is a noticeable difference to the sentential locative and spatial adjuncts that PP codas represent.

McNally (1997) argues extensively that the XP is a syntactic adjunct to the VP, pointing at various empirical facts: strong evidence in favor of the analysis as an adjunct comes from extraction facts of AP codas. Consider the following contrasts:

- (48) a. There were many people sick.
 b. [How many people] were there [t] sick?¹⁵
- (49) a. How sick were the children?
 b. *How sick were there the children?
 (McNally 2011:1835 [16a,b])

Whereas the *wh*-extraction of the phrase *sick* in (49)b does not work, *wh*-extraction of the NP that leaves the AP behind is licit (48)b (cf. McNally 1997:68–70). In point of fact, this can be explained by the Condition on Extraction Domains (CED), which states:

- (50) CED: Only complements allow material to be extracted out of them, not specifiers or adjuncts. (Radford 2009:206 [26], cf. the original version stated in Huang 1982:505)

McNally further notes that extraction from adjuncts is only possible if they occur within a complement or a main predicate (2011:1836). Applying this constraint to the sentences above, it can be seen that the NP complement of *be* can be extracted easily because it is a complement (as evident from the position of the NP in McNally 1997:70 [118]), even if this leaves behind the AP in (48)b. On the other hand, it is not possible to extract the XP *sick*, suggesting that it is an adjunct in (49)b. That the coda cannot be the main predicate is also shown in (49) because in contrast to the copular counterpart (49)a, extraction from the ES coda is not possible. Since such behavior is characteristic of adjuncts, McNally concludes that the coda in ES has to be an adjunct (McNally 2011:1835–1836). More about the nature of adjunction will be analyzed below in 4.3.4 (tree structures will also be provided there).

Support for an adjunct analysis of the XP constituent also comes from an empirical investigation conducted by Wurster (2013). She compared the ratings of *wh*-extraction from complements, adjuncts and the XP coda in a rating study. Extraction from the coda clearly patterns with extraction from adjuncts,

¹³ This argument is used against Jenkins's PS hypothesis but is still of interest here.

¹⁴ Huddleston and Pullum (2002:1393) argue that PP extensions are complements of *be*.

¹⁵ Things look slightly different in extraction contexts like ?*What were there many people t?* This sentence appears to be bad but not entirely impossible. In fact, an interpretation as an echo question (*WHAT were there many people?*) seems to improve the sentence considerably. However, these judgments have not been confirmed sufficiently to provide solid facts. It is interesting to note that the extraction works fine when the *wh*-pronoun is extracted out of a complement, as in [*What*] were there many people afraid of [t]?

yielding extremely low judgments. This not only conforms to the CED, but also shows that assuming the XP to be an adjunct is well-founded.

Analyzing the XP to be an adjunct to the VP provides a good explanation for why NP cannot occur in this position: as Moro (2006:225) argues, NP cannot occur as adjuncts in general (unfortunately he does not cite references). Whereas the restriction on adjectives depends on further (semantic) characteristics of their interpretation, NP are excluded because of their syntactic category. This could reflect a distinction like that made between c(ategory)-selectional and s(ematic)-selectional features (cf. Adger 2003:84), banning NP in coda position because of their syntactic category but certain adjectives because of their semantic features. This could mean that ES with an ILP coda are grammatically well-formed but are simply not acceptable because their interpretation crashes at some point. Some of these points are discussed in more detail below in 4.4.2, including the position of adjunction).

3.4 Summary

This chapter has shown that there are convincing arguments for the adjunct nature of the postnominal XP. A reduced relative clause has to be discarded because it has been shown that the XP is not an NP complement whereas RCs are NP complements by definition. Also the evidence from ungrammatical cases of reduction or non-reduction, respectively, points in another direction. Reduced clefts are unable to explain the structure of APs following an NP as well because they generally do not allow APs in the relevant position.

Williams's complex NP theory faces several theoretical and empirical inadequacies and is thus also not a viable candidate for a theory that describes the XP sufficiently. While his argumentation succeeds to show that the XP cannot be an NP complement because it fails to *wh*-extract, this does not automatically lead to the conclusion that it is part of the NP.

Finally, the arguments that can be brought up in favor of an analysis of XP as an adjunct are compelling: extraction in the light of the Condition on Extraction Domains shows that the impossibility to extract the AP makes it very likely that the coda is an adjunct. Also the evidence from the optionality of the XP points in this direction. The adjunct analysis is the most straightforward position in this respect and does not need additional assumptions or even a second form of *be* to explain the optionality. It also means that transformational theories of ES all face this general problem.

In the light of an analysis of the postnominal XP as a syntactic adjunct, it remains to explain the conditions on the AP coda that the predicate restriction imposes on existential sentences. This will be the aim of the next chapter.

4 Approaches to the Predicate Restriction

This chapter contrasts four major strands of theoretical approaches to the predicate restriction. First, Moro (2006) explains the restriction on NP predicates in the coda from their adjunct status, but does not provide a solution to the difference between adjectives in this position; second, there are approaches that explain the PR by examining the semantic properties of the adjectives in question, also with relation to the NP they follow (Milsark 1974; 1977; Williams 1984; James 1979); third, there are theories that take the PR to be the result of a difference in argument structure between certain predicates,¹⁶ which results in the grammaticality of some predicates in coda position in ES whereas others turn out to be ungrammatical in this position (Diesing 1992b; Jäger 2001; Kratzer 1995); this position is not uncontested, as the alternative approach by Maienborn (2004) will show; last, there are approaches which link the PR to secondary predication with the respective restrictions applying to it (McNally 1997; Kallulli 2008). These approaches draw on the distinction between predicates, but also employ alternative mechanisms to explain the difference in acceptability by involving pragmatics: Kallulli (2008) uses a revised Small Clause approach whereas McNally (1997) proposes that the XP is a depictive adjunct and that there has to be a link between this secondary predicate and the existential predication.

The approaches in this chapter cover almost all components of grammar that can be responsible for the PR: syntax, semantics and pragmatics. Moro (2006), Diesing (1992b), McNally (1997) and Kallulli (2008) are strongly syntactic in nature (although McNally is also to be located in the semantic group); Milsark (1974), James (1979), Kratzer (1995) and Jäger (2001) represent the semantic approach; the only pragmatic theory is provided by Maienborn (2004). All three groups make interesting observations on the nature of the PR.

It will become clear that these approaches differ greatly in the degree of explanation they offer for the empirical facts which will be discussed in the empirical chapter of this thesis; this can already be seen in the first approach discussed here, Moro's adjunct analysis, which does not offer an exhaustive explanation of the PR itself but provides further evidence for the adjunct nature of the XP. A short summary at the end of the chapter will consider the arguments provided by the theories and try to come to a conclusion regarding their respective plausibility on theoretical grounds.

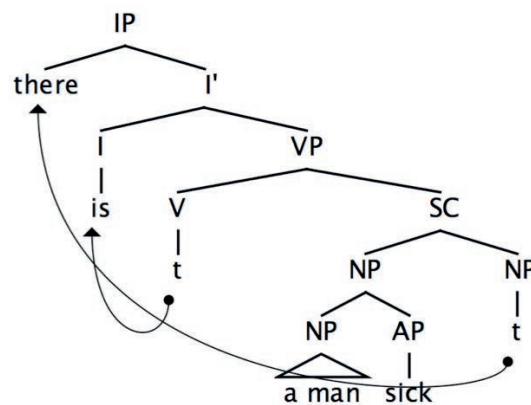
¹⁶ There are some conceptual overlaps between this approach and that by Milsark and James, but the latter is much more intuitive and lexical-semantic in nature, whereas the former is more elaborate and equipped with better testing mechanisms. Therefore these two strands are separated here (in part also due to the significant time gap between them).

4.1 Adjunct Analysis (Moro 2006)

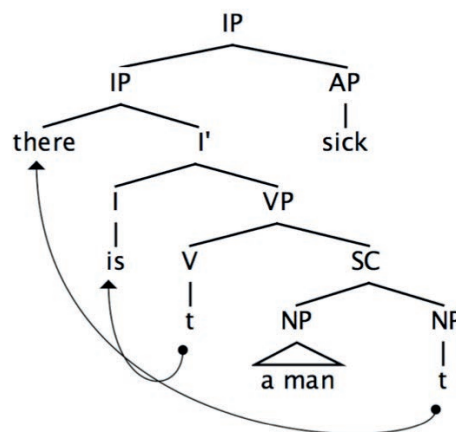
As already mentioned above, Moro treats the coda to be an adjunct,¹⁷ which is in contrast to other former approaches that consider the coda to be a part of the NP, the main predicate or a complement of *be* (depending on the theory, cf. Milsark 1974 and Stowell 1978). The coda is considered to be adjoined either to the NP or to the “clausal structure” (Moro 2006:223), but Moro does not provide an answer to the question of where this high adjunction would take place. The most logical options are, however, adjunction to VP or even IP.

Two possible tree structures for an AP coda are shown below, one adjunction to the NP (Tree 5), the other to IP (Tree 6) (as an interpretation of his term “clausal structure”,¹⁸ cf. 2.2.1 above). Adjunction to VP is also possible and the choice which McNally makes (1997:49; cf. 4.4.2 below).

(51) Tree 5. AP adjunction to NP.



(52) Tree 6. AP adjunction to IP.



(own structures)

¹⁷ Note that Moro’s approach is not analyzed together with McNally’s (1997) adjunct analysis because the two approaches differ greatly in their explanatory value and theoretical assumptions about the syntax of ES. Whereas Moro is not explicitly considering the restriction on certain APs, McNally elaborates more on the matter, but takes a different road with the link to secondary predication.

¹⁸ This interpretation of Moro’s term is also made by Felser and Rupp (2001:294).

Treating the coda as an adjunct has many important advantages over *there*-insertion approaches that consider it as a necessary part of the sentence. For example, Stowell (1978) had to assume two separate types of *be* for the two structures *there be NP XP* and *there be NP* because in the second case there could be no Small Clause with an empty predicate (Hartmann 2008:15, 36–37). The optionality of the coda is one of the reasons Moro considers it to be an adjunct. By definition, adjuncts can be left out from the structure (cf. Ernst 2002). This can be easily seen in (53), where there is no coda and (54) with a PP coda:

- (53) There are many girls. (Moro 2006:211 [3])
 (54) There are many girls in the garden. (Moro 2006:211 [4])

Moro's framework of adjunction has one advantage over *there*-insertion approaches with regards to the PR, but still suffers from severe shortcomings. It is able to solve the problem of overgeneration of **there be NP NP* by stating that NPs cannot normally occur as adjuncts. Since in a sentence like **There was a man a doctor*, the NP *a doctor* would have to be considered an adjunct, this is automatically excluded since it cannot serve as an adjunct (Moro 2006:225). This syntactic constraint on adjuncts is able to solve the problem of why NPs appear to be banned in the coda of ES, but as will be seen in the empirical investigation, there might be exceptions to this general rule.¹⁹ Moro follows Stowell in this case, who argues that the restriction on coda NPs is syntactic in nature whereas the PR on adjectives is a semantic restriction (Stowell 1978:460). Later approaches try to treat the restriction on NPs and certain adjectives similarly by arguing that NPs are the same type of predicates as those disallowed in the coda.

In contrast to Stowell, Moro does not assume the coda to appear as the second constituent in a SC selected by *be*, so the two analyses still show considerable differences, most notably that Moro's expletive *there* originates in the SC. Also, the connection between the NP of the SC and the coda is radically different: Stowell's argument for a constituent analysis of the coda was the event / situation interpretation of the SC and the strong connection of the two SC constituents, similar to secondary predication (cf. Stowell 1978:464–465). In Moro's analysis, the relation of the coda to the NP is not as close, which is a direct result of the coda being an adjunct. Both proposals have their appeal in this respect, but Moro is better able to explain the fact that not all ES need codas and that the following structure for ES is completely in line with his analysis:²⁰

- (55) There – *be* – NP (– AP / PP).

Whereas Stowell needs to make further assumptions to explain a 'missing' coda, the solution follows naturally from Moro's proposal.

¹⁹ In point of fact, evidence from potential NP predicates indicate that the restriction on NP codas is probably not syntactic but rather semantic because, as McNally (2011:1845) notes, NPs with a temporary interpretation (SLP) are less unacceptable than other (clearly ILP) NPs.

²⁰ Note that putting together AP and PP in parentheses refers only to surface word order and not necessarily to an identical syntactic position.

The only fault in Moro's analysis is that he does not address the PR at all in his paper. Though he offers an explanation for the fact that no NPs can occur in the coda, he fails to mention the fact that there are restrictions on certain APs as well. There is no obvious reason for this. Since he treats AP adjuncts indiscriminately, a framework that seeks to employ Moro's theory on ES still needs further assumptions to prevent overgeneration. When it comes to the kind of predicates that are allowed in the coda, his only argument is syntactic in nature, claiming that constituents of the form NP are excluded. He does not take a semantic approach, which appears to be a necessary condition to rule out ungrammatical AP predicates. Moro's approach can thus be seen as a good example for the necessity to include semantic criteria into the consideration of the PR because the syntactic restriction is not enough to limit the set of possible constructions to those that are actually considered grammatical.

Also in the light of the theoretical weaknesses of the inverse copular sentences framework when it comes to *there*-BE structures, it has to be concluded that Moro cannot offer a suitable explanation for the PR. Still, his analysis of the coda as a syntactic adjunct is compatible with other approaches that will be discussed later.

4.2 Temporary and Permanent Predicates (Milsark 1974, 1977; James 1979)

One of the earliest approaches to the adjectives that are permissible in coda position is Milsark's (1974) dissertation, where he introduces an intuitive distinction between them; this was later modified and expanded (Milsark 1977) to link the adjectives to the preceding NP. A similar link between the NP and the adjective is proposed by James (1979), an approach that does not focus on ES but rather postnominal adjectives in general. Both of these early approaches give valuable insight into the foundation of a contrast between predicates and will be discussed here in turn.

4.2.1 State-descriptive vs. Property Predicates (Milsark 1974)

Milsark's treatment of the PR goes back to his thesis (Milsark 1974), but was further elaborated and formalized in a later paper (Milsark 1977). In his discussion of various approaches to ES in general, he used the PR as one of the characteristic properties of ES to test the explanatory value of alternative theories. In many cases, he found that the predictions of theories like cleft reduction and Jenkins's (1972) Phrase Structure Hypothesis failed to give satisfying explanations for the restrictions on the postnominal constituent.

As mentioned above, Milsark argues that the rule of *there*-insertion fails to apply in certain contexts, among them the structure in (56), which bans TI outcomes as exemplified in (57) and (58):

- (56) NP X Copula PRED, where PRED dominates AP or NP (Milsark 1977:11 [17])
-

- (57) a. Linguists are intelligent.
 b. *There are linguists intelligent.
 (Milsark 1977:11 [11a,b])
- (58) a. Linguists are socialists.
 b. *There are linguists socialists.
 (Milsark 1977:11 [18c,d])
- (59) a. People are sick.
 b. There are people sick. (based on Milsark 1977:11 [19b])

However, he admits the fact that this exception to the general TI rule has exceptions, namely those sentences that contain a predicate which he will later term state-descriptive, as shown in the successful TI in (59). This leads to the situation that there is something like an ‘exception to the exception: in a first step, Milsark claims that predicative copular sentences with AP or NP cannot be transformed by TI, but on the other hand he states that TI works as an exception for some APs. It does not become obvious why the PR in his framework does not work the other way by generally allowing TI in all predicative contexts and later filtering out ungrammatical outcomes by a further rule.

As puzzling as the PR is on a syntactic level, Milsark concedes that there might as well be a semantic explanation for it (Milsark 1977:11). This semantic explanation is seen as the reason why TI is licensed as an exception to the general restriction on predicative copular sentences to undergo TI. The framework that results from this still seems to be slightly problematic with regards to undergeneration. If certain predicates have to be exceptionally licensed from the possible set of predicates, chances are that a rule does not capture all grammatical examples. On the other hand, a theory that allows TI in general in such contexts and has to filter out ungrammatical sentences afterwards runs the risk of overgeneration. From this perspective, the choice is between two alternatives that are still in need of further elaboration and that both need additional machinery.

In the light of this proposed semantic explanation, Milsark starts out to find common characteristics in the predicates that are allowed to undergo TI and those that are not. He arrives at the conclusion that the predicates that allow TI all share the property of being what he calls “state-descriptive”, by which he means properties of individuals that hold only for a limited amount of time and are not inherent in their nature; on the other hand, predicates that do not allow TI are said to be “property” predicates with characteristics inherent to an individual (Milsark 1974:128; 1977:12–13). The precise reasons why only state-descriptive predicates are allowed will be explained in the remainder of this section, but the distinction between these types of predicates calls for some further attention.

In both his accounts of the PR, Milsark is unable to give a precise answer to the question which types of predicates are to be considered state-descriptive and which are clearly property predicates:

I do not know how to make this distinction more precise or to supply some semantic test or tests which can be applied to decide in which category a particular predicate belongs. (Milsark 1977:13)

Though he gives a list of predicates that are allowed in coda position (like *sick*, *drunk*, *stoned* ...) and those that are not (e.g. NP predicates, *tall*, *intelligent*, *fat* ...), he concedes that a classification of these predicates

is dependent on world knowledge or at least intuitions and conceptions (Milsark 1974:129; 1977:13); for example, the adjective *heavy* is considered as a permanent property of an object, but under different gravity conditions, this is subject to variation, meaning that *heavy* could denote a temporary property. The distinction is thus not completely useful to account for the PR because the decision between these two predicate classes is not based on reliable rules. As the empirical investigation will show, this question can cause some problems when it comes to possible temporary readings of NPs, which Milsark denies to exist (Milsark 1977:15). The semantic tests he mentions in the passage quoted above are clearly the missing stones in his framework, but subsequent work on the PR has made use of his initial distinction and has developed tests that can be used to decide which category a certain predicate belongs to (Jäger 2001, cf. 4.3.3 below).

Milsark's account of the PR is closely linked to another phenomenon of ES, namely the definiteness restriction (DR), which bans sentences with so-called "strong" NPs as subjects to undergo TI.

- (60) a. There is a wolf at the door.
 b. *There is the wolf at the door.
 (Milsark 1977:4 [5a,b])

The DR has been the topic of a variety of literature, which will not be summarized here.²¹ Even though Milsark fails to define the distinction between state-descriptive and property predicates well enough to make the theory applicable in a broad context, this connection between two phenomena that have been regarded as independent can be seen as a strong point in his framework. In his explanation of the DR, Milsark concluded that only so-called "weak" subjects are licensed as subject of ES, whereas "strong" subjects are not allowed; the distinction between "weak" and "strong" NPs depends on the kind of interpretation the NP receives, which can be either 'cardinal' or 'quantificational', respectively (Ladusaw 1994:220; Milsark 1977:8). When deciding whether an NP receives a strong or weak interpretation, determiners are the relevant factor: determiners like the indefinite article or *sm* always receive the weak interpretation whereas determiners like the definite article, demonstratives and strong quantifiers like *every* and *all* always receive the strong interpretation (cf. Milsark 1977:8). Sentences formed under *there*-insertion are grammatical when the subject NP is "weak" and are ungrammatical when the subject is "strong"²² (Milsark 1974:122–123).

This two-fold distinction of "strong" and "weak" subjects in combination with state-descriptives and property predicates yields four different combinations in (copular) sentences, which are of the forms shown in the (a) sentences in (61)–(64), with examples provided in the (b) sentences (all taken from Ladusaw (1994:221 [5a–d])). The examples in (c) provide examples of corresponding existential sentences after TI has applied.

²¹ A comprehensive summary of the different strands of approaches is given in Hartmann (2008), cf. also Moro (2006) for an alternative approach.

²² There is also an ambiguous group which will not be treated here in further detail, cf. Milsark (1974:122; 1977:15–16) and Ladusaw (1994:220).

- (61) a. Strong subject + state-descriptive
 b. The man is sick.
 c. *There was the man sick.
- (62) a. Strong subject + property predicate
 b. The man is tall.
 c. *There was the man tall.
- (63) a. Weak subject + state-descriptive
 b. *Sm* men are sick.
 c. There were *sm* men sick.
- (64) a. Weak subject + property predicate
 b. **Sm* men are tall.
 c. *There were *sm* people tall.

As can be seen, copular sentences allow all combinations with the exception of ‘weak subject + property predicate’. Milsark claims that there has to be some semantic principle that rules out this combination, thus disallowing property predicates to be predicated of weak subjects (Milsark 1977:15). For existential sentences, three out of four combinations are banned: the only available combination that yields a grammatical ES is ‘weak subject + state-descriptive’. The sentences with “strong” subjects are ruled out of ES by the definiteness restriction. The sentence with a weak subject and a property predicate is ruled out by the same restriction that bans the combination from copular sentences.

The conclusion that Milsark draws from the evidence of copular sentences (and which he transfers to apply to ES as well) is formulated in the following “generalization” in two versions:

- (65) Properties may only be predicated of ‘strong’ NPs. (Milsark 1977:16 [33])
 (66) Properties are only predicated of quantified NP. States may be predicated of quantified NP, but may also be predicated of NP without quantification. (Milsark 1974:131 [109])

The PR is thus a direct result of the definiteness restriction because the DR permits only weak subjects to occur in ES (cf. Milsark 1974:131). However, for a property predicate to appear in coda position in ES, a ‘strong’ subject would be required. This mismatch of subject type and predicate type in existential sentences is the cause why no property predicates can appear in coda position. Linking the restrictions on the coda XP to the postcopular NP is one of the solutions to the problem at hand. A similar argument is made by Williams (1984), even though his assumptions on the XP differ from those Milsark takes as basis for his analysis. Milsark considers the possibilities that the XP is part of the NP (as Williams argues) or is a separate constituent attached either to VP or S (=IP) (Milsark 1974:7, 17). However, he arrives at the conclusion that the XP cannot be a nominal complement due to extraction facts (Milsark 1974:64). For ES in general, he assumes that the material following the NP is a VP, at least for ES that have an adjectival or verbal extension; bare existentials and locative extensions are treated differently (Milsark 1974:64, 90). As will be seen later on, there are approaches to the PR that are different in this respect because they do not establish a connection between the postcopular constituents to explain the restriction to stage-descriptives.

Milsark excludes one interesting group of ES from his discussion: sentences that contain a property predicate but are followed by further material, i.e. of the type exemplified in (67):

- (67) a. *There are people tall. (Milsark 1977:11 [20a])
 b. There are people tall enough to play basketball. (Milsark 1977:11 [20b])
 c. There were people who are tall enough to play basketball.
 (based on Milsark 1977:11 [20b])

The contrast in the first two sentences shows that property predicates may appear in coda position if there is, for example, a construction with *enough* behind it. Sentences of this type are a general problem for any analysis that classifies predicates in two classes and assigns grammatical and ungrammatical results to them because both classes are grammatical in this construction. Milsark argues that such constructions are in fact instances of complex NPs, provided that the complex NP (*people tall enough to play basketball* in this case) is independently attested (for example, the sentence *People tall enough to play basketball arrived at the party* is possible with the complex NP serving as an independent subject) and are thus not relevant for the discussion at hand; instead of belonging to the class of periphrastic ES that contain a predicative extension, these complex NP subjects are treated as ontological ES (Milsark 1974:90). A similar point is made by James (1979:688) in connection with single postnominal APs and participle modifiers.

The similarity of complex NP constructions to relative clauses is also apparent here, as seen in (67)c.²³ If such a complex NP string is available, the resulting ES does not contain predication of the type represented by (56). This structure only applies to sentences where no complex NP is independently attested, such as the NP string *people sick* (Milsark 1977:11, 2; 1974:19–20). This derivation of two apparently similar constructions by two different applications of the TI-rule appears to be somehow ad-hoc and does little to clarify why complex instances of property predicate APs should be licensed under TI whereas the bare AP does not allow it. In addition, the fact that Milsark excludes these examples from his theory limits its applicability and scope of explanation. This construction remains a challenge for all theories that try to explain this phenomenon uniformly.

In its own right, Milsark's explanation of the predicate restriction to stage-descriptives because existential sentences only allow for weak subjects and weak subjects only allow stage-descriptive predicates is a very consistent and logical approach within the framework of *there*-insertion. Stowell (1978) adopts Milsark's analysis even though his own framework of ES is quite different; the only difference he makes is that he takes the restriction on NP to be a syntactic restriction that is distinct from the restriction on adjectives. In this respect, Milsark is slightly more consistent because he extends the analysis of property predicates to be true of NPs as well, which simplifies matters considerably by eliminating a further restriction from the framework. Ladusaw (1994) provides additional evidence that Milsark's generalization

²³ Note, however, the general criticism on relative clause reduction mentioned above.

can be upheld under certain conditions, with additional arguments taken from Kratzer (cf. Kratzer 1995).²⁴

4.2.2 Constraints on Postnominal Adjectives (James 1979)

Regarding the occurrence of adjectives in *there*-sentences, Erdmann (1976) draws a connection between the syntactic position of adjectives and their ability to appear as the coda in ES. He points out that there are three basic positions for adjectives in English, which are divided into pre-position (i.e. before the NP) and post-position (after the NP). Pre-positional adjectives are characterized as attributive adjectives; post-positional adjectives can be further differentiated into postnominal and predicative adjectives (Erdmann 1976:162). These three positions are shown in the following examples:

- (68) The room is empty. (post-position, predicative)
 - (69) The room empty... (post-position, postnominal)
 - (70) The empty room... (pre-position, attributive)
- (all three from Erdmann 1976:163, explanatory parentheses added)

Erdmann goes on to explain that different types of adjectives are able to appear in all of these positions (like in the example), but other adjectives only appear in two of the three positions (predicative / postnominal and predicative / attributive).²⁵ Only APs that are able to show up in postnominal position also occur in *there*-sentences (Erdmann 1976:163). This early observation with respect to the PR does not yet explain why exactly some adjectives can or cannot occur post-nominally. However, subsequent research in this area has resulted in explanations that can be applied to existential sentences.

As has been shown above in the discussion of the nature of the postnominal XP, a complex NP analysis on its own is problematic, not only because Williams's (1984) extraction facts are not sufficient evidence for the complex NP hypothesis. Even if this hypothesis cannot be upheld for a syntactic analysis of existential sentences and despite the fact that Williams makes no distinction between grammatical and ungrammatical AP codas, the similarity between complex NPs with a postnominal adjective and the restrictions on predicates in the coda of existential sentences is still a striking feature.

As James (1979) noted, there are two semantic constraints that place limitations on APs occurring after NPs in English. In contrast to the attributive modification of the form *AP NP* in an NP like *the red house*, where there are no obvious constraints (despite those imposed by semantics and world knowledge, as in the famous *colorless green ideas*), the construction *NP AP* is not as free. The constraints are the following:

- (71) The NP has to be presupposed to allow the AP to occur after the NP. (James 1979:695)
- (72) The quality of the AP has to be one that can be easily lost or acquired. (James 1979:701)

²⁴ Nathan (1977:120–130) criticizes Milsark's generalization and proposes a different analysis, but his analysis of Milsark's argumentation is not in line with the later formulation in Milsark (1977).

²⁵ There are also APs that are exclusively attributive.

Starting from the same distinction between temporary and permanent properties of the AP as Milsark (cf. Milsark 1974:128),²⁶ James is able to solve the obvious problematic of the more or less permanent predicates *dead* and *alive*²⁷ by proposing that the contrast between grammatical and ungrammatical modification to the right of the NP is more about the ability of the AP to be acquired or lost suddenly than that of temporary vs. permanent properties. The property of being lost / acquired suddenly is impossible for classical ILP because they are inherent to the entity and can thus not be easily lost. For SLP, this condition holds because a state that is only of temporary nature can be lost just as easily as it can be acquired (cf. James 1979:700–701). This constraint can be applied to *there*-sentences because it is largely equivalent. Take the following examples (judgments for the b. sentences follow the examples in James 1979:696 [37]–[47]):

- (73) a. There are people sick.
 b. The people sick entered the room. (presupposed NP)
- (74) a. *There are people tall.
 b. ?*The people tall entered the room. (presupposed NP)

The NP in both b. examples needs to be presupposed for the sentence to be grammatical. Without a context, the sentences appear odd, but if located properly in context or if they are contrasted with another group of people, they are fine. It can be seen in these examples that if all conditions are met as in (73)b, it is possible for the AP to occur in the coda of the ES or after the NP in a sentence, respectively. If, however, the AP does not meet the second constraint as in (74)b, the resulting sentence is ungrammatical. This parallelism between ES and right modification of the NP is striking and certainly not a coincidence.

With regards to participles, James concludes that the relevant difference is not one between the ability to be lost or acquired suddenly (as would be true for the participle in **There were men loved*), but rather the reference to a “temporary event” instead of a “long-lasting or permanent state” (James 1979:701, 702). In general, participles (especially present participles) are considered to be usually acceptable post-nominally (cf. James 1979:697–698) because the reference to an event is more clearly encoded in them than it is in adjectives.

Despite the similarities between postnominal APs and ES coda positions formulated in James’s second pragmatic constraint, the first constraint reveals an incompatibility that prevents her analysis to be fully applicable to ES codas, as the following quotations illustrate:

²⁶ Acknowledging that a distinction between predicates appears to be relevant in natural language, as the different copulas *ser* and *estar* show for Spanish, which are also connected to temporary or permanent properties of the predicate (James 1979:699); but cf. Maienborn (2007:112, footnote 7) for a counterargument and critique of this distinction.

²⁷ These two adjectives prove to be problematic if SLP are defined by their status as being temporary and holding only for a limited time (*dead* being even more problematic than *alive*) (cf. Jäger 2001:94), but this can be solved by accepting the approach presented by James. The ability to acquire or lose a condition suddenly is still able to differentiate between more ‘ideal’ SLP like *drunk* and ILP like *fat*.

In order for a single postnominal adjective or participle to be appropriate, the speaker must believe that **the hearer presupposes, already knows about, the existence of a referent or referents** describable by the NP (given either linguistic or non-linguistic context). (James 1979:691, emphasis added)

The existential construction is characteristically used to **introduce addressee-new entities** into the discourse and for this reason the displaced subject NP is usually indefinite. (Huddleston and Pullum 2002:1936, emphasis added)²⁸

The addition of an existential sentence to a context entails the introduction of a discourse referent that corresponds to the instantiation of the description argument into the domain of the discourse model. An additional **felicity condition requires this referent to be novel**. (McNally 1997:77 [121])

James (1979:695) is aware of these different pragmatic uses of the two constructions, but still observes that the second semantic restriction appears to apply similarly in both cases. One possible explanation might be that the PR (here understood as a generalized form of the second semantic constraint proposed by James) is a very general characteristic of the English language and applies to more than just one construction.²⁹ Whether it is indeed a linguistic universal that separates adjectives in two classes (as the evidence from the two different forms of the copula in Spanish suggests) or not is exactly the point that has been observed by many different authors and for which alternative proposals have been made (cf. also Himmelmann and Schultze-Berndt 2005). These proposals will be discussed in the further course of this thesis.

What has become clear in this section is that the restriction on APs is taken to be a semantic restriction in the complex NP framework, based on the temporal or eventive features of the predicates.

4.3 Stage-Level and Individual-Level Predicates

In his 1977 thesis, Carlson considered the different readings of plural nouns without determiners or quantifiers ('bare' plurals) in English with the question in mind how they receive their different interpretations (cf. Kratzer 1995:138–139). The result of his analysis was the proposal of a three-way distinction of separate 'types' of existence, namely stages, objects and kinds (for a more detailed overview, see Carlson 1977 and Delfitto 2006). This is a further development of the two-way distinction into individuals and classes that was proposed by Milsark (cf. 1974:101). According to Carlson, stages and individuals are defined as follows:

- (75) A stage is conceived of as being, roughly, a spatially and temporally bound manifestation of something. (Carlson 1977:68)
- (76) An individual, then, is (at least) that whatever-it-is that ties a series of stages together to make them stages of the same thing. (Carlson 1977:68)

The relation between stages and individuals thus lies in their spatiotemporal location: whereas an individual can occupy several 'slots' in space and time, a stage is always limited to one specific space at a specified

²⁸ A similar condition is found in McNally (1997:120).

²⁹ James (1979:695) also notes that constructions of the form "(indefinite) NP + *be* + adjective denoting a permanent property" are subject to the same restriction.

time. The sum of all its stages then make up the individual.³⁰ Relations between stages, objects and kinds are as follows: individuals can be either kinds (general) or objects (specific); objects are limited to a certain space, whereas kinds are not since separate entities belonging to one kind can occupy different spaces. On one hand, kinds tie together objects as well as stages to make them manifestations of the same thing; objects, on the other hand, only tie together stages (cf. Carlson 1977:68–70).

Carlson’s analysis has far-reaching impact on the analysis of predicates in general and adjectives in particular. He defined three possible classes for adjectives: stage-level adjectives that are limited to stages of an object (for example *drunk*), individual-level predicates that are independent of stages but refer to the individual (i.e. across multiple stages, for example *fat*) and a rare class that refers to kinds of things (Carlson 1977:105–106). This distinction has been taken as one of the fundamental explanations of the PR in English, claiming that only stage-level predicates (SLP) but not individual-level predicates (ILP) can occur in the coda of the existential construction (and other constructions such as depictive secondary predicates and complements of perception verbs). It is very interesting in this respect that the PR is not an isolated phenomenon, but rather one manifestation of a feature of English (and possibly other languages) that appears to be deeply encoded into the grammar.

Carlson also offered a short commentary on the limitations on the predicates appearing in postcopular position in ES. The general claim is that an ES context “selects only stages” (Carlson 1977:107) and that all predicates that are not SLP cannot occur in this context. This means that NP predicates are to be generally excluded in these contexts:

Since all predicate nominals apply only to individuals and never to stages, such sentences as *bats are excellent* only select the universal reading of the subject as the predicate may only apply to individuals. (Carlson 1977:107, italics in the original)

This distinction between predicates has been taken up in various approaches to the PR; however, they in their turn make different assumptions about the exact nature of the difference between the predicates. A few of the many approaches to the PR that provide further details on the PR with respect to Carlson’s SLP–ILP distinction will be discussed here. The first section will discuss Diesing’s (1992b) syntactic approach to the contrast between SLP and ILP, arguing that they behave differently on a syntactic level in the way they generate their subjects. In the second section, the event-semantic approach based on Davidson (1967) will be introduced, with a further differentiation between the usual binary distinction into SLP and ILP (Jäger 2001) and a general critique of the event-semantic approach (Maienborn 2004; Katz 2000) following in the next two sections. It will become clear that a Davidsonian approach, which introduces event arguments into predicates, has its merits, but there are also complicating factors and even an alternative analysis that is not related to syntax or semantics but largely based on pragmatic principles.

³⁰ This can be visualized as ‘Individual X = stage₁(t₁,l₁) + stage₂(t₂,l₂) + ... + stage_n(t_n,l_n)’ while bearing in mind that locations can repeat whereas time progresses linearly.

4.3.1 Mapping Hypothesis (Diesing 1992a; 1992b)

In her thesis (published as Diesing 1992b) and a shorter paper (1992a), Diesing explores the logical representation of syntactic structure, particularly the interpretation of indefinite NPs (cf. Diesing 1992b:1). This process of obtaining a logical representation from a syntactic structure is referred to as ‘mapping’ and accordingly became known as the ‘Mapping Hypothesis’. Diesing’s work is closely connected to the contrast between stage- and individual-level predicates, which supposedly behave differently in this mapping process, namely by having different positions where the subjects of these predicates are mapped after S-structure. In the broad field of explanations to the PR, Diesing is more closely related to the syntactic side of the approaches than other theories. She takes a clear position by claiming that “the difference between stage- and individual-level subjects can in fact be described in syntactic terms” (Diesing 1992a:358).

The starting point for the Mapping Hypothesis is the fact that indefinite plural nouns have different interpretations, depending on the kind of predicate that follows. Whereas a sentence containing a bare plural noun and an SLP has both a generic and an existential reading, the same sentence with an ILP has only the generic reading. The reason for this is assumed to be related to the different logical representations for the two predicate classes because their subjects map into the logical representation (LR) in different ways (Diesing 1992a:353). To make this clearer, Diesing uses the Kamp–Heim theory,³¹ which roughly states that the variables introduced by indefinites have to be bound by a quantificational operator so that no unbound variables occur. The further argumentation is that a sentence is basically ‘split up’ into two parts, the nuclear scope (containing material from the VP) and the restrictive clause (containing material from I upwards) (Diesing 1992b:9 [13]). This can be explained using the following examples (the operator Gen_x represents the generic quantifier that is present when there is no other quantifier in the sentence, resulting in a generic, or universal, reading):

- (77) quantifier + restrictive clause + *nuclear scope*.
 (78) a. Bad cellists are prosecuted in criminal court.
 b. Gen_x [x is a bad cellist] x is prosecuted in criminal court
 (Diesing 1992a:355 [5])

In this example, the NP *bad cellists* has been raised out of the nuclear scope into the restrictive clause to be bound by the generic operator because there is no other overt operator to bind the variables (cf. Diesing 1992a:354). Another possibility is that the NP remains in the nuclear scope, but then has to be obligatorily bound by an existential operator, resulting in *existential closure*:

- (79) a. Bad cellists ruined the concert.
 b. \exists_x x is a bad cellist \wedge x ruined the concert
 (Diesing 1992a:355 [8])

³¹ For the relevant references, please refer to Diesing (1992b).

But what is the precise difference between these two operations and how can they be shown to work differently? The answer is that it can be shown that for different predicates, the sentence has, as mentioned above, different readings: in the generic reading (there are in fact two generic readings, but this is not decisive here), the NP is raised to the restrictive clause and bound by the generic operator, giving an interpretation that is a generally valid statement; on the other hand, the existential reading where the NP remains in the nuclear scope only asserts that there is an occasion where this statement is true, but this is not always the case. In this latter case, there is no restrictive clause as with the first process (since the subject remains in the nuclear clause) and existential closure takes place (cf. Diesing 1992a:355–356; Winkler 1997:258).

Returning now to the contrast between SLP and ILP, Diesing assumes that the difference between these predicates lies in their ability to map their subjects to different positions in LR, namely the nuclear scope or the restrictive clause. This is related to the subject readings with different predicates: subjects of ILP can only be interpreted generically, whereas subjects of SLP have the generic and the existential readings; accordingly, subjects of ILP can only be bound by the *Gen_x* operator and are thus limited to occur in the restrictive clause. Subjects of SLP, however, can be bound by either the *Gen_x* operator or the existential operator and can thus appear either in the restrictive clause or in the nuclear scope, respectively (cf. Diesing 1992a:357). A look at the predicates shows that there is a correlation between ‘genericity’ and ILP on the one hand and ‘existentiality’ and SLP on the other: since ILP are generally considered to represent permanent properties, a generic interpretation is a logical consequence; a characteristic of SLP is their limited duration in time, which corresponds to the existential interpretation of an occasion when this was the case. This does, of course, not diminish their generic interpretation (for a graphical representation of the mapping process with an SLP receiving both the existential and the generic reading, please refer to Diesing (1992b:20–21 [7], [8])).

With regards to the different predicate classes and the mapping process, the principle is as follows:

- (80) *LF Mapping Principle (English)*
 Subjects of stage-level predicates can be mapped into either [Spec,IP] or [Spec,VP]. Subjects of individual-level predicates must stay in [Spec,IP].
 (Diesing 1992a:359 [14])

Regardless of whether subjects are base-generated VP-internally in D-structure (as the VP-internal subject hypothesis claims, cf. Haegemann and Guéron 1999:234–235), they usually have to appear in [spec,IP] at S-structure, which corresponds to the restrictive clause in the Mapping Hypothesis. From this position, there are two possibilities: either the subject stays there during the mapping to LR (yielding the generic reading) or it is lowered to [spec,VP] (and receives the existential reading); this latter option is not available for subjects of ILP because they have not undergone NP movement (cf. Diesing 1992a:363–364). There are thus two levels of transformation involved, one from D-structure (subject either VP-internal or

generated in [spec,IP]) to S-structure (subject has to appear in [spec,IP] for English³²) and one from S-structure to LR, as seen in the following schematic diagram (parentheses indicate subject positions):

- (81) **D-Structure** ([spec,VP] for SLP or [spec,IP] for ILP) → **S-structure** ([spec,IP])
 → **Logical Representation** (generic [spec,IP] or existential [spec,VP])
 (own representation)

With regards to existential sentences, the Mapping Hypothesis leaves us with several small problems, but also with some advantages regarding the PR. The greatest advantage is, of course, that the Mapping Hypothesis explains why ILP cannot receive an existential reading. They simply lack the ability to map their subjects into the nuclear scope at LR, which leaves only open the binding by the generic operator (cf. Diesing 1992b:27). Since ES generally require an existential reading of the NP, this explains why ILP do not normally occur in ES; there is simply a clash in the kind of assertion these predicates make in different constructions (cf. Winkler 1997:256).

Having two subject positions available for the mapping to LR is convenient to explain the mapping to nuclear scope or restrictive clause and the binding by an operator in copular sentences. But in ES, we have an additional constituent to consider: *there*. This basically leaves open two possibilities for mapping: either *there* is deleted during the mapping process and the two subject positions are again available (as is argued for LF structures in Chomsky 1995:45, 65) or it remains in the representation and blocks the outer subject position in [spec,IP] for mapping, which would disallow the generic reading. This would explain why ES can only have an existential interpretation.

Assuming that *there* stays in its position in [spec,IP] at LR (blocking the mapping of the subject to the restrictive clause) and the ‘forced’ existential interpretation as a result offers an explanation why ES with an SLP that have a possible generic reading are judged bad in a grammaticality judgment task: this can be shown by sentences like the following, which have a discernible generic interpretation:³³

- (82) In New York, there are many buildings dirty. (SLP with possible generic reading)
 → It is a permanent feature of New York that there are dirty buildings.
 (from the rating study)
- (83) At school, there are many pupils tired. (SLP with possible generic reading)
 → It is an inherent characteristic of school that it bores students into sleep.
 (from the rating study)

The fact that sentences like these receive bad ratings (in comparison to other SLP) by native speakers is interesting and tells us that generic readings in ES are generally disfavored (which is in accordance with the statement in Winkler 1997:256). This could be a direct result of the inability of ES to map their subject to

³² At least in copular sentences and sentences with a main verb; things are, as has been shown, different for ES.

³³ These two examples are based on the items from the rating study in later parts of this thesis. Despite the fact that they contain SLP, their ratings were considerably worse than ratings for other SLP in the native speaker control group. This led to the assumption that they are interpreted generically, resulting in the bad rating. For more information on the rating study, see chapter 6.

the restrictive clause because this position is taken up by *there*. It can be seen that the interpretation of the predicate, regardless of whether SLP or ILP, also has influence on the acceptability of a sentence.

For the PR, this means that the adjectives of the coda have to pass the test for an existential reading; if the existential reading is available (i.e. if existential closure is possible), the predicate can occur in the coda. If only the generic reading is available (i.e. existential closure is not possible), the predicate in the coda yields an ungrammatical sentence. This test is a first step in the direction of a more reliable procedure to distinguish between predicates, which Milsark (1974) had not yet found.

On a side note, when considering Felser and Rupp's (2001) assumption that *there* is the overt manifestation of a spatiotemporal argument, a Mapping Hypothesis-like approach to ES has one advantage: in this interpretation, *there* would probably be mapped to the restrictive clause, delimiting the validity of the statement to the duration and location of the spatiotemporal argument; this would fit into the pattern and could be another explanation for why SLP are preferred in this construction.

Of course, the acceptance of Diesing's proposal is not universal; some later analyses (cf. Jäger 2001:99 and below) question the clear-cut binary distinction between SLP and ILP that arises from Diesing's proposal. An example is the open question of predicates that are ambiguous between an SLP and ILP reading, such as *visible* (also discussed in James 1979). As a consequence of this ambiguous predicate, it appears that there would have to be multiple entries in the lexicon, one for the SLP reading where the subject is created within VP and a second entry where the subject is created in IP. Whether such a distinction is made in the lexicon, or if it is even feasible or desirable, is left open; as will be seen below, Kratzer (1995) argues against a distinction that is permanently made in the lexicon.

There are also responses that are more general in their criticism, for example É. Kiss (1998). She discusses several problems inherent in Diesing's proposal, most of them connected to the availability of SLP / ILP in combination with existential readings of bare plurals when contrastive focus is involved (or not involved). For example, É. Kiss notes that for some SLP, there is no existential reading of the bare plural subject available unless the NP is contrastively focused (É Kiss 1998:148–149).³⁴ The paper further claims that the existential and generic readings of bare plural nouns are not a result of a different mapping process of their subjects into LR depending on the predicate, but rather spring from a difference in a so-called "specificity feature" of the NPs (É Kiss 1998:145). Only NPs with a [-specific] feature allow the existential reading. This is especially interesting with respect to ES because they are usually employed to introduce a new referent into the universe of discourse (the relevant references have been cited above in 4.2.2). However, É. Kiss does not provide an explanation for why only some adjectives are permissible in ES codas and

³⁴ The difference is observable in

- i. Children are noisy on the street. (no existential reading available)
 - ii. CHILDREN are noisy on the street, not ADULTS. (existential reading available)
- (É Kiss 1998:149 [12a], [13a], adapted)
-

not others; this is because she refers to main predicates exclusively and not to secondary predicates (that ES codas are in fact secondary predicates will be discussed below in 4.4.2).

Diesing's account for why there are different behaviors of predicates with regards to the mapping to LR is linked to Kratzer's (1995) additional event argument in SLP, which will be explained in more detail in the next sections. All in all, Diesing's (1992b) syntactic approach to the different readings of SLP and ILP has great explanatory value as far as the logical representation and the binding of variables is concerned. Even if the hypothesis has to be slightly stretched to account for ES, it is a useful tool to establish a distinct differentiation between predicates.

4.3.2 Event Arguments (Kratzer 1995)

The SLP–ILP contrast has not only provoked syntactic analyses such as Diesing's (1992b) Mapping Hypothesis, but also an extensive literature that incorporates recent developments in event semantics into a distinction of these predicate types. The notion of events being encoded in the logical form of sentences goes back to Davidson (1967) and has been taken up by numerous authors (see Tenny and Pustejovsky 2000 for a short overview). The basic claim of Davidson's paper is that action sentences introduce a 'hidden' (cf. Davidson 1967:92) argument into the argument structure of the predicate:

Part of what we must learn when we learn the meaning of any predicate is how many places it has and what sorts of entities the variables that hold these places range over. Some predicates have an event-place, some do not. (Davidson 1967:93)

The critical notion is that only certain predicates introduce this additional argument while others lack this position. This distinction has been taken to be one of the possibilities to explain the contrast between SLP and ILP. One of the prototypical approaches in this direction is presented by Kratzer (1995) and taken up by Comorovski (1995).

Kratzer (1995) draws a connection between the (classical) Davidsonian analysis of an event argument position and Carlson's distinction between stage- and individual-level predicates:

I will propose that stage-level predicates are *Davidsonian* in that they have an extra argument position for *events* or *spatiotemporal locations*... Individual-level predicates lack this position. (Kratzer 1995:126, emphasis in the original)

Among others, the starting points for this proposal are the observed difference in behavior for SLP and ILP, such as the ability to appear in coda position of ES and the fact that the interpretations of bare plural subjects differ, SLP allowing for existential and generic readings whereas ILP only have the generic reading (cf. Kratzer 1995:125).

That there is a correlation between events and ES has already been proposed by Milsark, who considered periphrastic ES to be the "naked description of an event" (Milsark 1974:100). One of the shortcomings of Milsark's treatment of the PR was that he was not able to give a clear classification of what came to be known as the SLP–ILP contrast. This is what Kratzer proposes, though she notes that the

distinction between the two types of predicates still leaves open cases where a predicate can be shifted from one type to the other if we change our expectations on the predicate and its pragmatic uses. What this means is that the argument structure of a predicate is not hard-wired into the lexicon but rather depending on the use of the predicate in the respective context: if we use an adjective as referring to a stage of an individual, it is equipped with an additional argument for the spatiotemporal location (cf. Kratzer 1995:125–126, 136).

This different argument structure can be illustrated by the following lexical entries for two predicates under their respective SLP / ILP readings:

- (84) a. available: $\lambda y_i \exists x_s [\mathbf{R}(y_i, x_s) \ \& \ \mathbf{available}(x_s)]$
 b. altruistic: $\lambda y_i [\mathbf{altruistic}(y_i)]$
 (Kratzer 1995:139 [33])

The adjective *available* refers both to an entity designated by y_i (i standing for ‘individual’) and a stage designated by x_s (s standing for ‘stage’). In contrast, *altruistic* lacks this second argument, only referring to the entity. Curiously enough, this argument does not surface explicitly anywhere in English or German, but is an implicit argument ‘hidden’ in the argument structure of the predicate (cf. Kratzer 1995:138). This makes it rather difficult to show that it really exists unless there are reliable tests that can detect it.³⁵ The representation of these two predicates in a simple copular sentence is as follows:

- (85) a. Firemen are available.
 b. $\exists x_s [\mathbf{R}(\mathbf{firemen}, x_s) \ \& \ \mathbf{available}(x_s)]$.
 (86) a. Firemen are altruistic.
 b. $\mathbf{altruistic}(\mathbf{firemen})$.
 (all from Kratzer 1995:139 [34]–[35'])

(85) shows that there exists such a stage of firemen where they are available, which corresponds to the existential interpretation of the plural subject (for more on the different readings, see below). In contrast, (86) shows that the kind of firemen is altruistic, which is the generic reading of the plural. In this second case, the existential reading is not available, since the reference to the stage provided by x_s in (85) is not present. Compare also Maienborn (2004:160 [2]–[4]) where she shows that SLP and ILP supposedly differ with their ability to bind a locative adverbial in a very similar manner.

There are several arguments that support Kratzer’s argument about the existence of an additional event argument, even if this is not overtly spelled out in any stage of representation. Sentences with SLP predicates and a frame adverbial are supposed to have two readings (with the locative modifying either the subject or the verb), sentences with ILP only have one reading available (where the locative modifies the NP), indicated by co-indexation in the following sentences from German:

³⁵ Or possibly that the event argument has a phonetic or morphological realization in other languages, which Bowers (2001) uses as an argument in his proposal of PrP with evidence from Japanese. Again, Spanish with the *ser* / *estar* distinction might be such a case.

- (87) a. ... weil [fast alle Antragsteller]_i [in diesem Warteraum]_i [saßen]_j.
 b. ... weil [fast alle Schwäne]_i [in Australien]_i [schwarz sind].
 (Kratzer 1995:128 [6], [8])

Not only our world knowledge tells us that the act of sitting is clearly a temporary property in this context, but also the fact that it can be modified by the locative. The sentence can mean the following:

- (88) a. All applicants in this waiting room were sitting (and not standing).
 b. All applicants were sitting in this waiting room (and not in the lobby).

The contrastive foci in parentheses helps to make the different meaning clearer; in (88)a, the locative modifies the NP, in (88)b the verb.³⁶ This is not possible for (87)b, where being black represents a permanent property (also in accordance with the context and our world knowledge); the locative there can only modify the NP. The ability of a predicate to be modified by locative modifiers is one of the results of the event argument they introduce; this event argument can then be identified by the locative modifier. Only if this connection between the predicate and the modifier is possible can the adverbial modify the predicate. Otherwise, this reading is not available (cf. Kratzer 1995:127–128).

Further evidence is provided by *when*-clauses where the quantifier *always* (which is implied by the sentence) can only be bound by SLP but not by ILP. For reasons of space, this argument will not be discussed in detail (but cf. Kratzer 1995:129–130).

A major argument in favor of an event-semantic analysis of the SLP–ILP distinction comes from the readings of bare plural nouns. This has been taken up by numerous authors, including Carlson (1977), Delfitto (2006) and Diesing (1992b), among others. The contrast is clearly shown in the following examples (repeated from above):

- (89) a. Firemen are available.
 b. Firemen are altruistic.
 (Kratzer 1995:139 [34]–[35])

The sentences differ with regard to their possible readings; the a. example has, according to Kratzer, three readings: two generic readings, which will be neglected here (cf. Kratzer 1995:141) and an existential reading as follows: “there is a stage *x* such that *x* realizes the kind of firemen and *x* is available” (Kratzer 1995:139). The reference to the stage as a temporal manifestation of firemen is evident. This stage reading is not available for (89)b, which is interpreted as predicating the property of being altruistic to the kind of firemen in general (cf. Kratzer 1995:139; Delfitto 2006:232; Hartmann 2008:117–118). What this difference in the interpretation of bare plurals means is that the existential reading is only available for predicates that introduce a Davidsonian event argument into the argument structure of the sentence, which can then be bound by existential closure (or in addition by a frame adverbial as above), yielding the existential reading (cf. Kratzer 1995:139–140).

³⁶ It would be interesting to investigate whether using an indefinite *im Warteraum* instead of the definite *in diesem Warteraum* would make a difference regarding the readings.

Assuming that there is an event argument introduced by the predicates in ES codas that is bound by existential closure also offers an explanation for the uniform acceptability of locative and temporal PP extensions: if one assumes that every PP introduces a spatiotemporal location, this can be easily bound by existential closure in ES. Apart from sentences where the PP clashes with our world knowledge, there appears to be no PP extension that is ungrammatical in this position. Of course it is still possible that PP extensions are of a different syntactic configuration and that the PR does not apply to them for this reason; still, it appears that the event-semantic analysis of the SLP–ILP contrast can be stretched to allow for an explanation of this fact as well.

Comorovski (1995) takes a similar approach to ES and the PR, claiming that *there be* is an episodic predicate that has an obligatory locative argument, which has to be either overt or “must be recovered from the context” (Comorovski 1995:163). It is important not to get confused with the terminology here: if *there be* is a predicate (i.e. the primary predicate of the ES), then the XP (realized by an AP in the constructions under discussion here) has to be considered a secondary predicate, with both predicates taking the NP as their argument. The connection to secondary predication is explicitly mentioned in the paper. In Comorovski’s analysis, *there be* takes a ‘situation’ as its external argument (which may be an overt adverbial or implicitly provided by the context) and the postcopular NP as its internal argument; in addition (and if present), the postnominal XP is connected to the NP via predication, just as depictive adjuncts are (cf. Comorovski 1995:163). The reason why only SLP can appear in the coda position (the ‘adjunct predicate’) is because the event arguments on the two predicates are connected at some point during the composition; since only SLP but not ILP carry this argument, Comorovski concludes that “only a stage-level predicate can license an adjunct predicate and that adjunct-predicates can only be stage-level” (Comorovski 1995:163).

Under Kratzer’s analysis, there is a uniform contrast between SLP and ILP: either there is an event argument or there is not, dividing predicates into these two classes. A major problem with this is that it is debatable whether there is really such a clear-cut distinction between predicates, as will be further discussed in the next subsection. James (1979) has already shown that there are adjectives such as *responsible* or *visible* which are ambiguous with respect to their status as temporary or permanent. The same is noted by Kratzer with her example of dyeing one’s hair every day, transforming classical ILP such as *blond* into SLP (cf. Kratzer 1995:125–126).

Kratzer’s approach using Davidsonian event semantics and Carlson’s distinction of stages and individuals is a considerable improvement over Milsark’s sketchy analysis of state-descriptive and property predicates. The tests provided in the paper (locative modification and the readings of bare plurals especially) are useful tests to distinguish between the two classes of predicates, even though they are not entirely uncontested (cf. the discussion on Maienborn below). Nonetheless, event arguments appear to be a suitable solution to the contrast between SLP and ILP, not only in the codas of ES.

The status of *there* is not coherent in the approaches that implement some version of the Davidsonian event argument analysis: as mentioned earlier in this section, Comorovski considers *there be* to be a predicate with an obligatory locative argument that is checked by the (non-)overt predicate, whereas Kratzer goes in a slightly different direction. An alternative analysis by Felser and Rupp (2001:310) goes as far as considering *there* to be the phonologically overt manifestation of the event argument which is raised to the canonical subject position if it has a phonological spell-out; the problem with this analysis is (among others) that the link between *there* and the event argument on the predicate is very strong. If there is no predicate (e.g. in ontological ES like *There is a God.*), there is no possible link to *there*; in this respect, Kratzer's approach is more elegant because she employs existential closure to bind the event argument on the predicate.

4.3.3 A Typology for Predicates (Jäger 2001)

The approaches to the distinction between predicates by Carlson (1977), Diesing (1992b) and Kratzer (1995) have one thing in common: they propose a binary distinction between predicates that are either stage-level or individual-level, even though Kratzer has to admit that “the stage-level/individual-level distinction is context dependent and vague” (Kratzer 1995:136).³⁷ Whether this is realized by proposing different syntactic positions for the base-generation of subjects (as Diesing does) or the argument structure of the predicate, the result is binary in both cases: either predicates generate their subjects in [spec,VP] or in [spec,IP]; they either have a spatiotemporal argument or not. It has long been a problem of theories on the PR to clearly define the contrast between those predicates that can occur in ES codas and those that cannot; ES are thus one of the constructions that allows for a testing of predicates with respect to the (SLP or ILP) class they belong to (cf. Felser and Rupp 2001). The work of Gerhard Jäger (1999; 2001) examines the SLP–ILP distinction and argues for a more detailed classification that is not binary, but rather based on several independent contrasts, while at the same time providing tests for this classification.

Jäger first discusses the most prominent tests that have been employed by other authors to distinguish between SLP and ILP: perception reports, interpretations of bare plural subjects, modification by adverbials, the possibility to occur as depictive adjuncts and so-called lifetime effects on the subject for ILP (Jäger 2001:85–87). All of these tests are supposed to represent the SLP–ILP contrast in a binary and reliable manner; they are also considered to be the result of the same underlying contrast, only in different manifestations. As Jäger shows, this is not the case: disregarding (among others) adverbial modification as irrelevant to the distinction (see also 4.3.4 on Maienborn below), he concentrates on three diagnostics for

³⁷ This means that predicates can be either assigned an SLP or ILP interpretation depending on the use of the predicate; the distinction in her theory is still binary, based on the selected interpretation of the predicate (cf. also Greenberg 1998:138).

predicates: perception reports and subject effects, which are taken to be independent of each other as well as independent of the question whether the predicate has a transitory property or not (Jäger 2001:96).³⁸ This leads to a distinction that involves three independent ‘variables’ (so to speak), which are the following:

- Weak / existential readings of bare plural subjects are possible [\pm WS].
- Ability to occur in perception reports [\pm PR].
- The predicate has a transitory property [\pm TR].

Since these three factors are binary and independent, the result is an eight-fold distinction of the possible combinations (for a tabular representation cf. Jäger 2001:96). If a predicate has a positive value for all three factors, it is considered a ‘prototypical’ SLP, while the same is true for ‘prototypical’ ILP that have negative values for all three. The predicate classes between these extremes can be said to be located on a continuum moving from SLP to ILP, with no clear distinction between the two sides. Since the focus of this thesis is on AP codas in ES, some of these classes are not relevant here; Jäger explicitly lists APs in the following three classes: C (+WS, -PR, +TR), E (-WS, +PR, +TR) and G (-WS, -PR, +TR); this does not exclude them from occurring in the other classes. The most interesting classes are C and E because the examples are among those adjectives that are most commonly used to illustrate SLP; still, their properties are quite different from each other. Predicates in class C (e.g. *available* and *present*) allow weak subject readings but fail in perception reports, while the opposite is true for class E (with examples like *drunk* and *sick*). This means that neither characteristic can individually predict that a predicate is possible in ES codas; rather, only certain combinations appear to be possible, as is evident from the examples Jäger provides (Jäger 2001:96–99).

Let us examine Jäger’s classification with focus on the existential construction: the following examples illustrate the different tests mentioned in the paper using the three predicates *available*, *drunk* and *alive* (from classes C, E and G, respectively); (a) subject effects [\pm WS], (b) perception reports [\pm PR], (c) transitory property [\pm TR] and (d) the additional test of a frame adverbial in combination with a predicative ES coda³⁹ (for all examples and judgments for (a)–(c), cf. Jäger 2001:97–99).

- (90) Class C: *available* (+WS, -PR, +TR)
- a. Firemen are available. (existential and generic reading)
 - b. *We saw Peter available.
 - c. Peter was available yesterday. (no lifetime effect)
 - d. In Russia, there are no firemen available.

³⁸ Jäger admits that the [\pm TR] property is largely dependent on world knowledge and thus not represented in the grammar (Jäger 2001:99). The term ‘lifetime effect’ means the interpretation that the tense of the verb “applies to the time of existence of the referent of the subject rather than to the predicate itself” (Jäger 2001:87).

³⁹ This test reflects the contrast mentioned in Kratzer (1995) and Maienborn (2004), cf. also section 0 on Maienborn below, where the contrast is explained in more detail.

- (91) Class E: *drunk* (-WS, +PR, +TR)
 a. Firemen are drunk. (generic reading preferred)
 b. We saw Peter drunk.
 c. Peter was drunk yesterday. (no lifetime effect)
 d. ?In Russia, there are no firemen drunk.
- (92) Class G: *young* (-WS, -PR, +TR)
 a. Firemen are young. (generic reading preferred)
 b. *We saw Peter young.
 c. Peter was young yesterday. (no lifetime effect)
 d. *In Russia, there are no firemen young.

The contrast between these three predicates shows that a binary distinction may be possible for individual factors, but they differ for each of the classes under discussion. As the intuitive judgments for the d. tests show, only predicates from class C are fine under a temporal interpretation of the adverbial, whereas predicates from class E sound odd and class G seems to be really bad. However, with regard to the other three tests, the contrast is not uniform and a binary distinction between SLP and ILP is thus not possible. The d. test could be pointed out as another test (a fact that is left open by Jäger), but as will be seen later, it is just as well possible that this test is a reflex of one of the other tests (cf. section 4.4 on secondary predication approaches below, where it will be shown that ES codas appear to pattern with depictive adjuncts, cf. also Jäger 2001:96).

Jäger's tests show that the clear-cut distinction that has been postulated by former theories of SLP–ILP cannot be upheld; if such a contrast were present, predicates should behave uniformly with respect to these three factors in a binary fashion, depending whether they are SLP or ILP. But the fact that they differ along these lines shows that there are further classifications necessary. The ramifications for the PR are relatively clear, as mentioned above: only predicates with certain combinations of features can appear in coda position and no individual feature can be responsible for this alone. What is less clear is what this means for the previous theories: which factor(s) determine(s) whether the predicate has an additional event argument position or where the subject is generated, respectively? If the binary distinction that is necessary for these theories to work fails, then what about these theories? It becomes obvious that Kratzer's (1995) and Diesing's (1992b) proposals face serious challenges with this non-binary distinction.

This question is immediately linked to the nature of the (Davidsonian) event argument: are events encoded in the lexical entry of a predicate and what characteristics does this argument have? Jäger goes into a similar direction as the approaches that apply the Davidsonian analysis very broadly: "I conclude that all predicates have a Davidsonian argument" (Jäger 2001:102). This is in direct contrast to Kratzer (1995); however, Jäger still assumes that the event argument differs slightly with different predicates and can thus explain the distinct characteristics in his tests.

One of the greatest benefits of Jäger's (2001) analysis is that he provides a testing mechanism that uses the most relevant characteristics of predicates to formulate a typology of predicates that is theoretically adequate because it is able to show the contrasts between individual predicate classes; a simple binary dis-

inction between SLP and ILP is no longer assumed, which creates problems in theories that rely on this distinction. On the positive side, Jäger's proposal achieves a coherent typology of predicate classes that is able to explain why predicates behave differently in some contexts and at the same time this 'problem' for binary distinctions is reduced because the framework of a difference between predicates can be upheld, even if in a non-binary form.

With regards to the PR, there is a clear development visible from Milsark's (1974) intuitive treatment of state-descriptive vs. property predicates that was largely based on world knowledge to Jäger's detailed typology that is based on reliable tests. From the eight predicate classes, we can draw connections to ES codas by testing each of the predicates in this environment, which gives insight into the question which combination of properties allows a predicate to appear there. Especially the adjectives listed in classes C and E appear to be fine in coda position, whereas class G includes most of the adjectives that are generally excluded from the coda in the literature. Even if classes C and E are not on the prototypical SLP extreme of the continuum (which is the case for PP codas and non-stative VPs, both of which easily appear in the coda), their combination of values seems to be permissible in this construction. As will be seen later on in the discussion of the empirical studies conducted for this thesis, Jäger's typology can be shown to have very real manifestations both for the corpus study as well as the rating study.

4.3.4 Critique on a Semantic SLP–ILP Distinction (Maienborn 2004)

The neo-Davidsonian approach to event semantics is a broad application of Davidson's observation, assuming that all predicates have a Davidsonian event argument. This view is not entirely uncontested. The broad application (evident in Jäger 2001 and, for example, Higginbotham 1985; cf. also Katz 2000:394) has been criticized, among others, by Maienborn (2004; 2005; 2007; 2011) and Katz (2000). They both claim that there are constructions that defy a Davidsonian analysis, for example stative sentences with verbs like *know* and *weigh* (cf. Maienborn 2011:17). Since the question of the Davidsonian argument appears to be a central aspect of the distinction between SLP and ILP, which in turn is critical for any explanation of the PR, these criticisms will be discussed here because they can further elaborate on the idea of how the intuitive notion of temporal / permanent properties can be further formalized (cf. Maienborn 2004:159). Maienborn also proposes an interesting pragmatic approach to the distinction between the acceptability of SLP and ILP in combination with locative adverbials in stative sentences, which is of interest to the PR.

Maienborn (2005; 2007) has shown that stative verbs as well as copular sentences fail to pass the standard tests for Davidsonian arguments. Among other things, this is supposed to show that not all predicates are equipped with a Davidsonian argument or at least that this argument differs depending on the predicate. This assumption is central to the neo-Davidsonian approach. It is argued that all predicates, regardless of SLP or ILP, have an "extra eventuality argument" (Maienborn 2005:282); the difference is

then either the reference to two different types of eventualities or the fact that SLP have an additional argument besides the Davidsonian argument, which ILP lack. Regardless of the exact formulation of the theory, their basic assumption is that SLP have some argument that ILP do not have.

In order to show the limitations of the neo-Davidsonian approach, Maienborn provides examples where the Davidsonian analysis does not work and proposes a different solution to these facts: on the one hand, she claims that copular sentences do not contain a Davidsonian argument because they fail the standard test for eventualities (for example the combination with event-related modifiers, cf. Maienborn 2004:163; for a more complete list, cf. Maienborn 2005:283–300); on the other hand, she offers a pragmatic explanation for the distinction between SLP and ILP that does not refer to event arguments but rather uses bidirectional optimality theory to explain the difference in acceptability of the relevant constructions. This touches closely upon one of the questions of this thesis, i.e. whether the PR is a syntactic, semantic or pragmatic restriction (cf. Maienborn 2005:282, footnote 7). For the sake of brevity, her analysis of copular sentences will only be sketched here.⁴⁰ The pragmatic explanation of the SLP–ILP contrast will be dealt with in a little more detail because it is an interesting alternative framework for the analysis of the PR in existential sentences, even though Maienborn does not refer to ES in her papers. It is, however, assumed in this section that the analysis can be applied to ES, even if some conditions (as described below) need to be met.

With regards to the event-semantic status of copular sentences, Maienborn draws a distinction between the ‘classical’ Davidsonian states and so-called Kimian states: “stative verbs ... as well as any combination of copula plus predicate do not qualify as Davidsonian eventualities but are instead what I call *Kimian states*.” (Maienborn 2007:108, emphasis in the original).⁴¹ The main differences between these two types of states become apparent in their definitions:

- (93) Davidsonian notion of eventualities:
Eventualities are particular spatiotemporal entities with functionally integrated participants. (Maienborn 2005:279 [1])
- (94) Kimian states (K-states):
K-states are abstract objects for the exemplification of a property P at a holder x and a time t. (Maienborn 2005:303 [47])

What becomes clear in both definitions is that these states refer to stages of an individual: Davidsonian eventualities have a “spatiotemporal” location whereas Kimian states only refer to a certain “time t”. The Kimian state thus introduces a ‘poorer’ argument that cannot be located in space, which affects the ability to appear with locative modifiers in a sentence (cf. Maienborn 2005:304). On this account, SLP should clearly pattern with Davidsonian states because a stage is a “spatially and temporally bound manifestation of something” (Carlson 1977:68).

⁴⁰ Please refer to the original papers in Maienborn (2005; 2007; 2011).

⁴¹ That ‘*be + XP*’ is in fact a stative is assumed by Jäger (2001:96) and Milsark (1974:54).

Concerning the observable difference between SLP and ILP in combination with spatial modifiers, Maienborn argues that this difference is not one of grammaticality, but rather of acceptability, depending on the reading of the frame-adverbial. If the frame-adverbial has a temporal reading, then SLP are preferred, as shown in (95):

- (95) a. Maria was tired / hungry / nervous in the car. (SLP)
 b. */?? Maria was blond / intelligent / a linguist in the car. (ILP)
 (Maienborn 2004:158 [1])

The general notion is that the sentences in (95)b are ungrammatical because the ILP resists spatial modification due to the lack of a Davidsonian argument. However, there is an alternative explanation available which concerns the temporal interpretation of the frame-adverbial. In the examples above, the ILP is only unacceptable if the frame-adverbial receives a temporal reading which claims that the respective predicates only apply to Maria during the time that she was in the car. ILP are clearly not acceptable under this reading. Providing the right context, however, makes it possible for the frame adverbial to receive an epistemic reading, which reduces the contrast between SLP and ILP (Maienborn 2004:162). What Maienborn concludes with these examples is that there is no reason to suppose “the presence or absence of an underlying eventuality argument” (Maienborn 2005:292) because the temporal reading of the frame-adverbial is only one possible interpretation and ILP are only unacceptable in this reading. This is already a hint at the position that the distinction between SLP and ILP in copular constructions in combinations with locatives is not something that is ‘hard-wired’ into the grammar, but in fact a pragmatic distinction.

A crucial factor of locative modifiers is whether they are event-related or not. In the above examples, the locative adverbial is a so-called ‘frame-setting adverbial’. Frame adverbials are not related to the event but rather offer a restriction on the validity of the proposition (Maienborn 2005:288; 2004:161). Returning to the two eventuality states described by Maienborn, the inability of Kimian states to be modified by a truly event-related locative adverbial holds regardless of whether the predicate is SLP or ILP, as shown in the following examples from German:

- (96) *Das Kleid ist auf der Wäscheleine nass. (Maienborn 2005:292 [23a])
 (97) *Carol war (die ganze Zeit) vor dem Spiegel eitel. (Maienborn 2005:293 [24a])

In these sentences, the adverbial is not a frame-setting adverbial located outside the VP, but a truly event-related adverbial (for the distinction cf. Maienborn 2005:288). If either of these sentences were an instance of the presence of a Davidsonian argument, the locative modification should be grammatical; however, this does not appear to be the case for Maienborn’s examples.⁴² What this means is that neither SLP nor ILP can be located in space in combination with event-related locative adverbials (cf. Maienborn

⁴² As a native speaker of German, I agree with her judgments, but would still say that an interpretation for SLP is more readily available than for ILP.

2005:294),⁴³ which is one of the fundamentals of Davidsonian eventualities (Maienborn 2005:280 [2b], [3b]). This is not only at odds with the broad application of Davidsonian event semantics, but also with Carlson's definition of stages. This shows that one of the classical assumptions of a Davidsonian analysis does not work for copular sentences, regardless of the type of predicate that is used. If this test is not available, the question is how the difference between SLP and ILP in certain contexts can be explained. In these examples, the temporal reading of the frame adverbial is not available and the sentences cannot be interpreted in this way, which would make them acceptable.

One of the ways that Maienborn explains the observed preference for temporary predicates in contexts with locative frame adverbials is by employing pragmatic optimality theory for the interpretation of the respective sentences.⁴⁴ In this framework, the semantic underspecification of the frame-setting adverbial (i.e. the fact that there are multiple readings possible, among them the temporal reading that brings up the SLP–ILP contrast) is resolved by bidirectional optimality. The gist of this theory is that the addressee of a sentence of the form shown in (98) will automatically try to resolve the semantic underspecification of the frame-adverbial and apply two distinct rules to do so.

(98) In Italy, Maria was rich. (Maienborn 2004:164 [11])

There are two basic underspecifications inherent in the adverbial in sentences of this type: (a) the topic time t^* (i.e. the interval of the adverbial) is either equal to the lifetime of the subject t^L or a proper subset of it ($t^* \subseteq t^L$); and (b) the topic time is either equal to the predicate time t^P (i.e. of the time that the predicate holds) or a proper subset of it ($t^* \subseteq t^P$) (cf. Maienborn 2004:165 [12] for a graphical representation of the four possible combinations). In a first step, the case of $t^* = t^P \ \& \ t^P = t^L$ is filtered out because there are less ambiguous ways of saying that Maria always lived in Italy ($t^P = t^L$). In a next step, the most restrictive interpretation is selected by a “Be strong” principle. Since $t^* = t^P \ \& \ t^P \subset t^L$ is implied by the other remaining interpretations ($t^* \subset t^P \ \& \ t^P \subset t^L$; $t^* \subset t^P \ \& \ t^P = t^L$), this interpretation is selected as the optimal interpretation of the sentence. The process is summed up in (99):

(99) *Temporariness effect:*
 a. Semantic underspecification: $t^* \subseteq t^L \ \& \ t^* \subseteq t^P$
 b. Q-based implicature: $t^* \subset t^L$
 c. I-based implicature: $t^* = t^P$
 (Maienborn 2004:167 [21])

What follows from this is that by the temporary interpretation of the adverbial and the fact that it is of the same duration as the predicate time, a predicate with a temporal reading is preferred (Maienborn 2004:167). This is one side of this theory: it is able to explain why, *ceteris paribus*, a frame-adverbial with a

⁴³ In this respect, the copular sentences pattern with stative sentences in general, regardless of the type of predicate that is used (cf. Maienborn 2007:109); that statives resist a Davidsonian approach has also been argued by Maienborn (2007; 2005).

⁴⁴ This account summarizes the detailed argumentation in Maienborn (2004:164–168) in a very sketchy manner.

temporal reading prefers what can be characterized as SLP. It is not necessary to resort to argument structure to rule out ILP in these sentences. That the interpretation of the adverbial determines the preferred type of predicate that is selected can be seen in the following examples:

- (100) a. In the car, Maria was tired.
 b. */?? In the car, Maria was blond.
 (adapted from Maienborn 2004:158 [1])
- (101) a. ?In Italy, Maria was tired. (temporal reading)
 b. In Italy, Maria was blond. (temporal reading)
 (Maienborn 2004:167 [22])

The reason for this reversal in judgments of SLP and ILP arises from the fact that in (100) the synchronization of t^* and t^p works best for SLP because “[o]ur world knowledge tells us that the average time of staying in a car and of being tired fit together quite easily, whereas being blond normally lasts for a longer period” (Maienborn 2004:167). If the adverbial is changed to denote a longer time period as in (101), ILP become more easily acceptable than SLP because the lexical / semantic contrast between the two types of predicates is blurred.

Another argument that calls the grammatical distinction between predicates into doubt is Maienborn’s DRS (Discourse Representation Structure) analysis of copular sentences, which attempts to prove that SLP and ILP share identical argument structures during the whole compositional process (Maienborn 2005:307–308).⁴⁵

Maienborn’s pragmatic solution works well for copular sentences that contain a frame adverbial with a clear reading. The questions now are whether this can be transferred to ES without modification and whether the usual judgments of the PR fit into the pattern. The temporariness effect predicts that under temporal interpretations of the adverbial, SLP are preferred over ILP. This fits into the general debate about the PR but employs completely different mechanisms. The following sentences illustrate the effect that the temporal interpretation of the frame adverbial can have under different conditions (own examples, roughly based on Maienborn 2004:158, 167 [1], [22]):⁴⁶

- (102) In France, there are only a few women ?drunk / blond.
 (‘long’ temporal reading of a spatial modifier)
- (103) In the car, there are only a few women drunk / *blond.
 (‘short’ temporal reading of a spatial modifier)
- (104) Over the last few centuries, there were not so many men ?tired / red-haired.
 (‘long’ temporal modifier)
- (105) Yesterday, there were not so many men tired / *red-haired.
 (‘short’ temporal modifier)

It appears that in these sentences, the acceptability of the ILP as well as the SLP conditions depends on the duration of the temporal reading of the frame adverbial (for locative adverbials, this corresponds to tem-

⁴⁵ Please refer to Maienborn (2005:305–309) for a more detailed account than space permits here.

⁴⁶ Judgments for these sentences are also based on Maienborn’s.

poral boundedness, which is more readily available for some adverbials than for others). Judgments are only intuitive, but it appears that under the long temporal interpretation (*during the time they stayed in France...*) of the adverbial in (102), the ILP *blond* is at least as acceptable as the SLP *drunk*, if not even marginally better. The opposite is true for (103), where the temporal interpretation of the adverbial is shorter (*during the time they stayed in the car...*). Here the ILP is clearly less acceptable (unless maybe in a contrastive focus reading which would require a partitive reading of the NP) than the SLP. The contrast of locative adverbials with temporal adverbials is apparent when comparing (102)–(103) with (104)–(105): in the latter two examples, the question of acceptability is more apparent than with the locative adverbials. This is essentially the point Maienborn tries to make: evidence from the influence of frame-setting adverbials can alter the interpretation of the sentence to allow for ILP in the coda due to the “plausibility of such a synchronization in view of context and world knowledge about possible or typical temporal extensions of properties” (Maienborn 2004:167). In many cases it is possible to construct a context that would allow for a meaningful interpretation.⁴⁷ On a pragmatic level it thus appears to be possible to synchronize the predicate time with the topic time in ES even if the predicate is an ILP, at least intuitively.

Matters are less clear if the ES does not exhibit an overt adverbial that would allow for synchronization to be possible. In such sentences, there must be another way to explain the observed difference in acceptability. Take the two following examples:

- (106) (At Mike’s party,) There were people drunk.
(own example)
- (107) (At Mike’s party,) *There were people intelligent.
(own example)

If the frame adverbial is present, the SLP *drunk* is clearly more acceptable than the ILP *intelligent*. This is due to the fact that for the SLP, the synchronization process works more easily because our world knowledge tells us that it is reasonable to assume that both conditions can hold for the same amount of time.⁴⁸ In the case of the ILP, our world knowledge and concept of the adjective *intelligent* clashes with the frame adverbial and thus makes the sentence less acceptable. But if the adverbial is not overt, this is not possible on the level of the sentence because there is nothing to limit the spatiotemporal validity of the proposition. In this case, it is necessary to resort to either the context or at least an implied adverbial (cf. Kallulli 2008) in order to arrive at the temporariness effect. This is not particularly damaging to Maienborn’s approach; ES are usually not isolated statements because they are used to introduce new entities to the discourse, meaning that there usually is preceding or following discourse material. A context that provides the necessary temporal fixation for synchronization to take place is thus available in most cases.

⁴⁷ Whether this is reflected in real-world judgments could be an interesting topic for an empirical study. The rating study for this thesis has shown that ratings for SLP and ILP conditions in ES codas are independent of the type of frame-adverbial used, cf. section 0 below.

⁴⁸ Not to mention that being drunk at a party is maybe a more salient reading than being intelligent at a party. Of course, this also depends on the type of party you are going to and so on.

All in all, Maienborn's theory of a pragmatic explanation of the observed contrast between SLP and ILP is a solution that uses uncomplicated pragmatic principles to arrive at a result comparable with the other theories about the PR. In her framework, it is not necessary to have the predicates carrying event arguments that are hard-wired into their lexical entries. In other papers, she has generally doubted the Davidsonian analysis of copular sentences and of stative verbs, which would make it difficult to characterize ES under the event-semantic framework (cf. Maienborn 2005, 2011). It can be seen that despite all the advantages of the Davidsonian approach, there are still other alternatives up for debate to explain the restriction on ILP in certain environments. The issue of temporal boundedness, which is introduced by the frame-setting adverbial in Maienborn (2004) will again become relevant below in the section on McNally's (1997) Adjunct Rule (4.4.2). Whether Maienborn's approach is adequate enough to explain all the relevant cases that rely on the Davidsonian argument remains to be seen, but the discussion shows that the nature of the PR is yet to be definitely to be categorized as either semantic or pragmatic in nature (or syntactic, if Diesing's 1992b approach is being followed). There are strong arguments in favor of a semantic analysis (cf. Hartmann 2008 and others), but a pragmatic solution would certainly mean a "more balanced division of labor between grammar and pragmatics" (Maienborn 2004:168); keeping grammar simple is not a goal in itself, but could reflect the nature of UG more adequately in this respect.⁴⁹

Katz is also quite clear in this respect: "if we hypothesize some underlying entity we should get some empirical bang for our ontological buck" (Katz 2000:395). Hypothesizing about event arguments should be of explanatory value for the empirical facts and make the correct predictions; otherwise such a construction makes things unnecessarily complicated. This is exactly the reason why Maienborn's alternative approach has its merits. Katz goes in the same direction as Maienborn in his critique of a general Davidsonian analysis of all predicates and postulates to retain the classical Davidsonian approach where "event sentences have an 'extra' argument and an 'extra' existential quantifier" (Katz 2000:409), which is not valid for statives and copular sentences, as Maienborn has shown.

4.4 Secondary Predication Approaches

In her general introduction on predication, Rothstein draws the distinction between two basic types of predication: primary or clausal predication as well as secondary or adjunct predication (Rothstein 2006a:75). Whereas primary predication is responsible for predicating the unsaturated argument of the sentence (the predicate) of a saturated expression (the subject of the sentence) involving an inflectional (INFL) node, secondary predication is defined by the fact that it establishes a predication relation of two

⁴⁹ Examining whether there is a similar feature in other languages and language families could hint at the PR being a feature of UG or whether it is indeed 'only' a pragmatic oddity of Germanic languages. Due to a lack of this insight, the question remains unanswered here.

constituents without this inflectional node and involving a local subject that is not necessarily the subject of the entire sentence (cf. Rothstein 2006a:74; Winkler 1997:8). This can be illustrated in the following sentences (a resultative and a depictive secondary predication, respectively), with the primary predication indicated by underline and the secondary predication by *italics*.

(108) Jane painted *the house red*. (sentence from Rothstein 2006b:210 [2a])

(109) Mike likes *his tea hot*. (similar to McNally 1997:7 [3])

The primary (transitive) predication contains the subject, a verb and the direct object of the inflected verb (the latter two being considered the predicate); in contrast, the secondary predication contains the direct object of the verb (which becomes the subject of the secondary predication relation) and a secondary predicate (here in the form of an AP, but PP are also possible). The secondary predicates are not included in the primary predication relation indicated by underline because they are not necessary to the sentence (at least in these simple cases) and can be easily left out without making the sentences ungrammatical (cf. Winkler 1997:2).

But why this digression to secondary predication? The answer is quite simple: there are a striking number of similarities between secondary predication and the coda of ES (cf. also Katz 2000:405–407), as is already apparent from the fact that (a) both involve an NP directly followed by a predicate. Among the further similarities is the fact that (b) the PR applies to secondary predication just as it does to ES codas: secondary predicates that are depictives (corresponding to (109) above but not (108), which is a resultative, cf. Rothstein 2006b) need to have a transitory property that has been described in terms of SLP (Rothstein 2006b:214; Winkler 1997:10–11; Simpson 2005:93); in point of fact, Winkler (1997:12) considers the PR to be such a powerful mechanism on secondary predicates that it should be made part of the rule system of predication. In addition to these, it will become apparent in the course of this subsection that (c) secondary predicates are also adjuncts, similar to the postcopular XP in ES codas. It is also a striking similarity that (d) NP are not generally allowed as secondary predicates, just as in ES codas.⁵⁰

This subsection will discuss two approaches that are made within the secondary predication framework, one using a more ‘classical’ SC approach to secondary predication and predicative ES codas (Kallulli 2008) and the analysis by McNally (1997), who considers the XP to be a depictive adjunct.

⁵⁰ NP secondary predicates are only available in certain contexts where they appear as resultatives, but are not usually available as depictives (cf. Winkler 1997:9–10). Himmelmann and Schultze-Berndt (2005) note that this is cross-linguistically only the case when there is a clear distinction between the classes of AP and NP and if NP are invariably considered as ILP.

4.4.1 A ‘Revived’ Small Clause Analysis (Kallulli 2008)

One of the approaches that takes existential sentences to involve secondary predication is the Small Clause analysis presented in Kallulli (2008), which will be sketched here briefly. She takes *there* to be the in-situ subject of predication (meaning that her SC approach differs from that of Stowell (1978) by not involving TI) which includes the Davidsonian event argument that builds the stage-level predication found in the construction; the nature of the secondary predication is assumed to provide the ‘stage-levelness’ of the predication that is linked to the event argument in *there*. In her view, the spatiotemporal location may be explicitly stated by a PP as the second argument of the SC, or this location may be implied by a constituent that is left out (Kallulli 2008:283–284). A similar argument is made by Comorovski (1995:162), who claims that there are no ‘bare’ existentials and that there is always a link to a spatiotemporal location for the sentence, even if it is only implied by the discourse.

In contrast to Stowell (1978), the second constituent in the SC is not obligatory, which is a great advantage over previous SC approaches because it can explain ontological ES like *There is a God* without having to resort to a second lexical entry for *be*. The possibility of an implicitly stated location makes it possible to maintain a SC approach with regards to this fact. What exactly leads Kallulli to the conclusion that the secondary predication of the SC provides the stage-levelness in ES and how this operates is, unfortunately, not explained in more detail in her paper.

The SC approach to secondary predication in general is criticized by Rothstein (2006b) and Winkler (1997). Rothstein maintains that “[s]econdary predicates do not form a constituent with their subjects ... and are essentially adjuncts” and that “there is no small clause in the case of adjunct predicates” (Rothstein 2006b:216, 217). In his article on predication, Williams (1980) argues that secondary predicates are licensed by *c*-command and that they appear inside the VP (cf. Williams 1980:204, 212); Rothstein’s view on depictives with regards to Small Clauses is that an SC with a PRO subject should be in an ungoverned position because PRO requires this (cf. Horrocks 1987:136), but since the secondary predicate needs to be *c*-commanded, the SC analysis is not possible (cf. Rothstein 2006b:217). Rather, the depictive is taken to be generated under *V*’ as a sister to the direct object of the verb and the verb itself (cf. Rothstein 2006b:219). A Small Clause analysis of secondary predicates (especially depictives) is thus ruled out by Rothstein. Winkler goes in the same direction by excluding analyses that consider the secondary predication relation to be a SC with PRO as its subject because of the requirement of an ungoverned position of PRO (Winkler 1997:22–23, 34).

While Kallulli’s structure of the SC is different from that of ‘classical’ secondary predication approaches in that it does not contain a PRO subject, but rather the postcopular NP as the first constituent of the SC, there is still the question whether this is an available structural representation of secondary predication. In Kallulli’s version of the SC, the NP *c*-commands its predicate; the problem of a governed PRO is thus

avoided. The notion of a close connection of the two constituents (i.e. the postcopular NP and the postnominal XP) is intriguing if it can be made to work on a syntactic level.

What is less elegant in the approach is that Kallulli considers the possibility of an implicitly stated second SC constituent if the coda does not appear in S-structure; this constituent still has to be present on some level of representation (at least in LF) to check the event argument of *there*; Higginbotham (1985:559) argues that the θ -criterion “is to hold both at LF and at S-Structure”, which could be in conflict with the ‘hidden’ E argument position on the predicate if the second SC constituent is not present at S-structure. The idea that the secondary predication of the SC with a PP constituent provides the stage-levelness of the predication assumes that all PP are SLP; the question whether SLP adjectives can also provide this is not directly answered (cf. Kallulli 2008:283, 285), but is probably the case in the proposal. However, the locative and temporal ‘anchoring’ of the event variable is definitely more apparent in a PP coda than it is with adjectives.

Another point that is worth noting are sentences that contain both an AP secondary predicate and a PP, such as *There was a man sick on the airplane* (own examples).

(110) There was [_{SC} [_{NP} a man sick] [_{PP} on the airplane]].

(111) There was [_{SC} [_{NP} a man] [_{AP} sick]] [_{PP} on the airplane].

It is unclear whether such constructions would fall under a complex NP (*a man sick*) with the PP as the second constituent of the SC or whether the AP is the second constituent of the SC and the PP some adverbial adjoined higher up in the structural representation. This could in turn lead to the question whether PP are not in general in a higher position of the structure, regardless of whether an AP occurs or not. Recursivity of PP adverbials probably points in the direction that they are of a different kind than the AP predicate in this case.⁵¹ Questions like this are not properly discussed in Kallulli’s short paper, but definitely need further consideration.

Concerning the PR, Kallulli notes that nominal predicates are ruled out because they represent ILP and makes no further distinction; the connection between the Davidsonian argument of SLP and ES is also established here (Kallulli 2008:285). Regarding adjective predicates, she lists the following examples of ungrammatical and grammatical sentences, respectively:

(112) a. *There were firemen hungry.

b. *There was a child happy.

(Kallulli 2008:285 [31])

(113) a. There are firemen lost.

b. There was a child drowned.

(Kallulli 2008:285 [32])

⁵¹ Cf. a sentence like *There was a man sick at gate 16A on the airport in Paris at 11 AM this morning*. An alternative that would suggest a single, highly complex PP would, of course, not be out of the question.

There are a number of criticism that can be presented against these examples: first of all, she does not try to explain why some adjectives appear to be grammatical and not others, but only hints at this might be related to the “(Davidsonian) event argument” (Kallulli 2008:285), yielding no explanation for the contrast.

Second, her grammatical examples are actually past participles (which she terms ‘deverbal’ adjectives); as James (1979:701) has shown for postnominal participles, the conditions are different for participles than they are for adjectives, past participles needing to denote an event that is not long-lasting. Comparing adjectives with participles and arguing that the difference in grammaticality is ‘crucial’ is not reliable evidence because the structures are not identical. The distinction between predicates that are allowed in this position and those that are not is indeed crucial, but the class of available predicates is certainly not limited to Kallulli’s ‘deverbals’.

Third and most importantly, her ungrammatical examples employ adjectives that are clearly SLP and should thus be allowed in this position. Applying Jäger’s (2001) tests shows that they allow an existential reading of bare plural subjects, are acceptable as complements of perception verbs and denote temporary properties without a lifetime effect.⁵² They thus belong to his class E, the “classical adjectival SLPs” (Jäger 2001:98). Kallulli does not give a reason why she considers *hungry* / *happy* ungrammatical in these contexts and her judgments are up for debate.⁵³ What she also fails to notice is that the sentences appear to become (intuitively) more acceptable when (a) context is provided or (b) if a quantifier is added (both examples adapted from Kallulli 2008:285 [31]):

- (114) a. There were firemen hungry at the festival.
 b. There were quite a few firemen hungry.
 (115) a. Yesterday, there was a child happy at the zoo.⁵⁴
 b. There was not a single child happy.

It can be seen that such minor modifications of the sentences turn them into more acceptable ones with the same adjectives. Kallulli’s claim that some adjectives are allowed but not others can thus not be shown to be relevant with these examples. It is not obvious why she does not refer to clearer examples (especially since there is an abundance of these in the available literature) where the ungrammaticality also persists if the conditions are changed (properties like *tall* or *intelligent* among them). That some uncontroversial SLP such as *tired* and *dirty* can cause difficulties in obtaining an existential reading with bare plurals has been

⁵² i. Children are hungry / happy. (generic and existential reading available).
 ii. John saw Mike hungry / happy.
 iii. Children were hungry / happy yesterday. (no lifetime effect)

⁵³ In the rating study that was conducted for this thesis, the NS control group’s acceptance of the predicate *hungry* was remarkably positive; in fact, it yielded the best result of any condition in the questionnaire, even better than present participles. Along with the arguments from Jäger’s classification, this should be enough to cast doubt on Kallulli’s judgment of this sentence.

⁵⁴ Though the sentence still sounds weird, this probably has to do with the reading of the singular subject. The only example in the BNC that has *happy* in a coda position features a plural subject in an infinitival context (... , *there were others happy to shake him...* (BNC: ECB 557)), which is not immediately relevant.

noted by McNally (1993:13–14) and this might be another point of interest (this has also been the case in the rating study, cf. below).

All in all, Kallulli's approach to ES in general and to the PR in particular faces numerous serious challenges that lead to the conclusion that she is not able to provide a sufficient explanation for the discussion in this thesis. Her arguments for the stage-levelness of secondary predication and the connection to the Davidsonian event argument are interesting, but not formulated clear enough to become apparent. The development of the SC approach to avoid the problematic status of PRO in this context to a SC that contains the overt logical subject of the sentence as well as an optionally overt predicate is relevant in many respects, but as will be seen, the optionality of the coda can be explained by other means that may be more convincing than the null spell-out of the predicate in S-structure.

4.4.2 XP as a Depictive Adjunct (McNally 1997)

In her complex work on the English existential construction, McNally has a distinct strategy to solve the PR: much like Moro (2006), she assumes the XP to be an adjunct to the ES structure and derives the unacceptability of ILP in this position as a result from the membership of the ES coda in the more general class of depictive adjuncts. It has been shown in various places that the PR applies to depictive adjuncts as well as to ES codas and it is desirable to find a generalization that fits all affected structures (cf. the clear analogy of the semantic restrictions on depictive secondary predicates in Simpson 2005:93–95); this is what McNally tries to achieve with her interpretive Adjunct Rule. Since her proposed Adjunct Rule depends largely on the status of the XP in the structure, her argumentation will be sketched before turning to the PR.

In a first step, McNally analyzes the syntactic status of the postnominal XP and offers three alternative explanations, two of which she excludes due to various empirical factors:

(1) The XP is actually a part of the postcopular NP and is thus subject to restrictions on postnominal modifiers (cf. Williams 1984; James 1979). The various arguments against this position have already been mentioned above, but will be sketched here again (McNally 1997:55–57): (a) the inability to extract the XP only shows that it is not a complement, but an XP independent of the NP is still possible; (b) the prohibition on NP codas (cf. also McNally 1997:13) can be explained by including NPs in the predicate class(es) of ILP; (c) the optionality of the coda is easily explained by its adjunct character (cf. Moro 2006).

(2) The PR is a direct result of the DR, being an incompatibility of the subjects allowed in ES and the requirement on predicates (cf. Milsark 1974; Milsark 1977; Ladusaw 1994). Milsark's generalization states that property predicates (roughly what are considered ILP today) require strong ('definite') subjects, which are excluded in ES by the DR; this means that property predicates cannot appear in ES codas because the type of subject they require is not licensed there. There are two points of criticism that McNally offers: in constructions other than ES, the PR also applies if the NP is definite, as the following example shows:

(116) Max played tennis barefoot / *intelligent / *an amateur (McNally 1997:38 [60]).

In this sentence, the subject *Max* is definite and thus qualifies as a ‘strong’ subject; still, an ILP adjective and NP predicate are not permissible in a secondary predication construction.⁵⁵ This means that linking the PR to the DR “is not going to account for these facts and will thereby quite possibly miss a generalization” (McNally 1997:38). A further argument in conflict with this link is the fact that the proposed incompatibility between subjects and predicates in copular sentences cannot be directly transferred to ES.

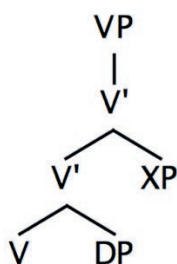
- (117) a. A woman I know is a member of the City Council.
 b. There was a woman I know on the City Council.
 c. *There was a woman I know a member of the City Council.
 (McNally 1997:37–38[56b, 57b, 58b])

These sentences show three things: (117)a shows that the copular combination of the NP and the XP is possible; (117)b shows that the NP *a woman I know* is a permissible subject in ES (i.e. it is a ‘weak’ subject); and (117)c shows that the combination of the subject and the predicate *a member of the City Council* is not possible in this context. If the subject and the predicate are compatible and the subject is licensed as an ES subject, then the combination of subject and predicate in ES should be possible as well (cf. the examples in Ladusaw 1994:221). Since only weak subjects are permissible in ES due to the DR, *a woman I know* has to be a weak subject because it is able to occur in (117)b; this means that the copular and the ES sentences should be either both grammatical or both ungrammatical because they pattern in this respect, which is clearly not the case here since (117)a is grammatical whereas (117)c is not.

These arguments lead McNally to the conclusion that strategies (1) and (2) are not suitable approaches to the PR and she takes a different approach, namely proposing (3) that the XP is a depictive adjunct (more precisely, an object-oriented depictive (ODD)) and that the PR follows from the semantic properties of this adjunct class (McNally 1997:36, 46–47). On the interpretive level, ODDs and the ES coda share the property of “restricting the state of affairs denoted by the verb in the clause in which they appear” (McNally 1997:47); as will be seen later, this property allows for a very technical, but also pragmatic explanation for the PR. In supporting the analysis as a depictive adjunct, McNally first shows that the XP is independent of the DP, but still within the VP. The structural representation of the XP is assumed to be the following:

⁵⁵ Himmelmann and Schultze-Berndt (2005:57–58), however, note that “cross-linguistically, the syntactic classification of depictives is more open, especially in languages where adjectives and nouns are not differentiated sharply”, which means that there might be some languages that allow NP in secondary predication, *ceteris paribus*.

(118) Tree 7. Depictive XP adjunction (McNally).



(McNally 1997:49 [73])

This position is in agreement with other approaches to the (object-oriented) depictive, most prominently Rothstein (2006b:217) and Winkler (1997:81 [152]), who both assign a position that is generated under V' to the OOD. This is where McNally's adjunct analysis and the link to secondary predicates is the most obvious.

The main argument for a DP-external XP is provided by the well-known 'sourcelessness' problem already mentioned in the general introduction to the theories on ES (cf. Milsark 1974): there are examples of postcopular DPs that are not available in normal subject positions in copular sentences (e.g. the DP *a woman who knows you working at the Pub these days*, which is fine as postcopular material in ES, but not as the subject in a copular sentence) (cf. McNally 1997:51–52, also for the DP example). On the other hand, the XP has to be within VP because it does not behave like an IP-adjunct in the ability to prepose:

- (119) a. There are many women jogging in the park.
 b. *Jogging, there are many women in the park.
 c. *Jogging in the park, there are many women.
 d. In the park, there are many women jogging.
- (120) a. Mary likes to drink her tea cold / *organic.
 b. *Cold, Mary likes to drink her tea.
 c. *Organic, Mary likes to drink her tea.

(119)b shows that the participle coda *jogging* cannot be preposed, suggesting that it is not adjoined to IP, where modifiers are expected to be preposable (cf. McNally 1997:52). Matters are the same if the locative modifier is preposed along with the locative (119)c, but the locative on its own can be easily preposed (119)d.⁵⁶ (120) shows a similar behavior for depictives, which fail to prepose regardless of whether they are SLP or ILP (ratings follow the examples in McNally 1997:52 [79]).

At the same time, it is shown that the XP cannot be a complement (either directly to *be* or as a constituent of a complement) because it fails to extract in (121)b, as already pointed out by Williams (1984); this argues against a Small Clause analysis of the XP because SC complements are extractable in (121)a (cf. also Hartmann 2008:172–173):

⁵⁶ This is one of the possible explanations why PP codas do not show effects like the PR because they are a different syntactic configuration than AP codas (cf. Maienborn 2005:288; Davidson 1967:96).

- (121) a. How clever do you consider Angela?
 b. *How available was there a man?
 (McNally 1997:66 [111a,c])⁵⁷

All of these empirical facts point at the adjunct status of the postnominal XP, which is clearly more adequate in comparison to previous complex NP or SC approaches. This analysis has several advantages, the most important being that the optionality of the XP follows naturally from its status as an adjunct. Unlike complements, adjuncts are optional by definition, since they are not taken to contribute essential information to the sentence (cf. Moro 2006). Rather, they further describe the subject of the sentence and in the case of ES, contribute to the temporal delimitation, as will be discussed below. Any analysis that approaches the PR is in need to explain the optionality of the XP, and McNally's approach is a very elegant solution to this challenge.

A second advantage is that ES are no longer considered to be directly related to copular sentences; it has been shown above that the PR could not be explained by a link between subjects and predicates in copular vs. existential sentences because the pattern argued for by Milsark (1974, 1977) appears to be empirically inadequate. Thus a distinct, non-transformative syntactic analysis for ES, as is also argued for by Hartmann (2008), is an appropriate proposal; as we will see, this offers a more reliable account for the PR than the link between the postcopular NP and the DP (cf. McNally 1997:73).

In contrast to the very sketchy treatment of this in Moro (2006), McNally provides a set of empirical evidence to argue for the adjunct status of the XP. Not only do the facts from non-existing DPs (resulting in the 'sourcelessness' problem already encountered by Milsark), non-preposability and failure to extract point at the conclusion that the XP is indeed an adjunct, but there are also many advantages that result from this analysis, both in terms of syntax and interpretability of the ES coda. Since the PR is a phenomenon that is not only present in ES but also in other constructions that contain a depictive adjunct, McNally certainly has a point when she argues that the PR is a direct result of the "membership in that adjunct class" (McNally 1997:151).

Once the status of the XP as a depictive adjunct is adopted, there remain two major open questions: (a) how is the depictive adjunct interpreted in the existential construction and (b) how can the PR be explained by the adjunct status? These will be the guiding questions for the remainder of this section.

Concerning the interpretation of the depictive, the literature agrees that the hold time of the adjunct predicate correlates with the hold time of the main predicate (or matrix verb); the precise relation holding between the two intervals can be described in terms of a set relation, as the following definitions show:

⁵⁷ It has to be pointed out that for depictives, the question of extraction is not entirely clear; Winkler (1997:81–82) points out that there are judgments that allow depictives to be *wh*-extracted, as in the following:

i. */? How drunk did you meet John t? (Winkler 1997:82 [154b])

However, this does not have immediate effects on the analysis discussed here. The judgment that is least restrictive on this extraction is still no complete acceptance of the result.

“the depictive contributes a property that the interpretation of its controller must have while participating in the state of affairs described by the main predicate” (McNally 1997:152)⁵⁸

“A depictive predicate attributes a property to its subject which holds of that subject all the time that the event denoted by the matrix verb is going on” (Rothstein 2006b:210)

“depictive ... adjuncts are semantically connected to the matrix clause by some relation holding between the described events (like ‘simultaneity’ or ‘result’)” (Jäger 2001:93)

All three authors suggest a similar relation between the adjunct and the main predicate, leaving open the bounds of the hold time of the adjunct predicate beyond those of the main predicate. The crucial factor is that the hold time of the adjunct is at least equal to that of the main predicate and not smaller; there is the possibility that the hold time of the adjunct is larger than that of the main predicate. McNally (1997:156) provides the example *Fido ate some meat raw*, explaining that the state of being raw must hold at least as long as the process of eating takes place, but could have started before and could last for some time after the eating event takes place. This linking of the adjunct to the main predicate reminds of Maienborn’s (2004) linking of the hold time of the adjunct to the frame adverbial, requiring that the topic time be equal to the hold time of the predicate. The difference between these two approaches lies in the constituents that are linked, but the method is quite similar.

For the interpretation of the adjunct predicate, McNally postulates two requirements: (a) the interval of the main predicate has to be included within the interval of the adjunct predicate (i.e. the interval of the XP has to be equal or larger than that of the main predicate)⁵⁹ and (b) there has to be some spatial overlap between these two predicates. The restriction on the temporal inclusion is much stricter than that placed on the locative overlap, as seen in the simplified version of the two requirements:

- (122) a. $int(V) \leq int(XP)$
 b. there has to be some l such that $loc(V) \wedge loc(XP) = l$
 (cf. McNally 1997:156–157)

This interpretation is one of two possible choices for the interpretation of depictive adjuncts. Compared with a strict linking of an event (or “state of affairs”) variable as seen in (123), the requirements on the “spatiotemporal parameters” of the main predicate has several advantages.

- (123) $\exists e[\text{drink}(\text{mary}, \text{tea}, e) \wedge \text{cold}(\text{tea}, e)]$ (McNally 1997:153 [265])

In (123), the drinking event and the state of being cold is bound by existential closure with a linking of the event arguments in the two predicates. As will be seen shortly, this approach is less appropriate to solve the puzzle of the PR in existential sentences; Maienborn (2004) has already shown that temporal intervals

⁵⁸ In other words, “A VP containing such an adjunct identifies only those states of affairs that are simultaneously describable both by the V’ and by the adjunct” (McNally 1993:6).

⁵⁹ The importance of the event structure of verbs and depictives with regard to extraction from adjunct islands has been noted by Truswell (2007). This can serve as further theoretical proof that events do matter when it comes to questions of grammaticality in specific structures.

are a suitable solution for the PR in connection with copular sentences and locative adverbials, so it seems likely that intervals are also a good approach to the PR in ES in more general terms.

The existence of an event argument (or variable) that provides the link between the coda and the rest of the existential construction is a wide-spread assumption, including the fact that SLP provide some kind of event argument the ILP are unable to provide, resulting in the prohibition of ILP as ES codas and similar constructions (cf. Kratzer 1995; Jäger 2001). This means that intuitively in ES, both the main predicate *be* and the adjunct predicate in the coda have to be SLP (or some class associated with SLP-like properties if a classification like Jäger's is assumed) and introduce an event argument to allow this link (cf. McNally 1997:158), as shown for copular sentences in (123). McNally goes a slightly different way in proposing that all predicates, regardless of whether SLP or ILP, carry a spatiotemporal event argument, but that this argument is irrelevant for ILP because their property is characterized by temporal persistence (cf. the argument made in James 1979) and independence of location (this is one of the major differences to the approaches by Kratzer 1995 and Diesing 1992b; cf. McNally 1997:162); some SLP are also location-independent, but this is not a characteristic feature of the majority of SLP. In many cases, the property no longer holds if the location is changed (McNally 1997:160–162). Take the following example:

(124) There are several stars visible from our window. (based on James 1979:697 [48]–[49])

It is clear that the predicate *visible* only holds from the location described by the frame adverbial. If the location is changed, the truth-value of the predicate most likely changes as well. Of course there are also some SLP that share location-independence with the class of ILP. The Adjunct Rule in (122) requires that there be some spatial overlap between the main and the adjunct predicate at some time during their intervals, so a reference to the location of the predicate is necessary to provide this link between predicates (McNally 1997:162). Postulating that all predicates have a spatiotemporal argument that is irrelevant in some cases (for ILP) has the great advantage that there need not be 'duplicate' entries of a predicate in the lexicon, one with and one without the argument.

Equally important to the spatial overlap between the two predicates is the requirement on the temporal features of the two predicates postulated in (122). This requirement states that the hold time of the main predicate (*be* in the case of ES) has to be a subpart of the interval of the adjunct predicate (for a detailed derivation of this requirement, see McNally 1997; 1993:6). The basic notion is that the interval of the adjunct predicate determines the temporal persistence of the main predicate: if the adjunct predicate is delimited in time (i.e. what the notion of an SLP usually entails), then the main predicate is 'forced' to be interpreted as temporally delimited as well; the temporal reading of the adjunct overrules the temporal interpretation of the main predicate, so to speak (cf. McNally 1997:166). If both predicates are, however, ILP, then this process does not work because the adjunct predicate cannot delimit the main predicate and the main predicate cannot contribute to a pragmatic interpretation of the appropriate temporal context (cf. McNally 1997:159–160, 166; 1993:5).

After the framework for the interpretation of adjunct predicates and the requirements of temporal and spatial inclusion and overlap have been established, McNally returns to the existential construction and the PR in particular. In more basic terms, she claims that “the coda serves to restrict the spatio-temporal parameters within which the referent of the pivot is instantiated” (McNally 2011:1845).⁶⁰ If no coda is present, the interval for the instantiation of the DP may be indefinite, for example in sentences like *There is a God*. In contrast, an ES with a predicate coda delimits the time of the main predicate to the interval that the adjunct predicate holds. This means that for the existential construction, the predicate coda is the constituent that provides information for the temporal and spatial interpretation of the entire sentence and the adjunct predicate is only licensed if a link between the hold times of the two predicates can be established (cf. McNally 1997:164–165, 169; 1993:2). In case that the two predicates are ILP, it is possible that the construction is ‘rescued’ by pragmatic inference of the link between the hold times. This mechanism is taken to be unavailable for the existential construction, since ILP are generally not licensed in this position (cf. McNally 1997:170). The connection between the requirements and the PR in McNally’s framework builds exactly on these facts: it has already been pointed out that a bare ES with no coda is interpreted in such a way that the existential proposition holds for the maximum interval available under natural conditions (i.e. it depends on the subject DP and our world knowledge of it). The PR can thus be illustrated by the following examples:

- (125) There are women. (McNally 1997:171 [292a])
- (126) There are women cycling. (McNally 1997:171 [292b])
- (127) *There are women altruistic. (similar to Kratzer 1995:125 [1b])

What now is the difference between these examples in McNally’s framework? In her view, (125) is interpreted as a temporally persistent instantiation of the DP *women*, meaning that the existence of the DP is asserted with no explicit delimitations in space and time (other than what our world knowledge tells us about *women*). Things are different for (126)–(127): in (126), the adjunct predicate *cycling* (an SLP) provides a temporal and spatial ‘region’ for the instantiation of the subject DP. The existence of the subject DP is only asserted for as long as the cycling process is taking place and only for the area that was covered during that process; as soon as the cycling stops, the sentence is no longer true. Equally, if there are no women cycling in the area inferred by the context, the sentence is not true. The temporally unbound parameters of the sentence in (125) are temporally bound by the parameters of the adjunct predicate, which means that, since the adjunct predicate is SLP, the adjunct predicate induces SLP-like behavior to the sentence, which then establishes the link between the hold time of the two predicates. The adjunct is thus licensed and the sentence is grammatical (cf. McNally 1997:171; 1993:9).

Things are different for (127) as well: here, the adjunct predicate *altruistic* is temporally persistent, since the property of being altruistic is not (usually) subject to sudden changes and the predicate is also (usually)

⁶⁰ The term “pivot” refers to the postcopular NP.

independent of the location. This means that the adjunct predicate cannot provide the kind of spatiotemporal restrictions that are necessary to satisfy the Adjunct Rule; both predicates are associated with unbound intervals and the adjunct thus fails to induce SLP-like behavior. This is the reason why ILP are not licensed in coda position, unless the context can provide some pragmatic way that is still able to ‘enforce’ SLP-like behavior of the main predicate. It also explains why DP codas are not permissible under the standard framework: since both the subject DP and the adjunct predicative DP would be temporally unbound, there is no link between the hold times available and the adjunct cannot be licensed. The Adjunct Rule is thus able to explain why both ILP and DP codas are not available in this position (cf. McNally 1997:171; 2011:1845; 1993:9–10).

McNally’s approach to predicative codas and the PR has several great advantages despite employing a complex mechanism like the Adjunct Rule: first of all, taking the coda to be a syntactic adjunct has proven to provide answers to the most obvious questions such as optionality, extractability and the ability to prepose. Compared to other analyses that try to explain the optionality of the coda (e.g. Stowell 1978, Moro 2006 and Kallulli 2008), McNally succeeds in all of the above-mentioned matters in a very consistent way. Second, her Adjunct Rule correctly predicts that ILP and DP are not licensed as codas in ES in general, but that there are some contexts that can provide enough spatiotemporal restrictions for an ILP to be licensed by means of pragmatic rescuing. The rule is thus both strict and flexible enough to account for the general prohibition on ILP with a limited number of exceptions.

McNally postulates temporary persistence as one of the key factors which is required for the linking, and thus the licensing, of the adjunct predicate to work. Jäger (2001) included a similar feature in his classification of predicates, namely the value [\pm TR], denoting a transitory property (cf. Jäger 2001:96).⁶¹ It has been shown that the adjunct predicate in ES has to be temporally bound in order to restrict the spatiotemporal domain of the instantiation of the subject NP, which means that it would require a [+TR] feature (keeping in mind that the types of predicates permissible in ES codas are not based on a binary distinction between SLP and ILP). A look at Jäger’s classification reveals that the [+TR] value is given for predicates of classes C and E, which are the two most important classes for adjectival codas in ES (cf. also the BNC study below). The two approaches can thus be said to be compatible, and Jäger’s classification is a very convenient additional tool for McNally’s licensing mechanism via the Adjunct Rule because with his tests it can be more reliably determined which adjectives should be licensed in the coda.

One thing that is not immediately clear when comparing Jäger’s and McNally’s is how predicates from Jäger’s class G are excluded from the coda. This class also has a [+TR] value (cf. Jäger 2001:98–99), but negative values for the other features. Several NPs are listed in this class, which should not be permissible in ES codas. However, if temporal persistence were indeed the decisive factor in the linking mechanism,

⁶¹ Jäger also draws a connection to the availability to appear as depictive adjuncts which is linked to a [+TR] feature. He draws on some of McNally’s work, which is quoted in several passages of his paper.

this could work for predicates in this class. Interestingly enough, Jäger lists the NP *the president* as an example in this class, which was arguably one of the few exceptions where an NP could be licensed as an adjunct predicate (cf. McNally 2011:1845) and which occurs in the BNC in a slightly different form (cf. the BNC study below). However, NPs from this class are still extremely odd, even if the provided context is able to somehow rescue the linking of the two predicates (the NP is taken from Jäger 2001:98, the rating is similar to that by McNally 2011:1845 [40]):

(128) ??There was an old man a referee at the soccer match.

The example shows that NPs that are potentially temporally bound are not generally acceptable in ES codas. But it appears that they are slightly better than clear ILP adjectives, for example in sentences like (129):

(129) *There were three teenagers tall in the class.

In these marginal areas of acceptability, judgments are necessarily fuzzy and largely dependent on the person judging them. Some of these issues will be addressed in the evaluation of the rating study, which offers some interesting results regarding the acceptability of NP codas.

Returning to the combination of Jäger's and McNally's theories, it seems reasonable to assume that a basic requirement on the ES coda is the [+TR] value; but as the case of class G predicates shows, it appears that the respective predicates need to have at least one additional positive value (either for weak subjects or complements of perception verbs). Of course this can be nothing more than a preliminary and intuitive rule of thumb: but the fact that classes C and E are available as ES codas whereas G is not, with the only difference being that class G has only the [+TR] value and no other, at least points in this direction. There is certainly further research required, but this is outside the scope of this thesis.

Despite the many advantages of McNally's theory, there are still some loose ends that need to be addressed. There are two major open questions:

McNally proposes that all predicates, both SLP and ILP, carry an event argument, which is simply irrelevant for the interpretation of ILP. The criticism against this broad neo-Davidsonian analysis have already been mentioned above. However, in comparison to other approaches, McNally offers an elegant solution to the fact that the event argument appears to be 'inoperative' in ILP: since the characteristics of the ILP are temporally persistent and 'follow' the entity to wherever it might happen to be located, the spatiotemporal features of the ILP become irrelevant because it is closely connected to the entity (cf. McNally 1997:161–162). Whether this irrelevance is enough to explain why copular and stative sentences fail some eventuality tests regardless of the type of predicate (cf. the discussion of Maienborn above) or if the universal event argument for all predicates needs to be revised to account for these facts is not obvious.

The second open question is related to the frame adverbial that accompanies many existential sentences. Remember that for copular sentences, Maienborn (2004) proposed that the hold time of the predicate is equal to the topic time of the frame adverbial. If this approach is combined with McNally's Adjunct

Rule,⁶² the topic time of the frame adverbial should be equal to the hold time of the adjunct predicate, which in turn has the hold time of the main predicate as a subpart. Consider a sentence like (130):

(130) There are women cycling at the beach. (McNally 1997:171 [292b], adapted)

One of the possibilities now is to form a complex adjunct predicate *cycling at the beach*, which would then undergo the Adjunct Rule as McNally has demonstrated. The interpretation of the topic time of the frame adverbial is adapted to the hold time of the adjunct predicate because the adjunct predicate provides the appropriate temporal interval and not the frame adverbial. This is important because otherwise, the women might be interpreted to spend the entire time they are at the beach cycling, which is not necessarily true; it is just as well possible that they arrived at the beach two hours before starting to cycle and stayed for another hour afterwards. The temporal interpretation of the frame adverbial has to be reduced to the time asserted by the adjunct predicate, which also restricts the hold time of the main predicate. In this sense, locative adverbials lose much of their temporal character which they have in Maienborn's framework because the topic time of the frame adverbial has a different character than in sentences like *In Italy, Maria was rich* (Maienborn 2004:164 [11]), where the frame adverbial determines the hold time of the predicate. It is just as well possible that a locative frame adverbial is an overt spell-out of the shared location between matrix predicate and the adjunct predicate.

Things are slightly complicated by the fact that the frame-adverbial is most likely adjoined to a higher position in the structure (directly to CP, for example) and thus the formation of this complex predicate is impossible. We then have to find a way that allows us to apply the Adjunct Rule to the adjunct predicate and at the same time consider the adverbial, whose interpretation again has to be set equal to that of the adjunct predicate in order to allow for the Adjunct Rule to work.

Regardless how the combination of the adverbial with the adjunct predicate is accomplished, it is probably no error to assume that Maienborn's proposal of setting the hold time of the adverbial equal to the hold time of the (adjunct) predicate: t^* (topic time of the adverbial) = t^p (hold time of the predicate); this t^p in turn serves as $int(XP)$, which takes $int(V)$ as a subinterval. In order to satisfy the second condition of the Adjunct Rule, the spatial overlap between the main and the adjunct predicate should be augmented by the location of the adverbial $loc(ADV)$; it appears that this can also be interpreted as a meet relation similar to that of the main and adjunct predicates because the adjunct predicate can again last longer than the frame-adverbial;⁶³ thus, this condition will be formulated as a three-way meet relation that has one location in common. The entire configuration can thus be tentatively stated as follows:

⁶² Attention should be paid to the fact that the two frameworks are based on two different types of predication: Maienborn treats primary predication (*Maria was rich*), whereas McNally treats secondary predication (*There were people drunk*). It is not entirely clear if a connection between the two theories can be established without further adjustments.

⁶³ In the example of *There were women cycling at the beach* quoted above, the cycling could also take place at locations other than the beach, before and after the occasion described in the sentence.

- (131) a. $int(V) \leq t^p$ with $t^p = t^*$
 b. there has to be some l such that $loc(V) \wedge loc(XP) \wedge loc(ADV) = l$
 (cf. McNally 1997:156–157, adapted)

An alternative would be to propose that $loc(ADV)$ is the l -variable. The spatial overlap part of the Adjunct Rule would thus not need to be modified:

- (132) b. there has to be some l such that $loc(V) \wedge loc(XP) = l$ with $l = loc(ADV)$

Matters appear to be different for temporal frame adverbials like *yesterday morning*. If the frame adverbial provides a temporal constraint, the interpretation of the adjunct predicate seems to be adapted to this interval, as in *Yesterday morning, there were women cycling* (matters are even clearer if a concrete time interval is added). Frame adverbials are certainly a major factor in the interpretation of ES and McNally's framework should be augmented by interpretive rules that incorporate the frame adverbial. Especially the linking of the adverbial to the adjunct predicate is interesting (and maybe even problematic) in this respect, but McNally's approach is still very useful.

All in all, the interpretation for the ES coda via the Adjunct Rule has its merits and is so far the most comprehensive explanation of the PR from the theories under discussion here. Especially in combination with theories like Jäger's (2001) predicate typology and maybe Maienborn's (2004) pragmatic approach to frame adverbials, McNally provides a detailed and consistent framework which explains why some predicates are able to occur in the coda of ES while others are not. Taking temporal persistence and the linking mechanism between the hold times of the main and adjunct predicate as the main motivation for the prohibition on ILP has proven to be an appropriate way that has several advantages over previous theories.

4.5 Summary

This extensive discussion of the most important approaches to the PR has shown that they are as diverse as they are numerous. They are located in basically every part of grammar, ranging from D-structure syntax and the lexicon to (event) semantics and pragmatics. It is not possible to definitely say that the PR is the direct result of restrictions applying at any one of these levels exclusively. The most convincing arguments, however, are made with respect to the different semantics of predicates and how this affects their ability to occur in ES coda position and related constructions. At least as early as Milsark (1974), there has been made a distinction between predicates that hold for a limited interval and those that are inherent features of the holder. Claiming that only NPs that are not available as subjects in the existential construction are able to be combined with inherent properties was an early solution to the PR, even if the distinction between the two predicate classes was largely based on intuition without reliable tests.

Alternative analyses to that proposed by Milsark (1977) (in short, deriving the PR directly from the DR) incorporate the argument structure of predicates and the (existential) copula, claiming that only predicates that contain a special spatiotemporal argument can provide this link between the two constituents

(cf. Kratzer 1995). The most important level is therefore semantics, dividing predicates in SLP and ILP with different characteristics in this respect. This event semantic approach is still limited in that it draws a binary distinction between predicates (i.e. predicates that have the extra argument and those that do not), a point that has been shown to be empirically inadequate since predicates can be distinguished further by additional and independent factors (cf. Jäger 2001). The Davidsonian event argument might be one of the factors triggering the PR, but the empirical facts are not entirely clear yet, especially since Maienborn (2005) has shown that constructions thought to be sensitive to the PR in fact resist a Davidsonian analysis altogether and that there is thus no clear SLP–ILP difference between predicates.

A largely syntactic motivation for the PR was introduced by Diesing (1992b), connecting the different possible interpretations for predicates from a Mapping process that is ultimately caused by different subject positions for predicates and thus explains why predicates behave differently in constructions such as the ES coda. Other theories with less direct impact are Moro's (2006) adjunct analysis of the XP, which offers no explanation for the PR but is still useful in treating the XP as an adjunct and excluding NPs. Williams (1984) argues for a complex NP analysis where the XP is a modifier of the NP; the restrictions on postnominal modifiers can be explained with the help of James (1979). While James's explanations of the restrictions on postnominal modifiers are almost directly applicable to the PR, the XP has been shown to be external to the NP for various reasons (cf. above). Despite the usefulness of these argumentations, an alternative solution is necessary. Also the Small Clause proposal by Kallulli (2008) proved to be not sufficiently satisfactory. All in all, these approaches provide many helpful insights into the nature of ES and the PR but are not adequate enough to provide all the necessary answers.

The most elaborate and comprehensive analysis is that by McNally (1997): not only does she give a detailed interpretive analysis of the postnominal XP, but also a clear and logical explanation of the PR following from the spatiotemporal restrictions the XP places on the main predicate. The focus of this approach is not on one level of grammar exclusively, but incorporates syntax (taking the XP to be an adjunct, which is the condition for the interpretation to work), semantics (by introducing the interpretive Adjunct Rule) and pragmatics (providing a 'rescuing' mechanism that can license otherwise ungrammatical cases if the appropriate context is provided).

What the majority of these approaches is concerned with is the attempt to find an explanation for the different behavior of predicates in the ES coda. The main question is how to find a formal definition for this instead of relying on intuition and giving ad-hoc explanations for why a predicate is permissible while some other is not. In this particular field, much work has been done since Milsark's (1974) intuitive distinction between state-descriptive and property predicates; the Davidsonian approach with a difference in argument structure proposed by Kratzer (1995) is a very formal semantic representation of the predicates' argument structure and their linking to the main predicate at some point during the derivation. Despite Maienborn's (2004) critique of this and her counterarguments, the linking of the XP to the main predi-

cate is also what McNally (1997) proposes in her account. Her version of the linking, however, is quite different and does not so much rely on the presence or absence of the Davidsonian argument, but rather on the relation between the hold times of the two predicates and the requirement on a spatial overlap between them. On the formal side of argument structure, this approach is less complex, but incorporates a sophisticated interpretive rule that establishes the temporal inclusion relation of the main predicate and the adjunct predicate. Of all the approaches discussed in this chapter, McNally's is certainly the most advanced and applicable; especially when Jäger's (2001) tests for predicates are applied to determine to which class a predicate belongs and whether it is temporally persistent or not, this approach explains most of the relevant cases. This and the fact that McNally's analysis of the XP as an adjunct to the VP are a consistent framework lets us conclude that her approach is the most adequate of those presented here. This answers at least in part one of the questions asked at the beginning of this thesis. Which part of the grammar leads to the PR cannot be definitely answered here, but since McNally's Adjunct Rule and Jäger's predicate typology are both largely semantic in nature, a semantic analysis of the PR should be favored.

Many of the theories presented in this chapter have one thing in common: they focus on the existential construction and sometimes completely ignore its context. But ES are not an isolated grammatical phenomenon, but rather a way of introducing entities into the discourse and providing more detailed descriptions of the referent NP if a coda is present. An information structure account of an all-focus structure of ES in comparison to the topic–comment / focus–background structure of copular sentences is of special interest (cf. Erteschik-Shir 2007:119–121). This method of 'information packaging' (the term is taken from Huddleston and Pullum 2002) should not be studied entirely on its own, but rather with respect to the context because we can often find explanations there that are easily overlooked otherwise. If examined in isolation, the focus of explanations of the PR shifts to semantics and the different argument structure of predicates; on the other hand, if the context is incorporated in the analysis, pragmatics gains ground and offers valuable insight into how predicates that should be excluded on semantic grounds are made to work in this environment. The question of the relation between semantic and pragmatic solutions will certainly be of interest to further investigations of the PR. If the XP is not sufficient on its own to temporally restrict the proposition of the main predicate *be*, either a (covert or overt) frame-setting adverbial or the context of the utterance might 'rescue' predicates that are not permissible in an isolated context.

A good example for this is the prohibition on NP codas: the theories generally agree that this type of constituent cannot function as the coda for various reasons. It is argued that an NP cannot function as a postnominal modifier (or appear as the 'terminus' of an NP, cf. Williams 1984), that an NP is inherently ILP because it refers to an individual that is independent of its stages, etc. However, it is possible to improve some of these potential predicates if the context clearly states that the NP is a temporary state. In the example above, repeated here for convenience, there appears to be further influence on acceptability if more adverbials restricting the occasion are added (judgments are omitted):

- (133) There was an old man a referee.
(134) There was an old man a referee at the football match.
(135) There was an old man a referee at the football match last Sunday.

From the first to the third sentence, it seems that the acceptability is slightly improved, but this is pure intuition. In addition, it appears that the last two sentences have a ‘partitive’ interpretation of the NP ‘a referee’, meaning roughly ‘There was an old man *one of the five referees* at the football match’. These are two things that should be considered in further investigations of the PR.

McNally’s approach does not necessarily incorporate the interpretation of frame adverbials in the Adjunct Rule, but since the existential construction can contain frame-adverbials in addition to the adjunct predicate, the interrelation and influence on the interpretation of the ES should definitely be considered.

One of the big open questions remaining is if there can be a unified theory of all constructions that have the structure *there BE NP XP*. This is especially relevant for cases where it is unclear whether the XP is not in fact part of the NP, as has been suggested for constructions like *tall enough to play basketball*. In turn, this is connected with the matter of relative clause reduction (which does not always yield grammatical outcomes) or expansion to an RC (which is always possible), respectively. The considerably improved acceptability of ILP with material following (like a construction with *enough*) remains a puzzle. A precise syntactic analysis of these constructions is needed to clearly delimit the cases where the PR applies and to separate them from those cases that are not subject to this restriction.

5 Empirical Investigation I – BNC Research

The preceding three chapters have illustrated the syntactic structure of ES in general, the syntactic status of the XP and the properties of the PR in particular. In this and the following chapter, two empirical investigations will try to establish the connection between the theory and the actual manifestations of ES in the British National Corpus (BNC), as well as the judgments on existential sentences with SLP / ILP / N coda conditions.

The first investigation is a corpus research using the BNC, while the second investigation is a rating study performed with German students. This and the next chapter describe the operationalization of these two studies and discuss their respective results. A combined evaluation of the data raised in these investigations will be offered in chapter 7. The material for both studies can be found in the appendices at the end of this thesis.

For the first study, the BNC was searched for sentences that show the effect of the PR in English sentences with the aim of testing the predictions of the theories against actual usage of English.⁶⁴ The next subsection first explains the search string and method that was used to extract the examples listed in Appendix 1. Then the results of the research are grouped together to clarify the findings.⁶⁵ A short summary will put the results into context before they are evaluated along with the results of the rating study in chapter 7.

5.1 Research Design

The BNC research was performed using the *BNCweb* (CQP-Edition) provided by Lancaster University (BNC 2008). It was the goal to find examples that illustrate the usage of ES with regards to predicative extensions, but also to look for possible examples that might give rise to questions about the accounts described above. Due to practical reasons (which will be further explained below), the research was restricted to sentences with AP predicative extensions, but also leaving open the possibility for NP codas, i.e. sentences of the following pattern:

(136) There – *be* – NP – AP / NP.

Previous experience with this research design⁶⁶ has shown that there is a large number of ES with the adjective ‘available’. For this reason, a separate search string (search string 2) was designed to filter exclusively for this adjective. The main search string (search string 1) filtered for all other AP predicates with the ex-

⁶⁴ Data cited herein have been extracted from the British National Corpus, distributed by Oxford University Computing Services on behalf of the BNC Consortium. All rights in the texts cited are reserved.

⁶⁵ Unless otherwise noted, judgments for the BNC sentences are mine.

⁶⁶ Cf. Kehl (2012) for a similar but less exhaustive BNC study.

ception of ‘available’. Below in (137) and (138), the two search strings are given, (a) giving the search string as entered into the BNC search mask and (b) giving a ‘translation’ of the CQP syntax. Parentheses in (b) indicate the optionality of the constituent.

(137) **a. Search string 1:**

[pos="VHB|VBB|VBD|VM0"]? [pos="EX0"] [pos="VM0"]? [pos="VHB"]?
 [pos="VBB|VBD|VBN|VBI"]? [pos="AT0"]? []? [pos="AJ0"]? [pos="NN0|NN1|NN2"]+
 [pos="AJ0"&word!="available"&
 pos!="VVN|VVI|VVG"]

b. (modal/*have/be*) + there_{EX} + (modal) + (have) + (*be*) + (article) + (any token, e.g. ‘any’) + (adjective) + one or more nouns + adjectives other than ‘available’ and excluding participles, infinitives and ing-forms.

(138) **a. Search string 2:**

[pos="VHB|VBB|VBD|VM0"]? [pos="EX0"] [pos="VM0"]?
 [pos="VHB"]?[pos="VBB|VBD|VBN|VBI"]? [pos="AT0"]? []? [pos="AJ0"]?
 [pos="NN0|NN1|NN2"]+ [word="available"]

b. (modal/*have/be*) + there_{EX} + (modal) + (have) + (*be*) + (article) + (any token, e.g. ‘any’) + (adjective) + one or more nouns + ‘available’.

These search strings might look overly complex at first, but are designed to find a broad variety of ES, including sentences with modals as well as questions. There were a few challenges with the search string that had to be taken care of:

- **Compound NPs:** entering compound NPs into the search string proved to be quite difficult. NPs consisting of more than one noun can obviously appear in subject position in ES, but entering them in the search string required to augment the relevant NP position with a “+” operator, allowing one or more nouns to appear subsequently. This of course resulted in a large number of sentences that fit the pattern of the search string, but were no longer constructions under surveillance. Unsuitable sentences had to be filtered out manually. It was nevertheless necessary to include the operator because otherwise the relevant compound NPs would have not been part of the results.
- **Difficulty of searching for *there be NP NP*:** this second problem is directly connected to the previous one. The only way to search for the relevant examples (even though the prediction was that they should not occur at all in the corpus due to their theoretical ungrammaticality) was to either shorten the search strings above to cut off after the NP position (but including the “+” operator) or to look for accidental examples in the other results. However, a search string without a following AP or participle yields thousands and thousands of examples, in fact so many that the results are automatically thinned down by the corpus engine with a random selection to 5,000 sentences. The chance of finding a relevant example in this selection was considered to be too small to justify the effort. Unfortunately, the BNC does not provide phrase glosses / parses that would be able to thin down the results to the desired ones automatically.
- **Participles and ambiguous glosses:** Despite the fact that the search strings were supposed to exclusively search for AP (and possible NP) codas, a lot of participles appear in coda position in the examples. This might be due to their having an adjectival character or in some cases just a mistake in the automatic POS (part of speech) assignment of the corpus. In either case, participles have been generally removed from the results unless the adjectival character is striking. The

difference between SLP and ILP appears to be more strongly in adjective predicates, not only owing to the fact that (especially present) participles seem to carry reference to the frame action / situation and could thus be considered to be inherently SLP, at least in the ES context (cf. Carlson 1977:75).

- **‘Open’ vs. ‘closed’ search string:** Searching for an ES with a particular coda predicate is relatively easy and yields reliable search results, as the ‘closed’ search string 2 which looks for only one predicate (*available*) has shown. An ‘open’ search string like 1 that allows for a great variety of possible results is much more difficult to handle, but also much more representative. Search string 1 made it necessary to sort out a lot of unsuitable examples, a process that is described in a little more detail below. A closed search string is very useful to get the total number of occurrences of a specific predicate in the corpus, but lacks the openness that was required to detect which predicates actually appear in the material. The open search string does not presuppose that a certain predicate appears in this construction and is thus more useful for the purpose at hand. Search string 2 only serves to exemplify the predominance of *available*, but also to show how precise a closed search string can be (which has been employed in testing the predicates used for the rating study in the next chapter).

Despite these challenges, the search results are useful in a descriptive analysis of the claims made by the theories based on this empirical investigation. The combination of a relatively open search string and manual cross-checking has resulted in many useful examples that fit into the theoretical pattern(s), but also a few highly interesting results that will be analyzed below.

5.2 Results

The results from the two search strings have been checked manually to filter out the ‘bad’ examples that are not the subject of this thesis. ‘Bad’ examples included sentences that were either glossed or interpreted incorrectly by the corpus engine or contained constructions that were not the subject of the research design, for example participles. Double appearances of identical sentences have been removed as well. In addition, results have been sorted into examples from written and spoken English in the corpus. The following table shows the total number of search results before and after manual filtering:

Search string	Unsorted sentences			Sorted sentences		
	Written	Spoken	Total	Written	Spoken	Total
1 (AP)	588	54	642	262	19	281
2 (‘available’)	285	29	314	283	28	311
Total	873	83	956	545	47	592

Table 1: BNC results.

More detailed data on the number of results distributed over the result groups are shown in Table 1. It becomes immediately clear that whereas search string 2 yields a high degree of reliable results, search string 1 is enormously thinned down by manual sorting. One reason for this is the large number of participles

that is filtered out. Another reason is the fact that there are many unsuitable examples due to the “+” operator after the postcopular NP. The number of useful examples is still large enough, however, to be able to draw some conclusions with regards to the PR.

Another thing that jumps to the eye is the difference in results from spoken and written English. In both cases, the written examples largely outnumber the spoken examples. This is probably due to the relation of written and spoken examples in the BNC and should not lead to any judgments on the frequency in spoken and written English, respectively.

The majority of the sentences that resulted from the two search strings can be placed in one of the following classes, which will be analyzed and discussed in turn: (a) adjectives that can be said to predicate the existence of the postcopular NP, including predicates with *available*, *present* and *possible*; (b) SLP predicates in general; (c) predicates that might contain NPs; (d) complex predicates that contain ILP and thus evade the PR; and (e) miscellaneous results, including idiomatic expressions, the list reading and some potential ILP predicates. The classes and their respective hits are given in Table 2, which also provides information about the percentage share of each class. A clear concentration is already visible by the pure numbers.

Predicate		n=	% of total n=592	
'Existence' predicates	<i>available</i>	311	61.7%	52.5%
	<i>present</i>	31		5.2%
	<i>possible</i>	8		1.4%
	Other existence predicates	15		2.5%
SLP		167	28.2%	
Potentially NP		5	0.8%	
Complex NP with ILP		18	3.0%	
Miscellaneous	Idioms	24	6.2%	4.1%
	List reading	2		0.3%
	ILP	9		1.5%
	Unclassified	2		0.3%

Table 2: BNC results (grouped).

For ease of reading, the postcopular NP has been underlined and predicate codas have been highlighted in **bold typeface** in the quoted examples throughout the following sections. All search results from the corpus study can be found in Appendix 1.

5.2.1 'Existence' Adjectives

According to Milsark, it is the most basic assumption about ES that they “all make a claim about the existence of the entity denoted by the reordered subject NP” (Milsark 1974:104). It is thus no surprise that many of the results of the corpus study show an adjective in the coda position that can be said to predicate the existence of the NP. For reasons of convenience, they are collected in this subsection under the prelim-

inary title of ‘existence’ adjectives because it will be shown that they share properties that distinguish them from other predicates.

The adjectives that can fall into this class are quite a few and the most prominent ones have been picked out and are discussed in more detail below. Most of the adjectives fit nicely into the pattern expected for codas,⁶⁷ but there are also a few examples that are problematic with regards to the assumed properties of predicates in coda position. This subsection treats these ‘existence’ adjectives in turn; their common properties will be examined in the last paragraph.

(1) *Predicates with ‘available’ (n=311)*

Overall, there are 311 results of written (n=283) and spoken (n=28) English existential sentences of the type under consideration that contain the predicate coda *available*. A few examples are given here:

- (139) There are several different formats **available** for printing out colour patterns.
(BNC: CGX 883)
- (140) There are many useful accessories **available** which will give curtains a professional finish.
(BNC: GUB 325)
- (141) There are already cars **available**. (BNC: KRE 140)

Compared to the number of results for other predicates, the predominance of *available* is significant. The combination of *there* with *available* seems to be very common, especially in contexts that want to point at the existence of a certain entity. *available* can thus be categorized as one of the most obvious instances of an ‘existence’ predicate. Due to the prominence in the corpus material, a dedicated search string was designed to detect all instances of the existential construction that have *available* as their coda predicate, as already mentioned in the research design.

One explanation for the high frequency of *available* predicates might be that this word is extensively used in advertising and other commercial contexts to make customers aware of the existence of a certain product or service. This can be clearly seen in the example sentences quoted above, all of which show this advertising character. In addition, a *there*-sentence is much less direct than a non-existential construction. Instead of using a direct construction like “you can rent a car at the airport”, a sentence like “there are cars available for rent at the airport” sounds more politely. It would be a matter of examining the sources used for the BNC in more detail to find out if the high frequency of *available* can be explained in this way.

In consequence, there are at least two pragmatic factors that could lead to the high frequency of *available* in existential sentences: the use of *available* in advertising contexts and the possible influence of face-saving acts that could be among the reasons why this predicate yields so many results in the BNC.

⁶⁷ For example the adjective *extant* (n=2) with a clear meaning “in existence; existing” in the OED (Simpson and Wiener 1989, s.v. *extant*, a. and n.)

(2) Predicates with ‘present’ (n=31)

The adjective *present* is another clear example of an adjective that makes a statement about the existence of an entity, either in asserted or negated form. Take for example the following two sentences selected from the total of 31 results, (142) asserting the existence of the NP whereas (143) negates the existence:

- (142) There were three other men **present** and at this point, they joined the argument.
(BNC: ECT 3654)
- (143) The Smith mourners were all on foot and there were no women **present**.
(BNC: CFY 1279)

Examples like these show nicely that ES refer to a point in time and space because (142) could be paraphrased as (144):

- (144) Three other men were present at this exact location and at this point in time.
(BNC: ECT 3654; adapted)

The implicit reference to the universe of discourse becomes very clear in this sentence. An existential sentence with an ‘existence’ predicate like *present* is interesting in this respect because there is a double reference to the existence of the NP: on the one hand, Milsark’s E-Rule (cf. section 2.1.1) already determines that the class identified by the NP has at least one member and on the other hand the predicate *present* refers to the temporal and spatial location of the utterance. It would be easily imaginable for (142) to be expressed by either one of the two following sentences, (145) being a copular counterpart and (146) being an ES without a coda:⁶⁸

- (145) Three other men were present and at this point, ... (BNC: ECT 3654; adapted)
- (146) There were three other men and at this point, ... (BNC: ECT 3654; adapted)

The introduction of the predicate *present* in this case clearly serves to delimit the set of people that serves as the logical subject of the sentence, in accordance with Milsark’s E-Rule, which assigns a predication structure to the XP following the NP (cf. above).

Another factor that comes into play when deciding between a canonical sentence and an ES when the existence of a set is to be achieved is probably semantic or pragmatic in nature. Canonical counterparts of ES are grammatical (with a few exceptions) but may sound odd on a pragmatic level. Compare the following two sentences, with (143) repeated from above:

- (147) The Smith mourners were all on foot and there were no women **present**.
(BNC: CFY 1279)
- (148) The Smith mourners were all on foot and no women were present.
(BNC: CFY 1279; adapted)

While (148) is a perfectly grammatical sentence, in comparison to the ES counterpart it appears to be slightly less favorable on a pragmatic level, which leads the speaker or writer to select the ES construction.

⁶⁸ Note, however, that leaving out the coda appears not to work as elegantly with “The Smith mourners were all on foot and there were no women”. The exact reason for this is not apparent, but may have to do with the negation.

The exact reason for this is neither part of this investigation nor obvious enough to make a precise statement about it. Nevertheless, the pragmatics of ES are of special interest in cases like this.

(3) *Predicates with ‘possible’ (n=8)*

One further ‘existence’ predicate is the adjective *possible*, which is exemplified in sentences like the following in the BNC:

(149) There was no other choice possible. (BNC: G02 600)

Like the other predicates in this group, *possible* asserts the existence or non-existence of the logical subject. What is interesting is the fact that all NPs in the 8 results are [-animate], which appears to be one characteristic of this predicate. Apart from this semantic condition laid on the NP by the predicate, it behaves very much like *present* or *available*.

(4) *‘Problematic’ existence predicates*

Among the group of ‘existence’ predicates, there are also a few examples where the predicate does not fit into the pattern of characteristics that are assumed by most theories that have dealt with AP codas, namely a feature that is not permanent or inherent to the entity described. Consider the following two examples:

(150) However, there are special difficulties inherent in treating overdose patients.
(BNC: B30 290)

(151) Furthermore, as we discuss in Chapter 2, there are processes innate to human beings (...) which also combine in many complex ways with ‘social’ or ‘man-made’ processes.
(BNC: HRM 745)

Both predicates *inherent* (n=10) and *innate* (n=1) describe properties that are essential to the logical subject and are neither temporary nor easily acquired or lost. The last condition was proposed by James (1979:701) for adjectives to be allowed after a presupposed NP in non-existential contexts. Non-essentiality and temporariness are the conditions that Milsark (1974:128) imposed on ES codas and are basically what the SLP–ILP distinction has shown. However, the predicates in the examples clearly describe a general state that is a permanent feature of the NP, which appears to clash with the conditions on the predicate; the question is whether such characteristics can be suddenly lost, which would satisfy one of James’s conditions, similar to her interpretation of *dead*. On the other hand, *inherent* and *innate* in these contexts can be described as existence predicates because they emphasize the ontological assertion that the *there*-sentence makes about the NP; this can be seen by the fact that they are able to receive pitch accent. The contrast to the other ‘existence’ predicates is still puzzling. The question is how to explain their appearance in the BNC without widening the theories too much to remain useful tools.

In this context, it might be interesting to re-consider the facts of complex NPs and reduced relative clauses. For both examples, the postcopular material could be analyzed as a complex NP which is independently attested, as the following sentences show:

- (152) Special difficulties inherent in treating overdose patients have been known since the 1920s. (BNC: B30 290; adapted)
- (153) Processes innate to human beings have also been found in animals. (BNC: HRM 745; adapted)

As for most AP codas, reduced relative clauses are also a possible source of the sentences:

- (154) However, there are special difficulties (which are) **inherent** in treating overdose patients. (BNC: B30 290; adapted)
- (155) Furthermore, as we discuss in Chapter 2, there are processes (which are) **innate** to human beings (...) which also combine in many complex ways with ‘social’ or ‘man-made’ processes. (BNC: HRM 745; adapted)

While both the reduced RC and complex NP analyses have been rejected earlier in this thesis for theoretical and empirical reasons, they can be seen as a sort of ‘last resort’ analysis for problematic examples like these; this option is also available for complex NPs with ILP, as will be seen later on. Also bearing in mind that they account for only 11 out of 602 examples clearly marks them as exceptions, despite the fact that the constructions appear to be almost idiomatic; even though their semantic features are counter-intuitive to the standard SLP–ILP distinction, their interpretation in these sentences comes quite natural. McNally’s (1997) approach appears to struggle with these predicates since they are not clearly temporally bound; in such cases, the Adjunct Rule would not be able to establish a link between the hold times of the predicates. This shows that despite their salient interpretations, these predicates can be difficult to analyze under a PR framework.

(5) How do these predicates fit together?

After describing the group of predicates that have been termed ‘existence’ predicates for this section, the question remains what justification can be provided to group them together. One of them is already apparent from the term ‘existence’: they all share the property of making an ontological statement about the existence of an entity or object in addition to the statement about the existence that is made by the existential construction itself. The semantics of these predicates are similar enough to group them together.

But there is also more evidence that they share certain characteristics: Jäger (2001:97) explicitly notes that *available* and *present* belong to his class C of predicates, which allow for existential readings of indefinite plurals but cannot appear as complements of perception verbs.⁶⁹ It is interesting to see that adjectives that share the same characteristics with regards to Jäger’s classification are quite frequent in the corpus material. All of the predicates mentioned above behave similarly with regards to the three tests mentioned by Jäger; the only exceptions are the ‘problematic’ cases of *inherent* and *innate*. Applying Jäger’s tests to the predicates yields the following results for (a) weak subject readings, (b) perception verb complements and (c) transitory properties (cf. Jäger 2001:96–97):

⁶⁹ Cf. the discussion of Jäger’s article above.

- (156) a. Firemen are *available / present*. (existential reading possible)
 b. *We saw John *available / present*.
 c. Peter was *available / present* yesterday. (temporary property)
- (157) a. Solutions are *possible*. (existential reading possible)
 b. *We saw solutions *possible*.
 c. A solution was *possible* yesterday. (temporary property)⁷⁰
- (158) a. Problems are *inherent / innate* (in this analysis). (existential reading possible?)⁷¹
 b. *We saw problems *inherent / innate*.
 c. Problems were *inherent / innate* (in this analysis) yesterday. (temporary reading?)

It becomes clear that *possible* belongs to the same class C of Jäger’s framework as *available* and *present*. As will be seen in the next subsection, the decisive difference between the ‘existence’ predicates and the other SLP predicates is the inability to appear as the complements of perception verbs and the subject effects. The interesting cases here are the predicates *inherent* and *innate* because they are semantically similar to the other predicates but appear to have more permanent readings (at least when compared to the other predicates, a temporary reading is less likely; still, there is no lifetime effect on the NP), contradicting the view that SLP cannot describe properties that are inherent to the entity under discussion. They also appear to allow for a generic reading of the NP, which would then put them into Jäger’s class G of predicates if this were the only available reading.

Two interesting things about the ‘existence’ predicates remain to be said: on the one hand, as has already been mentioned above, the canonical counterparts of these ES appear to be slightly less favored on a pragmatic level, which makes the ES construction the more plausible choice; an explanation for this might be the fact that these predicates appear to be more dependent on the location as other predicates, because their truth value might change if the location is altered (especially obvious with *visible* and *available*, cf. Jäger 2001:113). On the other hand, the fact that the predicates that fall into Jäger’s class C appear with such a high frequency in the BNC is astonishing; especially the predominance of *available* has to be noted. It appears that this class is preferred in *there*-sentences, maybe because they are all related to the existence of the entity or object under discussion. A similar fact is noted in É. Kiss (1998:149, 161), who draws a distinction between the majority of adjectival predicates as denoting “the physical, mental or emotional state of the referent of their subject” and ‘existential’ predicates which “express, at least in one of their meanings, its existence” (É Kiss 1998:149).

⁷⁰ The behavior of *possible* is similar to *available / present*, but it needs an inanimate NP.

⁷¹ Note that the NP influences the readings: above, the existential reading is possible, but if the NP is changed to *scientific analyses* (a general bare NP), the interpretation appears to be more likely generic.

5.2.2 Predicates with SLP Adjectives

The majority of the results (n=167) of the first search string represent adjectives that are characteristically considered to be SLP; this comes at no surprise because SLP are, according to all theories, usually possible in ES coda positions without further conditions. The following examples are exemplary and show typical SLP:

- (159) She then went home – there was a man **asleep** on the doorstep whom she took care not to waken – and apologized to Peter. (BNC: CMJ 673)
- (160) There was a window **open** on the third floor, but marks consistent with the rubber-soled shoes he was wearing suggested that it was from the parapet in front of the four dormer windows in the roof. (BNC: J17 250)
- (161) Damian – is there a post **vacant** at Swift? (BNC: JYD 769)
- (162) We walked outside near the Commercial Union building and there was a car **alight**. (BNC: AK2 46)

As can be seen clearly, these predicates are all stage-level, by virtue of being a temporary state that can be easily altered. Sleeping can be interrupted and only holds for a few hours a day (under normal conditions) and similarly for a burning car, which is the exception in the lifetime of a vehicle. *open* and *vacant* are just as well stages of the entities they refer to (in the terminology of Carlson 1977). The reference to a spatio-temporal location stipulated by Kratzer's (1995) Davidsonian analysis is thus quite apparent.

The results show that three of the predicates that James (1979:696–697) described as ambiguous are also included. Among them are *responsible*, *visible* and *alive*, as shown in the following examples:

- (163) If there are four satellites **visible**, a military user on the ground with a portable receiver can use the discrepancies between their time-checks to get a measurement of his position accurate to well under ten metres. (BNC: ABH 3141)
- (164) There were no animals **alive** today. (BNC: FSB 511)
- (165) There are other sub-committees **responsible** for 'Program,' 'Finance,' and 'Personnel' decisions. (BNC: ALB 97)

James showed that some predicates are ambiguous between a stage-level and an individual-level reading, depending on world knowledge. The first two cases here are disambiguated by the conditional *if* (indicating that this is not always the case) in (163) and the temporal modification *today* in (164). More problematic is the case of *responsible*, because in this case it does not appear to be a question of 'guilt', but rather a more permanent organizational structure, for example in a company. Another interpretation is that the other sub-committees are responsible in addition to some committees not mentioned and thus introduce the NP into the universe of discourse, which makes the sentence acceptable. Despite the fact that some small ambiguities could remain for the last example, this does not weaken the fact that the majority of predicates can be identified as stage-level.

All in all, these results show that a fair number of SLP appears in the existential construction in the corpus. The examples are not as nice and clear-cut as in the literature (and are thus sometimes more complicated to analyze), but this is due to the fact that they are not idealized examples coined for the purpose of a paper, but examples from language as it is actually used.

Search results from this subclass can be placed in Jäger's (2001) class E of predicates because they can appear as the complements of perception reports (*She saw a man asleep*), in contrast to the 'existence' predicates of class C, which are non-observable, more abstract states.

5.2.3 Possible NP Predicates

The five examples that fall into this class may very well be the most interesting results of this study; therefore they are discussed in more detail than the other result groups. Against the predictions of almost all theories that have described the PR, an NP appears to occur in the coda position, i.e. right after the copular NP. Erdmann (1976:162) in his large corpus-based study, for example, lists only three examples with an NP in this position (*the alternative, the matter (with)*) and classifies the sentences as phraseological in character. Since the results from the present BNC study are not too numerous and enormously interesting, all five will be discussed in turn. The first example is (166):

(166) 'I think there are equal parts black magic and goodness.[]' (BNC: CK6 558)

This sentence could be very well paraphrased as shown in (167), which would strongly point against an NP predicate:

(167) 'I think there are equal parts of black magic and goodness.[]' (BNC: CK6 558; adapted)

In this reading, the kind of relation between the postcopular NP and the coda is not of the same quality as in the other examples because there is no secondary predication but rather an NP with a PP complement. The sentence can be analyzed with the two following simplified phrase structures (& indicating the coordination of the two NPs); (168)a represents the non-PP complement and thus predicative structure whereas (168)b represents the complex NP with PP complement version:

(168) a. ... there *be* [_{NP} equal parts] [[_{NP} black magic] & [_{NP} goodness]]
 b. ... there *be* [_{NP} [_{NP} equal parts] [_{PP} ~~of~~ [_{NP} black magic] & [_{NP} goodness]]]
 (own representation)

These phrase structures result in two options to interpret the sentence: either it is in fact a PP complement to the NP where the preposition has been omitted or it is an actual example of an NP coda, however unlikely this would be in the light of the theories described in the previous chapter. Another possibility is of course that the sentence is not after all grammatical, but still appears in the corpus because it is a quotation that has not been corrected. The quotation marks at the beginning of the sentence might point in this direction; performance factors could be the reason for this odd utterance. Thus, the sentence is not a real challenge for the theory because it is the only example of its kind in the corpus (at least related to ES), can be explained by the omission of the preposition in the PP and could just be an unacceptable sentence that is not part of the standard grammar of English.

The four remaining examples for a potential NP coda all have a form of *woman* as postcopular NP and are given in (169)–(172):

- (169) ‘Did I think, then, there could be a woman **Prime Minister**?’ (BNC: CH8 1634)
 (170) There are women **Tory Members** on the Back Benches now, so why not appoint them?
 (BNC: HHW 2819)
 (171) There are few women **agricultural workers**, although some wives and daughters cook or do other domestic tasks on the big estates. (BNC: EVS 43)
 (172) At that time, there were 22 women **political prisoners** who were held in a separate block from the common prisoners, but the number expanded very rapidly[.] (BNC: EVS 1403)

They have to be further distinguished with regards to singular and plural forms, with only one example (169) showing the singular whereas the remaining three (170)–(172) have the plural *women*. The question is whether this distinction offers different options for analyzing these sentences and possibly explaining why they occur in the corpus.

The singular example (169) comes close to McNally’s example sentence when she takes stock of the PR, stating that the occurrence of NPs is among the only remaining contested facts about the PR (McNally 2011:1845):

- (173) ??There was a woman the president. (McNally 2011:1845 [40])

McNally’s postcopular NP in her example sentence differs from the example in the corpus by virtue of being a definite NP, *the president*. It is unclear whether the determiner makes the sentence worse, as shown in the following contrast where the NP in (174) is transformed into a definite NP in (175):

- (174) ‘Did I think, then, there could be a woman **Prime Minister**?’ (BNC: CH8 1634)
 (175) ‘Did I think, then, there could be a woman **the Prime Minister**?’
 (BNC: CH8 1634; adapted)

Intuitively, (175) appears to be slightly less acceptable than (174), but this is debatable. The fact is that all four examples in the corpus that have *woman* / *women* as the postcopular NP are indefinite whereas McNally has a definite NP in her example (which is in turn interesting with respect to the DR, which should disallow the definite NP). However, the parameter of definiteness should not be relevant at all since almost all theories claim that NP are generally excluded from this position. This is also McNally’s argument on this position; the NP in her example is at best marginally acceptable.

As McNally also points out, some authors argue that an NP can be allowed as a coda if it is a “temporary state-descriptive nominal” (McNally 2011:1845). In the case of *president* / *Prime Minister*, such an analysis makes sense because both positions are usually held for no longer than the period defined in the constitution or are at least limited to a certain extent of the respective person’s lifetime. At least this is what our world knowledge tells us (disregarding political systems where being the president is a more permanent property).

In Carlson’s terms, if a temporary reading is selected, this could classify as a stage of this individual, because the property of being the *president* / *Prime Minister* holds only of some of the stages of the individual, which have a clear temporal limitation. Since this delimitation is one of the conditions for McNally’s (1997) Adjunct Rule, this could be seen as an NP that is exceptionally licensed. This is also in line with Milsark’s analysis of state-descriptives and property predicates: since being *president* / *Prime Min-*

ister is not an inherent property of the individual, it could be seen as a state-descriptive predicate (Milsark 1977:12–13). It has to be kept in mind, however, that Milsark strongly opposes NP codas, claiming that “it is impossible for some reason to effect a state-descriptive predication with a NP PRED” (Milsark 1977:13). The *president* example shows that the distinction is not as clear as Milsark describes it, despite the fact that the example is debatable. NPs that have a clear-cut temporal limitation are rare and clearly the exception to the general rule that NP usually denote more or less constant properties of individuals.

Considering both the arguments from Carlson and Milsark, the nature of the restriction on NPs has to be at reconsidered in one respect: if it really is a syntactic restriction as Stowell claims (1978:461), sentences like (169) should be ungrammatical under all circumstances. But if the restriction on NP codas is taken to be of the same semantic nature as the PR in general, examples like this can be explained by means of the SLP–ILP distinction: in the rare cases where an NP can denote an SLP, it is also able to appear in the coda of ES. It appears that beyond such extremely narrow contexts, the temporary analysis of an NP is of little use to explain the situation. It cannot be excluded that the possibility of a temporary NP analysis is the key to sentences like these, but the argument also has its disadvantages, as will be seen with the other possible NP predicate examples with *women* as postcopular NP.

Concerning the three example sentences that have the plural form *women*, it is interesting to note that two sentences are from the same text, which might point towards a certain bias on the side of the author. The three relevant sentences are repeated as (176)–(178) for the reader’s convenience:

- (176) There are women **Tory Members** on the Back Benches now, so why not appoint them?
(BNC: HHW 2819)
- (177) There are few women **agricultural workers**, although some wives and daughters cook or do other domestic tasks on the big estates. (BNC: EVS 43)
- (178) At that time, there were 22 women **political prisoners** who were held in a separate block from the common prisoners, but the number expanded very rapidly[.] (BNC: EVS 1403)

Applying the same structure as in McNally’s example (2011:1845 [40]) shows that they behave differently from (169) when they have a definite NP with the *as* determiner (intuitive judgments):

- (179) *There are women the Tory Members on the Black Benches now, so why not [...]
(BNC: HHW 2819; adapted)
- (180) *There are few women the agricultural workers, although some [...]
(BNC: EVS 43; adapted)
- (181) ?At that time, there were 22 women the political prisoners who were held in a separate block from the common prisoners, but the number [...] (BNC: EVS 1403; adapted)

In comparison to (175) above, the examples in these cases are severely degraded when they are definite NPs. (179) and (180) are quite bad, whereas (181) can be argued to constitute a complex NP with the following relative clause, which improves acceptability on an intuitive level. It remains to be explained why the NPs can occur in coda position in the first place.

It is just as well possible that *woman / women* in these examples is in fact part of the NP following it, resulting in a complex NP with *woman / women* as a modifier to the following NP.⁷² This would also exclude the interpretation of a noun with an NP coda, meaning that the examples under discussion do not fall into the pattern of ES with a predicative coda, but are rather ontological ES.

In addition to the argument for writer's bias in the cases of (180) and (181) and a compound NP for all examples, one explanation can be brought forward that does not take the circumvention of the ban on NP codas for granted: it is possible that *women* in this case is not a noun after all. In spite of the fact that the *OED* unambiguously glosses *woman* and its plural form as a noun (Simpson and Wiener (eds.) 1989, s.v. *woman, n.*), an adjectival use in the sense of 'female' would explain the sentences without having to argue that NPs can occur in coda position. A sentence like (182) would be far more acceptable and within the framework of the theory:

- (182) There were few female agricultural workers, although some wives and daughters cook or do other domestic tasks on the big estates. (BNC: EVS 43; adapted)

This sentence appears to convey the same information as the original. A similar explanation would also be applicable to the other two examples with *women* in postcopular position. If this analysis is correct, *women* is nothing more than an adjectival modifier of the following NP, which would then be analyzed as the true complex 'subject' NP of the sentence. There would be no need to assume an adjunct structure, which would make the sentence much easier to process as well. Such an explanation would not necessitate a revision of the PR on NP codas and is not without justification, even if the *OED* does not gloss *woman / women* as adjectives. Regional variation is another possible explanation. The Internet dictionary dict.cc actually has one gloss of *woman* as being an adjectival attribute, interestingly enough also with the context of a female Prime Minister, cf. Dict.cc (2013). The adjectival use of *woman* is also exemplified on Dictionary.com (2013).⁷³

In a second line of argument, it would of course also be possible to argue that the NPs in these sentences are in fact also SLP since they are only predicated of stages of the respective individuals. But this argument gets confusing in these cases. One could start by claiming that being a political prisoner or a Tory Member is only true during a certain time span in an individual's life and that they can thus be analyzed as "temporary state-descriptive nominals" (McNally 2011:1845). But then again, one could argue that it is very well possible that a person has been a political prisoner for all their life (and for whatever reason) and that it is an inherent characteristic of that individual, which would classify the predicate as ILP. It can be seen that the argument depends on world knowledge and is thus hardly reliable. Milsark also made the argument about different worlds where attributes that are considered to be individual-level

⁷² This point has been proposed by Susanne Winkler.

⁷³ Cf. also the discussion in The New York Times (2007) and on The Chicago Manual of Style Online (n.d.).

might in fact be stage-level and would, in this world, be perfectly fine as predicates in ES (cf. Milsark 1974:129; 1977:13).

Considering the facts presented for the four sentences in (169)–(172), the most likely explanation is that *woman / women* is in fact either part of an NP NP compound or a prenominal adjective and not the postcopular NP.

All these examples are from written texts in the BNC, there are no examples with possible NP predicates in the spoken section of the corpus. This means that performance factors are probably not the main reason why potential NP predicates appear in coda position in these sentences. If all examples were directly from spoken English, performance factors would probably be a suitable explanation for the occurrence of this otherwise unacceptable construction. However, two sentences are in quotation marks, which hints at the fact that they are only written records of a spoken utterance. The question whether performance factors and author bias qualify as explanations has to be left open here.

Whether or not these five sentences are actually instances of NP predicates in coda position, they are clearly interesting examples that leave room for interpretation. They might even offer some justification for the position that NP are not generally excluded from codas in ES. But considering the total number of examples, it becomes relatively clear that they are the exception.

5.2.4 Complex Predicates with ILP Adjectives

The last significant group of results is represented by sentences containing an ILP, a fact that is at least as interesting as the existence of potential NP predicates because both are generally considered as ungrammatical. In these instances, however, they appear to be licensed, as the following sentences show:

- (183) Maybe there are some people **gullible** enough to believe that. (BNC CH3 4600)
 (184) But let us suppose there are theories **robust** enough to hold the tension. (BNC EDD 74)
 (185) There will be factions **nostalgic** for the Festival ribbon and the typographical thought police may find the lettering out of synch with the image. (BNC K5F 1763)

The most interesting thing about these examples is that they become marginal or even ungrammatical if the AP is the last word in the sentence (intuitive judgments):

- (186) ??Maybe there are some people **gullible**. (BNC CH3 4600; adapted)
 (187) ??But let us suppose there are theories **robust**. (BNC EDD 74; adapted)
 (188) ??There will be factions **nostalgic**. (BNC K5F 1763; adapted)

It appears that the constituents following these APs is necessary for the sentence to be grammatical. In some of the relevant examples, the AP is followed by a construction headed by *enough to* or by a PP as in (185). The grammaticality of ILP combined with *enough* was already noted by Milsark (1974:19–20) and was the reason he excluded these sentences from his considerations. These sentences can be considered as a complicating factor for any theory that tries to explain the PR by resorting to a distinction between ILP and SLP; in the above examples, the AP most likely describes a permanent property of the entity or at least

one that cannot easily be lost or acquired (cf. James 1979). The problem can, however, be solved by following Milsark and consider the sentences above as ontological ES instead of periphrastic ES; this basically means that they do not involve predication in the form of a depictive adjunct, but rather a complex NP which could be derived by relative clause / cleft reduction or other NP-internal processes (cf. Milsark 1974:90). Of course, it is not a very elegant solution to exclude problematic examples from the theory and try to derive them from a different structure. But in this case, this is definitely the easiest and not completely unreasonable approach. Evidence for the possibility of the complex NP character comes from the fact that the postcopular material is individually attested as a complex NP for the sentences above:

- (189) *Some people gullible enough to believe that* stood in line for hours.
(BNC CH3 4600; adapted)
- (190) *Theories robust enough to hold the tension* have been recently discovered.
(BNC EDD 74; adapted)
- (191) *Factions nostalgic for the Festival ribbon* were denied access. (BNC K5F 1763; adapted)

Additional evidence for the NP character comes from *wh*-extraction, which can target the postnominal material: *Which theories have been recently discovered? – Theories robust enough to hold the tension*. In accordance with the CED, “extraction of an adjunct from within a complement or main predicate is possible, whereas extraction of an adjunct from within an adjunct is not” (McNally 2011:1836; cf. also Radford 2009:206). This is indeed the case here and leads to the conclusion that the NP is followed by an NP-internal adjunct that does not involve secondary predication, which is on the level of VP and thus outside the NP (McNally 1997:57 [93a]).

Winkler (1997:256) states that the relative clause reading of predicative ES can be excluded if a focus accent is placed on the subject NP instead of on the coda. This test can be used to argue that these sentences are indeed reduced relative clauses because the focus accent intuitively falls on the AP of the coda (192)a; otherwise we probably get a contrastive focus of the NP in (192)b:

- (192) a. There were people táll enough to touch the ceiling[, but also others who were smaller].
b. There were péople tall enough to touch the ceiling[, not mónkeys].
(roughly based on Milsark 1977:11 [20b])

The interaction of focus with the existential construction and the exclusion of the relative clause reading is beyond the scope of this thesis, but certainly an interesting point for further empirical investigations, especially since these examples are difficult to explain in current frameworks if the relative clause analysis is not employed. Note that the contrastive focus accent in ES would be a focus that is employed in addition to the all-focus status of the existential construction in a framework like that proposed in Erteschik-Shir (2007:119–121).

Examples like these show that the SLP–ILP distinction is not sufficient to explain all instances of ES in the BNC. However, if this distinction is reserved for ES that involve secondary predication and an alternative analysis (such as the complex NP) is available to explain some of the remaining constructions, it can

be justified to accept these two different approaches, depending on which one yields a better description and explanation of the relevant sentence.

5.2.5 Miscellaneous Results

(1) Idiomatic expressions

Some of the results might be classified as idiomatic expressions because they follow the same pattern. Among those are for example the predicate *ready* (n=17), or more precisely, a combination of *ready* and a following present participle (n=4), such as the following:

- (193) They had plenty of berries and there would be jobs ready and waiting for them.
(BNC: AC4 748)

ready on its own as the coda is a fairly standard SLP predicate, but the construction *ready* + *V-ing* seems to have a slightly different connotation. The expression is more static and restricted than other results from the BNC and could thus classify as an idiom (cf. Radford 2007:199–201).

Moreover, there are additional sentences that are quite similar in their structure and could be seen as idiomatic despite the fact that they are from the same source text:

- (194) Well, there was one thing certain. (BNC: AT7 480)
(195) Well, there was one thing sure. (BNC: AT7 1737)

The parallelism between the structures and the lexical content of the predicates is interesting and could hint at the fact that ES constructions can serve as idioms. Especially the examples with the NP *one thing* look very much like a sentence that is clearly focused, which is also hinted at by the introductory *well*. It could also be the case that this is a manifestation of a postnominal AP as a modifier of the NP in the sense of James (1979): even if the referent of the NP is mentioned after the sentence in question, it could still be possible that the referent is already presupposed. The question is if the AP would qualify as a characteristic that can be easily lost or acquired, James's second restriction on postnominal adjectives. Even if this is not the case, the idiomatic reading of this expression is most likely the best solution to these sentences.

(2) List readings

On a side note and despite the fact that this thesis is not concerned with the 'list reading' (a special case of ES that allows definite NPs as the pivot despite the Definiteness restriction, cf. Hartmann 2006), it seems appropriate to give one example that came up in the research and nicely reflects the list character of sentences that allow for a definite NP in postcopular position:

- (196) Second, there are the cash resources available from the Training Agency, for those Com-
pacts funded in Urban Programme Areas. (BNC: EVM 1112)

In this example, the list character is obvious since the sentence is introduced by the ordinal number *second*. This construction is one of the extremely few contexts in which a definite NP, indicated by the definite

determiner *the*, is allowed to appear after the copula without being ungrammatical. The definiteness restriction, a second semantic restriction besides the PR that bans exactly this type of postcopular NP in ES, has been the topic of much more discussion in the literature on ES and there are numerous analyses available.⁷⁴

(3) Potential ILP predicates

A small number of sentences turned up by the BNC search show potential ILP predicates, at least in some interpretations of the sentences. Due to this very limited number, it seemed appropriate to list them under miscellaneous results. There are two explanations that can be brought up against examples such as the following two sentences:

(197) There were two side doors **5ft wide** on each side of the van for dealing with the churns at the stations and sliding, instead of folding, doors were fitted. (BNC: B2S 217)

(198) So on that basis maybe Havstock Park would be a better venue ... *cos* there would be ... rooms adjacent ... (BNC F7J 518 (spoken); pauses replaced by ellipsis marks)

In (197), the most logical interpretation of the AP *5ft wide* is a permanent property of the door that is not easily changeable due to physical limitations. This would make it impossible to receive an SLP interpretation of the AP and the structure would thus not be a grammatical sentence. One option that is possible here is to interpret the sentence as containing a complex NP as shown above. The NP *two side doors 5ft wide on each side of the van* appears to be an NP that can be generated independently, which at least allows for a potential complex NP analysis. Again, this has to be seen as a last resort option if the unexpected grammaticality of the ILP ‘predicate’ is to be explained.

(198) is an example from the corpus using spoken English. This becomes very clear in the pauses indicated by ellipsis marks. The ‘problematic’ AP in this sentence is *adjacent*, which describes a permanent property of the two rooms under discussion, a property that can be ‘acquired’ when the building is constructed, but cannot be easily lost; this disqualifies it from positions following the NP in the framework of James (1979), which is assumed to work similarly for ES, at least as far as the second semantic constraint is concerned. The sentence cannot serve as a clear example, though, because the pauses complicate the matter and confuse the structure; it is possible that the sentence reads *cos there would be rooms adjacent*, but this is already an interpretation of the bare facts and can thus not count as a clear example. But this sentence shows one additional possible factor that might license ILP predicates in ES: performance is a crucial influence in spoken English, much more so than in the written form. Performance errors should not be taken as decisive evidence for or against the grammaticality of a structure. A sentence like this may be acceptable on the side of oral performance, but this does not automatically lead to conclusions about the

⁷⁴ For a comprehensive overview, please refer to Hartmann (2008:68–88; 2006) and the references cited therein.

grammaticality of the sentence, which is on the side of grammatical competence and thus distinct from performance (Horrocks 1987:2).

All in all, these few examples do not pose serious counterexamples to the fairly regular distribution of predicates in ES coda positions. The majority of predicates is clearly SLP, with only a few exceptions.

5.3 Summary

The BNC research has shown several things: first, that there is a very large number of ES with the predicate *available*; second, that some of the predicates can be grouped together under ‘existence’ predicates because they share similarities; third, that there are some potential NP predicates; fourth, that ILP followed by a comparative construction appear to be grammatical; and last, that the vast majority of predicates falls in the SLP category (or categories, following Jäger 2001) while ILP predicates show only a marginal number of examples.

But which are the most interesting results of these five? It is not surprising that there is a subclass of predicates that is used to assert the existence of an entity or object; also, the dominance of SLP in general and *available* in particular comes at no great surprise considering the theoretical conditions on predicates in this position. Taken together, ‘existence’ predicates and SLP account for 89.9% of all results. The most interesting results are clearly the possible NP predicates and the ILP + *enough to* constructions because they have the potential to cast doubt on the reliable application of the theories analyzed in the last chapter. Still, their share of the total results is only roughly 10% and can be either explained by means other than a violation or by considering them to be constructions that are not entirely similar to those under discussion.

For the possible NP predicates, four explanations have been offered: (a) PP reduction or unacceptability; (b) temporary state of the NP and forcing of an SLP analysis; (c) a complex NP NP compound; (d) adjectival use of *women* with no adjunction structure. It should have become clear that even though the sentences that fall in this class are exceptional, there are ways to explain them without having to assume that NP can generally occur in coda position.

Existential constructions with an ILP followed by a construction with *enough* or other further material in the sentence have been a problem for an analysis of the PR since at least Milsark (1974). The unexpected appearance of predicates that are usually bad when they are the only element in the coda is a test case for any theory of the PR. In this matter, Milsark was probably right to exclude these sentences from his considerations of the PR because they have other possible sources from which the sentence can be derived, i.e. a complex NP analysis similar but not identical to that proposed by Williams (1984), or relative clause reductions. The question is still open to some extent, since a theory that could include these cases as well would be of a greater explanatory value, covering more cases. However, there is not yet any solution apparent that approaches this problem in a manner sufficient enough to result in a single, coherent theory.

For the time being, Milsark's analysis as an ontological ES with a complex NP appears to be the best solution at hand.

To conclude this chapter, it can be said that the BNC data are fairly regular in the type of predicates they have as their coda: the few examples that represent ILP predicates are a very small minority and not even clear in most instances. Also the fact that some possible NPs show up in coda position is not sufficient evidence that they are generally allowed in ES codas. However, the simple lack of ILP examples in the BNC does not automatically lead to the conclusion that they are generally banned, just as the presence and frequency of SLP codas does not automatically mean that they are grammatical (cf. Featherston 2007:2). A correlation between well-formedness and occurrence in corpus data seems to be given: “‘good’ structures are produced and thus found in corpuses, while ‘bad’ structures are not produced and thus not found” (Featherston 2005:16), keeping in mind that well-formedness does not automatically lead to occurrence and that the corpus reflects only a limited view upon all possible structures of a language (cf. Featherston 2005:13–14, 17).⁷⁵ The results of this research still show that the distinction between SLP and ILP established as the difference in grammaticality of ES by most current theories is the one that comes closest to the actual data, especially when the typology by Jäger (2001) is taken into consideration by looking at the frequencies of predicate classes C (‘existence’ adjectives) and E (other SLP adjectives).

⁷⁵ Featherston's Decathlon Model will be used for a unified evaluation of the two empirical studies in chapter 7.

6 Empirical Investigation II – Rating Study

The second empirical study for this thesis consists of a grammaticality judgment task in the form of a questionnaire. This type of method was chosen because it appeared to be the best way of obtaining the desired results, which would be hard to examine with other empirical methods. Grammaticality judgment tasks in generative syntax serve to make intuitions about constructs visible in their judgments (cf. Norris and Ortega 2003:726, Table 21.1). They are clearly located in the area of experimental research methods as opposed to naturalistic linguistic data collection methods and belong to the metalinguistic knowledge tasks, where “learners are presented with linguistic stimuli, in reaction to which they must make other active decisions, ratings, comparisons and revisions about the form or meaning of the stimuli” (Chaudron 2003:796, 764). The questionnaire used here is a rating task where the participants are asked to rate sentences on a given scale according to their intuition. Even though the study was conducted with non-native speakers of English, the results are in line with the general expectations of the theory, meaning that the L2 status appears to be a factor that is not damaging to an application of the results to general empirical syntax (also considering the fact that an equivalent of the PR is also at work in German).

In the following sections, the research design will be explained, including details about the item sentences and filler sentences as well as the expected results and problems. The results and a summary are offered at the end of this section before an evaluation of the two empirical studies is given in the next chapter. The descriptions of the research design and the evaluation are based on Norris and Ortega’s (2003:720–721) structuring of the (SLA) measurement process in the two aspects of ‘conceptualization’ and ‘proceduralization’. The first three of their six stages (belonging to the conceptualization) are reflected in the subheadings (1)–(3) in section 6.1; their fourth step – *Behavior elicitation* – is spread over sections 6.1–6.3; step five – *Observation scoring* – roughly corresponds to section 6.4 below while the last stage – *Data analysis* – is located in section 6.5 at the end of this chapter as well as the following chapter.

All relevant material for the rating study can be found in Appendix 2 (starting page 177), including material regarding the item and filler sentences as well as more detailed results than were possible to integrate in the main text.

6.1 Research Design and Aim

(1) *Construct definition*

When measuring judgments on linguistic expressions (in their case for SLA), Norris and Ortega point out that it is important that researchers clearly define “what it is they want to know” (Norris and Ortega 2003:720). The present study targets one main question: is the different theoretical grammatical status of SLP and ILP in ES codas reflected in the judgments of the participants, even if they are not native speakers

of English? On the side of the theoretical assumptions, the facts for English are relatively clear: SLP are permitted in this position whereas ILP are not (disregarding the problematic cases discussed above). However, it is not certain that such a distinction is automatically recognized by non-natives, who were the majority of the participants; their “mental representations” of English may differ from that of a native speaker (Norris and Ortega 2003:717). Intuitively, a native speaker’s knowledge of his mother tongue should be more detailed and reliable than that of a non-native, a point that is not entirely accepted in SLA theory (cf. Gregg 2003:836). This is among the reasons why this study is conducted with non-native speakers, especially since English is an enormously important second language with vastly more speakers for whom it is a second language (cf. Doughty and Long 2003:4).

(2) Behavior identification

In order to observe the behavior that is needed to test whether the grammatical distinction is intuitively recognized by non-native speakers, their judgments with respect to acceptability need to be observed (cf. Norris and Ortega 2003:726). It has to be kept in mind that there is a difference between the terms *acceptability* and *grammaticality* (cf. Chomsky 1965). A sentence might be grammatical from the formal side of syntax, but may be pragmatically unacceptable and vice versa. Grammaticality is located on the level of competence, whereas acceptability is on the level of performance; acceptability ratings are the intuitions measured in a test environment, but let us draw conclusions about the grammatical status of a construction (cf. Horrocks 1987:2; Bussman 1996:8). The question whether non-native speakers have an intuition about the occurrence of predicates in ES coda position can be elucidated by looking at the ratings and comparing them with a native speaker control group. Results from both groups should reflect the grammaticality judgments in the literature about certain predicates; if the results do not reflect the judgments in the theoretical literature, it has to be concluded that non-native speakers do not have an intuition about the PR in English. Of special interest is not only the absolute rating of items, but also the ratings relative to each other.

(3) Task specification

The basic design of the rating study consists of 42 sentences presented for rating, 12 being item sentences with three different conditions and 30 filler sentences. More detailed descriptions of the rating study sentences can be found in the next two subsections. All sentences could be rated on a scale from 1 (very good / correct) to 7 (very bad / wrong). The instructions were to only rate the sentences according to intuition and did not ask participants to mark ‘mistakes’ or improve the sentences they considered to be bad. Such a rating task is an appropriate method for advanced learners of a language because they have gathered enough competence in the language (cf. Chaudron 2003:796); this is why older students have been select-

ed (see subsection 6.1.3 on the participants below). Precise information about the task are also given below.

Featherston (2007:10) proposes two minimal requirements for data collection in generative grammar: (a) multiple informants and (b) multiple lexical variants of the structures. Both these points have been observed in the rating study, as will be further explained below. In addition to these “essentials”, the present study also satisfies the two “desirables”, namely that the task should be one where participants respond to input and that the scale of well-formedness should not be binary but multiple (Featherston 2007:10).

6.1.1 Items

As already mentioned, the core of the study are the 12 sentences that test for the structure under discussion here. These sentences all are of the following basic syntactic form:

(199) [frame-setting adverbial], there *be* [\pm negation] NP [predicate]

The frame-setting adverbial (cf. Maienborn 2004:161–163; 2005:288) was used to give the ES a basic context, which served to make the target structure less obvious and to reduce the usually negative rating effects of ES without such an adverbial (either preposed at the beginning of the sentence or following the coda) since they are considered odd or uninformative more easily than sentences where a context is provided (cf. Moro 2006:211; Hartmann 2008:36). Thus, all item sentences feature this adverbial, which was preposed in all instances. Six of the frame adverbials are temporal (1–6 in Table 3) and six are locative (7–12 in Table 3).

NP subjects in the item sentences are kept short and precise (in order to avoid the problematic cases where ‘specific’ NPs can force an ILP reading, cf. Diesing 1992b:48–49), sometimes featuring only a noun, sometimes containing a quantifier (e.g. *one*) or quantifier expression (e.g. *lots of*) before the noun.

There are three conditions for the predicate in the item sentences, which served as the variable target structures for the grammaticality judgment. The three conditions are stage-level adjectival predicates (SLP AP), individual-level adjectival predicates (ILP AP) and nominal predicates (NP). This results in three possible combinations for each sentence with a predicate, which were distributed evenly across three versions of the questionnaire (A, B and C). Each version contained three SLP AP, three ILP AP and three NP conditions, respectively. The 12 item sentences with the three conditions are shown here in Table 3.

Item	Sentence	SLP AP	ILP AP	NP
1	In times of crisis, there is no solution ...	possible (7)	perfect (0)	an alternative (0)
2	When Bush was elected, there were a lot of people ...	present (50)	stupid (0)	doctors (0)
3	Last Friday at John's party, there were many guests ...	drunk (1)	intelligent (0)	students (0)
4	When we walked near the river, there was a car ...	burning (10)	red (0)	a taxi (0)
5	Back in 1950, there were many women ...	sick (0)	blond (0)	housewives (0)
6	When they were needed, there were no helpers ...	available (314)	brave (0)	firemen (0)
7	At the meeting, there was not a single person ...	hungry (1)	beautiful (0)	an American (0)
8	In our classroom, there is one window ...	open (33)	round (0)	an exit (0)
9	At school, there are many pupils ...	tired (0)	young (0)	girls (0)
10	In New York, there are many buildings ...	dirty (0)	tall (0)	skyscrapers (0)
11	In many Southern countries, there are lots of children ...	unemployed (1)	fat (0)	criminals (0)
12	In our school library, there are hundreds of books ...	missing (15)	boring (0)	novels (0)

Table 3: Item sentences with conditions.

As a first test of these predicate conditions, all of them have been entered in the narrow search string 2 from the BNC study (cf. section 5.1 above) in order to check if they appear in the corpus material of the structure under investigation. The search string is repeated here for the reader's convenience with PRED at the end marking the position of the respective predicates:⁷⁶

(200) [pos="VHB|VBB|VBD|VM0"]? [pos="EX0"] [pos="VM0"]? [pos="VHB"]?
 [pos="VBB|VBD|VBN|VBI"]? [pos="AT0"]? []? [pos="AJ0"]? [pos="NN0|NN1|NN2"] +
 [word="PRED"]

The number of hits for each predicate are shown in parentheses in Table 3. This 'background check' shows on the one hand how useful the specific search string is to filter for specific predicates and on the other hand that the distinction between SLP and ILP / NP for these predicates is also reflected in the number of results. For constructions with ILP / NP predicates, there is not a single hit (*round* does yield a few results, but they are all truncations from *around* and not *round* proper), whereas there are usually at least a few for SLP. While this is not enough empirical evidence to answer the research question sufficiently, it already points in the direction that is also reflected in the literature.⁷⁷

All predicates in the rating study have been tested with Jäger's (2001) three-fold characteristics to determine which predicate class they belong to. SLP items are either class C or E, whereas ILP items fall into

⁷⁶ For a 'translation' please refer to the BNC study above.

⁷⁷ Please note that the results from this background check have not been thinned down as in the BNC study above (for example, *enough* constructions have not been removed here). This explains that the numbers are slightly different for some predicates compared to the BNC study. This search was only intended to gain a first basic overview if the predicate appears, which is a different goal than that pursued in the BNC study.

class G. NP predicates can also be grouped into class G since they prefer the generic reading and do not appear in perception verb complements.

6.1.2 Fillers

In addition to the 12 items for the rating study, 30 filler sentences were used, yielding a total of 42 sentences to be rated. Most of the filler sentences are grammatical, since already 8 out of 12 item sentences (ILP and NP conditions) on each questionnaire are ungrammatical. However, grammatical constructions were chosen that are not too common and thus grammatical-but-difficult. The fillers included the following constructions (* indicating a construction that is generally considered ungrammatical):

- Existential sentences with PP coda (n=3);
- Secondary predication with resultatives (n=4; *n=2);
- Secondary predication with depictives (n=4; *n=1);
- Sentences with deictic *there* (n=2);
- Sentences with expletive *it* (n=2);
- Focus constructions with NP preposing (n=2);
- Heavy NP shift (n=2);
- Locative inversion (n=2);
- Negative inversion (n=2);
- Sentences from language proficiency tests like TOEFL and LPI (n=1; ?n=2; *n=2).

Fillers with ES and PP coda and deictic *there* were used to ‘disguise’ *there* in the item sentences; the large number of sentences with secondary predication is one of the striking characteristics of the filler sentences. The reason for this is that the construction is quite similar (also regarding restrictions on them) to predicative ES codas and can thus serve to test whether the construction is rated worse than other sentences in general or whether the difference in acceptability is largely dependent on the AP itself. If all secondary predication constructions yield low ratings, this factor has to be considered when evaluating the three item conditions (cf. section 6.4.7). The remaining constructions are mainly aimed at making the students read the sentences carefully because they are not very common and thus ‘marked’ as more complicated than simple VSO word order sentences. Including language proficiency test sentences should give at least a limited impression of a participant’s language background, despite the fact that only four sentences are hardly evidence for grammatical competence.

The filler sentences and a short commentary on possible problems can be found in Appendix 2, Table 14 (page 180).

6.1.3 Participants

The participants of the rating study are students of the ‘gymnasiale Kursstufe I / II’, aged between 15 and 18 (with a few exceptions). Compared with other school types, the Gymnasium has a relatively high level

of language proficiency because the students learned English for at least six years before entering the Kursstufe. Still, it has to be noted that they probably had mostly contact with edited English language material up to that point since school text books usually use edited texts or even text specifically written for the respective book.

Concerning language acquisition, all students should be beyond the ‘critical period’ for first language acquisition (cf. Cho and O’Grady 1997:496), but this does not effect second language acquisition (cf. Archibald 1997:524). It is difficult to say at which level of language proficiency they operate, but they should have developed some intuition about grammatical sentences by that time, even with (assumed) limited exposure to original English material. The first language of the majority of students (again with a few exceptions) is German, a Western Germanic language like English (cf. Harbert 2007:15–16). The total number of participants in the student group was 92, which should prove sufficient for results with empirical value.

In addition to the student group, a control group of native speakers was asked to fill out an identical questionnaire. The only differences were in the personal information section (the question on stays abroad has been left out) and in the instructions for an electronic version of the questionnaire (explaining how to fill out the ratings and submit the file). The instructions have also been translated into English. Apart from that, all items are completely identical to those the student group received. The number of participants in the control group was significantly smaller than the student group (11 compared to 92 for the student group) and the age of the control group was also higher in general, most of them being adult; the age span is between 19 and 60. All of the control group participants are from one of the major dialects of English, i.e. American English, British English and Australian English; only one of the participants was Canadian.

6.2 Possible Problems

As with any empirical investigations, there are several problems that can arise. This subsection lists the problems that were expected for the rating study, including a few brief comments on the potential implications on the overall results.

6.2.1 Interference of L1

The first obvious problem with any measurement concerned with SLA is of course the influence or interference of the students’ L1 with the judgments on L2. Grammars differ in many respects even within a language family and thus it has to be kept in mind that these differences can influence judgments. An important question thus is whether the distinction between SLP and ILP is also given in the participants’ L1, in this case German. For predicates in copular sentences, Maienborn (2004:158; 2005:288) notes that

SLP can be modified by a locative modifier whereas ILP cannot (though she later tries to refute the assumed difference in grammaticality); the same holds for a German translation of the respective sentences:

- (201) a. Maria was tired / hungry / nervous in the car. (SLP)
 b. */?? Maria was blond / intelligent / a linguist in the car. (ILP)
 (Maienborn 2004:158 [1])
- (202) a. Maria war im Auto müde / hungrig / nervös. (SLP)
 b. */?? Maria war im Auto blond / intelligent / eine Linguistin. (ILP)
 (Maienborn 2005:288 [15b]; adapted)

This similarity already hints at the fact that German makes the same (or at least a similar) distinction between predicates as English.⁷⁸ As far as ES are concerned, it appears that the distinction is equally applicable there, as the following contrasts show; interestingly enough, grammaticality of ILP is also improved if the predicate is followed by a *enough* construction:

- (203) Did you miss Mike's party last weekend?
 a. There were so many people drunk / *tall.
 b. There were so many people tall enough to touch the ceiling.
 (cf. Milsark 1974:39 [64]–[69], adapted)
- (204) Hast du Mikes Party letzte Woche verpasst?
 a. Da waren so viele Leute betrunken / *groß.
 b. Da waren so viele Leute groß genug, um an die Decke zu fassen.
 (own example)

It has to be kept in mind that the German sentences above are not literal translations of the English existential construction. This is a general problem when comparing the two languages in this respect. The corresponding German expletive construction usually features *da* or an *es gibt* construction (treated in more detail in Hartmann 2008). Nevertheless, the similarities between the two constructions above show that English and German both show the effects of the PR in these cases.

Also on the side of secondary predication with depictives, there are similarities between English and German with regards to the PR, since both allow SLP but not ILP:

- (205) a. Peter likes his tea hot / *organic. (similar to McNally 1997:7 [4])
 b. Peter mag seinen Tee heiß / *biologisch.⁷⁹ (own example)

Evidence from perception verb complements also indicate that German has a similar restriction on predicates in this position like English. Note that the reference of the predicate is ambiguous between a subject-oriented (*I*) and object-oriented (*Mike*) reading, an inherent feature of depictive adjuncts (English examples based on Jäger 2001:97–98):

- (206) a. I saw Mike drunk.
 b. *I saw Mike intelligent.

⁷⁸ Bear in mind that Maienborn actually argues against the grammatical difference under frame-setting adverbials like in these examples; still, the English and German examples pattern alike with regards to the interpretation.

⁷⁹ The judgments for English are taken from the literature, especially Rothstein (2006b) and McNally (1997). For the German sentence, intuition is that the ILP is not entirely ungrammatical, though it is still far worse than the SLP.

- (207) a. Ich habe Mike betrunken gesehen.
 b. *Ich habe Mike intelligent gesehen.
 (own example)

This similarity between English and German means that the influence of L1 should not interfere severely with the results of the rating study. A negative influence would be more prominent if a construction under investigation is grammatical in English, but ungrammatical in German; in this case, the influence of L1 probably deteriorates the judgments for the English construction, while the opposite should happen if the construction is grammatical in German but not in English. Since the PR appears to be a feature of both languages, however, this fact alone should not have a negative influence on the overall ratings. The results should thus be transferrable to L1 English without too much blurring of the results.

6.2.2 Problems Recognizing Secondary Predication

One of the problems that could arise is the possibility that participants might falsely analyze the AP coda in ES as a form of illicit adjectival modification because they do not recognize the secondary predication construction as grammatical and thus resort to the next alternative analysis known to them, which would probably be adjectival modification. Adjectival modification in English is usually made to the left of the head noun, though there are certain cases where right adjunction is possible, but these are exceptions and influenced by semantic factors as well (cf. James 1979). Modification to the right is still a very marked construction and might not be acceptable for a large number of non-native participants (and even some native speakers in unclear cases). The difference is shown in (208):

- (208) a. The tall building.
 b. *The building tall.
 (own example)

According to James (1979), the restrictions on constructions where right adjunction to the NP is possible concern the presuppositional status of the NP as well as the transitory properties of the adjective. However, students cannot be expected to note such details because the construction is not too common and probably not found extensively in material covered in school. It is thus reasonable to assume that this type of construction is not acceptable for them and that they transfer this unacceptability to ES codas with adjectives, regardless whether they are SLP or ILP.

Following the assumption made by McNally (1997) that the coda is an adjunct to VP, this conflicts with an analysis that considers the AP to be part of the NP. The level of adjunction is higher up in the structure for VP adjunction. Thus, while the problem does not arise on the level of the syntactic theory of the PR, it could be a problem for students with non-native language proficiency. The two possible interpretations for (209)a are shown schematically in (209)b, c:

- (209) a. There were people drunk.
 b. *There_{[VP [V' [V were] [NP [NP people] [AP drunk]]]]].}

- c. There [_{VP} [_{V'} [_V were] [_{NP} people]] [_{AP} drunk]]].
(own examples)

Such an (incorrect) processing of the construction might lead to bad ratings for ES with AP codas. If it is indeed the case that post-nominal AP constructions get worse ratings than the other sentences, this should also affect the filler sentences with secondary predication. For non-native speakers, secondary predication structures might appear strange or even ungrammatical because they violate their notions of regular AP–NP word order. Secondary predication in general and especially existential constructions with secondary predicates could thus be easily misinterpreted and could receive worse ratings than other sentences. For this reason, fillers with secondary predicates have been included in the rating study to test whether they receive bad ratings as well. In this respect, the student group is more likely to rate secondary predication constructions worse than the native speaker control group because they lack the amount of input to recognize this construction as grammatical. Native speakers benefit from the natural and implicit input of available material whereas students are most likely not explicitly instructed about secondary predication (cf. DeKeyser 2003).

The second question with regards to secondary predication is whether there is still a clear difference between the three conditions of the study if secondary predication is rated worse in general. Even if this is the case, there are at least some cases where a difference between SLP, ILP and NP predicates should be very straightforward, considering that some SLP constructions could be said to be idiomatic (cf. the results of the BNC study above, especially the cases of *available* and *present*). The fillers can thus serve to compare how much the ratings of predicative ES codas and secondary predication fall together and if they are generally considered to be worse than (ES) items without secondary predication.

6.2.3 Other Possible Problems

There are still some other problems that might blur the results of the rating study. Among them are performance factors that might affect understanding of the sentences in a test environment, even if there is no pressure of grades behind it (cf. Norris and Ortega 2003:722). Most of the sentences are short and usually contain no more than two clauses; all of the item sentences, for example, consist of a frame adverbial and the existential sentence, so the constructions are not too complicated with respect to their length.

A second possible problem for the results is the length of the questionnaire. Rating the 42 sentences including reading the instructions took one test group between 10 and 15 minutes. During this time, concentration and motivation are expected to decline. This is a general problem for judgment tasks, not only with students. For example, one of the participants rated the first sentence with 1, the second with 2 and so on, reversing the order when 7 was reached; the result was a nice pattern on the questionnaire, but the results have of course not been included in the evaluation.

As has been mentioned at the beginning of this thesis, an ES without proper context sometimes sounds unnatural. On its own, a sentence like *There were people drunk* lacks context and is thus not a good choice for a grammaticality judgment task (cf. Horrocks 1987:2–3). The frame-setting adverbials in the item sentences should provide at least some context, but it is not certain if this context is comprehensive enough to make the sentence more natural for the participants. On the other hand, a frame adverbial that is too rich might ‘force’ an SLP interpretation and could thus interfere with the test results (cf. Diesing 1992b:43; Maienborn 2004:167).

One final problem is a problem inherent in any approach to the PR: which predicates are acceptable in ES codas and which are not? Regardless of whether the distinction is between a mismatch of subject NP and predicate type (as Milsark 1977 suggests) or a result of a missing event argument for ILP (following Kratzer 1995), there has to be at least a rough but principled notion of which predicates are possible and which are not. This is especially important when designing a study that tries to examine exactly this distinction. If the predicates in the study are ambiguous in some cases, the results are not likely to provide reliable results. This is why the predicates in the items have been tested within Jäger’s (2001) framework as mentioned above. The problem cannot be avoided altogether, but this method should at least reduce this influencing variable.

6.3 Expected Results

In the light of the theories discussed in chapter 4 and bearing in mind that the distinction between SLP and ILP is also present in German (cf. 6.2.1 above), the following results are expected to be visible in the data:

- ES with predicative extensions are expected to yield lower ratings than the fillers with a PP extension; this reflects an individual violation cost of secondary predication in predicative ES codas in addition to the assumed violation cost of ILP / NP predicates.
- ES with SLP are expected to yield the best ratings of the three conditions, followed by ILP and then NP conditions. The differences between the three conditions are expected to be as described in the following points.
- Since all the theories agree that NPs are generally banned in coda position (with the marginal exceptions of theoretically transitory NPs such as *president*), the NP condition is expected to yield the lowest rating of the three conditions with a considerable gap to the SLP / ILP conditions.
- The difference between SLP and ILP conditions is expected to be clearly visible but not as pronounced as the SLP–NP differences.

These expectations are made on the theoretical basis that the literature about ES in general and the PR in particular offers. Hence, they are already an initial interpretation of the theoretical background and have to be verified or falsified with the actual results as an empirical basis.

With these expectations of problems and results, the following section presents the actual results of the rating study and examines whether the data is in accordance with the theories of the predicate restriction.

6.4 Results

6.4.1 Overview

The results for the three item conditions is shown in Figure 1. They are interesting and surprising in several aspects: the average ratings for SLP (3.64) by the student group are indeed better than both ILP (4.53) and NP (4.43), but the differences are not as pronounced as was expected. The control group shows the distinction more clearly (SLP=3.25; ILP=5.86; NP=5.59). At a first glance, this seems to indicate that students do indeed have intuitive knowledge about the grammaticality of ES constructions, but also that this intuition is not as reliable as for the control group. One very surprising result is that NP predicates are rated better than ILP predicates for both groups, even if the difference is only marginal for the student group. There is, however, an explanation for this unexpected result which will be discussed below. A closer look at the rating for individual items below will show that there was considerable variation in the ratings of all three conditions. After a few remarks on the results for each group, the overall results will be discussed (more material on the results can be found in Appendix 2, starting page 181).

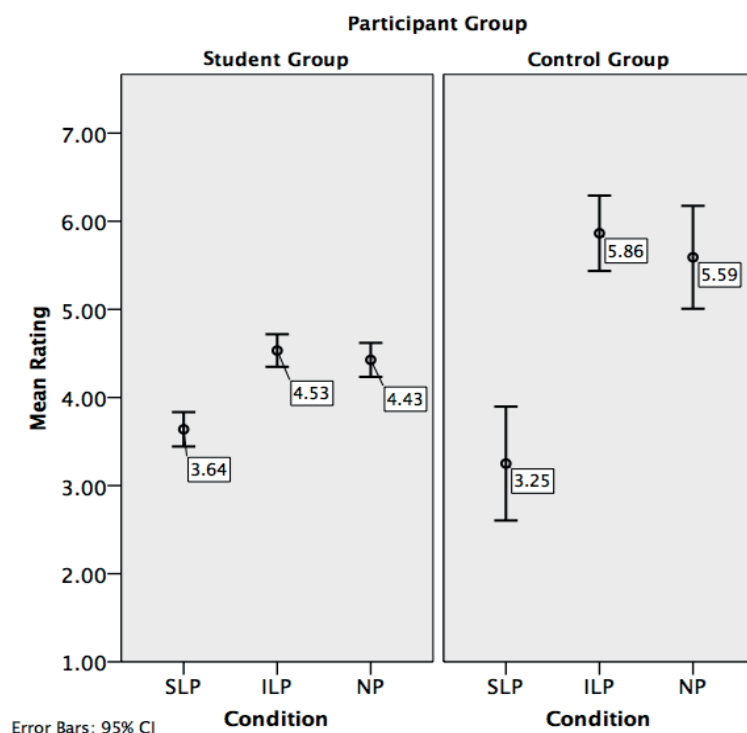


Figure 1: Overview.

6.4.2 Group-specific Results

(1) Control Group

The control group shows a pronounced different rating for SLP conditions compared to ILP / NP conditions. For eight items (cf. Table 16 on page 183 for detailed results for each item), the rating difference (and thus the violation cost) between the SLP and the ILP condition was larger than 2.0, which corresponds to roughly 29% difference on the 1–7 scale. Three additional items differed more than or equal 1.0 (~14%), meaning that the difference was smaller than 1.0 only for one single item (item 5 where, in fact, the ILP condition was rated better than the SLP condition). Concerning the difference between SLP and NP conditions, the picture is similar, with 7 items differing more than 2.0 and one additional item more than 1.0. Curiously enough, three NP conditions were rated better than the SLP condition (items 5, 7 and 31). However, the average rating for SLP conditions was considerably better than for the other two conditions.

It has been mentioned above that problems recognizing secondary predication could pose a potential problem for the rating of ES in general. In point of fact, one of the control group participants ‘corrected’ most instances of secondary predication (by indicating that the adjective should be to the left of the NP), not only ES with predicate codas. This is exactly the potential problem described above with regards to secondary predication and re-analysis as attributive APs with incorrect NP–AP word order. Interestingly enough, this person rated only two of the item sentences better than 4, the SLP condition of sentence 12 (*missing*) and the SLP condition of 6 (*available*). All other item sentences received worse ratings, regardless of the fact that some of them contained other SLP.

Concerning the fillers, the control group was quite reliable with their ratings of the clearly ungrammatical fillers 4, 38 and 42, but also rated some of the grammatical-but-difficult constructions, like the resultative in 18 and the out-of-context focus constructions 6 and 40, quite bad. On the other hand, their ratings were generally better for grammatical sentences than the judgments by the student group, but this is most likely due to the limited number of participants. The more participants a study has, the greater the chance gets that the results resemble a bell curve (cf. Figure 5 on page 109). This is the most obvious explanation for the clear-cut rating differences with the small control group in comparison to the large student group.

(2) Student Group

The first thing that is noteworthy about the results of the student group is the extreme variation in judgments. Almost every single item sentence yielded judgments ranking from 1 through 7 (with only a few exceptions, cf. Figure 13 on page 181). This is due to operational factors, as will be explained below in more detail. As with the control group, the student group rated NP conditions slightly better on average than ILP conditions, contrary to expectations. The difference between the theoretically ungrammatical ILP

/ NP conditions and the assumed grammatical SLP condition is visible, but not as pronounced as with the control group (see the next subsection).

This less clear gap between the conditions is also reflected in the number of items where the difference between ILP / NP conditions and the SLP condition was larger than 2.0 (or 1.0) (cf. Table 16 on page 183). As shown above, the difference in rating between ILP and SLP condition was larger than 2.0 for eight out of 12 items for the control group and larger than 1.0 for three additional items. Regarding the student group, only one single out of the 12 items showed a difference of more than 2.0 for the ILP and SLP conditions (item 21). For five items, the difference was larger than 1.0 (items 7, 10, 25, 27 and 34). Comparing the NP with the SLP condition, two items showed a difference of more than 2.0 (items 21 and 27) and two additional items one larger than 1.0 (items 25 and 37). These differences between the groups already indicate that the contrast between grammatical and ungrammatical constructions is less pronounced for the student group than it is for the control group.

The fillers also showed interesting results: although the student group on average gave worse ratings for the clearly ungrammatical fillers 4, 38 and 42, they also gave bad judgments to a resultative (filler 20) and inversion structures that are fine from a grammatical point of view (fillers 3, 9 and 17). Inversion structures might pose problems with the processing of the sentence, yielding the low ratings. At least for negative inversion (fillers 3 and 9), this is surprising because negative inversion is still part of the school curriculum as a stylistic device.

6.4.3 Ratings for the Three Conditions

In the expected results, it was formulated that the assumed rating order for the three conditions should be SLP << ILP < NP. Figure 2 shows that this is not the case. The figure indicates the mean average for each condition and the picture is slightly different than expected. It is indeed the case that SLP conditions are on average rated better than the other two conditions by both groups. Especially with the control group, the gap is very pronounced (+2.61 for ILP–SLP); the gap for the student group is significantly smaller (+0.89 for ILP–SLP). Also, students on average rated the SLP condition worse than natives did. The differences between ILP–SLP as well as NP–SLP are given in Table 4 (both in absolute and z-score values), which shows that the two ungrammatical conditions incur violation costs, but that they are much smaller for the student group than for the control group. For both groups, there is a moderate correlation between the coda condition and the average rating (.421, $p < .01$ for the student group and .535, $p < .001$ for the control group).

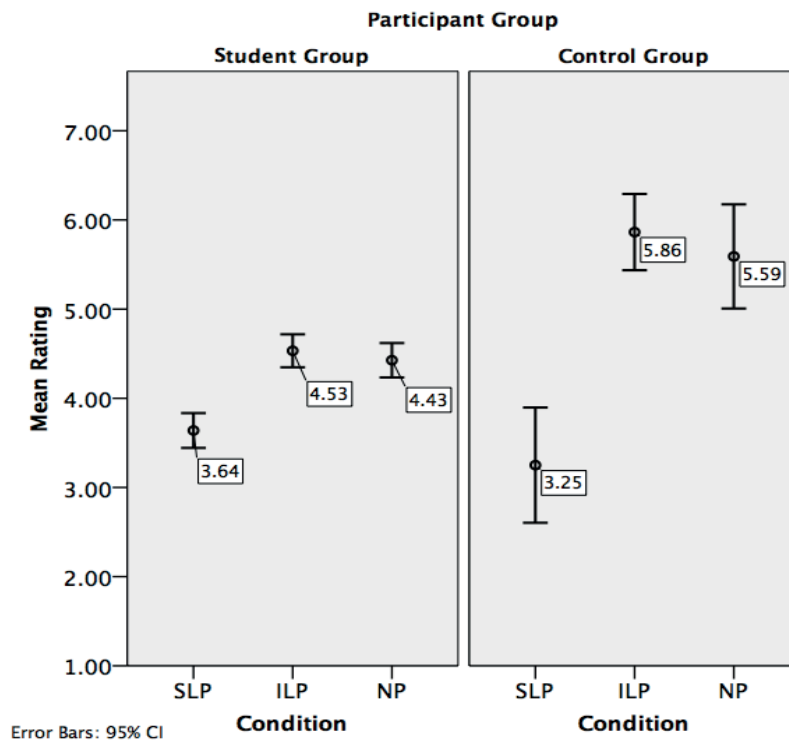


Figure 2: Overview (repeated).

Group	Absolute violation costs		z-score violation costs	
	ILP violation cost (ILP – SLP)	NP violation cost (NP – SLP)	ILP violation cost (zILP – zSLP)	NP violation cost (zNP – zSLP)
Student group	0.89	0.79	0.47	0.41
Control group	2.61	2.34	1.20	1.08

Table 4: ILP / NP violation costs.

Maybe the most surprising result of the rating study (which is contrary of the expected results) is that NP conditions are rated slightly better than ILP conditions by both groups. The difference is not as big as between SLP and ILP, but it is still surprising in the light of basically every theory on the PR claiming that NP are not acceptable in general. NP conditions basically belong to the class of ILP conditions since NPs can only in very rare cases denote temporary properties and are generally thought to not contain a Davidsonian argument (cf. Kratzer 1995). In this respect, it is interesting that, on average, NP conditions are judged slightly better ILP adjectives. On the other hand, the small rating differences, when compared to the SLP condition, still shows that neither ILP nor NP codas appear to be permissible based on these judgments. Against the expected results, the rating order for the conditions is $SLP \ll NP < ILP$.

When looking at Figure 2 and the normalized comparison of ratings for the different conditions in Figure 3 (student group) and Figure 4 (control group), it becomes clear that the results for both groups are roughly parallel (but note the scale differences for the normalized graphs). For both groups, the rating order is the same; only the contrast between the different conditions is considerably less pronounced for the student group. But the results still show that both groups have similar intuitions about the item sen-

tences. Both groups show a negative z-score for the SLP condition, in this case meaning that it is rated better than the average for the three conditions combined. It follows that the ILP / NP conditions incur a violation cost, already mentioned in absolute terms in the left columns Table 4 and for the z-scores in the right columns. For the z-score violation costs, it can be seen that the differences between the groups are not as pronounced as in absolute terms.

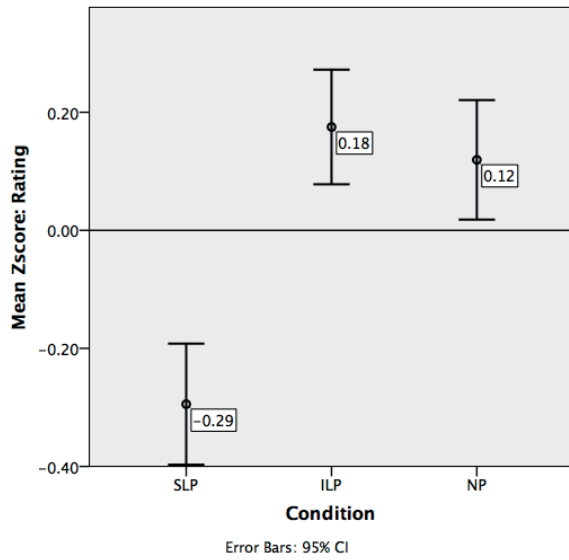


Figure 3: Normalized overview (student group).

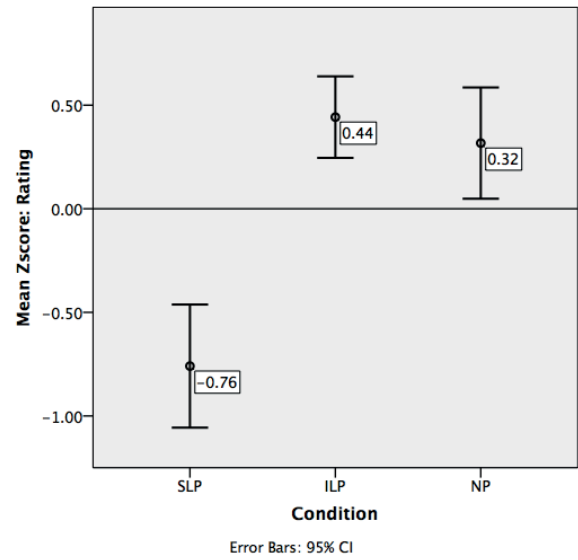


Figure 4: Normalized overview (control group).

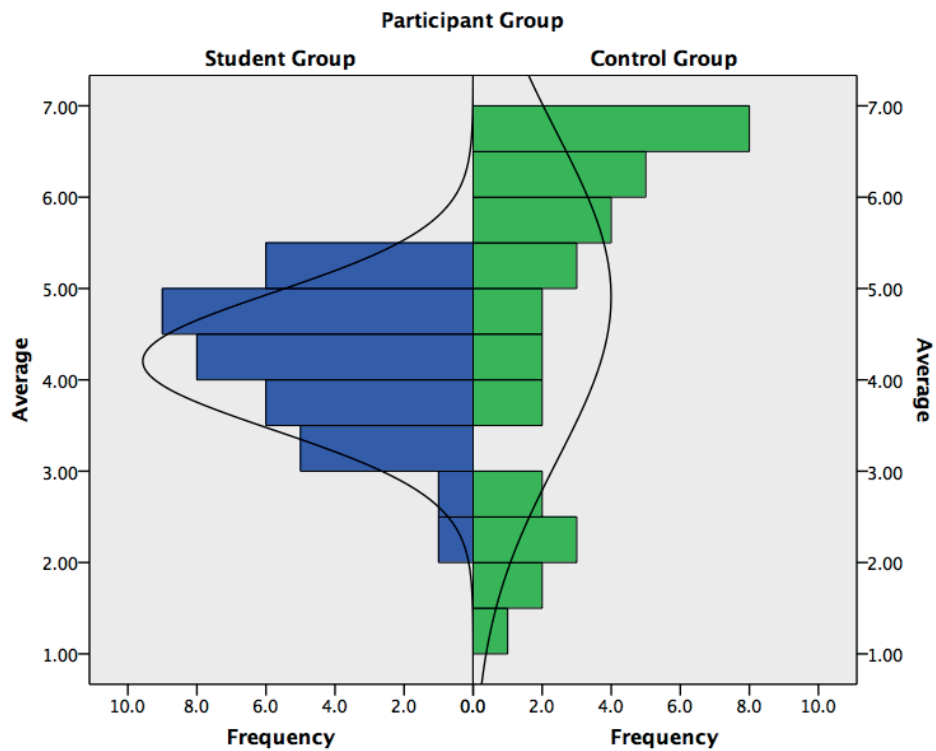


Figure 5: Average rating distribution.

Several factors play a role for the results. On the one hand, the group size paired with operational effects: keeping in mind that the two groups differ significantly in size, the average rating of the student group (clearly visible in Figure 5) is much closer to the the middle of the scale (bell curve effect), whereas the control group shows more pronounced tendencies toward the edges of the scale. The normal distribution curve for the student group is considerably different from that of the control group. A bigger control group would probably show the same tendencies.

Also the great variation in student judgments for individual items (often ranging through the entire 1–7 scale) is at least partially responsible for the less pronounced distinction. But at the same time, a larger group also means that results get more reliable because the variation from single participants is cancelled out by the variations of other participants. The mean average of large test groups is thus closer to the actual acceptability of a construction than with smaller groups: there, the variation of a single person has far more influence on the mean average and thus on the overall result. These things should be kept in mind when interpreting the figures in this study. Nonetheless, the normalized results show that the tendencies are similar: SLP are far more acceptable than the other two (ungrammatical) conditions, showing that both groups have similar judgments on the difference in grammaticality, as was expected in the light of the theoretical assumptions. This gives strong evidence in favor of the theoretical claim that IP / NP are not permissible as ES codas.

6.4.4 Different Ratings for SLP Classes

In addition to the differences between the SLP / ILP / NP conditions, there are also further differences between the SLP predicates that are of interest. As noted above, Jäger (2001) further distinguishes between 8 classes of predicates. Of the predicates used in this study, the ILP / NP predicates fall in class G (cf. the discussion of the item sentences above), while the SLP are either from classes C or E. When looking at the average ratings for these two classes in Figure 6, the only significant difference between the groups is that the control group gave considerably better ratings to class C (the ‘existence’ predicates like *available*). For class E, there is almost no difference in the average ratings. But a closer look at the data reveals that the ratings are not that consistent for class E as they appear. This can be seen in Figure 7. Predicates of class C are much more consistent within one participant group (indicated by the circles around the clusters), even if their judgments differ from one another (as mentioned above for the average ratings). For the three predicates that belong to this class, the differences between the ratings is very small; the exact opposite is true for predicates of class E (*hungry*, *sick*, etc.). Here the average ratings differ considerably within each group, clearly visible by the dots are not in a cluster but spread across the entire scale. This example shows that for some of the data it is important to take a closer look at the detailed ratings instead of the average.

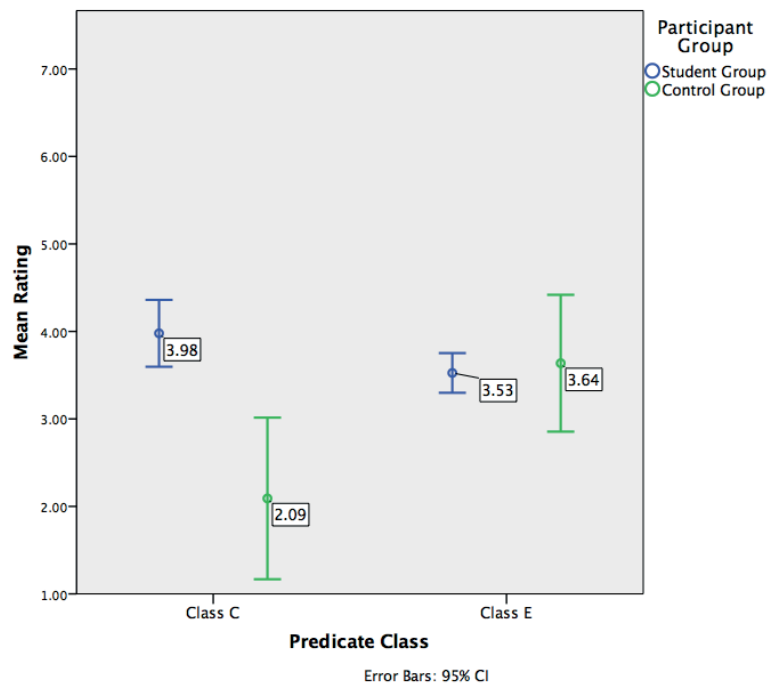


Figure 6: Ratings for SLP classes C & E.

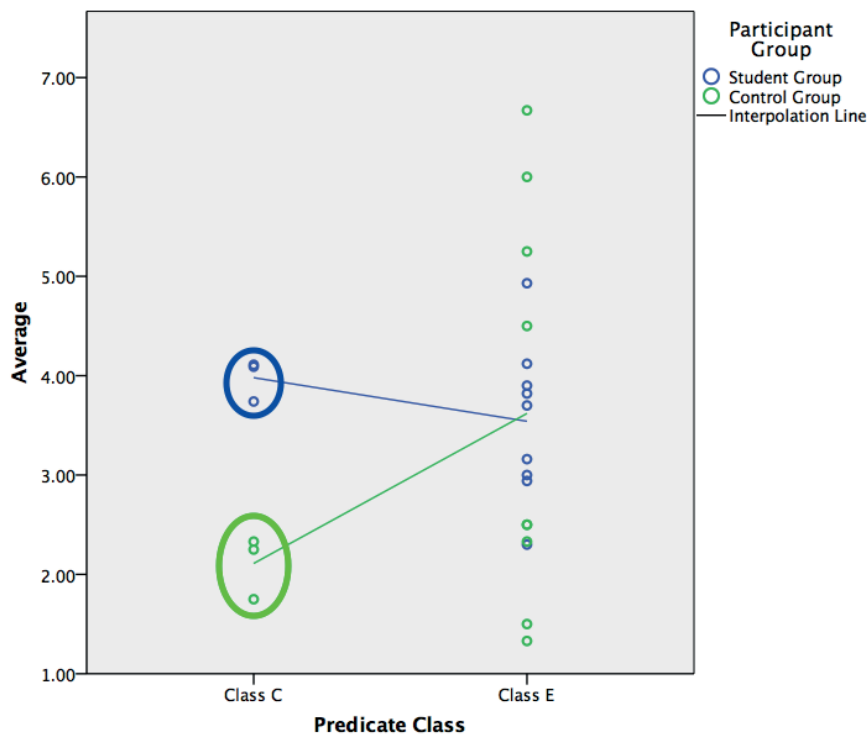


Figure 7: Detailed ratings for the two SLP classes.

Not only are there considerable differences for the individual items within each participant group, but also between the two groups. Why exactly this is the case is not obvious from the data. But there has to be some factor that causes these different judgments. At least two of the surprisingly bad ratings for the SLP *dirty* and *tired* (both class E) might be explained by the context: the item sentence for *dirty* was *In New*

York, there are many buildings dirty. This might be interpreted as a generic statement about the permanent state of many buildings in New York and could thus be interpreted as an ILP (or a clash of the existential construction with the generic statement). This explains the very bad rating by the control group. Another factor with this item might be that it is in position 5 of the questionnaire and might thus still be subject to an initial skepticism by the participants, yielding lower ratings than usual. A similar contextual explanation might be responsible for the rating of the predicate *tired*, which was used in the sentence *At school, there are many pupils tired.* This sentence might also be interpreted generically and could reflect a reading where the predicate is interpreted as an ILP.

In a 1993 paper, McNally points out the difficulty for obtaining an existential reading for uncontroversial SLP and lists *tired* and *dirty* among them (McNally 1993:13–14). So for some SLP, there has to be some other factor that hinders the existential interpretation and might thus be responsible for the ratings in the study. That there appears to be a connection between the theoretical issue raised in the paper and the results of the study is certainly not entirely based on coincidence, but hints at a pattern that should be further investigated.

On the other hand, the results for predicates of class C are interesting in a very different way. Here the ratings differ considerably between groups, but are consistent within the groups. Instead of a two-way variation (inter-group and intra-group), we only have one of these two with this predicate class (inter-group). The very good ratings from the control group show that the three predicates in this class are very acceptable to them and supports the notion that this predicate class is different from class E, where the ratings are more distributed across the scale. The SLP interpretation appears to be inherent in this predicate class, at least to natives. As far as the student group is concerned, the matter is exactly the opposite: the class C predicates are on average judged worse by slightly more than 0.5 compared to the predicates in class E (average of 3.98 compared to an average of 3.54 for class E). This is highly interesting, since the dominance of class C in the BNC and the consistently good ratings by the control group suggest that these sentences are generally accepted in English.

These results are a good reflection of the distinction Jäger (2001) makes between predicates: not only do they show different characteristics with respect to existential readings of their subjects and acceptability in perception reports, they also show distinct ratings in grammaticality judgments (as well as regarding their frequency in the BNC). This is not empirical proof for Jäger *per se*, but strongly suggests that the SLP–ILP distinction is not binary; any theory that is based on a binary distinction is likely to miss these results.

6.4.5 The Influence of the Frame-Adverbial

Maienborn (2004) proposes a pragmatic explanation of the observed difference in acceptability between SLP and ILP using bidirectional optimality theory. A basic assumption of this approach is that a temporal reading of the frame adverbial (even if it contains a locative PP) prefers stage-level predicates because the interpretation of the sentence is such that the topic time is equated with the predicate time and both are proper subsets of the lifetime of the individual. Since frame adverbials were included in the item sentences in a preposed position to provide some context for the otherwise ‘odd’ isolated ES, it appeared interesting to check whether the choice of a temporal or locative adverbial has an influence on the average ratings. The frame-adverbial is no variable in the study, meaning that for a specific item sentence, the adverbial was always the same.

Figure 8 shows the average rating for the 6 locative and 6 temporal frame adverbials used in the items, respectively. As can be seen from the figures, the influence of the adverbial has only a marginal influence on some ratings. There is no significant correlation between the choice of adverbial and the average rating (.07, $p < .895$ for the student group; .008, $p < .987$ for the control group; .02, $p < .95$ for both groups combined).

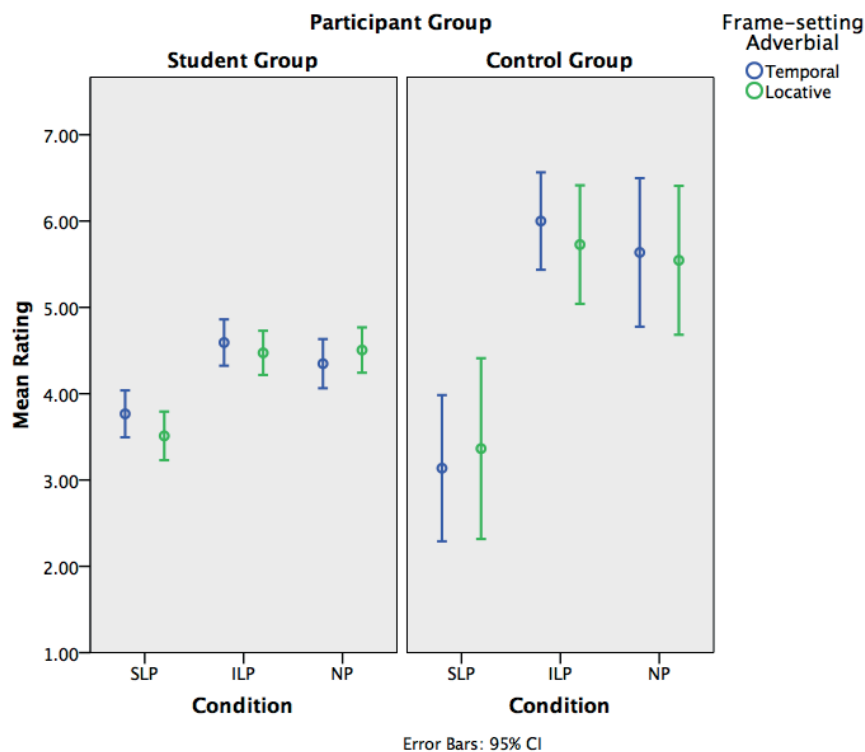


Figure 8: Influence of adverbials.

These data are not supposed to provide evidence for or against Maienborn’s proposal. For such a purpose, the data would need to be much more controlled, especially with regards to the readings of the adjectives in combination with the modifiers and the question whether the locatives allow a salient temporal inter-

pretation or not. As this was not the main goal of the study, this has not been implemented. However, it could well have been possible that there is a clear positive effect on the rating with temporal adverbials.

There are still a few facts to consider: for example factors that can force an SLP interpretation of an ILP (cf. Felser and Rupp 2001; Diesing 1992b; Jäger 2001:93; Kratzer 1995:155–157). Maienborn has shown this for frame adverbials that have a longer duration (according to our world knowledge) which then allow ILP (cf. Maienborn 2004:167). If a temporal reading is more readily available (inherent in temporal adverbials), this could theoretically lead to a more pronounced difference between SLP and ILP conditions. A study specifically designed for these conditions could maybe yield results that can show this influence; it is, however, not observable in this study. A positive aspect from the non-observable influence of a frame adverbial is that this is a factor that can be excluded in the discussion of the individual results. This means that there is one less intervening variable to consider in the interpretation of the data.

6.4.6 Good Ratings for NP Conditions

One of the most surprising results of the rating study was the relatively good (or rather not-too-bad) ratings for NP conditions in general, but also for specific NP predicates with exceptionally good ratings, contrary to expectations. The particularly interesting items are items 7, 25 and 31, which yielded an average rating of 4.0 or better in both groups:

- (210) Last Friday at John’s party, there were many guests **students**. (item 7)
- (211) In our school library, there are many books **novels**. (item 25)
- (212) Back in 1950, there were many women **housewives**. (item 31)

The first striking similarity of all these items is that they all contain the quantifier *many* before the subject NP. But why do these sentences receive good rating, despite the fact that NP conditions should theoretically receive the worst ratings? All three items were in fact rated best with the NP condition, SLP and ILP conditions receiving lower ratings. It is thus necessary to investigate the possible causes for these unexpected results.

Rating	1	2	3	4	5	6	7
Student group	9.68%	29.03%	19.35%	25.81%	0.00%	9.68%	6.45%
Control group	25.00%	0.00%	25.00%	0.00%	25.00%	0.00%	25.00%

Table 5: Item 7 NP condition.

A closer look at the data shows that the results from the control group is not reliable in these cases because the ratings are distributed randomly and thus not statistically significant. The variation in the judgments is spread across the entire spectrum on the scale from 1–7. For example, the ratings for item 7 in the NP condition are distributed as shown in Table 5. Whereas the average judgments of the student group show a clear preference for good ratings, the control group does not exhibit this preference but rather shows an equal distribution across the entire spectrum (25% each for ratings 1, 3, 5 and 7). The data is similar for

the other items under discussion. It is interesting to note that the rating variances of the control group are especially strong with the items under discussion here, whereas it is not as pronounced for other items and other conditions. What exactly the reason for this is remains unclear to me, but the results would certainly look different with a bigger control group panel.

One reason for the behavior of the control group data is of course that there were significantly less participants in this group compared to the student group. This means that any variation in the judgments has a statistically higher impact on the average result of the rating as well as on the distribution of the ratings on the 1–7 scale. Since the control group rating has to be taken out of the present considerations for these operational reasons, let us focus on the student group ratings, which are clearer in their preference for a good judgment in the NP conditions of the items under discussion.

For item 7, there is one very logical explanation at hand that can explain the surprisingly good rating for the NP condition. As can be seen in Table 5, the majority of students rated the sentence in its NP condition somewhere between 2 and 4. Considering the factors of stress and motivation, it does not seem unlikely that many students misread the sentence:

- (213) Last Friday at John's party, there were many guests students.
(from the rating study)
- (214) Last Friday at John's party, there were many guest students.
(from the rating study, adapted)

When the sentence is not read carefully enough, the plural *s* of *students* might easily be missed. The resulting sentence is then perfectly grammatical because the NP predicate is then included in the preceding NP to form the compound NP *guest students*. Since this lexical compound should be familiar to most students in this group, it is not surprising that they re-interpreted the sentence in this manner, which is much more logical to them than to analyze *students* as a predicate that follows. A general unfamiliarity with secondary predication structures also plays a part in this and further facilitates the 'incorrect' analysis. These factors explain the rating for item 7 in the NP condition; if the NP condition for this item is not considered, the item nicely shows the different ratings for the SLP and ILP conditions, which show a clear difference (3.7 vs. 5.04 for the NNS group).

The NP condition of item 25 also received good ratings from both groups. Again, the data from the control group ranges from ratings between 2 and 7, with an emphasis on 4 with 50% of the total ratings (n=4). In contrast to item 7, there is no obvious misinterpretation of the sentence. The combination *many books novels* can hardly be analyzed as a complex NP and the absence of the plural marker does not give an alternative, more economical, interpretation of the sentence. As far as this item is concerned, no satisfying explanation for the NP condition rating can be offered. Considering that the scale is from 1 to 7 and the item yielded an average rating of 3.71, the rating is certainly not perfect (especially since the SLP condi-

tion with a present participle for this item yielded an average rating of 2.30), but still surprisingly good in the light of the ban on NP predicates by most theories.⁸⁰

Rating	1	2	3	4	5	6	7
Student group	25.00%	14.29%	17.86%	17.86%	14.29%	7.14%	3.57%
Control group	33.33%	0.00%	0.00%	33.33%	0.00%	33.33%	0.00%

Table 6: Item 31 NP condition.

As far as item 31 is concerned, the control group rating again varies across the entire spectrum with no clear preference and is thus neither helpful nor significant. The interesting thing about this item is that the subject NP contains the NP *women*. 25% of the student group rated this NP condition with a straight 1 rating, the preference for a positive rating for the NP condition is quite obvious with this example (cf. Table 6). As with the other items that received a relatively good rating for the NP condition, there has to be a reason for this. McNally (2011:1845) argued that an NP predicate could be permissible in coda position if it denotes a transitory property as other SLP do. In her example for this claim, the NP predicate was *the president*, which could allow such a reading. This is, however, hardly the case here. Being a housewife is certainly a condition that holds for a long time (especially in the life of a woman from the 1950s) and this interpretation should be available in the world knowledge of the participants. It has become clear in the BNC study (cf. 5.2.3 above) that a form of the noun *woman* appears in most ES constructions that have an NP predicate following the postcopular subject NP, at least in a first interpretation of the surface structure. Further considerations of this puzzle led to the conclusion that *woman / women* is in these cases used as an NP modifier or an attributive adjective modifying the NP that appears to occupy the position of the predicative extension in the sentence. Probably, this is also the case here, even if it is unclear whether this improves the reading on the sentence on an intuitive level.

The explanation for the good rating of the NP conditions discussed in this section are of course not final in any way. A closer look at the ratings from individual participants in the control group shows that there are some ‘irregularities’ in their judgments. Some participants show a very consistent bad judgment of the NP conditions (3 participants give only 6 and 7), while for other participants, the range goes from 1 through 7. Within the individual groups of the study, group A has the most positive ratings for the NP condition, while judgments are generally far worse for group C. From the 11 overall participants of the control group, 2 appear to give surprisingly good ratings for NP conditions compared to all other participants, but apart from these two and some occasional good ratings, the pattern shows a clear tendency towards bad ratings.

⁸⁰ Note again that the difference between the SLP and ILP conditions is very clearly visible (2.30 vs. 4.14 for the NNS group) if the NP condition is not considered.

There may be lots of other factors playing a part and it is not possible to consider all of them. Despite this operational difficulty, which may in part be due to insufficient item control (as in the case of *guest's students*), the explanations offered here have at least a certain plausibility. What these results mean is that for these items, the student group did most likely not rate the NP conditions that were intended with the study; this is probably the case for items 7 and 31, whereas the case of item 25 is not so easily explained.

6.4.7 Comparison with Similar Filler Items

The item sentences in the rating study represent instances of the form discussed above, namely ES with a predicative AP / NP coda following the postcopular NP. Some of the filler items are related to this type of construction and have been included in the study to allow a comparison between the target structures and the related structures. These related structures are ES with a PP coda, as well as secondary predicates (resultatives and depictives, both in grammatical and ungrammatical forms). The main aim of the study was to examine the rating differences between the three predicative coda conditions, but the comparison with the other constructions is also interesting in this case (not only for the student group, but also for the native speakers, as the results show). The average results of the structures just mentioned can be found in Figure 9 as well as in Table 7 on page 119.

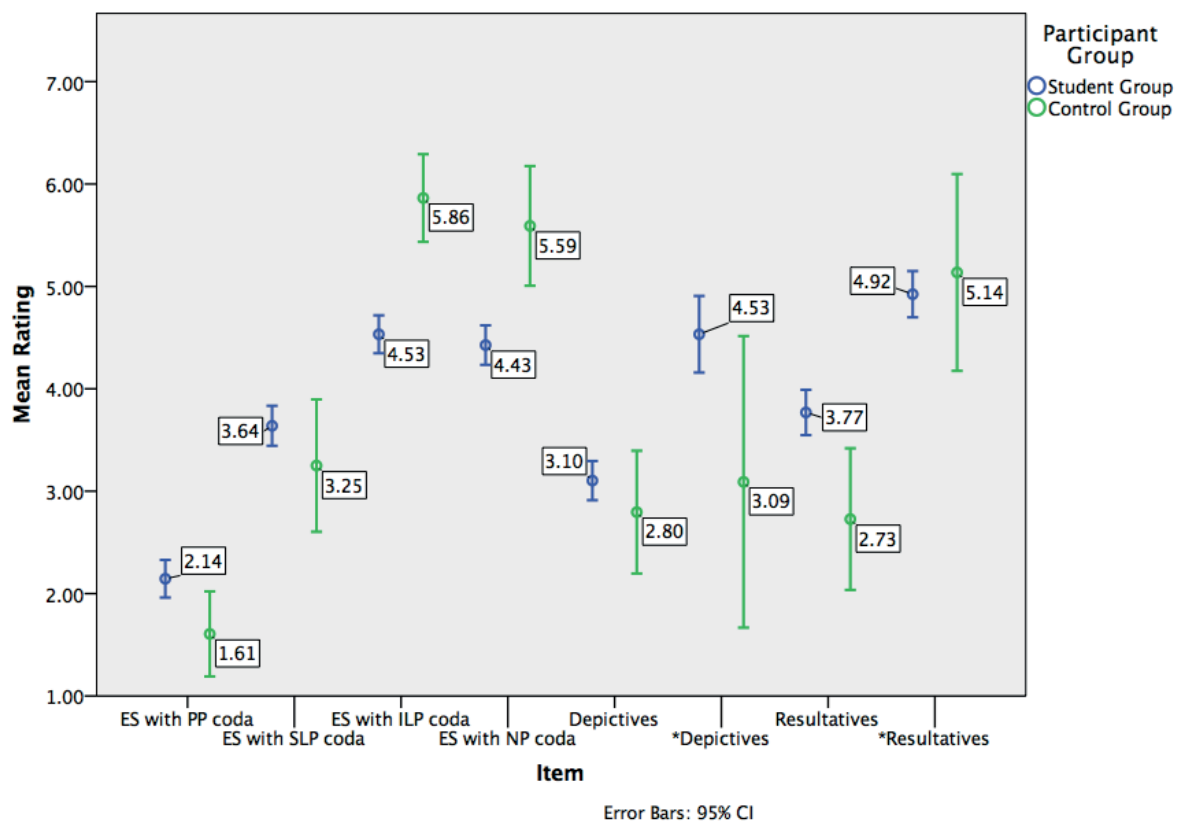


Figure 9: Comparison with other conditions.

It is quite clear that the ES fillers with a PP coda (the first set of error bars in Figure 9) are judged very positive by both groups, especially when compared to the target structures with predicative codas (error bar sets 2–4). This can maybe be explained by the lower complexity of the PP coda fillers (items 13, 24 and 28 on the questionnaire); the difference is still quite remarkable, showing that ES with a predicative extension are generally judged worse than ‘simple’ PP coda constructions. This might be related to the adjunction site of the PP coda, which is assumed to be a sentential (IP) adjunct (similar to a frame-setting adverbial) rather than a VP adjunct in the same position as the AP coda (a depictive secondary predicate under McNally’s 1997 analysis).⁸¹ What this might mean is that the processing effort for secondary predicates is higher and the construction thus yields lower ratings, a factor that should be taken into account when looking at the absolute judgments of the target item ratings. The lower ratings for predicative codas for both groups might hint at the fact that they have an independent violation cost. Jäger (2001:97) includes locative PPs in his classes A and B, meaning that they are considered prototypical SLP, even more so than the ‘existence’ predicates *available* and *present*, which belong to class C. The ratings for the target conditions and PP codas can then be explained by referring to Jäger’s SLP–ILP continuum: prototypical SLP incur the lowest violation costs and the violation costs increase when moving from class A through class H. PP extensions can be considered to be the base value for the ratings, with additional violation costs added for the other predicate classes. However, this would predict an ordering of PP < SLP < ILP < NP. This exact ordering is not reflected in the rating study (the order being PP < SLP < NP < ILP), but this small deviation can be explained by the positive ratings for some of the NP conditions as described above.

With respect to the independent violation costs, it is helpful to compare the other instances of secondary predication in the study: the ratings for grammatical depictives and resultatives is roughly equivalent to the rating for the SLP condition, even slightly better. Due to the fact that the study does not include an unmarked condition for secondary predication (i.e. simple copular sentences), it is not possible to compare the effect of the two conditions. But hypothetically, there could be a correlation between *non-predicative ES vs. predicative conditions* and *primary vs. secondary predication*. This could show that secondary predication incurs independent violation costs, to which additional violation costs for ILP / NP condition are added (linearly or superadditive). The effects of the violation costs are summarized in Table 7.

⁸¹ It has already been noted above (section 1.2) that Huddleston and Pullum (2002:1393) consider PP extensions to be complements of *be* instead of predicative modifiers.

Constructions	Students	Control group
∅ rating ES with PP coda (base 1)	2.14	1.61
∅ rating ES with SLP coda (base 2)	3.64	3.25
∅ rating ES with ILP coda	4.53	5.86
∅ rating ES with NP coda	4.43	5.59
Violation cost predicative coda (base 2 – base 1)	<u>1.50</u>	<u>1.64</u>
Independent violation cost ILP (ILP – base 2)	0.89	2.61
Additive violation cost ILP (ILP – base 1)	2.39	4.25
Independent violation cost NP (NP – base 2)	0.79	2.34
Additive violation cost (NP – base 1)	2.29	3.98
∅ rating Grammatical depictives (base 3)	3.10	2.80
∅ rating Ungrammatical depictives (base 4)	4.53	3.09
Violation cost ungrammatical depictives (base 4 – base 3)	<u>1.43</u>	<u>0.29</u>

Table 7: Violation costs.

Another very interesting result is the student group's tendency to give lower ratings for the constructions, regardless of their grammatical status. This can be seen in the ratings for the secondary predication fillers, which included grammatical, questionable but very likely ungrammatical and clearly ungrammatical cases. Here, the average ratings also show that the student group gave lower ratings in general (with the exception of *resultatives, where the control group's rating is erratic), but each time with a pronounced gap between grammatical and ungrammatical sentences, respectively. In the case of the depictives, the student group was even more reliable to 'detect' the ungrammatical structures; the control group showed only a marginal gap between them in this case. This fact can be traced back to a less strict item control for non-target structures and again group size.

Figure 9 also shows that for some item groups, the student rating is worse than that of the control group while the opposite is true for two conditions, namely the ILP and NP ES coda conditions. There, the ratings of the control group are considerably worse, especially when compared with the SLP condition. However, in the case of ES with SLP and PP codas, as well as for the other secondary predication conditions, the student rating is worse than that of the control group and to a very high degree for some conditions (especially the *depictives and resultatives).

There are two basic facts that are interesting when looking at the data from the secondary predication fillers: on the one hand, the ratings of the student group show a characteristic 'diamond' shape when the values for the secondary predicate fillers are connected, meaning that there are two factors which influence the ratings: first, there is a slight difference between depictives and resultatives and second, that the difference between grammatical and ungrammatical secondary predicates shows roughly the same effect for both types. For the control group, either grammatical depictives or ungrammatical resultatives fall out of the pattern and prevent a diamond shape, which is only roughly visible compared to the NNS group. This might have reasons (the easiest being that there was something odd about the grammatical sentences that resulted in the bad judgments; it should be noted that the individual grammatical items also had a large variation in their ratings) that are beyond the scope of this thesis, but this pattern will again be discussed

briefly in the evaluation chapter of this thesis. The second interesting fact is that the student group was able to clearly distinguish between grammatical and ungrammatical secondary predicates, but that the different ratings for the target items are not as clearly distinguishable. Here the SLP conditions are outside the pattern and should have received better ratings. This will be further discussed in the next chapter.

All in all, the comparison with similar conditions is highly interesting because it tells us something about the general processing and rating of the secondary predication structures. It also shows that PP codas are judged much better than other coda constructions, which is probably related to the issues of their syntactic status as well as processing problems with secondary predicates in general. This matter will also be taken up again in the next chapter.

6.5 Summary

The main motivation for data collection is to test one's initial interpretation of a construct by formulating expected results and checking whether they are reflected in the data. At the end of this process stands another interpretation, which is based on the evaluation of the data (cf. Norris and Ortega 2003:719). The following four expected results have been formulated earlier in this section:

- ES with a PP coda yield better results than ES with predicative extensions.
- The SLP condition should be rated best, followed by ILP and then NP codas,
- NP conditions yield low ratings with a clear difference to SLP / ILP conditions.
- The difference between SLP and ILP is not as big as between SLP and NP conditions.

Of these four expected results results, only one is clearly the case. ES with a PP coda (filler items 13, 24 and 28) show considerably better average ratings than all other ES conditions (an average of 1.88 for both groups compared to averages of 3.45, 5.20 and 5.01 for SLP, ILP and NP, respectively). An explanation for this is that none of the PP coda sentences involve secondary predication and are thus more likely to be recognized by participants. Despite many grammatical fillers containing secondary predication, they all yielded lower results than the PP extensions (cf. Table 7 above). The conclusion that can be drawn from this is that predicative extensions are less acceptable for the participants. This fact can also account for the significantly smaller rating differences for the student group concerning SLP and ILP / NP conditions. If they generally give lower ratings to predicative extensions, chances are that the distinction between these predicates gets blurred. The control group was better able to differentiate between these predicates because they are more familiar with this construction and should thus be more sensitive to the SLP–ILP contrast. It is odd, in this context, that the control group gave surprisingly low ratings for grammatical depictive fillers (2.80), which was only 0.30 worse than the student group.

The remaining three expected result concerning the ordering of average ratings were not reflected in the data, both for the student and the control group. As has been shown above (cf. Figure 1 on page 105), the

NP condition was on average rated slightly better than the ILP condition. In terms of preference structure, SLP < ILP << NP was predicted, but the actual average results are in fact SLP << NP < ILP.⁸² In some cases, the NP condition was even the condition that yielded the best rating of the three conditions. It has been attempted to explain these cases wherever possible. What this shows is that the intuition of a single person is (a) not reliable and (b) that this intuition should thus not be the sole basis for the development of a theory. This is why empirical studies are important to base assumptions not entirely on theoretical and intuitive ground, but on facts that reflect the actual use of a language:

linguists can and do err, influenced by a range of factors, including but not limited to the demands of the paper they are working on. The judgments of an individual are revealed to be inadequate as a basis for theory development. (Featherston 2007:5)

In connection with the second expectation, the third and fourth were also not reflected in the data. It was expected that the NP condition should be the most clearly unacceptable in most cases, with the subtler difference between SLP and ILP being reflected in ratings closer together. It is interesting to see that things are not entirely as expected, even though operational factors of the study should also be taken into account. But even though these expectations were not fully met, this is not damaging to the overall interpretation of the data in the light of the theoretical assumptions about ES codas: SLP are much more acceptable than either ILP or NP in the coda, which is predicted by the theory.

It would have been a valuable insight if the NP condition was rated considerably worse than the ILP condition because this could have been taken as evidence that NP codas reflect a syntactic violation in contrast to the semantic violation of ILP (as proposed by Stowell 1978). Still, the clustering of ILP / NP codas at the lower end of the scale is an important empirical reflection of the theoretical proposals. We can thus draw the preliminary conclusion that the PR is not just a theoretical assumption, but rather a phenomenon that can be observed in grammaticality judgments and is thus a ‘real thing’, so to speak. While we can draw conclusions regarding the ontological status of the manifestation called ‘PR’, there are many questions that are still open, some of which must remain unanswered. However, some of these questions will be pursued in the next chapter, which will draw a connection to the BNC study in this thesis.

⁸² The rating preference for the control group could be expressed as SLP <<< NP < ILP to indicate the greater difference between the SLP and ILP / NP conditions.

7 Evaluation of the Empirical Studies

The two empirical investigations in the previous chapter were designed to achieve two separate things: the BNC research had the aim to test the theories' claim that ILP and NP predicates are ungrammatical in ES coda position; the rating study was designed to test the ratings for SLP, ILP and NP conditions. This chapter will first try to answer the questions that have been asked at the beginning of this thesis with the data collected in the empirical studies. The question regarding the syntactic status of the postnominal XP has been answered in detail above and will not be repeated here; similarly, the question of which component of the grammar is responsible for the observed PR effects has been dealt with extensively in chapter 4. In the first section of this chapter, the SLP / ILP distinction will be evaluated. The second section will briefly discuss the implications raised by the rating study with regards to language acquisition. A connection between the two empirical studies will be drawn in the third section by applying the Decathlon Model of Empirical Syntax (Featherston 2005). The final section will deal with the question which of the theories discussed in this thesis is most adequate in the light of the empirical studies.

7.1 Reconsidering the SLP / ILP Distinction

In the BNC study, the aim was to collect data on the types of predicates that occur in the coda of ES in the corpus material. The rating study has mainly focused on finding out which predicative coda conditions are acceptable to participants and how the ratings between SLP, ILP and NP conditions differ. The latter two conditions are considered ungrammatical in the theory, which should then also be reflected in the corpus and the results of the rating study. A suitable methodological comment on grammaticality judgments and their impact on our concept of a participant's knowledge of grammar comes from Gregg (2003):

What we actually observe in a grammaticality judgment test, for example, is the subject making marks on paper or punching keys on a computer keyboard; we do not observe grammaticality judgments. We infer (with a very high degree of confidence, of course) from the observed acts to the judgments and (with a good deal lower degree of confidence) from the inferred judgments to the hypothesized grammatical knowledge. (Gregg 2003:834)

Even if we cannot directly observe grammaticality in so-called grammaticality judgment tasks, we can still comment on the acceptability of the constructions under observation; constructions that are consistently rated bad have a high tendency to reflect ungrammatical sentences. Both empirical studies for this thesis have shown that SLP are more acceptable when taking a relative judgment task as a tool and are in fact the dominating results in the corpus material. It is thus safe to say that the literature correctly claims that ILP and NP are not allowed under normal conditions. This leaves us with one of the questions asked at the beginning of this thesis, namely whether there is a uniform contrast between SLP and ILP.

That there are two natural classes of adjectives that are sorted into binary categories of [+SLP] and [+ILP] has been doubted even in the early 1970s when the distinction between SLP and ILP had not yet been generally established. Milsark (1974:129) noted that if we change our world knowledge, an adjective might switch to the other class and admitted that there are some fuzzy edges to the concept of state-descriptive and property predicates. James (1979:696–697) noted as well that some adjectives are ambiguous in this respect. Kratzer (1995), however, explained the difference by postulating an additional event argument for SLP, though she admits that the distinction is probably not made in the lexicon, thus allowing predicates to be of both classes in the respective context (an argument that is not too far away from Milsark's). Even without considering ambiguous cases, Jäger (2001) observed that there is no single diagnostic for the distinction, but that there are at least three independent features that result in 8 different classes of predicates. Considering the arguments that have been discussed in previous chapters, it thus seems quite clear that a binary distinction is unlikely since predicates do not fit into this binary pattern (as Jäger's tests for weak subjects and perception verb complements show, SLP do not all behave the same) and that the question of whether an adjective is permissible in ES codas (and related constructions) is not determined by one single factor alone. Taking a more general, cross-linguistic perspective, there is also some evidence that the restriction on depictives to only allow SLP is not a linguistic universal (cf. Himmelmann and Schultze-Berndt 2005:27); this is especially relevant since McNally (1997) assumes that the predicative coda in ES is a depictive adjunct, thus restricting permissible adjectives to those that can appear as depictives.

On the basis of the empirical studies conducted here, there are three main arguments that point at the fact that the (non-binary) distinction between SLP and ILP is indeed behind the differences in acceptability of predicates in ES codas.

First, there is the fact that from the corpus examples with the relevant test strings, the majority contains adjectives that are considered to fall in the SLP class in the literature. Many of the examples might not fit into the standard pattern of a clearly temporary state, but the examples that contain a clear ILP are extremely rare and the XP in these cases is often complex (constructions with *enough* for example), suggesting that these examples might not be depictive adjuncts at all but rather reduced relative clauses or the like. In addition, the predicates that were used in the rating study have been tested using the narrow search string, which filtered only for sentences where this particular predicate occurred. The result there (as seen in Table 3 on page 98) show that none of the ILP or NP predicates show up in the BNC corpus, whereas there are more than 400 sentences that contain one of the SLP under investigation.⁸³ This already shows that SLP are by far more common in the corpus (of course, overall lexical frequency should also be taken into account).

⁸³ To be fair, the predicates *available* and *present* account for 83% of these occurrences, but the tendency is still clearly visible.

Second, the judgments in the rating study speak a clear language: the SLP that are used all fall into classes C or E from Jäger's classification (i.e. they differ with regards to their acceptability in perception reports and the readings of bare plural subjects while both exhibiting temporary properties). The ILP that are used all have preferred generic readings and consistently fail in perception reports and are thus most likely to be found in class G; the same is true for the NP predicates (cf. Jäger 2001:97–99). Even a superficial view on the results shows that the SLP conditions are rated better with a clear difference to the other conditions. In direct consequence, we can say that, even if there is no uniform contrast between SLP and ILP, the different predicate classes yield distinctly different ratings in grammaticality judgment tasks; classes C and E (both considered SLP) receive considerably better ratings than class G (considered ILP). Even if there is a difference in rating for the 'existence' predicates (like *available*) between the two participant groups, the pattern is clearly visible. Augmenting the binary predicate distinction to 8 classes based on their differing behavior in certain contexts does not declare all the previous theories on the PR (and the SLP–ILP distinction in general) null and void, but describes the facts more adequately; it is still possible to state which of the 8 predicate classes can appear in the ES coda. The results might even be more reliable using a variety of tests instead of just one.

Third, if the results of the rating study and the BNC research are connected, it becomes apparent that the relative judgments and the occurrences in the BNC coincide: ILP and NP conditions are rated worse in the judgment task and occur rarely in the BNC; SLP are rated better on average and occur dominantly in the BNC. A close look at the data also shows that Jäger's (2001) predicate classification is reflected in the results of both studies: on the side of the corpus study, predicates from class C (e.g. *available*, *present* and *possible*) account for more than half of the overall results in the BNC study; in the rating study, predicates from classes C and E showed different behaviors regarding the consistency of the results (cf. above). Predicates from class C were also rated significantly better by the control group, which corresponds to the high frequency in the corpus. This shows nicely that while the two studies have been conducted independently of each other, their results point in the same direction and can be connected without complicated additional assumptions. This will be taken up in section 7.3 of this chapter, where Featherston's Decathlon Model will be applied to the results, which is in line with the studies performed here

As McNally (2011:1845) noted, one of the remaining debates is whether NPs are systematically excluded, a point that has been made by Milsark (1974), Stowell (1978) and others. There are, however, also authors (e.g. Erdmann 1976:162) claiming that certain NP predicates are permissible if they are "phraseological". McNally also points out that NP predicates denoting a temporary state (such as *the president*) can marginally occur in ES codas, even if they are not acceptable for all speakers. The question whether all NPs are excluded has also been one of the questions of this thesis. Judging from the empirical investigations here, it is possible to say both *yes* and *no* with regard to this question. It has been argued that some NPs can indeed denote a temporary state (such as political offices), but it is clear that the evidence for their

acceptability is not very convincing. The few examples from the BNC are not unambiguously real NP predicates and also the results from the rating study have shown that NP on average receive worse ratings than SLP with variation between participants. The cases where the NP condition was rated surprisingly good could almost all be explained by misreadings of the sentences.

The results from the BNC speak a clear language in this case: the few examples that occur are actually not clearly NPs at all and are thus subject to different restrictions. Especially the status of *woman / women* as an AP rather than an NP can solve this puzzle because it explains 4 of the 5 examples without any ramifications for the occurrence of NPs in ES codas. The results of the rating study are not as easily interpreted because, especially for the student group, the NP conditions are rated better than expected. For 50% of the items they are the condition that is judged worst, but sometimes only with a slight margin and in 3 cases even represent the condition that was judged best. Operational and performance factors have been adduced to account for this discrepancy with the theory. One of the cases where the NP condition was rated unexpectedly good had the NP *women* as the predicate. This is an interesting connection between the corpus and the rating study because in both cases this predicate yielded unexpected results. It has already been discussed that this is probably the result of a mis-glossing of *women* as an adjective and thus has no ramifications on the NP issue in general. It is nonetheless surprising that the same predicate results in an exceptional result in both empirical studies; it also shows that the two studies can be connected and compared, which will also be attempted in one of the next sections in this chapter.

The NP condition in the rating study provides an interesting connection to the question of the acceptability of NP predicates from Jäger's class G discussed briefly above. As McNally (1997) proposes, temporary persistence is one of the main factors deciding whether an adjunct predicate is licensed or not. Since predicates from class G have a [+TR] (transitory property) feature and this class includes NPs, it could be possible that they are somehow licensed as adjunct predicates in ES codas despite the fact that they are usually considered to be not permissible in this position. It is possible that some of the more positive ratings for some NP conditions are a reflection of this fact. The matter is still that NPs in this position are not generally acceptable and also not rated very positive, showing that temporary boundedness is not the only factor playing a role in the licensing of the coda. As a tentative solution to this question, it could be proposed that in addition to the [+TR] feature, a predicate needs either a [+WS] or [+PR] value to become acceptable in ES codas but that the [+TR] feature is a necessary condition. The three predicate classes under consideration here (C, E and G) all have this property, but C and E have an additional positive value (either for readings of bare plural subjects or perception reports). This claim should be further investigated using empirical methods specifically designed for this purpose.

The BNC study has also shown that besides the (over-)dominance of SLP codas, there is an additional focus on what has been termed 'existence' predicates. In Jäger's classification, they form a class that is distinct from the bulk of other adjectival SLP predicates; Jäger argues that APs like *available*, *visible* or *present*

have an additional argument (which might be termed location-dependency) which is responsible for their ability to have weak subject readings (Jäger 2001:121). This does not explain why *available* is so common, however. It is also not clear what differentiates this argument from the additional event argument that Kratzer proposed for SLP, since Jäger's additional argument applies to only one class as far as possible APs for ES codas are concerned. This argument would also have to be different from the Davidsonian argument, which is assumed for all predicates in Jäger's framework.⁸⁴

The exact nature of the PR is still a matter of debate. From the facts considered here, it can be concluded that a purely syntactic approach leaves many questions open, especially when considering Jäger's complex classification using several independent factors where predicates do not behave uniformly. The question thus is whether we can arrive at a convincing explanation for the relevant facts using semantics or pragmatics exclusively or whether they both operate here. Of course it is also possible that syntax is still involved in the PR, especially in the form of Diesing's (1992a) Mapping Hypothesis (which, however, would require multiple lexical entries with different subject positions, etc.). Jäger (2001) has shown that the simple absence vs. presence of an event argument, as proposed by Kratzer (1995), cannot be the solution; the event-semantic approach is, however, still one of the most coherent approaches, even if the details have to be worked out to obtain an entirely rule-guided system. Maienborn's (2004) purely pragmatic approach certainly has its merits and also shares some similarities with McNally's (1997) Adjunct Rule to link interpretations and explain the preference for SLP. It is obvious that the PR is a complex phenomenon involving several modules of grammar. Even if the difference between certain predicate classes is taken to be its foundation, this difference is not yet entirely understood and a definite account for the PR, in ES codas and other constructions, is still to be found.

These considerations attempt to answer three of the questions introduced at the beginning of this thesis: which module of the grammar is responsible for the PR effects, how can the difference between predicates be described and are NP predicates generally impermissible in ES codas? In the first case, semantics appears to be dominant; in the second case, there is evidence for a non-binary distinction along the lines of Jäger (2001); and finally, NPs can only occur exceptionally in the coda and even then with deteriorated ratings. The answers to the last two questions are much clearer than for the first one, but the theoretical discussion is still going on in the literature, with no definite clarification at hand.

⁸⁴ If indeed all predicates contain an event argument, the question is whether this is bound by existential closure in all cases and what happens if there is no existential operator; it might be possible that the event argument does not need to be bound if no suitable operator is available. Also, it remains open whether the additional argument is bound by the existential operator as well or whether another operator has to be introduced.

7.2 The PR in Native and Non-native English

The conclusions about the representation of the PR and ES in the grammar of native speakers of English are largely based on the judgments in the relevant literature, the corpus material from the BNC and the control group of the rating study. The literature is more or less uniform in their opinion that ILP are not permissible as the coda of ES, for whatever reason (the different approaches have been discussed in detail above). The corpus data from the BNC confirms this view because the predicates that show up in the construction under investigation are dominantly SLP. For the ILP that appear, other analyses are possible, which include the possibility that the construction there differs from those in others, but also leaves open the possibility that they are exceptionally (or erroneously) produced.

Of course, the corpus data can give us only a limited insight into the matter because no corpus is large enough to accommodate all possible variations and constructions; this does not mean that the corpus study is without merits. On the contrary, the clear tendency of the corpus examples to feature SLP indicates that this is the most accepted condition of the construction. At the same time, it does not mean that ILP are excluded from occurring in dialects or sociolects that have not been captured by the BNC; they might be perfectly fine there, even if it appears unlikely with the strong theoretical preference of SLP codas.

It is of interest to briefly talk about the representation of the PR in non-native English, with special emphasis on the question whether non-native students of English are sensitive to the PR in the same way native speakers are. This inevitably brings up the topic of whether UG is involved in this acquisition process and whether this can be used to account for a great variety of facts.

When students acquire a language that is not their L1, it is assumed that they access Universal Grammar (UG) at least to some extent to build their mental representation of the L2 grammar; the Full Transfer Full Access approach, for example, claims that learners start with an interlanguage grammar that is basically identical to their L1 grammar (=full transfer) and that they approach the L2 grammar more and more by solving ‘perturbations’ (i.e. cases where L1 does not adequately reflect the L2) with the help of (full) access to UG (White 2003:61).⁸⁵

White (2003:23) gives two factors that need to be present in order to “demonstrate convincingly that interlanguage grammars are constrained by principles of UG”, namely underspecification of the L2 input in this regard and a different working principle of the phenomenon in L1 and L2, respectively. Considering the first factor, it can be assumed that the distinction between SLP and ILP is not explicitly taught in school textbooks and thus satisfies the criterion of underspecification as far as explicit instruction is concerned; however, inferences could still be made by the non-occurrence of ILP in any of the relevant

⁸⁵ This constructivist approach to SLA becomes more and more reflected in recent concepts of teaching, moving away from the focus on rule learning.

constructions. This means that it cannot be guaranteed that the distinction is completely underspecified by the L2 input.

It has been shown above that the PR appears to be working similarly in English and German (and perhaps in the Germanic languages in general), meaning that the second factor proposed by White is not met. We can thus draw no meaningful conclusions regarding the operation (or existence, if taken very broadly) of UG by observing the PR in English and German. Another question would be if grammaticality judgments as performed for this thesis are even able to give reliable evidence for UG operation and the ramifications thereon (cf. Martohardjono 1998:154–155; Yusa 1998:216).

With these facts in mind, we can provide answers to two questions regarding the representation of the PR in non-native English:

- How do non-native learners of English rate ES with predicative codas in general?
- Are they sensitive to the distinction between SLP and ILP in this position?

The first question is easily answered looking at the data: predicative codas are in general rated worse than PP codas by a considerable margin (2.06 for the student group, 3.29 for the control group), reflecting the independent ‘violation costs’ of predicative codas.⁸⁶ Even the best predicative condition (SLP) is on average rated 1.50 worse than the PP fillers by the student group (judgments for the ILP condition are even 2.39 worse). The grammatical costs of a predicative coda are thus relatively high, even for grammatical conditions.

Regarding the second question, it is sufficient to refer to Figure 1 on page 105. There is a clear tendency towards better ratings for SLP conditions than for the other two conditions. Even if the distinction is less pronounced for the student group, they are still sensitive to the difference between SLP and ILP / NP conditions. Despite the fact that we cannot directly derive properties of the working of UG from the present rating study, it is still of interest to note that the PR applies to non-native students of English in a similar fashion as it does for natives. The ratings show us that the conditions that the literature considers ungrammatical are actually judged worse than the grammatical conditions are; so there has to be some underlying reason why students have an intuition about the PR if they have not been exposed to explicit evidence which shows this distinction. Of course it is also possible that other, non-grammar-related factors play a role: it has often been mentioned that the PR is at least partially dependent on context and world knowledge (or on proper embedding in a frame-adverbial). Still, they do indeed appear to be sensitive to the distinction, regardless of how it is reflected in their representation of grammar.

⁸⁶ Subtracting the average rating from the PP fillers (13, 24 and 28) from the average rating of the SLP / ILP / NP conditions.

7.3 Bringing Both Studies Together

In his Decathlon Model of Empirical Syntax, Featherston (2005) proposes a model of grammar that draws a connection between different data types in syntactic research, namely judgments and corpus data; since these are the types of empirical studies conducted for this thesis, the Decathlon Model can be used to analyze them both together.

Featherston's model of grammar consists of two modules that convert a message into an output: first, there is the module of "constraint application", which calculates the respective costs for rule violation in each possible structure the message could be encoded in; the second module then selects the best structure relative to others (or more than one if they are equal in their violation costs) (Featherston 2005:9–10). In the first module, each violation of a rule has the same quantifiable effect on the structures in question and deteriorates their relative 'goodness'; this module basically ranks all the available alternative structures in an ordered fashion and thus hands them over to the second component, which then chooses the competitively best structure for production: all other structures are discarded and are not produced; however, it happens in exceptional cases that the probabilistic nature of the second module selects a non-optimal structure as output. The basic difference to other models of grammar is that there is no binary distinction between grammatical and ungrammatical structures, but rather a graded "continuum of well-formedness" (Featherston 2005:9); this also means that there are no single violations that can turn a structure into a completely ungrammatical one (cf. Featherston 2005:7).

Since Featherston also draws a connection between judgment data and corpus material, the results of this thesis will be considered in the light of this model: the rating study can be seen as probing the constraint application module and the corpus study the output selection. The continuum of well-formedness proposed with the constraint application is reflected in the judgment data, which rarely fit into the grammatical–ungrammatical distinction (unless those are the only two options for judgment), but rather show a much more diversified distribution of judgments. This is exactly what can be seen in the analysis of the rating study: the difference between the three item conditions (two of which are considered as ungrammatical by the theory) is not absolute, i.e. it is not the case that the SLP condition is rated with a straight 1.00 average and the ILP / NP conditions with a straight 7.00 rating. Rather, there is a graded distribution between the conditions and none of the conditions is so good or so bad that there are no judgments in the exact opposite direction: the great variance between individual participants shows that there are SLP conditions that are rated 7, while at the same time some ILP / NP conditions receive a 1 rating. Thus the violation of the theoretical rule that bans ILP (and especially NP) in codas of ES is not a hard constraint that makes the sentence completely unacceptable (as for example a violation of word order rules would).

One thing that should be observable in the results under Featherston's model is that the difference between the conditions is always more or less the same because each violation has a quantifiable and constant effect on the judgments of this condition (cf. Featherston 2005:4–5). This is not the case for all the item

sentences with their respective conditions; there are quite a few items that do not fit into the pattern. While the tendency of constant violation costs for ILP / NP conditions can be retrieved from the average ratings for the conditions, there are still other factors that play a role in the sentences that do not fit into the pattern (for example the unexpected good results for NP conditions that have been discussed above); processing efforts and plausibility of the item sentences are certainly among those factors (cf. Featherston 2005:6–7).

Despite the fact that the pattern is not consistently followed with the item conditions, the effect of violation costs can be seen if one takes the grammatical secondary predication items (ES with SLP, depictives and resultatives) and compares them with the ungrammatical secondary predication items (ES with ILP / NP, *depictives and *resultatives):⁸⁷ here the difference in (theoretical) grammaticality has an observable and roughly similar effect on the relative judgments of both groups, as can be seen in Figure 10: the left two error bars show the average rating for the grammatical conditions (split for participant groups), the two error bars on the right the ungrammatical conditions.

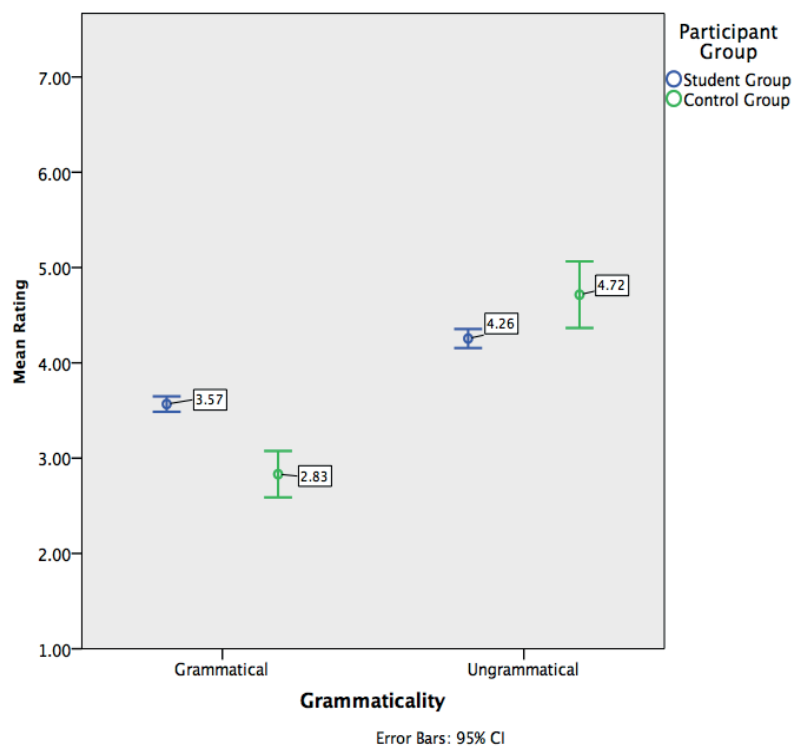


Figure 10: Ratings depending on grammatical status.

The tendency of the ratings of both the student and the control group is nearly identical when moving from grammatical to ungrammatical conditions. The figure also shows the same contrast as the average

⁸⁷ It has to be noted that the amount of grammatical examples was higher for depictives and resultatives to compensate for the greater number of ungrammatical ES conditions on the questionnaires; these results are thus nothing more than an illustration of a general tendency.

ratings for the ES item conditions, namely that the distinction is more pronounced for the control group, showing that the effect (or ‘grammaticality impact’) is less strong for the student group (in fact the ‘violation costs’ are more than 2.5 times as high for the control group, 0.69 compared to 1.89). This is of course the average of several conditions that behave quite irregularly if taken individually, but the numbers in this case are still quite illustrative of the predictions that the Decathlon Model can make. This matter has already been discussed in the previous chapter using Figure 9 on page 117. When looking at the correlations between the grammatical status of a sentence (ES and secondary predication as well as only ES target items) and the average rating as shown in Table 8, it becomes evident that the student group shows a moderate correlation and the control group a strong correlation for both cases. This is exactly what we see in the figure above. We can thus assume that the ungrammatical sentences incur a violation cost that is quantifiable to a certain extent by statistic extrapolation, also keeping the sample size in mind.

Correlations Grammatical status → Average rating	Student group		Control group	
	Correlation	Significance	Correlation	Significance
All Items including fillers	.445	p<0.01	.631	p<0.01
Only target items	.528	p<0.01	.664	p<0.01

Table 8: Correlation between grammatical status and rating.

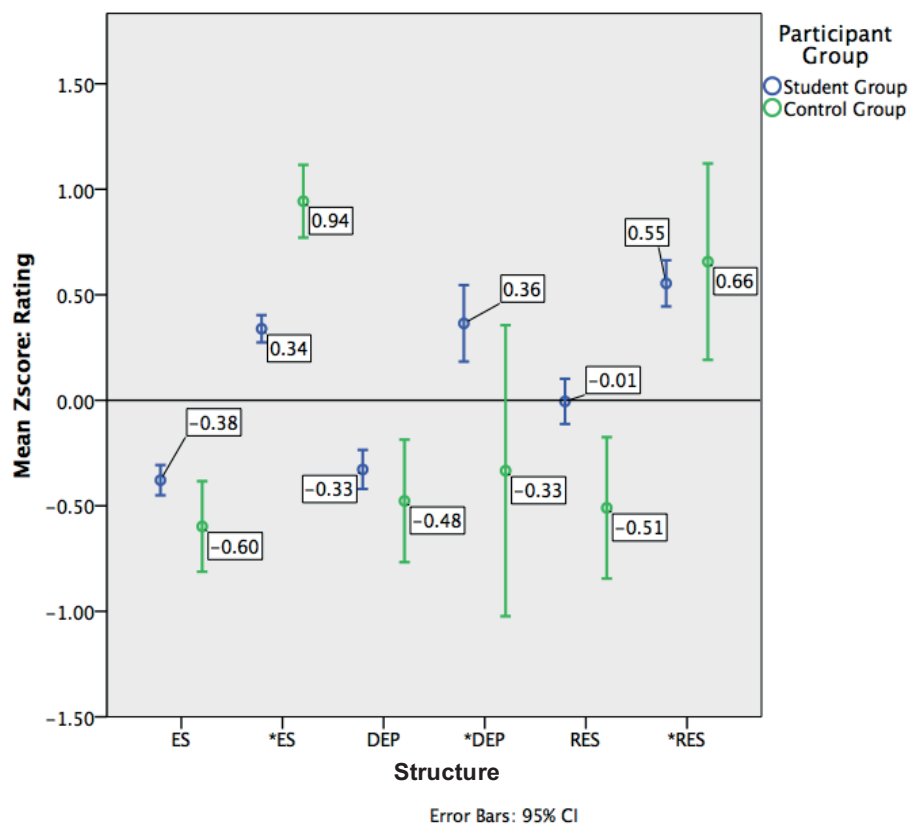


Figure 11: Grammaticality impact.

Here it is helpful to break down the data shown in Figure 10 to the three constructions (ES, DEP = depictives and RES = resultatives) and consider the impact that a violation has on the rating of the two constructions compared. This is done in Figure 11, which compares the z-scores of the grammatical conditions with their ungrammatical counterparts (indicated by the starring).

The first obvious observation is that in all cases and for both groups, the ungrammatical items are rated (on average) worse than the grammatical items. What is also interesting is that the ES/*ES comparison for the student group is almost identical to the depictives: the average violation costs for those two item groups are thus roughly the same. Except for the erratic case of DEP/*DEP (bear in mind that only one filler item was *DEP), the control group is much more precise in their low rating of ungrammatical items. Even if some of the data are not reliable because of the small number of items, it is still interesting to see the pattern of violation costs for the item groups.

Table 9 compares the average impact factor that an ungrammatical condition has on the rating. This is achieved by dividing the average ratings for grammatical items by the average ratings of ungrammatical items. A factor of 1.00 means that the ungrammaticality has no effect on the average rating. The higher the impact factor, the higher the violation costs of the respective ungrammatical item group. This impact factor is a more direct comparison of the data shown in Figure 11, reducing the complexity of the graphs. It can be seen that, except for the erroneous DEP/*DEP cell for the control group, the control group's grammaticality impact factor is considerably higher for ES/*ES, meaning that this group was better at 'detecting' ungrammatical ES and giving the respective low ratings. The violation costs for the three construction groups are rather soft for the control group, with ungrammatical ES receiving 'only' 1.55 lower ratings. Here the similarity to the DEP/*DEP condition is also visible, just as in Figure 11 above.

Grammaticality Impact	Student Group	Control Group
ES/*ES	1.55	2.35
DEP/*DEP	1.46	(1.11)
RES/*RES	1.30	1.88

Table 9: Grammaticality impact factor.

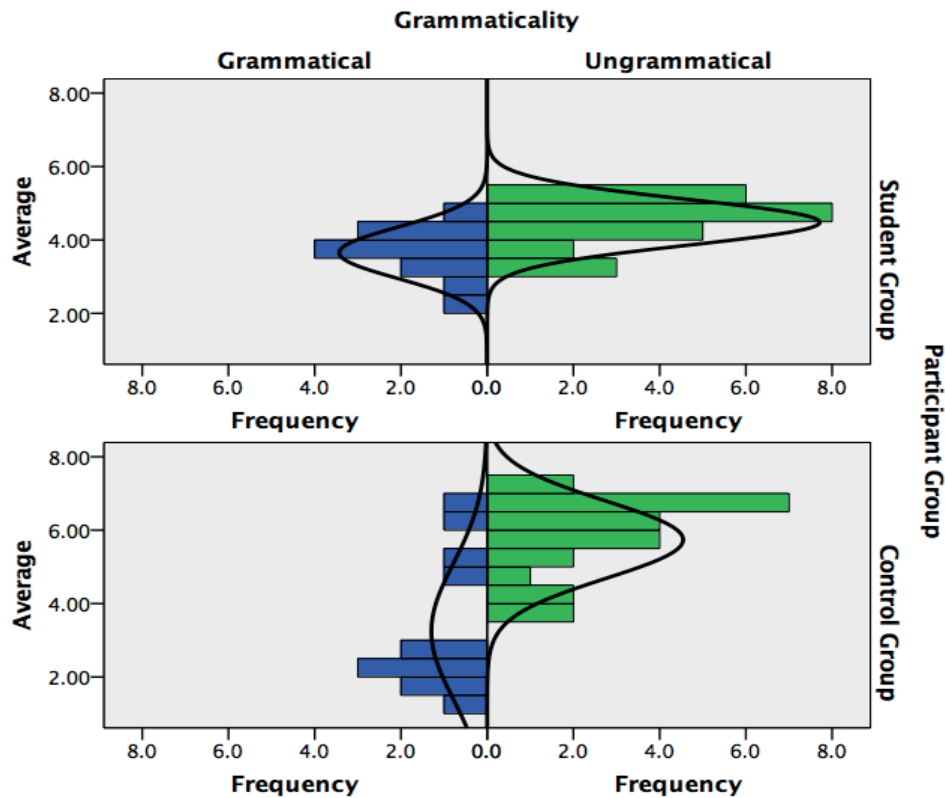


Figure 12: Normal distributions.

The normal distributions in Figure 12 also show that the control group was more reliable in giving grammatical sentences good ratings and vice versa. There are a few outliers in the control group data, which are not immediately explained by looking at the data.

Results like these are predicted by the Decathlon Model and show that the processing costs for different conditions and grammatical statuses appear to be indeed quantifiable and cumulative. The results can be interpreted as follows (as already mentioned in the previous chapter): secondary predicates receive a slightly worse judgment than the other similar conditions because they require a larger processing effort on the side of the participant, or because (probably in the case of the student group) the violation costs for secondary predicates are higher than for other constructions. This can be seen in the difference between ES with predicative codas and codas containing a PP, the latter yielding far better results. Figure 10 additionally shows that there are similar effects between grammatical and ungrammatical secondary predicates for both groups, but that the student group already starts at a worse base level for grammatical conditions. The fact that this difference is still observable is probably connected to the addition of violation costs in the grammatical representations of the two groups: for the NNS group, secondary predicates already have a violation cost because they are unfamiliar with the construction, explaining the difference to the NS rating. But there is still a clear difference between grammatical and ungrammatical secondary predicates, showing that NNS and NS alike place (additional) violation costs on these constructions. This is then the

reason why the NNS group shows a similar pattern as the NS group (which is more pronounced), but on a worse level than the NS group. For the NNS group, two violation costs add up, yielding the lower ratings. In comparison with the secondary predication fillers, the results for the target conditions are less significant in their distinguishing between grammatical and ungrammatical conditions, but the pattern is still observable.

A major advantage of the Decathlon Model is that it accommodates both evidence from judgment data as described above (i.e. a gradual distinction with respect to grammaticality) and frequency data from corpus studies. Featherston assumes (and is confirmed by his data) that from among all the possible structures that are handed over to the second grammar module (output selection), only the best one(s) actually occur(s). With this, it has to be kept in mind that occurrence in a corpus is based on relative goodness, not the absolute goodness of a construction, which would again be a two-way distinction between grammatical–ungrammatical structures. This explains why there are only a very few limited cases of potential ILP and NP predicates in the results of the BNC study for this thesis: they are just not ‘good enough’ to be produced on a more general level when compared with the SLP constructions. From this, we can with a certain amount of confidence arrive at the (grammatical) generalization that ILP and NP are not allowed in the coda of ES; even the few potential counterexamples that we can find (and other exceptions noted in the literature, e.g. the dialectal and historical variation mentioned in Comorovski 1995) are not damaging to this generalization because from time to time, suboptimal structures are selected by the second module, which works on probabilistic grounds (Featherston 2005:8, 10). From the absence of ILP / NP codas in the BNC alone, it would not be possible to arrive at the conclusion that these predicates are ungrammatical: the simple fact that they do not appear can be influenced by factors other than grammaticality.

The combination of the two modules of the Decathlon Model is also able to shed light on the relation between the average rating of the ILP / NP conditions and their occurrence in the corpus data. Since these conditions have no significant frequency in the BNC in ES coda contexts, the ramifications from generative grammar would strengthen the position that they are not grammatical since they do not show up in the corpus, even if this is not a definite proof. An effect of this would be that these conditions should be expected to yield ratings close to 7.00 because they are not grammatical. However, this cannot be directly observed in the results of the rating study, where ILP and NP conditions are on average 5.87 for the control group and 4.49 for the student group. While the control group is much closer to 7.00, this cannot be said of the student group, even though this would be one of the assumptions under a more standard view of grammaticality in connection with frequency data (cf. Featherston 2005:9–10, 12). The Decathlon Model is also useful to explain the contrast between the theories that NPs are generally banned in the coda of ES and their judgments in the rating study, which are even slightly better than the ILP conditions for both groups (even though the difference is sometimes only marginal). The non-occurrence of NPs in coda position (apart from the exceptions noted in the discussion of the corpus data) only means that these

structures are filtered out by the second module of the grammar model; as Featherston has shown, the difference between structures that occur and those that do not occur can be very small and insignificant in terms of relative judgments but still result in an ‘iceberg effect’, cutting off non-optimal output (cf. Featherston 2005:8, Figure 3; 14, Figure 5).

That there is a connection between judgment and frequency data in the Decathlon Model is not only obvious from the facts that Featherston provides, but can also be seen in the narrow BNC search string that was used to test the predicates in the item conditions: invariably, the ILP / NP predicates do not occur in the context that the search string filtered for (cf. 6.1.1 above). Only the SLP were actually found in this search string; this confirms the assumption of the Decathlon Model that ILP / NP are filtered out by the second module, but not because their violation costs are so high that they are thus disqualified from occurring: “The Decathlon Model however claims that *production competition* determines output, so that no single level of well-formedness triggers occurrence in the output” (Featherston 2005:13, emphasis mine). There is still a considerable gap in the judgments between SLP and the ILP / NP conditions, showing that the violation costs of ILP / NP are much higher than for SLP (especially with the control group), which is one of the reasons why the latter are selected by the second module. The interplay between these two modules of grammar and their different modes of operation (gradual for the constraint application and probabilistic for the output selection) is strong enough to predict the output of ‘good’ utterances and the discarding of ‘bad’ ones, but is at the same time flexible enough to allow for the sporadic production and selection of suboptimal utterances. This is evident from the few examples in the BNC and some good ratings for theoretically ungrammatical conditions.

This connection between the data obtained in the two empirical studies shows that the Decathlon Model is a suitable description of the two data types and their role in the model of grammar and at the same time that the two methods test different aspects of grammar. The more or less clear distinction between occurrence and non-occurrence in the BNC data is thus no contradiction to the more gradient judgments obtained from the rating study, even more so if variation between individual participants and the smaller gap between SLP and ILP / NP conditions for the student group are considered. The application of the Decathlon Model to the two studies has shown that from the observed judgments and the analysis of the examples found in the corpus, we can with a certain degree of confidence confirm the claim of the theories discussed in the previous chapter: regardless of what exactly triggers the PR, codas containing ILP or NP are not generally considered acceptable.

7.4 Which Theory is Most Adequate to Explain the Results?

With all things considered, can we draw further conclusions regarding the syntactic analyses of ES or the nature of the PR from the data in these studies? First of all, neither the BNC study nor the rating study tell us directly which syntactic form the existential construction takes. Material from the BNC could tell us how ES behave under extraction conditions (if they are included in the filtering), but this has not been the aim of this particular study. Equally, the rating study does not tell us more about this question; the most relevant factor of the syntactic configuration is clearly the postnominal XP in this regard, but its syntactic status would have only been relevant for the results of the study if it also tested extraction conditions, which was not the case. These conditions could show empirically that the XP is an adjunct (as has been done by Wurster 2013); for the purposes of this thesis, this conclusion has been reached by resorting to theories. The only vague hint at the syntactic configuration has been the link between the acceptability of (un)grammatical ES codas with (un)grammatical secondary predication constructions. But since the secondary predication fillers were not as controlled as the target items, this is not solid evidence, only a small tendency. It would be possible to test the relation of acceptability between these four conditions in an empirical study, which could show that the violation costs for them are similar (in accordance with Featherston 2005).

Things are similar for an explanation of the PR: the two studies let us gather data on which predicates actually appear in the corpus and how they are rated in a test environment. One thing, however, is quite clear from the results of the rating study: PP codas are by far more acceptable than predicative codas (with maybe the exception of present participles, which also yield positive ratings). One possible explanation for this is that PP extensions are not of the same syntactic structure as predicative AP codas; evidence for this has been provided by the catenation of PP extensions, which is not available for APs. Additionally, a PP extension can be combined with an AP extension, hinting at the fact that PPs are adjoined higher up in the structure (which fits an analysis of a frame-setting adverbial).

What neither of the two studies shows us with respect to the PR is what mechanism is responsible for the selection of acceptable predicates: we cannot draw a conclusion whether participants of the rating study try to establish a link between the subject NP and the XP (cf. Milsark 1977) or between the adjunct predicate and the main predicate (cf. McNally 1997). These matters should be reserved for theoretical research.

However, both empirical studies for this thesis have shown that Jäger's (2001) predicate classification is a useful tool that has empirical ramifications: in the BNC study, predicates from class C clearly dominate (especially *available*) and this predicate class has also received more consistent ratings than SLP from class E in the rating study. While the corpus study results might be taken to reflect a very pragmatic approach, this is less obvious for the rating study. It has been mentioned in the discussion of the 'existence' adjectives like *available* and *present* in section 5.2.1 above (starting on page 78) that these types of predicates are

compatible with the general communicative goal of ES to a large degree: they point at the presence of a certain entity (often in advertising contexts), which can be considered as the prominent use where the existential construction is selected by the speaker.

In the light of this empirical evidence that there is a distinction in both frequency and rating between these different predicate classes, it is reasonably safe to assume that there is no categorical distinction between SLP and ILP, but rather a graded classification that is not dependent on one single factor. Jäger's observations should thus be considered in any account that tries to find an explanation for the PR.

One implication drawn from this is that any theory on the PR that relies on a categorical distinction should be viewed critically: it is still possible that a categorical classification with regard to an additional event argument is compatible with an extended predicate typology. For example, Kratzer's (1995) claim that the predicates allowed in the coda contain an extra event argument could be equally valid for both C and E classes, but not for class G. However, the fine-grained distinction clearly gets lost in this case: theories relying on a binary distinction do not account for the data evident in the empirical studies here. And since the data are clearly visible, the choice for a theory that takes stock of these differences should be favored.

The same reasoning applies to the approaches by Milsark (1974, 1977) and James (1979): regardless of how the exact definition of the predicate is formulated, a binary distinction between permanent or temporary properties (or properties that can be easily lost or acquired) does not distinguish between predicates like *available* and those like *sick*. It may be a common property of these two predicate types that they both denote temporally bound states as opposed to permanent properties, but this still leaves their different behavior in the empirical studies to be accounted for.

McNally's (1997) approach in combination with Jäger's typology seems to be the most adequate choice. The interpretive Adjunct Rule has been shown to yield reliable results, but it was not entirely clear which predicates can actually occur. This is where Jäger's typology can be useful to test the predicates in question: if they belong to class C or E but not to class G (classes are limited to those under discussion here), then they should pass the Adjunct Rule and yield felicitous results. Finding a reliable test mechanism has been a challenge since Milsark (1974), but the framework discussed here offers a way to find out which predicates fulfil the requirements of the Adjunct Rule. The exact reasons for why adjectives in classes C and E fulfil this requirement has to be left somewhat open, but it has been proposed that the transitory property value [\pm TR] is a necessary (but not satisfactory) condition in addition to a positive value for either existential readings of bare plural subjects [\pm WS] or the ability to appear in perception reports [\pm PR]. However, this matter is not entirely settled.

Assuming that Jäger's (2001) typology of predicates is essentially on the right track, it is also not problematic that ILP and NP codas did not show a clear difference in the rating study (with NP being considerably worse): since NPs can be grouped in the same class as adjectival APs (both in class G), it can

be explained why they show almost identical average ratings for both participant groups. A more pronounced difference between these two conditions (as mentioned in the expected results of the rating study in 6.3) would have been a welcome confirmation of the majority of the literature discussed, especially Stowell's (1978) claim that NP and ILP codas reflect a semantic and a syntactic violation, respectively. Still, it allows us to tentatively formulate the assumption that NP codas are inherently ILP in character; for both coda types, certain rescue mechanisms are available that can exceptionally license those predicates.

8 Conclusion

There are still some open questions about the PR that could not be clarified in this thesis and are still debated. Despite McNally's (1997) convincing arguments that the postnominal XP is an adjunct to VP, there are still approaches that prefer a modified Small Clause (e.g. Kallulli 2008) or reduced relative clause analysis. Many of the more dated accounts could be shown to have serious flaws; however, they offer valuable insights into the discussion of the PR as well as a perspective on how the underlying syntactic reasoning has changed over the last decades. More current theories are certainly more advanced in their theoretical and empirical argumentation, but are still founded on earlier discussions. Not all of these approaches are without challenges, but the development is clearly visible.

The discussion about the PR and the types of permissible predicates is not yet entirely over. From today's perspective, it might be relatively clear which predicates are allowed in coda position and which are not. There are a variety of different approaches, ranging from a syntactic differentiation to a semantic explanation by means of argument structure to a purely pragmatic account. Over the past 40 years, our knowledge about the PR has steadily increased, just as our general syntactic understanding has been heavily transformed. From Milsark's (1974) first intuitive description and Carlson's (1977) SLP-ILP framework towards the incorporation of Davidsonian event semantics and the similarities to secondary predication, the tools for describing the PR and the ways to categorize predicates has become more useful and more reliable.

The nature of the PR should probably be split into two components: a general mechanism that licenses the AP in the coda position and a set of criteria that let us decide which predicates fulfil the conditions to undergo this mechanism. On the side of the general mechanism, McNally's (1997) interpretive Adjunct Rule is the most advanced approach. Her account is able to explain many of the characteristics of the existential construction with predicative extension and explain why some predicates are allowed in coda position and some are not.

On the side of the criteria to decide which predicates can undergo the Adjunct Rule, Jäger's (2001) typology of predicates yields reliable results, allowing for the predicates in question to be tested, both in theoretical considerations and in empirical studies. His typology has been shown to have manifestations in the corpus as well as the rating study, based on frequency and average rating results. This is why his framework for predicate selection has been considered as the foundation for any further theory that licenses the AP in coda position.

In retrospect, the questions asked at the beginning of this thesis have been addressed and answered to a large degree. Even if the precise syntactic configuration of existential sentences is still debated in the literature, it is reasonable to assume that the postnominal XP is a syntactic adjunct based on the theoretical

considerations in chapter 3. The several approaches to the PR discussed in chapter 4 has provided enough theoretical ground to explain the most important empirical manifestations.

Even if there is still a debate on which module of grammar is ultimately responsible for the PR, the various approaches taken in these areas all provide interesting aspects that should be the subject of further investigations. Especially Maienborn's (2004) entirely pragmatic approach to the licensing of predicates via the frame adverbial is of interest here since there are various ways to account for the preference for SLP in certain contexts on more than one single level. In the light of a combination of McNally's Adjunct Rule and Jäger's predicate typology, a focus on the semantic nature of the predicates under discussion appears to be the most promising choice.

That there is a uniform contrast between SLP and ILP has been shown to be empirically inadequate, as Jäger (2001) has successfully demonstrated. The case has also been made that some NP might be permissible under strong pragmatic conditions while maintaining a marginal acceptability at best.

Another aim was pursued in the two separate empirical investigations: the BNC study has shown that apart from a few highly interesting examples, the claims of the theories that SLP are the only predicates allowed in coda position can be upheld, even if there are still some cases that are not yet entirely explained (occasional NP / ILP codas). The rating study has tested the participants' intuitions with regards to a differentiation between SLP and ILP in coda position. It has been shown that there is a significant preference for SLP in coda position, even if the results were not entirely as expected. A combined evaluation of these two investigations applied the Decathlon Model of Empirical Syntax (Featherston 2005) and showed that they can be brought together using this model. Whereas the rating study revealed the graded acceptability of different conditions on a 1–7 scale (corresponding to violation costs and processing effort), the corpus study showed that only the 'best' conditions actually appear in it. In addition to the results from the individual studies, this evaluation has given additional explanatory value to the studies.

The PR tells us much about the nature of predicates and is part of a larger phenomenon that allows some predicates in positions where others are not permissible, suggesting that there is a fundamental distinction between predicates responsible for this. Since the distinction between predicates is not limited to ES or the English language, a discussion of the PR can yield interesting results for other fields of study, be it in other modules of grammar or different languages.

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Statement for Best Practices

Erklärung:

Ich erkläre, dass ich die Arbeit selbständig angefertigt und nur die angegebenen Hilfsmittel benutzt habe. Alle Stellen, die dem Wortlaut oder dem Sinn nach anderen Werken, gegebenenfalls auch elektronischen Medien, entnommen sind, sind von mir durch Angabe der Quelle als Entlehnung kenntlich gemacht.

Ich erkläre weiterhin, dass eine Vorversion der hier vorliegenden Arbeit als Wissenschaftliche Arbeit (Zulassungsarbeit) unter dem Titel „The Predicate Restriction in English Existential Sentences. An Empirical Investigation of Native vs. Non-Native English“ am 18. Februar 2014 beim Landeslehrerprüfungsamt sowie der Universität Tübingen eingereicht wurde.

Crailsheim, den 20. März 2016

Ort, Datum



Unterschrift

Appendices

Appendix 1: Material for the BNC Research

The following 4 tables give the results of the BNC research. Table 10 and Table 11 list search string 1 (written and spoken, respectively), Table 12 and Table 13 search string 2 (accordingly).

BNC ID	Sentences from Search String 1 (Written)
A7W 1027	Mr Robin Cook, Labour's health spokesman, said in every ambulance station in London there were staff ready and waiting to provide emergency cover.
A08 995	There are two things fatal to the development of any artist, Leiris said, one is success and the other is failure.
A0X 1608	Of all the styles it is the most laborious and there are few professionals able or willing to continue the tradition.
A35 170	But are there composers ready to seize this chance?
A4C 7	In one sidestreet alone there were 16 trucks full of the so-called 'workers' militias' on standby.
A65 1446	There's archery on-site too as well as a simulated parachute jump.
A67 1293	Inevitably the symposium brought out some conflicting opinions (there were 300 people present!) but that is what makes the book interesting.
A9W 807	That was bad for newspapers and bad for the Council: but, worst of all, it meant that there was no independent body able to speak up for press freedoms under threat.
AAL 469	But as around 1,000 mourners shivered through a ceremony made all the more moving by its simplicity and brevity, there was little bitterness evident — only bewilderment.
AAV 1041	There are no trains Eastbound on the Central Line until further notice, this is due to inaudible inaudible London Underground would like to apologise for any inconvenience.
AAW 249	He was the first European to win a Masters title and the difference between him doing that and Tony Jacklin winning the US Open in 1970 is that by the Eighties there were other talents ready to be inspired by the Ballesteros achievement.
ABH 3141	If there are four satellites visible, a military user on the ground with a portable receiver can use the discrepancies between their time-checks to get a measurement of his position accurate to well under ten metres.
ABM 511	It can still be said, he suggests, 'that there are some things capable of being known, though they are still not ones that can be known with an Aristotelian knowledge, but only experientially or according to appearances'.
AC4 748	They had plenty of berries and there would be jobs ready and waiting for them.
ACW 801	There were few children lucky enough to visit the cinema mid-week, as he so often did and that made Frankie feel particularly privileged.
ADE 177	People's vulnerability at this time can be very great and it is a poignant reflection on our society that there are many other people ready to prey on this.
ADL 821	There were several people present at the interview, he told him and 'at least one of them was an FBI agent.'
ADS 1531	Minnie had written to her about how terrible it had been, how Captain Cook had brought his wife up to see a specialist who had examined her and said at once there was nothing to be done, there was no operation possible and he must take his wife home to die.
ADS 30	By next week there will be two rooms ready for occupation but whether I will find takers I do not know or if I will be up to providing the services required.
AHJ 950	There was a walled garden full of little nut trees and figs, a conservatory which ran the length of one wing, loose-boxes and a private bridle path leading to the open countryside.

BNC ID	Sentences from Search String 1 (Written)
AJA 1102	If your fancy is for sea breezes and the gentle slap of water at the bow of a yacht, there are many sailing schools ready to teach you to sail.
AK2 46	We walked outside to near the Commercial Union building and there was a car alight.
AKR 879	Clearly, there are also people ready to take these jobs at the going rate and not too discontented as long as they are not the breadwinner in their family and are thus able to regard their wage as additional to the basic family income.
AL3 1437	Nevertheless, there are many advantages off-season, if you can handle the sun and humidity.
AL3 470	There would be many owners aghast at allowing a horse of Dr Devious's talent to be sold, but Sangster's approach has been much more beneficial to his trainer and also to the future development of Manton.
ALB 97	There are other sub-committees responsible for 'Program,' 'Finance,' and 'Personnel' decisions.
AM5 1517	There are several proprietary seed sowers suitable for indoor sowing.
AM6 627	But there may be a more useful structure implicit in the teacher's role itself — as government spokesman.
AMT 550	At the same time, however, there must be evidence sufficient to make belief in God an act of commitment representing risk but not foolish defiance of reality.
AN5 157	There are various procedural requirements applicable to a reduction in the standard number, including a duty of the proposer to publish details of the proposals and to refer the proposals to the Secretary of State if objections to them are raised by 10 or more local government electors or by the LEA or governors (whichever of them is not the admissions authority).
AND 622	If there are large wall spaces difficult to fill then why not have a mural?
ANK 836	It is always a surprise why people like Tawell resort to the ultimate solution, when there are other courses open to them.
AR3 928	It is when there are two diners present, even when one of them is one's own employer, that one finds it most difficult to achieve that balance between attentiveness and the illusion of absence that is essential to good waiting; it is in this situation that one is rarely free of the suspicion that one's presence is inhibiting the conversation.
ARG 1611	Even popular magazine articles recognize that there are appropriate steps necessary to being happy.
ARH 1295	There may be neurological involvement similar to that occurring in adult acquired syphilis, but the onset is, of course, at a much younger age.
ARH 411	There are several other bacteria similar to the gonococcus, which belong to the same family, the Neisseriae .
AS3 175	There's noticeably less equipment hanging from a scrambler, but pound for pound there will be more fleecy material visible.
ASL 980	There the tip developed as a hand but all the more proximal structures were absent and so there were no muscles proximal to the hand.
ASR 1342	This doesn't mean that there are no large fragments present; there are merely less of them.
ASV 2416	He was in danger of becoming part of the establishment and there was a new young punk hungry for his chance: twenty-one-year-old Brock Little had come fourth in the 1986 Eddie Aikau when Foo was second.
AT3 1265	There were no bandages large enough in the wheelbarrow to make a cold compress, so I poured water on my sock where it touched the inflammation, but the water filled my boot and left the sock barely damp.
AT3 1567	I guessed that she had been blown far from her oasis and now there was no landmark other than the wheelbarrow, not a tree, not a blade of grass, not a ripple on the plain, nor a rock bigger than my fist.

BNC ID	Sentences from Search String 1 (Written)
AT6 529	There are numerous variations possible, so experiment with different feet angles and see which one suits your style best.
AT7 1737	Well, there was one thing sure: whatever that feeling was he hadn't passed it on to even one of his three sons.
AT7 480	Well, there was one thing certain, she wouldn't find it in Spring Street.
B12 368	A new urban middle class has emerged, but at the other end of the social scale there are many people unemployed, especially young people, in the urban high density suburbs.
B1D 8	He stated that there should be reception rooms capable of taking nearly fifty guests for dinner parties to celebrate birthdays and 'occasionally upon the arrival of Foreign Princes in this country'.
B1H 2352	Alongside the Manchester Ship Canal there were open spaces suitable for large modern factories using imported raw materials.
B23 1535	There remains a duty to ensure that there are sufficient schools appropriate to the needs, abilities and aptitudes of children as well as securing adequate provision for further education.
B2D 37	It can be seen, therefore, that there are certain prerequisites necessary for the perception of an odour.
B2F 744	There are four basic components necessary to successful meditation.
B2L 60	Outside England, apparently, there were no areas suitable to be given metropolitan district status.
B2P 106	It is essential to note that there are no words constitutive of a trust, as the text explicitly states: instead they must be construed.
B2P 200	But the fact is that there might be persons eager to oppose the operation of the trust and vested interests in declaring that no legal intention could be seen in the words used by the testator.
B2S 217	There were two side doors 5ft wide on each side of the van for dealing with the churns at the stations and sliding, instead of folding, doors were fitted.
B30 290	However, there are special difficulties inherent in treating overdose patients.
B7K 860	WHENEVER a long spell of unusual weather occurs, there are always people ready to blame it on carbon dioxide, a storm on the sun or the latest volcanic eruption.
BLW 2176	Psychiatrist John White suggests that no marriage is problem-free but that there are three options open for dealing with a troubled marriage.
BMD 279	There are stockists countrywide, but if you contact Borderline direct on 071-823 3567 before 30 June, quoting Country Living as reference, you will receive a 10 per cent discount on all hand-blocked borders and ribbons.
BMN 1121	If it was lust, there were other ladies ready and willing.
BMU 287	Till we came to the sea and then there'd be lighted ships ready to take us across the world.'
BNN 430	Apart from the Society of Friends, there was no established organisation ready to come to the help of children under threat in Czechoslovakia.
BPC 974	Follow the toad signs to Hastings or Bexhill, Battle is clearly signposted off all the main roads leading to these towns — There is ample car parking close by.
C8F 1273	There was little difference apparent between more- and less-frequent walkers, but it was noticeable that particular sub-groups stood out as experiencing more than their share of problems.
C9B 472	Similarly, if his daughter was threatened with violation and there was no way open to save her, he would consider it his duty and the purest form of ahi sã, to take her life.
C9H 1589	Well, there would be two choices open: Melodic Minor and Harmonic Minor.

BNC ID	Sentences from Search String 1 (Written)
C9S 1234	For a number of reasons, then, there were numerous Anglicans ready to respond to the message of moral crusaders who campaigned on a range of issues, from telephone chatlines to abortion.
CA3 111	Lee had felt the emotional voltage in the room heighten to a point when she thought that Philippa would slam the door behind her, hard, but the door closed as gently as if there were a baby asleep in the house.
CAL 802	Lubavitch rabbis currently run six major synagogues in London and there are many others dependent on Lubavitch teachers.
CB3 174	No action has been initiated or is being contemplated by the club, although Ben's father, Roger, who is also chairman of SCRFC, has engaged solicitors independently of the rugby club to determine if there was any negligence responsible for his son's injuries.
CB5 1466	There were enough passengers ready to believe that they would never wish to eat again, let alone eat fat bacon.
CBF 1790	The London Taxi Drivers' Association says that from 8pm on Christmas Eve to Boxing Day morning there will a standard £2 extra on every cab fare.
CBJ 52	Now there were few options open to her; rather on the old side to be sure of getting married, she decided to do what most of those who wanted to survive usually did: she left Frome.
CBR 1020	In this view there can be no possibility global approval or rejection.
CBW 1112	The Vegetarian Society estimates that in 1991 there were 3.6m British vegetarians.
CC7 242	There were two Hungarians present at the Congress.
CCM 23	'There was no day different in the orphanage until I came out of it and came here.'
CD8 1223	But there were earls present, Strathearn, Lennox and Ross, who were conditioned not to take over-kindly to too much prominence for a mere knight, even one of so illustrious a line as Dalwolsy.
CEG 1374	Furthermore there were furniture firms short of work and again the development time for a wooden aeroplane has always been much shorter than that for a metal one.
CER 132	Everyone's environmental awareness was sharpened: 'Pollution free energy from fusion' was the cry; if there was a time ripe for exploiting the story, Easter 1989 could hardly have been bettered.
CEX 381	She has a charming smile, very generous and merry: since there were no men present, I got the full benefit of it.
CFE 294	They are used in a wide variety of ways, covering many different aspects of human existence and there are often unexplored value judgments inherent in them.
CFY 1279	The Smith mourners were all on foot and there were no women present.
CG2 745	Away from the main Lakeland climbing centres of Borrowdale and Langdale there are many routes worthy of the attention of the modern mid-grade climber.
CGU 691	At the end of week six, I had a medical interview where it was decided that due to hurricane Gilbert there was no medical facility adequate for my medical needs; I'm asthmatic.
CGW 1308	There are many variations possible when knitting this kind of edge.
CH3 4600	Maybe there are some people gullible enough to believe that.
CH4 1390	When she lowered herself into the chair, there was a loud squelching noise similar to that made by a hippopotamus when lowering its foot into the mud on the banks of the Limpopo River.
CH8 1634	Did I think, then, there could be a woman Prime Minister?'
CHF 347	The rationale for this approach is that there are few suffixes relative to words.

BNC ID	Sentences from Search String 1 (Written)
CHG 1721	I had the impression that there were hands anxious to tidy up, but never succeeding.
CHJ 428	There are many options open to the tourist — from car hire, coach tours and steamer trips to flights over the glaciers in a seaplane.
CHS 689	There may be fixed allowances payable for accommodation and meals or firms may reimburse reasonable expenses.
CJA 449	And in the middle there was an area open to space, just a circle of bare surface with a window all the way round it and a sign on the window that said it was the site of the Capellan arrival in the solar system.
CJP 423	He said that in her disdain for the laws of our land she had humiliated the honour of her family name; there was no other course possible for her family to take.
CJT 526	There were other huts visible as outlines in the mist of early afternoon, but it was to the hut with the figure '2' painted in yellow on the doorway that they were led.
CK6 558	I think there are equal parts black magic and goodness.
CKC 1054	We were pretty certain that there were people alive aboard the Delos and we were also pretty certain that there was no one alive aboard that plane.'
CKC 1532	If there were a sufficiently powerful explosion close by it might go up by sympathetic detonation.
CKP 1243	By contrast, median RNR levels were highest and the dispersion greatest where all adult members were of working age and there were no dependent children present.
CLD 557	There were no Civil Service retirement regulations applicable to Basil.
CLR 1344	On the other hand, there was no heir apparent ready to occupy the throne: West Germany, the only possible contender, understandably showed a marked reluctance to do so.
CLS 337	The movies were telling stories and, of course, there were political values implicit in these stories, but in general the movies were using society rather than engaging it directly.
CLU 719	Compiling this listing has proved that there are more Japanese aircraft extant than might at first be envisaged.
CLY 878	It emphasised that there was no one style appropriate for the teaching of mathematics, for
CM2 668	Importantly, there are no transformations capable of wholesale disfiguration of the by-products of any stage of the generative process.
CMH 322	This means that there will be brain systems present in both rats and humans that can be just as easily studied in the former as in the latter.
CMJ 673	She then went home — there was a man asleep on the doorstep whom she took care not to waken — and apologized to Peter.
CMN 542	Individuals are therefore not subjects and if history is to be a process without a subject there must be no subjects short of the ensemble of practices itself.
CN1 1642	The crossbow is not a popular weapon amongst men from the Empire, but there are always foreigners eager to be recruited into the Empire armies so it is quite common to find crossbowmen amongst the state regiments.
CPD 134	One advantage LanOptics has over other companies is that although Israel is not in the European Community, there are no import duties payable for importing the products into Community countries.
CRE 1732	There was a shadowy figure visible through the ironwork filigree and bullet-proof glass of the front door.
CRK 1516	One other critical feature of the present situation for maintaining the ministry of the word should be mentioned: it concerns the study of the biblical languages (Hebrew, Aramaic and Greek) and those of the classical ancient versions, at a level sufficient to assure that there will be enough scholars able to serve as fully competent exegetes and, therefore, as active tradents of Tradition.

BNC ID	Sentences from Search String 1 (Written)
CTW 1044	On the other hand there are problems inherent in the composition of the certificates.
EA3 1054	There are always referential alternatives possible to the speaker and addressee and to the observer in relation to any utterance.
EA8 810	They have to believe that there will be an advantage commensurate with or greater than the sacrifice that they are going to make.
EAK 962	There are more Neanderthal features present, although some postcranial characters may well turn out to be more widespread plesiomorphies when data from other, non-Neanderthal, samples are known.
EB7 92	Elsewhere in the Province there are other settlements worthy of consideration and one of the largest and most interesting, is that at Braughing.
ECB 557	But when he made his appearance in the members' bar a few hours later, there were others happy to shake him by the hand and talk with him far into the night.
ECE 935	In 1987 in England and Wales there were 9,572 deaths attributable to senile and pre-senile dementia, of which 488 were of the pre-senile type (OPCS 1989b).
ECT 3654	There were three other men present and at this point, they joined in the argument.
ECX 211	The geographical spread is reasonable, though doubtless there will be some omissions apparent depending on where you are based.
ECY 1070	In the case of little Hans, with his phobia towards horses, there were ambivalent feelings present, of both interest and positive attitudes towards horses and a hatred for them.
ED7 2970	Maybe this question had some relevance to the fact that there was a large space vacant before the stage — or did the fish smell like fish?
EDD 74	But let us suppose that there are theories robust enough to hold the tension.
EEC 872	Few, if any, rose from the lowest rank, but nonetheless there was a career path open to prison governors to progress through the intermediate rank of Assistant Commissioner to a full Commissionership.
EEF 1406	There are considerable risks inherent in this policy, for export competitiveness can shift rapidly among countries, almost irrespective of relative changes in domestic costs.
EEM 1285	It would not do, he once wrote, for others to think that there were no Catholics capable of appreciating the Copernican arguments.
EFA 566	It could even be suggested to him that he leave Vietnam and 'take up once more the philosophical studies to which he had devoted a great deal of his previous life' and it might also be suggested that 'there would be pension adequate to support him in those studies'.
EFG 2277	Is there an album suitable for kids?
EV3 594	There were six staff present including the Project Coordinator, the new teacher-librarian, the head, representatives of basic studies, maths and science and a social education teacher who had been designated as holding an implementation of policy post (or "10p posts" as they were commonly called).
EVA 993	There were some differences explicable only in terms of cultural factors which are indicated in the table, but what must be the most remarkable thing about these data, is the general unanimity with which these two groups of people thousands of miles apart dreamed.
EVS 1403	At that time, there were 22 women political prisoners who were held in a separate block from the common prisoners, but the number expanded very rapidly:
EVS 43	There are few women agricultural workers, although some wives and daughters cook or do other domestic tasks on the big estates.
EVV 1138	Not all difficulty factors have been identified and there can be factors unique to a task which influence performance.
EW5 2114	In this day arid age there are always people keen to do the job for you Arid if they are keener than your militant unionized staff, why not let them?

BNC ID	Sentences from Search String 1 (Written)
EX2 141	We should inquire whether there are other theories capable of giving better explanations before abandoning the one we have.
EX2 986	More importantly, there are constraints specific to the public sector and to regulated firms, as discussed in the next two chapters, which may improve their efficiency.
EX6 1462	11 Make sure that when ideas for features are to be discussed in a group setting there are no competitive media present.
F99 39	It had come to her, then, that there were places different from Wickrithe.
F9B 664	Not Barriers that there should be a £25 fee payable on making an application to an industrial tribunal.
F9L 757	Clerical representatives, after all, sat in it almost as often as their lay counterparts who consented to lay subsidies: in seventeen out of the nineteen of Edward II's parliaments to which knights and burgesses were summoned there were also clerical proctors present.
F9T 394	By the time the interviews were to start, there was an atmosphere prevalent that might best be described as 'heightened excitement'.
F9U 1543	He encouraged the police to step up the number of arrests for homosexual offences, as part of a political manoeuvre to allay American fears, fuelled by the Burgess and Maclean episode, that there were people susceptible to blackmail occupying high positions in Britain.
F9V 1402	Thus, while there may be preferences discernible in the choice of elements most-likely-to-be-concentrated-on within a sentence if that sentence is presented in isolation, such preferences may reflect the rather trivial fact that names are more salient than anything else, in isolation.
F9X 1056	There was a lot wrong with the way the corporations ran the colonies.
F9X 2950	That there are people alive as straight ahead as Abslom Daak.
FAW 34	Such a creation of regional consciousness 'can take shape only after there are institutions capable of reproducing and maintaining them'.
FB9 318	Looking around the bedroom, she saw that it was almost exactly as it had been in the photograph, although now there was a book open and face downwards on the patchwork quilt.
FBE 1220	He saw that there were many stars invisible to the naked eye.
FBL 782	There were paparazzi present for each drink and each kiss and Lowe couldn't bring himself to admit that all this attention was inevitable.
FCY 116	He took the view that what mattered was whether at the stage when the prosecution wanted to discontinue, the judge thought there was a case fit for the jury to consider.
FD3 325	Secondly, is the fact that there was no separate independent advice fatal to the plaintiffs' claim?
FEF 677	There are no instruments capable to measure the magnitude or direction of A.
FEV 64	There are spots sensitive to either heat or cold between 1 and 5 millimetres apart all over the skin.
FPN 1128	Before this happened, however, there were two minor incidents worthy of comment.
FPP 419	If there are people alive on that ship now, you cannot save them, William.'
FS5 241	There were various legends extant about
FSB 511	There were no animals alive today.
FSN 333	A parents of the bride or groom speaks or, if there are no parents present, another older relative playing host can make the speech.
FT4 1715	There are several conceptual errors inherent in this description.
FTT 79	Almost over on the west coast at Traigh Bhan there are three cists close together in the eroded sand dunes at the mouth of Glen Tuath.
FYY 909	Jed was coming up to five years old, very bright but also very quiet ... so quiet that she worried sometimes, wondering if there were things wrong that he wasn't telling her.
G00 2730	Linotype's strong showing with their 200P is a significant indicator of this and there are others ready and waiting, Itek being one.
G02 600	There was no other choice possible.

BNC ID	Sentences from Search String 1 (Written)
G0G 1300	That there were issues important enough seriously to disturb Anglo-papal relations at this time is confirmed by a letter of Pope Hadrian I to Charlemagne which dates to between 784 and 791.
G10 1891	They would certainly have noticed it, but there are other qualities useful to a sovereign.
G1D 128	There was a letter relevant to the murder item he had seen that morning and he read it through, frowning.
G1D 2432	It was not the smell which deterred her but the fact that there were two girls present: one sat on a table swinging her legs, while the other stood by a sink.
G1N 1719	There are also characters present from works by authors as diverse as Homer, Clarice Lispector, Mark Twain, Milan Kundera and Eugène Sue.
G3F 1266	There are few needs specific to the use of cotton Wool; most of the interest centred on the mother's more general needs as she uses the product.
G3K 210	There are certain errors inherent with a Compass System mounted in an aircraft.
GUB 340	There are several options open to you (fig. 2):
GUY 1732	There are various options open to an organization in deciding how much to spend on advertising its products.
GV0 774	The first is the absence of deep gaps in barrier reefs and atolls, whereas if subsidence has been long continued, there should be deep gaps present, because once the gaps are deeper than the depth at which reef-building corals occur they cannot be filled by coral growth.
GVA 1409	If a theory of normal language processing were proposed in which there were a single processing system responsible for dealing with spoken language — a system used both for perceiving and for producing speech — then one ought never to see patients with intact speech perception and impaired speech production, nor patients with the opposite disorder.
GVR 111	In those circumstances, it would be simpler for the prosecutor to charge violent disorder, providing that there are sufficient numbers present together.
GW1 38	However, it is noteworthy that even as late as the nineteenth century, the courts were still discussing whether, in the case of a young girl, there was penetration sufficient to constitute rape where the hymen remained intact.
GWL 160	There will be four general managers responsible for buying and marketing in WHS Retail.
GXE 77	There are of course other collections too numerous to mention, covering topics as diverse as witchcraft and mountaineering, baking and Ossianic literature.
GXG 515	We were fortunate that there were several people present at the Forum who were familiar with the oil industry internationally.
GXJ 1212	There are two vertical alignments possible for this section of the Bypass.
H0N 1245	In the light of this discussion, we can see that even before Socrates there was a spirit hostile to the Dionysiac.
H0P 593	But there are also maternal ailments attributable to the number of births, the ages at which women bear children and possibly also to the amount of time that elapses between births, presumably, among other things, because the reproductive pattern influences ability to meet demands that pregnancy and breastfeeding make upon the body.
H0S 437	This has several drawbacks, including the fact that even when all the weak stems of the words in a search co-occur, they may do so in only a very few records and there may be other relevant records retrievable by adding one or more strong stems.
H0U 730	Consider a volume v under shear stress — in which there are N elements capable of changing their position.
H0Y 599	There are certain characteristics peculiar to the use of machines in language teaching: Listening To develop the ability to understand the language spoken at a normal speed.
H7E 123	Even in the worst years of the Depression there were still people wealthy enough to give their cast-offs to the poor and they didn't come much poorer than a Salvation Army officer's family.

BNC ID	Sentences from Search String 1 (Written)
H7H 703	Take the lot up to Mrs Fox-Collier with the cook's compliments — wait, she said, as Nicandra turned to leave, "there could be a scone ready for yourself. "
H7S 15	It need hardly be said, of course, that this is not a matter of absolutes: there were certainly fifteenth-century scholars ambitious for worldly power and possessions, as there were seventeenth-century scholars who aspired to excellence in .
H82 1562	One room had the smell of a hospital ward and there were patients asleep there with a nurse in attendance who was not surprised by my intrusion.
H82 808	Gave our power away, you see and there are always people ready to grab it.
H83 1442	Similarly, as pointed out by an exploratory group working on aesthetic assessment, there are no available procedures suitable for assessing artistic appraisals and these need to be developed (APU, 1983).
H8U 1599	When these areas were drained and enclosed, less water accumulated on them and there was less natural habitat suitable for visiting ducks and other water fowl.
H9G 2087	They would not have felt at ease if the beach had been entirely unpeopled and indeed it was not, but over here balls would not bounce nor running youngsters kick sand up on to their towels and there was the shade essential for Jack, which his wife had still to remind him about.
H9L 102	There were women present who were more beautiful than she was, notably the blonde beside Luke Scott and Nicky Kai, the world-famous Taiwanese ex-model, but the languid sway of Maria's hips above long slim legs drew attention, as did her unusual colouring, an exotic combination of olive-toned skin, streaky brown and blonde hair and eyes that could be anything from copper to amber, depending on her mood.
HA2 1150	There was no human presence discoverable anywhere.
HA4 859	I'm not sure that there are many things suitable for men, though,' she added, looking helplessly at the aprons, bed jackets and hand-knitted babies' woollens.
HA5 756	There was no tiredness perceptible on Rune's blandly enquiring face as he shrugged his wide shoulders into his own jacket.
HA9 160	She might be growing to detest the man more with every passing second, but she doubted there was a woman alive who could deny his sheer male beauty or fail to be drawn to it on the most basic level.
HBS 336	There are two options open to us: we can either mount a much more restricted display in the Library than originally hoped (restricting ourselves to the two display cases in the Barrel Vault leading to the foot of the main staircase) or we can examine the possibility of creating a panel-mounted display which would go on show both in the Library and in other venues.
HGG 1223	Parliament crossed him, always with the greatest respect but implacably, criticised his use of the council to levy an aid for the marriage of his elder daughter without consulting them, doubted if there was a precedent recent enough to justify the aid and periodically and obstinately restated to him the principle that the king should live 'of his own', without demanding that parliament should raise money by taxes for his expenses.
HH3 3030	Today, the oil glut and effects of war have more than halved the figure and there are few other industries able to boost export earnings.
HH7 1272	There are no markets overt in Wales or Scotland.
HHB 2083	There are cheques ready for you to sign,' she said listlessly, making an effort to get away from the subject of Doreen.
HHN 338	As a matter of interest, though it was well loaded, there were seats free, nobody had to stand.
HHW 2819	There are women Tory Members on the Back Benches now, so why not appoint them?

BNC ID	Sentences from Search String 1 (Written)
HHX 14743	It was recognised that Tyrone was likely to be the area in which there would be activity subsequent to the activities in Belfast.
HHX 4121	There were five Liberal Democrat Members present, including the hon. Member for Ceredigion and Pembroke, North.
HJ1 19724	The readiness of Scots to migrate at this period has prompted suggestions that there were forces inherent in Scottish society which encouraged high levels of mobility and a propensity to migrate, but this has yet to be shown.
HJ5 4663	Conversely, there may be matters relevant to a particular engagement not covered by the specimen.
HKT 826	An earlier attempt to extend President's rule, on March 30, had resulted in an embarrassing debacle when the government failed to ensure that there were enough members present to constitute a quorum for a constitutional amendment.
HL2 342	There were 20 commissioners responsible for the various ministerial portfolios, principal among these being Soungui Ahmed — Foreign Affairs; Mahamat Saleh Adoum — Interior and Security; Jean Alingue Bawoyeu — Agriculture; Abakar Mallah — Justice; Djibrine Dasset — Defence; and Mohiaaine Salah — Finance and Equipment.
HLF 1952	Olszewski said that he had approved the retirement because once a civilian Minister of Defence had been appointed in December 1991 — see pp. 38685-86], there was no post suitable for such a high-ranking officer.
HNM 1869	The price in 5 years time is expected to be 75p, the beta for the company's equity is 1.2 and there are 400,000 shares extant with no expectation of any additional issues over this period.
HP6 124	There were 52 members present and the President, Alistair Shaw, was in the chair.
HPU 1086	There are additional factors important in this case, however.
HPU 12	We remarked in Chapter 1 that research is about "finding things out" and there are many activities consistent with this description.
HPW 118	Certainly the Becket conflict had wider repercussions than an insular struggle between English king and archbishop and the principles and arguments in the quarrel were widely discussed, for there were deeper issues relative to the nature of authority.
HPY 285	We shall here use adjectival position to mean any construction which has the function of realizing some distinct pattern of intensional relations and which meets the following criteria: (a) It contains an adjective as one of its elements; (b) It is minimally extended for that adjective, i.e. there are no further elements dependent on the adjective (since all such phrases will reduce in their structural effect to a single occurrence of adjective anyway); (c) It is minimally complete for that adjective; that is, the adjective achieves its structural effect within the construction, so that setting the whole pattern into a larger construction cannot change the effective value of the adjective.
HRM 745	Furthermore, as we discuss in Chapter 2, there are processes innate to human beings (including sexual and emotional drives) which also combine in many complex ways with 'social' or 'man-made' processes.
HTD 298	Students from countries within the European Community are free to take up employment during vacations but unemployment is high in the United Kingdom and there are few jobs vacant.
HTT 2731	There was a newspaper open at the local pages on top of the freezer and as he munched the roll Zen read an article describing the life and times of the late head of the Miletto family in such exorbitantly fulsome terms that Zen wondered in his dour Venetian way whether such a paragon would find Paradise quite good enough for him.
HTV 1405	Therefore, many TNCs might feel that there were risks inherent in training local technicians and managers too well.

BNC ID	Sentences from Search String 1 (Written)
HU0 1521	I noticed there were no other women present and later learnt this was the Scottish custom.
HU2 6361	There are inevitable difficulties inherent in a study of this nature.
HWS 5360	There were no significant differences relative to ip saline, but the difference between groups treated with SC53116 and R-zacopride was significant (Newman-Kuels test).
HWT 703	We believe that restorative proctocolectomy should not be advised for Crohn's disease and that if there are features suspicious of the disease, a preliminary colectomy should be advised.
HXB 73	There are two fees payable on application on initial registration.
HXC 1157	Answering this question requires a fuller investigation of the availability and remuneration of work for women and children in both the agrarian and manufacturing sectors of the eighteenth century, but there are no series comprehensive enough to talk of trends and movements in women's wages.
HXE 1015	There are several cases illustrative of implied representations.
HXE 2104	There are English authorities similar to Harms.
HXS 1122	An emphasis upon the characters within the tale is established from the start of the Miller's Tale, where there are three character portraits replete with significant detail.
HXW 1653	However, there are also remedies specific to leases.
J0T 105	A third reason for isostatic anomalies is that there are dynamic forces present in the sub-lithospheric mantle which are capable of actively dragging down or pushing up the lithosphere.
J0V 384	When the library opens in 1995/6 there will be 100,000 volumes accessible digitally, but there are also plans to provide access by the year 2000 to a wide range of multimedia resources from sound recordings, to moving pictures, to radio programmes, to television programmes, to still images (Fresko 1993).
J12 1488	With the demonstration apparatus there are other non-linear effects present, particularly in the damping; the bob is a ball moving through the air at a Reynolds number , cf.
J17 250	There was a window open on the third floor, but marks consistent with the rubber-soled shoes he was wearing suggested that it was from the parapet in front of the four dormer windows in the roof.
J2A 593	There may be a fee chargeable.
J2G 757	I would like to have said that I thought Mr. Braden should be reminded that there were ladies present, but instead I said, "I don't know if the ladies enjoy this kind of talk very much. "
J2J 140	Returning to Fig. 6.2 for a moment, whenever the parameters are altered so that one of the solid lines (representing homoclinic orbits to the origin) is crossed, there will be a bifurcation similar to that described above.
J52 1749	There are animals alive today that beautifully illustrate every stage in the continuum.
J57 423	As we shall see, there are problems inherent in trying to give shape to such an abstract concept as political culture.
J78 101	Newspapers and television stations had no standing to apply to the trial judge to lift the order and there was no avenue open for them to appeal to any other court.
JXM 955	There was no device comparable to the annual conferences of individual unions or affiliated socialist societies at which Constituency Labour opinion could be expressed.
JYD 769	Damian — is there a post vacant at Swift?
K1C 897	He says BSE is a worry, though there are few cases relative to herd sizes.
K1J 2013	With 300 years of coal reserves still under the ground here, there are still young Foresters hopeful of a traditional future down the pit.

BNC ID	Sentences from Search String 1 (Written)
K1R 556	It wasn't a hoax because there were people asleep near the spot.
K1W 2454	The mutilated and partly decomposed body was found on the 16th of July, on a rubbish dump near Lisbon and police there are 90 percent sure it's the body of Mr Christensen.
K27 2852	But so far there are no signs evident to tell wheelchair users there IS a lift and the disabled toilet is locked.
K3T 550	In Glan Conwy, as in several other flood-hit areas, there were scenes reminiscent of the blitz as villagers turned out to clear-up the devastation.
K4W 839	There are still places open at the free Wednesday Workshop (7–9pm) and Mrs Freda Weaver, one of six volunteer tutors, says a City and Guilds Number Power certificate is on offer for the first time.
K59 1667	The Fimbra guidance note, which was first published in July, warns advisers that: 'It should be clearly demonstrated that the beneficiaries' rights in the (company) scheme are fully taken into account,' and that anyone contemplating a transfer must be advised that there are four options open to them, including remaining in the scheme as a deferred member.
K5F 1763	There will be factions nostalgic for the Festival ribbon and the typographical thought police may find the lettering out of synch with the image.
K5L 1587	Along with housewives whose personal needs were swamped by the family, there were recovering alcoholics grateful for acceptance.
K5Y 152	However, the -55bp promoter is not expressed in transgenic mice indicating that there are no downstream elements capable of driving minimal expression.
K8S 537	If there was one thing sure about it, it was that Isambard had abated nothing of his purpose and if he had halted his experiment in terrorisation short of the act, it was not from any impulse of pity, but the result of a calculated probability that these methods would not get him what he wanted.
K93 1617	There are many examples similar to (b); perhaps the best rule to give is that the tonic syllable will tend to occur on the last lexical word in the tone-unit, but may be placed earlier in the tone-unit if there is a word there with greater importance to what is being said.
K9L 35	It's even been suggested that there should be an ICI director responsible for quality programmes.
K9X 307	There is a thriving Computer Club open to all secondary pupils provided they apply while there are still places vacant.
KAB 125	There is background information specific to each problem and plenty of good advice on how to deal with the day-today- difficulties that arise from it.

Table 10: Search string 1 results (written).

BNC ID	Sentences from Search String 1 (Spoken)
D95 556	Erm, that, there are sufficient people active in the town, they will come together and challenge those things.
DCH 943	I did, yes, erm, when erm, we thought our prisoner was finished the co-ordinators wrote to me and said would I be interested, would our group be interested in erm, writing to Yugoslavia's still, because with the Civil War going on there's lots of cases coming up, for example there was a whole hospital full of patients that were taken prisoner [pause] I don't know if they were actually physically removed or whether they were held in the hospital without access to medical treatment for something like ten days and erm, Saria did say she'd help me last time and I wrote back and said yes, two of us could write once a month, well they're taken that very liberally and and, got two or three things from the already and erm, if anyone else is interested in writing an odd letter say once a month to Yugoslavia maybe they could erm, let me know later on. [unclear] .
F7J 518	So on that basis maybe Havstock Park would be a better venue [pause] cos there would be [pause] rooms adjacent I, I should imagine, I haven't been in to Havstock Park.
F7U 427	So you'd name this as [pause] butane [pause] in other words, you're saying it's a butane chain [pause] you take off the E [pause] you will add O L [pause] and if there are positional isomers possible [pause] you have to indicate the position [pause] one O L [pause] butane one L [pause] one O L [pause] butane one O L.
F8U 716	Cos I just don't want to send stuff back, knowing that there are things wrong
FMS 151	If she made her estate more than a hundred and fifty thousand pounds there'd be some tax payable, so it's a question of how much you've got and both estates have got that exemption of a hundred and fifty thousand pounds.
FUF 45	If erm if there is enhancement payable erm that part of the pension will ultimately be paid by [unclear] County Council [unclear] by the county council.
HE9 737	There was no hours worried about.
HEL 359	You see there was milk cheap and different things after the war for them you see.
HES 369	And er the [pause] foreman and bosses that knew people and they knew the circumstances and [pause] I suppose they put a word in and erm you know men were sort of stopped because er I mean, if a man had a house full of children or something, he'd probably be the very last [unclear] you know [unclear] before he was sort of forced to g-- you know sacked or wh-- And I mean they weren't sacked in a sense, they was always ready there was a place ready for them to come back to there.
HVF 150	As far as the debate with Leeds and Bradford is concerned, there are three districts adjacent to West Yorkshire, Selby, Harrogate and Craven.
HYD 357	Rather like the sort of, there, there are various glasses full of different marbles
J3W 13	There is one basic thing that they need to do, they or their parents, that is pick up the telephone and ring a contact, that's all they have to do because within here there are people ready to receive those er t-- telephone enquiries and get the youngsters on the water.
JA0 512	When you arrive at your assignment there will be an envelope full of bits and pieces right?
JNB 582	Chairman, I support Mr [gap:name] 's amendment and finally I would like to say that there are foxes alive and well in suburban Bristol in my parent's garden.
JNP 333	Erm [pause dur="4"] whereas if there were independent trustees responsible to the regulator and they were properly trained, they would I suggest be able to smell out very quickly any malpractice and would have [unclear] straight to the regulator, if only to call a stop for someone to have a look at it.
K78 35	It requires also that there be an armed force sufficient to enforce the law on recalcitrant individuals.
KNA 135	And it seems that in this whole area of redemption there are three qualifications necessary for redeemer.

BNC ID	Sentences from Search String 1 (Spoken)
KRL 97	The time, twenty one minutes past twelve and it's erm the lunch time phone in with me John Simpson through till one o'clock, don't forget we've got the latest news headlines coming up at half past twelve and if you want to join in the phone in you can now, Oxford three double one, one double one, the lines are open, there are lines free, so if you want to ring in.

Table 11: Search string 1 results (spoken)

BNC ID	Sentences from Search String 2 (Written)
A06 2398	There will always be more people wanting to act than there are jobs available.
A0C 670	These commands will do the job but, if you are willing to spend some money, there are programs available which will make the whole process much easier, even automating back-ups so that your data is kept fully secure at all times.
A0D 1257	You see, whoever put that poisoned cherry on the cake must have got sugar on his hands, but couldn't lick them because of the poison and couldn't wash them because there was no water available.
A0V 555	There are many courts available in England which are not used, schools, private and club.
A0X 788	There are many stripy veneers available which can be employed to give various effects exploiting the characteristics of stripyness.
A10 441	There may be time available for voluntary work.
A16 96	There are several types available; those containing methylene chloride are quick acting and are usually free from caustic or acid and will not harm the wood.
A3P 18	There are three rooms available: one double, one single and a family room.
A40 25	At the time when there were doubts about whether or not the tour would go ahead, after the first invitations were largely turned down, numerous stories started to circulate that there would be money available and that sponsors were in the country looking for players.
A49 585	Dick Whittaker, deputy secretary of the JMB, said that there were now calculators available which, for example, offered computerised foreign language dictionaries and others which provided a complete guide to fossil groups in palaeontology.
A62 994	There was real choice available in terms of depth and detail, ranging from entertaining but uninformative tabloids to highbrow news sources like the quality papers, Radio 4 news or television programmes like Newsnight and Channel 4 News .
A67 726	There is healthy eating available in today's RAF and with messing committees to ensure that everyone has an opportunity to contribute their views and ideas, there seems wider appreciation of the skills of today's cooks and of the results that they achieve with their limited financial resources.
A6L 332	He first decided to go into manufacturing because when he finished his design training in the early 1980s there were few jobs available simply because in those days industry, by and large, saw no call for designers.
A70 2329	But there is no need to feel discouraged, because there are low caffeine drinks available in the shops — like these PG tea bags that contain only one third of the normal caffeine content.
A7D 1368	There are 30 places available on a first come, first served basis; the closing date is Friday 15 March.
A7K 510	Full fees are £125 but there are bursaries available.
A7P 1265	However, I've no idea what qualifications I need or if there are any courses available.
A8R 339	(Sadly there are no imitation droppings available to complete the set.)
A92 91	Anglian Water Authority refused to attend the meeting of residents in Oakham because of rules preventing them discussing matters that might depress the share price during privatisation and because there was little information available.
AB6 1213	As expenditures on arms decline with the ending of the cold war, there may be more money available for aid, but democratic politics being what they are, few would care to bet on it; certainly not on any percentage saved being set aside for the developing nations.
ACA 163	Domestic service or the mills were the main openings for single women of the working-class; if they married and outlived their husbands, there were no old age pensions available.
ACP 1041	In Britain's current enterprise culture, there's money available to fund anything from a cow chiropractor to a breeder of edible snails, though there's no guarantee that your venture will work.
ACR 212	Until then there are still tickets available at the Send a Cow office at the address below.

BNC ID	Sentences from Search String 2 (Written)
ACR 3136	But there are irrigation pumps available which will pump slurry for miles.
ACY 1094	There are many different products available that can be used by the DIY enthusiast to construct the decorative face of a retaining wall.
AD0 520	There are now instruments available to measure body fat.
AD0 818	Luckily there are low-sodium salts available in supermarkets and chemists to help you in your endeavour.
AD0 1062	There are gadgets available to make exercise more fun.
ADL 493	Poindexter remembered a meeting one day in the Oval Office, discussing sources of contra money, when he had to move quickly to stop North blurting out that there was money available in places he knew.
AHC 1453	There are still places available for late 1992 to Malaysia, Zimbabwe, Chile and Namibia.
AJ6 413	Not easily, not quickly, but I am not prepared to abandon the ambition of having a fully working economy and having a fully working economy means there are jobs available for just about everybody who is looking for a job.'
ALC 1385	There were no courses available on finances although farmers felt a need for training in financial management.
ALW 117	There are courses available to all levels of women returners, including those who want a change of career.
AM5 1612	You can use a bitumen-backed foil such as Evostik Flashband (there are many other types available): the bitumen backing gives good adhesion to both the masonry and the roof sheets.
AMD 973	Excursions: There are numerous excursions available from your resort.
AMD 1181	Tennis: There are many courts available for hire.
AMD 1329	Excursions: There are numerous excursions available from St Anton.
AMD 1509	There are some family suites available with two separate but interconnecting bedrooms, one bathroom and two entrances.
AMD 1929	Tennis: There are several courts available.
AMD 2133	Excursions: There are numerous coach excursions available from Kitzbuhel; Innsbruck and Vipiteno; Rattenberg, Mayrhofen and the Krimml Waterfalls; Grossglockner; Salzburg via Berchtesgaden ; Chiemsee Castle: Venice: Vienna and the jewel-like lakes of the Salzkammergut.
AMY 376	Members were discouraged from bringing along a personal caddie and if they did they still had to pay the caddie master the fee he would have received, irrespective of whether there was a caddie available or not!
AN2 1190	There are many kits available for fitting alternative diesel engines to Land Rovers Personally I think that a Land Rover 2 25 litre with a proper rebuild, including pump drive gear, takes a lot of beating BMC 2 2, 2 5, 3 4 and 3 8 litre engines will fit as will Perkins 4 203 (3 3 litre) Ford York 4-cylinder plus others from Toyota, Nissan and Mazda can also be fitted as can the VM 2 4 turbo from the Rover SDI
AN4 1889	There was hardware available to straighten women's backs, necks and shoulders.
AN5 194	Nevertheless, there would be unlawful sex discrimination by an LEA if, in toto, there were more places available in its single-sex schools for boys than for girls and vice versa.
AN5 350	However, there are various defences available — for example, that the parent took reasonable steps to comply with the direction or that the direction was 'unreasonable'.
AN7 3087	The punch was non-alcoholic; there was no alcohol available, other than what was secretly brought in.

BNC ID	Sentences from Search String 2 (Written)
AND 249	If there is spare accommodation available during the school day then turning some space over to use as a parents' room is well worth while.
AND 691	There are products available that will remove the most stubborn of paint sprays and it's likely that the local Public Works Depot will have a graffiti removal squad that can be called into action to remove any offensive spray paint.
ANS 840	In responding to children's writing, teachers are well able to distinguish between an embryonic attempt at a story and a more developed example; indeed, there is substantial research available on the stages of story-writing through which young writers progress.
AR3 271	On inquiring where the bathroom was, the woman told me in a timid voice that although it was the door facing mine, there would be no hot water available until after supper.
AR8 1231	There were no aircraft available for air drops at that stage of the war in the desert, which was a pity when one bears in mind that only two years later SAS parties operated in France for anything up to two months behind enemy lines, totally reliant on parachuted stores.
ARH 917	There are several drugs available which are highly effective at eliminating trichomonas from both sexes and metronidazole is both the earliest and most widely used of these.
ARW 1751	Fees will be on a sliding scale and there will be a creche available.
B03 433	In March 1991 there were 267 vacancies available.
B07 529	Choice occurs chiefly in the areas of popularizations, introductions to a subject field and textbooks, where badly or unsuitably written texts may be rejected because there are alternatives available.
B0M 1845	However, there is data available for the effects of high dose radiation on the human body and data on radiation hazards is regularly reviewed by the United Nations Scientific Committee on the Effects of the Atomic Radiation (UNSCEAR).
B0P 1152	That decided, I bait the swim every other day at approximately the same time in the evening, for this will teach the carp that there is food available from a certain time.
B12 188	There are also grants available to cover about a quarter of the cost of putting up new school buildings.
B13 91	Remember that people were then leaving school at 12 or 14 and there was no secondary education available in the town.
B14 1250	For those who have impaired auditory structure and function, it is possible now to have quite sophisticated, unobtrusive hearing aids which dramatically improve their quality of living and there are also amplifiers available for telephone conversations and public meetings.
B1E 817	In the developing world, plantation forestry is also increasing, though there are few data available which facilitate an assessment of environmental impact.
B1M 761	They are introduced wherever there is a council scheme and there is sufficient space available in the car park to have 'banks' and service them.
B1X 3250	When I asked Special Branch for extra men for surveillance work, I was told there were no extra men available.
B25 699	In my own studies of theatre audiences and of book reading habits in the United Kingdom I found, when I began, that there was very little published at all on who goes to the theatre and, while there was more information available on adult reading habits, much of it had its source in America and much of what was available in Britain referred to borrowing from libraries but excluded book buying.
B2A 558	Indeed for some treatments there may be no service available since the providers consider it unprofitable.
B2M 284	In the course of the MINSE project, comments had also been made to the effect that, although OICs were able to purchase a microcomputer if there were sufficient funds available, little thought had been given to how these might be applied or to the staff training needs.

BNC ID	Sentences from Search String 2 (Written)
B2X 687	If all possible resolved logical forms are deemed implausible, CLE-I finally hands to the plausibility checker a special symbol denoting that there are no more interpretations available.
B32 944	Make sure commodes are clean and to hand and that there is toilet paper available.
B3G 162	If you think the time may come when you may have to care for an elderly or disabled person in your home, there are also grants available for adapting housing.
B3G 1078	Caring is a costly business and even though there are other benefits available, such as attendance allowance for the person being cared for and also grants to help with alterations and improvements, a great deal of extra expense is paid for by the carers themselves — for example, special diets and extra heating.
B3K 1506	There are several rooms available for private functions so there's sure to be one just right for you!
B77 552	It is a language that needs a large memory capacity and for the first time there were machines available to use it.
B77 1515	Once there are more data available and the phenomena are established as real, the way is open for theorising about the nature of UAPs.
B7D 1105	One industry observer, Bill Welter, a consultant to Applied Concepts, believes that by 1983 there will be three chess calculators available that will be good enough to play against the top 5 per cent of rated players.
B7K 1052	When binaural recording last found favour, 10 years ago, there was no low-cost digital recording equipment available.
BLW 1425	Elizabeth Hodder, whose wisdom I have relied upon in this section, found from personal experience that there was no help available for stepfamilies in Britain.
BM9 1034	There was little money available for luxuries, yet in 1928 a group of children from the Royal Cross School for the Deaf, Preston, made what may have been the first ever educational overseas school trip when they went to France and Belgium.
BM9 1151	There was no money available and I suppose it showed in the quality of school life.
BNA 1483	If you are going to pay candidates' travelling expenses one of the advance preparations will be to organize these beforehand, ensuring there is cash available or that someone will be there to sign the necessary cheque.
BNW 421	As they become unemployed, they find that there are few jobs available in their local area and no jobs at all which require their specialised skills.
BNY 122	During the summer months, the times of reproduction, there is ample food available to sustain the increased need, but when winter comes not only does food cease to be so readily available here, there and everywhere but the intake itself has to be much more varied.
C8Y 1082	Sparing the time to make these two visits may show ways of substantially increasing the household income and reducing its outgoings on rent, rates, prescription charges and many other expenses for which you may not have realised there is help available.
C91 1751	There are programs available for some computers that will print out various sizes and types of bar codes.
C92 1006	There are two choices available in this respect.
C95 1296	A There are two Catfish available in the trade as Butterfly Plecs: <i>Peckoltia pulcher</i> and <i>Pterygoplichthys gibbiceps</i> .
C9K 849	There are various power outputs available but the ST200 I settled for kicks out 100 watts per side in stereo and, when bridged into mono, the full 200 watts.
C9P 149	You too can save lots of money by perming your own hair and there are several good home perms available on the market.
C9P 185	If you're environmentally conscious, there are perms available that are gentle to your hair and the planet.
C9R 2245	There are many excellent books available on tinnitus.

BNC ID	Sentences from Search String 2 (Written)
CAN 675	With such an elaborate division of labour, the conventional longwall system requires much more integration than single-place systems but, claimed Trist and his colleagues, there were no mechanisms available to provide this.
CAU 1165	If there are no gudgeon pins available he'll make them; likewise pistons, push-rods or you name it.
CB2 535	I would have been quite happy just to have been on the bench for the entire championship but, as it turned out, I had another big incentive in that as Gary might not play for the rest of the Five Nations there would be four internationals available if I proved good enough'.
CBC 8256	There are reconditioned phones available on both systems, from Pounds 110 on Lifetime and from £75 on Primetime — new ones are Pounds 199 and £159 respectively.
CBG 10431	That is not to say I am not looking around and it's reassuring that there's money available if necessary.
CBT 1222	So although, broadly speaking, taxation jobs are few and far between (as can be seen from the table there has been no movement at all at assistant manager level in several areas) there are still excellent jobs available for those with the right specialist skills and knowledge.
CBT 2500	Books — there are many excellent text books available, which often give a different perspective.
CBX 3330	But as the subsidiary has negative net assets, there would be no funds available on liquidation to pay the preference shareholders anything.
CD6 1920	Being a black actor means there are limited roles available, so you start writing about black characters yourself.
CDD 603	It was formed when there was little information available on gold mining and when local opinion on the issue — such as it was — was generally in favour.
CDH 491	There are several products available which can actually help repair existing damage plus they protect the hair, thus preventing further damage.
CDK 353	There are some government-sponsored training schemes available.
CE4 1165	There are several books available that are full of ideas and information on using stencils, whether on walls or to decorate pieces of furniture.
CEK 4074	I understand that there are still tickets available for the jazz dinner, with some of London's mainstream jazz names, hosted by Pizza on the Park, Knightsbridge.
CEP 5879	I suggested that if there was money available from sponsors that was not intended for the development of rugby, then it might be used as a way of rewarding the squad.
CGF 358	In Britain for example there are detailed studies available of sociolinguistic variation in Norwich, Tyneside, Reading, Dudley and Belfast.
CGX 883	There are several different formats available for printing out colour patterns.
CH7 3648	There was no physiotherapist available.
CHF 1052	From our first experiments with binary tree structures it became apparent that there were other structures available which would give much faster search times.
CHF 1159	For example there may be further information available at the pattern level or provided by higher levels of analysis, which will be able to suggest alternative candidate words for the position in error.
CHS 77	There is little point in telling the staff that relocation is in the air if there are no precise facts available to answer employees' questions.
CJ9 880	There are many different types available and if you experiment with the different brands and types, you will find one which suits you both.
CJB 448	There are two Disc System shoes available in the tennis range, the Pro Court 5000 at £89.99 and the Advantage System 4000 at £74.99.
CJK 1197	There are self-catering holidays available in a cottage and a chalet.

BNC ID	Sentences from Search String 2 (Written)
CK3 1338	Currently there are four videos available, with plans for a further 16, covering various knitting techniques.
CL4 300	There are excellent courses available for home study and the Society has its own Language School which it makes available for people who need help.
CLG 166	There are several d-i-y systems available, including the following:
CLG 820	However, if you want carpet in these rooms, there are extremely hard-wearing kitchen carpets available, with a short nylon pile that is easy to keep clean and also water-resistant bathroom carpets that give a touch of luxury underfoot without turning into a swamp at bathtime.
CLL 1560	This makes it possible only to use one part if there is limited time available.
CLN 458	There were modest alternatives available to an antislavery readership but they either propounded the outlook of a minority tendency as did the <i>Anti-Slavery Advocate</i> , edited by the Irish Garrisonian Richard Webb in the 1850s or had a predominantly local circulation as was likely with the short-lived <i>Anti-Slavery Watchman of Manchester</i> produced by the Garrisonian group around George Thompson and his son-in-law F. W. Chesson or propounded a particular remedy for slavery in the case of the Quaker Richardson family in Newcastle through the Slave's stress on the free produce movement.
CLP 760	The procedure can be computerised, there are programmes available for the easy production, manipulation and storage of block diagrams with useful cross-referencing facilities.
CLT 661	If your water is soft and acid, it will eat into the shell and dissolve it and there are insufficient salts available for the animal to maintain it.
CLT 805	There are two Catfish available in the trade as Butterfly Plecs: <i>Pterygoplichthys gibbiceps</i> and <i>Peckoltia pulcher</i> .
CM5 1562	There was no such basis available for women.
CM6 257	Where sources are unpublished and accessible, there are usually official guidebooks available.
CM6 678	Great Britain still had great industrial resources: there were specialized skills available among her workers, she still had huge supplies of her excellent coal, she had opened up new markets as fast as she had been pursued into her old ones by her competitors and she had an enormous income from investments overseas and from the services which she supplied — in transport, banking and insurance, for example — to the rest of the world.
CMF 428	There are various lists available for this purpose.
CMG 977	The deputy public assistance officer, Mr. H. L. Davison, said that this was because there was no other accommodation available in the town's lodging houses.
CMH 164	In truth, Gall and Spurzheim's theory of localization was ahead of its time because there were no suitable methods available for testing it, although test it people did.
CMK 887	There are three choices available to people with preserved rights who leave a company to switch jobs.
CN6 1046	There are no firm statistics available at either national or local level to determine the incidence of child abuse.
CPK 47	That time lag is a feature that bedevils the software industry and led to the absurdity that the first generation 32-bit chip, the 80386, had been superseded and obsoleted by the 80486 before there was a 32-bit desktop operating system available for the processor.
CRJ 586	To balance this, there are more daylight hours available to hasten plant, insect and plankton growth.
CRR 69	In other words, contemporaries viewed bribery as a bargain in which a vote was exchanged for something tangible at a time of election, but quite apart from the general distaste for such transactions, there was insufficient patronage available to permit its lavish use and there was certainly never enough money.
CRS 1316	It was not a foregone conclusion that there would be a place available at Cedars since there is a lot of pressure on special school places in the county.

BNC ID	Sentences from Search String 2 (Written)
CRU 647	It has also been suggested that there were many signs available to Mrs Whitehouse that, in her terms, all was not well within the Church and that this reinforced her view that the established order was under threat and that urgent action was necessary.
CS1 1280	There were no hard-porn videos available on the activities of The Fox at the time this new offender was committing his offence, only the soft-porn reporting of the popular newspapers, which were describing the atrocities with such vivid detail as they occurred.
CU0 1512	THERE ARE many other items available for clubs keen to improve their facilities.
E9U 371	There are 32 places available for the matchplay which begins tomorrow.
E9W 463	Indian ink is widely available: Winsor & Newton, Saler-Rowney and Sennelier make good quality Indian ink, although there are many other brands available.
EA0 1427	On the other hand, there are proved services available but no mechanism by which the public can be readily informed about them.
EA0 1705	Ensuring that there are trained people available to listen and to provide practical help, including help with stress management and job hunting, is critically important.
EA9 571	Sometimes a large coloured dot (red for stop) is used to emphasise when there are no rooms available for let in a certain category.
EA9 740	Therefore, many hotels work on the principle of accepting a percentage more reservations than there is accommodation available.
EAM 90	Changes will be deferred if there is insufficient information available to make a decision.
EAP 173	There is space available on the form to fill out any 'comments' arising from the completion of the task.
EC5 610	There are porters available in the Halls of Residence throughout the day.
ECF 1858	There are some suites available which would suit a family or friends in groups of three or four and represent very good value.
ECF 5254	There are three apartments available, appointed in simple style with a sprinkling of original Umbrian peasant furniture.
ECH 574	An abseil from a large snow bollard is the classic method, but if there are any other means available use them in preference.
ECJ 1551	There are many portable types available for hire which simply plug into the 13amp socket.
ECN 1577	Within their own group there was little to strive for since there were no clearly identifiable roles available.
ECV 1295	Having denied that she is incompetent, I am certainly not going to concede that the only alternative is to make her a degenerate; there must be another choice available.
ED4 2097	For dogs who will not tolerate this, there are toys available to combat plaque.
EDC 1029	There were beds available for those with particular problems, such as those who had been injecting over a long period.
EDC 1512	And cocaine when it was available, but it was very rare at that time, y'know, but opium seemed to be very stable, there was always opium available and that was the thing that I would always try to achieve, to obtain, y'know.
EDL 1028	In the result, therefore, there may be foreign pre-trial procedures available to the parties which will enable them to overcome the limitations on the territorial scope of the procedures normally available in England.
EE7 223	He must also ensure that there is adequate information available about this and about any conditions necessary to ensure that it will be safe and without risks to health when properly used.
EE8 1306	There are many fertility treatments available to childless couples and fertility counselling aims to enable clients to make an informed choice.

BNC ID	Sentences from Search String 2 (Written)
EE9 163	He advocated state support only for the minority who could not be self-helping because they were too old or disabled for work or because there were insufficient jobs available; and he accepted the need for punitive treatment of the undeserving at the base of society.
EEB 1359	There are many software packages available which have graphics facilities.
EFD 1442	But, given that there is government money available for training, the local community should have more say about what type of training is needed and who gives it.
EFD 1443	Others felt that there weren't adequate funds available for training and that current government policies are the latest attempt at doctoring unemployment statistics for the area.
EFR 909	There were two mechanisms available — the ancient, rather hazardous and capricious method that distributed spores, the wind; and the newly arrived messenger service, the flying insects, which were now regularly moving from tree to tree, feeding on the leaves and the spores.
EUY 551	But there are no workmen available to dig and pick the necessary hole through the bus platform, tar mac, gas pipes and hard core to allow this ecological flow so the matter rests on the bus platform — and keep fit classes are hastily arranged with coughed
EVM 143	The DTI's Education and Enterprise Advisers will provide valuable support to Compact schools in ensuring that there are sufficient places available to satisfy demand.
EVM 942	The best ad vice in order to guard against such a mismatch is to start out by piloting Compact in a small number of schools and to take in more schools only when the Partnership is satisfied that there are sufficient job opportunities available.
EVS 254	In 1981, when I left, there was no surgical alcohol available and we had to make do with boiled water.
EVS 255	The patients were being given yucca roots and chayote fruits as the main meal of the day and there was no milk available for the babies.
EVS 1005	We were preparing television programmes on laboratory work when most teachers counted themselves lucky if there was any chalk available.
EVY 791	In turn, following examination of staffing schedules, she will be informed if there is work available at her convenience.
EX5 2578	There is help available: we all need at some stage to avail ourselves of it.
F9T 34	Since there was little practical guidance available in the literature and most previous research had not been carried out under normal classroom conditions, we decided to enlist the help of a number of experienced teachers who were using 'collaborative approaches successfully.
FA4 242	The Japanese committee's work ensured that at launch there were 17 different discs available, including a multilingual dictionary bundled with the first players sold.
FB2 263	It is true that there are some fringe benefits available to farm workers (as there are for many occupational groups), but their value amounted to only an estimated £1 per week for free food and a net £2 per week for low-rent tied cottages (Brown and Winyard 1975).
FB2 1533	There are exchequer grants available to finance improvement schemes, but these are limited in extent and little effective work seems to have been accomplished.
FDN 141	Here the constable told the driver that there was no device available at the station for taking specimens of breath and then simply required him to provide a specimen of blood.
FEF 670	I regret to say that there are no general guidelines available.
FP4 393	There are few data available which explicitly measure demand and all forecasts have used the number of entrants as a proxy.
FP9 1219	There was a lot of sense to this, with little point in earning more real income if there was no time available in which to spend it.
FPY 542	By contrast, Zimbabwe is pessimistic because there are fewer people available to train choirs and play the organ.
FT8 1631	There were no street prices available at the time of going to press, but my guess would be about £270.
FUA 1596	— Are there any special facilities available?

BNC ID	Sentences from Search String 2 (Written)
FUA 1850	Similarly with new materials, try to find others who have used them or ask if there are samples available which you could try out.
G14 287	And fortunately, there were simple techniques available both for the measurement of the rate of protein synthesis and for preventing such synthesis.
G28 864	There were no averages available and non-one seemed willing to discuss the subject in detail.
G29 937	If there is insufficient funds available to meet one instalment, the individual's name is included on a violator's blacklist at the Federation of Bankers' Associations.
G2A 899	There are many social facilities available and also Farmoor reservoir only a short distance away.
G2C 169	As Friends of the Earth comment: 'There are alternatives available and it's been shown that heavy treatment with chemicals is unnecessary.
G2D 315	There are two types available — those with a tin lining have a low melting point and may well need to be relined if overheated, which can prove expensive.
G2F 1947	Blinds are an attractive alternative to curtains and there are many types available.
GUB 297	There are several plastic tracks available, varying in strength, which are suitable for straight runs and which can also be bent successfully round bays.
GUB 325	There are many useful accessories available which will give curtains a professional finish.
GUB 995	There are a few tracks available which combine with a valance rail (page 16).
GUC 1300	Of course, there may be historic data available from outside the corporate group which can be used to help formulate the required yield for a new area that the group is entering, but suppose that this is not the situation.
GUY 1025	Today there is sufficient software available (ie programs) to enable a microcomputer to perform most office functions reliably — for example, accounting, stock control, word processing etc).
GV1 949	There are innumerable aquatic snails available for the pool, but it is only the ramshorn type (Fig. 16) that can be depended upon to restrict its appetite to undesirable algae.
GVG 193	When the arrears are payable, the presumption is that they are to be paid provided there are surplus assets available, whether or not these represent accumulated profits which might have been distributed by way of dividend, but that they are payable only to the date of the commencement of the winding up.
GVH 853	There are blueprints available for the comprehensive provisions of legal services.
GVW 743	This is very surprising on reflection because there were clear pointers available waiting to be followed.
GXJ 3176	4.13 Management should continuously review the procedures for the delivery and/or collection of money to see if it is absolutely necessary and whether there are alternative methods available.
GXJ 4547	Ensure that there is adequate community care available for everyone who comes out of a psychiatric hospital after a stay of six months or more.
H0A 1747	We now made a practice, as soon as we camped, of building a perimeter round the camp with loads and camel saddles and, if there were sufficient bushes available, added a thorn fence or zariba.
H0K 1278	There was much previous information available, now to be reassessed and brought up to date.
H0P 6	According to a recent WHO estimate, about half a million women die every year as a consequence of pregnancy, birth and other maternal causes and many more are chronically impaired physically; there are no estimates available as to the number of pregnancy related diseases, illnesses and health impairments.
H7P 1392	She had not known what to expect from this side of marriage since there was no literature available to her on the subject and her mother had told her nothing.

BNC ID	Sentences from Search String 2 (Written)
H7R 1409	The stepping rate quantisation may prevent the system from approaching its pull-out rate, e.g. if the pull-out rate is 7000 steps per second, there may be insufficient torque available to accelerate between 5000 and 5270 Steps per second.
HA5 2268	One couldn't just get a campaign up and running overnight — although the recession bit both ways, so at least there would be space available in the media for short-term bookings.
HAC 3592	There are two perspectives available: First person and TV camera.
HBM 131	At levels 1 to 3 there are 12 languages available:
HBM 132	At levels 4 and 5 there are six languages available:
HC0 198	Students using the libraries are advised that examination papers cannot be borrowed or photocopies but there are sets available for consultation.
HC7 98	They believed practicalities like how parents are supposed to know what is happening in the nursery should be clarified and that there were records available for parents to look at and in some cases contribute to, in connection with their own child and with the nursery in general.
HGR 935	There are many alternative paths available to follow and many of these paths will turn out to be dead ends.
HGR 1322	It is also often the case that there is insufficient data available for a reliable determination of all of the parameters of a Markov model.
HGR 1416	There were two options available at this stage — either to manually tag the corpus or to try out some automatic determination of the tags.
HGR 1945	There are methods available for dealing with this problem.
HGW 1396	If you do not have space for a build-in model beside or under the sink, there are portables available that sit on the worktop, where they can be connected to the taps and drains for washing.
HH3 4215	There were no more coffins available, but by four o'clock we had buried the soldiers, wrapped in plastic sheeting.
HHP 144	There were many through tickets available over L & Y Railway and successor lines as well as the Mersey Railway.
HHV 9464	I am glad that the hon. Gentleman welcomes the project, but he must face the harsh reality that if we ever had a Labour Government there would be no money available to pursue this project, let alone order any more type 43 frigates.
HHV 16657	There were no hip replacements available just a few years ago.
HHW 7540	There is assistance available for students' education through the educational maintenance system and what is currently in operation is the best method for the support of students.
HHX 12305	If there are any sources available to the Government that disprove that figure, it is right that the Minister should put those sources to the House.
HJ3 4509	Most of the senior people in advertising today came through the media, through door banging at agencies to get a job in the traffic department, through the graphics department of the Belfast Art College, simply because there was no other education available.
HJ4 9971	There are two routes available: a 50-mile circular sponsored cycle from Belfast along Strangford Lough and back or an optional 25-mile route between Belfast and Comber.
HJA 3123	There is uncertainty concerning the accuracy of our present method of counting visitor numbers to Edinburgh, but there are statistical procedures available for estimating numbers to a high degree of accuracy.
HNM 125	This means that there is data available to estimate betas, expected returns and risks.
HPK 708	There will be a skip available in the Mill Yard from Tuesday 31st March — Tuesday 7th April for bulky items of household refuse — but no trade refuse, please.

BNC ID	Sentences from Search String 2 (Written)
HPP 1456	We stayed in the huts, which are run by DOC (Department of Conservation); you buy tickets in advance, but they don't guarantee you anything; however, if the hut is full, there are usually extra mattresses available.
HR3 1839	To be used successfully a simulation model must adequately represent the system under study and there must be sufficient relevant data available to allow for the calibration or tuning of the model.
HRD 1292	While the concept of enriching teaching through the use of various and varied media, was clearly sound, there was no technology available to draw the ingredients of multimedia together and unify them with a single, practical teaching resource.
HRK 262	for this reason, there must be query languages available which make it easy for untrained users to use the system.
HRK 1763	further, there is less need for an experienced programmer or database administrator to access the database as there are languages available which are easier to use, such as QBE.
HRK 2312	There are prototyping packages available which will set up screen layouts and bring in blocks of code for validating and presenting data.
HTD 755	Historical English Linguistics: the syntax, phonology, lexis of all historical periods of English can be catered for, although there is special expertise available for Old, Middle and early Modern English advanced study.
HTD 1976	There are excellent computing facilities available and the intimate nature of the department, combined with the research orientation of its staff members, provides an excellent atmosphere for research students.
HTE 2674	Number of Places There are 65 places available for 'home/EC' students.
HU4 5536	In the 1960s series, there was adjacent mucosa available from 145 of the 196 patients with gastric cancer.
HW9 720	Answer guide: Here there are alternatives available: either a new asset account can be opened for the sail material or it can be added to the tubing.
HW9 1640	There are no stocks available for the production of Abrasive.
HWD 570	The pressure of population caused much less concern in the Welsh Border counties where there was still sufficient land available to allow poor immigrants to erect cottages on the wastes and to claim common rights to go with the few acres that they had cleared from the woods or the moors.
HWF 14592	If material is to be offlined then there must be two separate media items available (in states 2 or 3), one for the Primary copy and one for the Secondary copy.
HWS 6824	There are several other treatments available for palliation of rectal and rectosigmoid cancer; these include electrocoagulation, transanal resection and cryotherapy.
HWU 1901	There were no records available on the patient's possible childhood diphtheria vaccinations.
HX8 555	There are some balloons available to be given away at suitable events (not for sale) — let me know if you are participating in any public event and would like some.
HX8 2226	There are some orange balls available at £2.00 each for orders of a dozen
HXD 1569	There are certain defences available, an important one of which is the "state of the art" defence.
HXF 1945	In other cases, especially if space is limited, handling sessions will take place in a special classroom, where there may be other related resource material available and where practical follow-up activities can be carried out.
HXK 71	The theoretical basis for this rests on economic models which predict that there are net welfare gains available from removing these barriers.

BNC ID	Sentences from Search String 2 (Written)
HXN 414	With the removal of all tariff barriers, there will be few other measures available to States to grant assistance and there is a danger that, in the absence of control, State aids could become a substitute for protectionism, enabling a State to give preference to its own industry.
J15 51	If the supply of money in the economy (M_s) increases, there will be more money available than people require to hold ($M_s > M_d$).
J17 840	He cranes hopefully up at windows, to demonstrate that you can see the sky if you lean far enough back and shows Dr Serafin how there is lavatory accommodation available in the basement, only three floors down.
J1E 1861	Can anybody tell me if there are any tickets available for the Liverpool game tomorrow?
J1G 1594	Assuming this formation is the right one (I prefer British teams to play 4-4-2) I suppose there are no better uninjured/unsuspended players available.
J54 1583	It was hard for an English girl to get a secretarial job in New York these days — she had been lucky in getting her work permit before the restrictions were so stringent — but maybe one day the conditions would change and there would be more work permits available.
J6S 708	There are various options available for providing Newco with funds.
J6S 1261	However, while interest on a loan falls due regardless of ability to pay, dividends on redeemable preference shares can be paid only if there are sufficient distributable reserves available.
J6X 375	A disabled person might have to pay more for his holidays because he has to go to places where there are additional facilities available.
J6Y 313	This has been considered in a number of recent winding-up cases, notably in <i>Re Abbey Leisure Ltd</i> [1990] BCC 60, where the Court of Appeal said that two grounds for preferring a winding-up order to the transfer notice procedure and valuation by a company's auditor were: (1) that there was nothing unreasonable in a petitioner with a minority holding refusing to accept a discount being applied to the valuation of his interest in the company, which an auditor was likely to decide on; and (2) that there was machinery available in winding-up for the proper determination of claims, which was not available to an auditor.
K1C 948	On each occasion he's been sent home from hospital because there were no beds available in intensive care.
K1C 2848	If people realise there is help available we can do a lot for them.
K1K 217	Until now there were no kidney machines available for her to use there.
K1P 1082	They say there are schemes available that could be implemented, such as the simple water butt.
K3H 1585	But Taylor might argue that, Chris Waddle apart, there are few players available outside his squad to turn to.
K3K 888	We are hoping to hear from him soon to see if there is money available to support us.
K4T 9679	There was no treatment available in her own country.
K4V 390	He claimed for one period several months ago, there were no spare ITU beds available in the entire southern half of the region.
K55 4382	There would be some money available with National Park status but far more restrictions.
K55 8713	Seeking to translate this question of morality to local issues, I asked the question, did the candidates agree that it was morally wrong and perhaps a misuse of public funds for local councillors to claim that there was no money available to install gas central heating in the homes of elderly disabled people when they always found money for hospitality allowances and trips abroad for themselves.
K56 463	Though there is no legislation governing the fitment of airbags to European cars nor is there any independent evidence available on how many fatalities or injuries are prevented by the use of an airbag in conjunction with seatbelts.

BNC ID	Sentences from Search String 2 (Written)
K5D 9789	While our efficiency approach argues for looking for ‘good buys’ in terms of where the most health gains can be had per extra £1,000 spent, the strategy document tends to argue in terms of throwing most money at the biggest problems irrespective of whether there are cost-effective measures available for dealing with them.’
K5D 11189	The trial judge, however, directed the jury that there was no evidence available against the first appellant that he was acting in concert and that the only evidence that there was a concerted attack came, if the jury accepted it, from statements made by the second appellant outwith the presence of the first appellant.
K5E 115	There are different types available and various dosages within each type, so there is a good chance you will eventually find a combination of oestrogen and progesterone that suits you.
K5H 3432	We are advising that leasing will be the best option in the first year and our initial impression is that there will be more quota available than sheep that need it,’ said Sandy Wright of Aberdeen & Northern Marts.
K5M 4281	Mr Clarke told the FBU leaders there was no extra money available.
K5T 200	If there was no map information available then the order and orientation of the contigs was random, but the order of probes within each contig was stable.
K97 1002	I believe there is money available,’ said Ferguson.
K97 1601	But staff at the Young Persons' Housing Resource Centre add that there are fewer places available to house these people.
K97 7421	The economist John Maynard Keynes advocated just such an approach in the Thirties, arguing that during a recession it made sense because there were idle resources available.
K9D 273	Our experience over the last few years has shown that there is work available in the sectors in which we operate and we have proved to ourselves that we can win business.
KAJ 988	There are specimen letters available, from [gap:name] , which may help you get new/renewed membership for Specialised Groups.
KAJ 991	There are still places available on this weekend, which will be of great benefit to all teachers.
KAJ 1320	There are a few places available to Q.T.'s who are interested in taking part please contact [gap:name] immediately but send accommodation fee — £32 to the Office.

Table 12: Search string 2 results (written).

BNC ID	Sentences from Search String 2 (Spoken)
D90 230	But in nineteen forty nine there was less meat available than in nineteen forty four.
D91 455	Were open I mean there's been lots of things done like that I mean you maybe aware of this sort of jazz in the Gilbey bar on Saturday lunch time and that's been running some time then it'll cease to come back again you know if you'll actually counting on the people actually coming cos of the jazz there I think as your looking at it it was slightly up it wasn't a wasn't great influx because there was jazz available so yeah we'll certainly look introducing things into different areas of the theatre but from past experience it doesn't automatically follow that if you can do that then you know it's gonna happen.
F7Y 6	And er [pause] but my husband was down here [pause] er [pause] a good year before we moved down here [pause] because [pause] there wasn't accommodation available [pause] for us to move with i [pause] him you see?
F7Y 12	My daughter was of er [pause] grammar school [pause] erm [pause] tuition [pause] but we couldn't put her into anywhere here because there were [pause] no schools available [pause] Loughton wouldn't take her [pause] neither would [pause] er, Bishop's Stortford because they were the only two grammar schools available here and erm [pause] my dau-- , other daughter [pause] with many other children er, well all the, children of the residency in Tanys Dell and the Glebelands [pause] had to travel [pause] to Chingford every day to school.
FL4 338	There is information available.
HDP 5	Now there are chairs available for additional speakers so if they would come down it would certainly expedite the business of congress.
HVK 38	A new point that I would make, however, in many of those arguments which relate to the impossible or alleged availability of additional windfall sites and land on the inner greenbelt boundary, but I think the analysis which is er carried out is a simplistic one, because it solely relates to residential land requirements, there is no erm attempt to erm bring into the equation whether there is land available for the related employment necessary for that additional residential development, whether there is land available for schools, shops and Mr Davis's recreation uses and so on and all those will very considerably increase the amount of land required to be released to support residential development, wherever it is located and that is something which I believe has not been properly taken into account.

BNC ID	Sentences from Search String 2 (Spoken)
HVK 232	I'm sorry, I just wanted to make a couple of points in response to erm things that people have said in relation to my opening statement, erm Mr Brook er mentioned the fact that er none of the employe-- none of the new settlement proposals of which he was aware, erm included an employment element, erm I just wanted to to place on record the fact that our suggested re-working of policy H two does provide for an explicit land er amount of land for employment purposes, erm as part of the new settlement location, I wanted to say that because I, I'm not invited to appear on your employment day and I do feel that this is an important component of the the H two strategy and clearly that employment component will be drawn from the Greater York allocation, the second point, Mr Sexton erm I believe said that in his view you could not find a site for a larger new settlement er within the or outside the Greater York er greenbelt, erm which would not result in physical coalescence with the existing villages in the area, now I'm not sure whether he was referring to any particular size of larger new settlement, but I invite you to look at the er land range at one to fifty thousand er map of the area and you will see that the area outside the greenbelt is characterized by erm a very rural area with sporadic villages and my believe is that there are erm sites available within that area which could accommodate a larger new settlement, the planning point is of course the larger the new settlement becomes, I think the less that that the reduced number of sites you will have available to accommodate erm that proposal, because of its scale and the third aspect I want to comment on Mr Cunnane and Mr Thomas erm said that Barton Willmore had not made a need argument for the new settlement, well if I'm not mistaken that's what we spent most of this morning discussing under policy H one and I don't erm I don't wish and I don't suppose that I'd be invited to repeat the comments made by Mr Grigson this morning, I don't think there's any need for that, but that establishes in our mind very clearly there is a need for a new settlement in the range of two thousand to two thousand five hundred dwellings, erm in the period up to two thousand and six and I won't say anything more on that.
J3R 576	Some guarantees that, that, that, that er, sort of er, day care facility and possibly a facility for people with er, learning disabilities, that there would be room available on a regular basis, I mean it, I, yes
J8D 1800	the situation is slightly different now [pause] there are other tutors available [pause] and I'm available.
J9C 25	Lincolnshire and Humberside and so er er I've no doubt in my mind that there will be opportunities available to us, er through further capital receipts, in the foreseeable future.
J9T 87	Erm I would have liked to have produced some er tables and diagrams to go with this document, but you will appreciate within the time that we had available, erm that there was insufficient time available to er to prepare that but hopefully that will give you er a basis for considering the, relative merits of the various a-- various erm sectors around York.
JA5 217	Er in relation to King Street er car park, there are there are complications in relation to er the usage of the car parking spaces erm and the health centre and on street car parking erm and we are going to do er further work in surveying the usage of those spaces and how we could perhaps better allocate them to ensure that there are erm spaces available for people who need to get to the surgery [unclear] and the subcommittee will be reporting back to the council.
JA5 474	the provision of electricity and water to the site, but within the original budget and with the estimates and quotations we've had, there will be some money available for the erection of a small sign, so perhaps er I propose that we do that within the budget that we've already established for the purchase of the ground, wh-- which is within budget at the moment, so if there's any spare after the provision of electricity and water to the site, [unclear] suggested.
JJ7 271	There are places available.
JJT 307	He said quote, if there are relatives available, a care package does not normally work.
JNB 631	There are methods available to control foxes.

BNC ID	Sentences from Search String 2 (Spoken)
JNJ 36	The wider range is erm, what might be termed more speculative investments, but there are many shares available within the wider range which are in fact extremely sound and safe investments and the sort which we as trustees would wish to invest in.
JP0 890	Most of the questions are going to be related to to what it is, are there any jobs available or what [unclear] type of thing.
K61 312	Are there any refreshments available at the ground?
K6D 231	To see if there are any tickets available, you click on the arena.
K76 103	My Lords, er the principle of co-option has been described as by a number of Your Lordships as an extension of principal of democracy, but I call on my experience not as er of a year as er Minister for the Police under my Noble Friend Lord Whitelaw, but my three years as Minister for the Prison Service er and er in that er service, there was erm in each prison a Board of Prison Visitors and I observed during that time that the membership of the prison population was becoming increasingly black, but that the membership of the er Boards of Prison Governors was remaining stubbornly white and I er [pause dur="2"] put it, I made it then that I thought there should be something to redress this balance er [pause dur="3"] the system is as it were a supervised co-option, the local er Board makes a proposal and the Minister approves or doesn't, but also I had to refuse five successive of proposed co-options of white members to an all-white prison board for a prison which was predominantly black in population because it was alleged there were no suitable black people available.
KB0 2258	There are a couple of things I would like to say [pause] one is that you will find [pause] people have asked regards [pause] the paper which David mentioned in Northern Ireland [pause] that has been distributed [pause] it was pinned to another sheet of paper [pause] erm, headed The Last Attempt [pause] and there are more copies available [pause] it's simply to know [pause] where to find that [unclear] .
KC8 635	there must be a reason [pause] you know, they, they went well so I've got sixty of them, they take them with me tonight and they said would there be any cakes available for Saturday and I, I think and I nearly said to erm, well last year you reckon you couldn't sell cakes, but anyway I helped her
KRE 140	There are already cars available
KRH 5046	The older the child is the harder it is for him to overcome his difficulty, but there are courses and there are techniques available which definitely do help children to overcome their problems with reading and with spelling and with language as a whole.
KRT 2366	This would put applicants in a very false position, perhaps drive away very talented applicants who might think that there were fewer places available for them, but also to encourage people who might in fact be struggling to go to any university in the country, it might encourage them to apply and to have a reasonable expectation of success because their sporting abilities were outstanding, they would then be disappointed because they would not be admitted and if they were admitted at that level, they would probably have a very unfortunate time at Oxford.
KRX 8	And there's coffee available.

Table 13: Search string 2 results (spoken).

Appendix 2: Material for the Rating Study

Material 1: Questionnaires

This is one of the three versions of the questionnaire that was handed out to the student group. Versions A, B and C differed in the conditions of the item sentences as shown above in Table 3. The questionnaires for natives were identical, with translated instructions and further comments on an electronic version where applicable.

Fragebogen v.A. DE.rev2

Angaben zur Person:

A

Alter _____ Muttersprache _____ Klassenstufe _____

Längerer Aufenthalt in einem englischsprachigen Land (Schüleraustausch oder Ähnliches)? _____ Wenn ja, wo und wie lange? _____

Bewerten Sie die Sätze auf den folgenden Seiten auf einer Skala von 1 (sehr gut/richtig) bis 7 (sehr schlecht/falsch).
Rechtschreibung und Satzzeichen sind nicht relevant. Lesen Sie sich die Sätze durch bevor Sie sie bewerten. Denken Sie nicht allzu lange über die Sätze nach, sondern entscheiden Sie nach ihrem Bauchgefühl.

Beispiel:	Bewertung:
Sue's parents bought her a dog this weekend.	1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
The school children have finally finishing their drawings.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input checked="" type="checkbox"/>

Datenschutz:
Ihre Daten werden vertraulich behandelt und es gibt keine Möglichkeit, den Fragebogen mit Ihrer Person in Verbindung zu bringen.

Vielen Dank für Ihre Teilnahme!

1

Fragebogen v.A_DE.rev2

No.	Satz:	Bewertung:
1	It has never been more difficult to get a good job.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
2	There is the room I was looking for!	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
3	Never did I think about leaving my hometown.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
4	Electrical disturbances on Earth are frequently caused with storms on the surface on the sun.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
5	In New York, there are many buildings tall.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
6	To John, I talked at the party.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
7	Last Friday at John's party, there were many guests students.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
8	Mary hates to drink her tea cold.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
9	Not only did Susan pass the test, but she also got the best grade.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
10	When Bush was elected there were a lot of people present.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
11	Of all the animals, only the whale is bigger than the elephant.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
12	At the meeting, there was not a single person beautiful.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
13	There is a funny man at the corner.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
14	William drove the car drunk after he went to the party.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
15	At school, there are many pupils girls.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
16	Bill never returned to Elizabeth the book he borrowed three years ago.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
17	Outside stood ten police officers.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
18	At the competition, Philip raced the horse tired.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
19	In times of crisis, there is no solution perfect.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
20	Alice drank the barkeeper under the table.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
21	In our classroom, there is one window open.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>

2

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22	Down the street rolled an extremely expensive new sports car.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
23	Mike painted the house red last week.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
24	There is a cinema in our town, but it is expensive.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
25	In our school library, there are hundreds of books novels.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
26	Josh drew the model naked.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
27	When we walked near the river, there was a car red.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
28	Suddenly, there was a loud noise next door.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
29	It was obvious that Peter had no idea what he was doing.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
30	Ray left the room angry.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
31	Back in 1950, there were many women sick.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
32	I was really lucky to get a beautiful photograph of the sun setting over the lake with Bob's camera.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
33	When I learned that I had won a price, it was the happiest feeling that I had ever achieved.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
34	When they were needed, there were no helpers firemen.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
35	Mike gave to Deborah a bottle of the wine she liked so much.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
36	Peter likes his girlfriend blond.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
37	In many Southern countries, there are lots of children unemployed.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
38	John loaded the hay into the wagon full.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
39	Over there in the garden, people are trying to have a barbecue.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
40	An interesting book about dinosaurs, Irene read last week.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
41	Bill wiped the table clean.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
42	Jake knocked the door open for a minute.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>

3

Material 2: Fillers

This table lists the filler sentences used for the rating study in the center column. The type of filler and possible problems are indicated in the right column. Fillers and item sentences were distributed randomly on the questionnaire, with attention on a roughly equal distribution.

Item No.	Filler sentence	Filler type
28	Suddenly, there was a loud noise next door.	ES with PP coda.
24	There is a cinema in our town, but it is expensive.	
13	There is a funny man at the corner.	
18	At the competition, Philip raced the horse tired.	Secondary predication with resultatives. Construction may yield low ratings due to unfamiliarity.
23	Mike painted the house red last week.	
41	Bill wiped the table clean. (Rothstein 2006b:210 [2b])	
20	Alice drank the barkeeper under the table. (cf. Winkler 1997:83 [157a])	
42	*Jake knocked the door open for a minute. (Winkler 1997:5 [8b])	
38	*John loaded the hay into the wagon full. (Winkler 1997:4 [6d])	
26	Josh drew the model naked.	Secondary predication with depictives. Construction may yield low ratings due to unfamiliarity.
8	Mary hates to drink her tea cold.	
14	William drove the car drunk after he went to the party. (cf. Rothstein 2006b:219 [26])	
30	Ray left the room angry. (Winkler 1997:69 [124])	
36	*Peter likes his girlfriend blond.	
39	Over there in the garden, people are trying to have a barbecue.	Deictic <i>there</i> .
2	There is the room I was looking for!	
29	It was obvious that Peter had no idea what he was doing.	Expletive <i>it</i> .
1	It has never been more difficult to get a good job.	
6	To John, I talked at the party.	(Out of context) focus constructions.
40	An interesting book about dinosaurs, Irene read last week.	
35	Mike gave to Deborah a bottle of the wine she liked to much.	Heavy NP shift. Unfamiliar construction?
16	Bill never returned to Elizabeth the book he borrowed three years ago.	
22	Down the street rolled an extremely expensive sports car.	Locative inversion. Unfamiliar word order?
17	Outside stood ten police officers.	
3	Never did I think about leaving my home town.	Negative inversion. Unfamiliar word order?
9	Not only did Susan pass the test, but she also got the best grade.	

Item No.	Filler sentence	Filler type
11	Of all the animals, only the whale is bigger than the elephant. (TOEFL 2013: adapted)	Language proficiency test sentences.
4	*Electrical disturbances on Earth are frequently caused with storms on the surface of the sun. (TOEFL 2013)	
32	?I was really lucky to get a beautiful photograph of the sun setting over the lake with Bob's camera. (LPI 2013)	
33	*When I learned that I had won a price, it was the happiest feeling that I had ever achieved. (LPI 2013)	

Table 14: Filler items.

Material 3: Results

The material collected in this section represents more detailed results for specific items as well as fillers. Red background in a table and bold typeface is used to highlight results where the judgments of natives and students differed by more than 2 on the scale of 1–7, which corresponds to roughly 29% difference. Differences larger than 1 (about 14%) are shown by a yellow table background.

Figure 13 and Figure 14 give a graphical representation of the average ratings for the individual item sentences by both the student group and the control group, respectively.

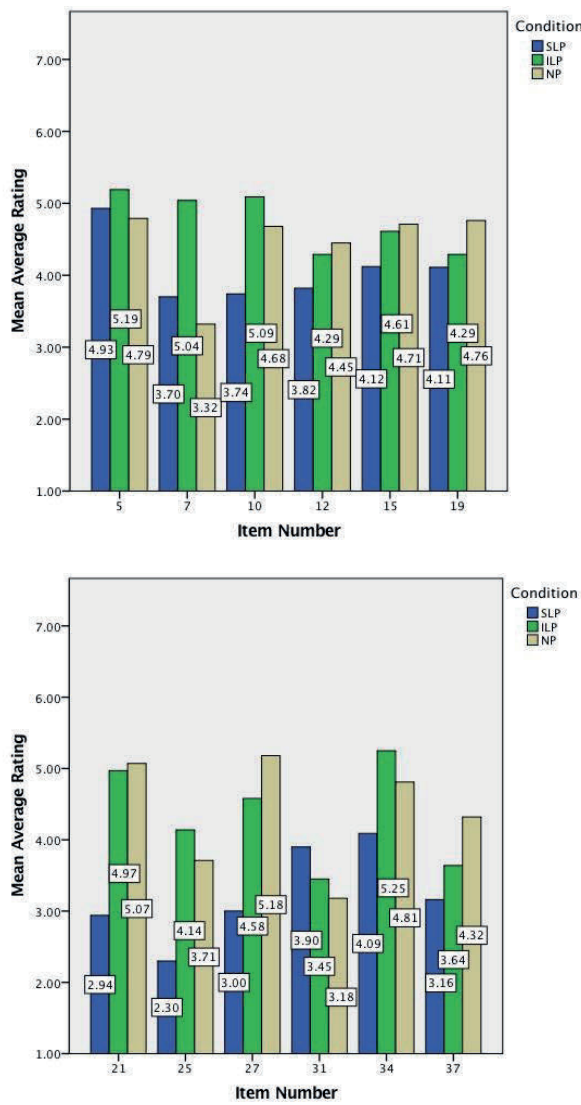


Figure 13: Results (student group).

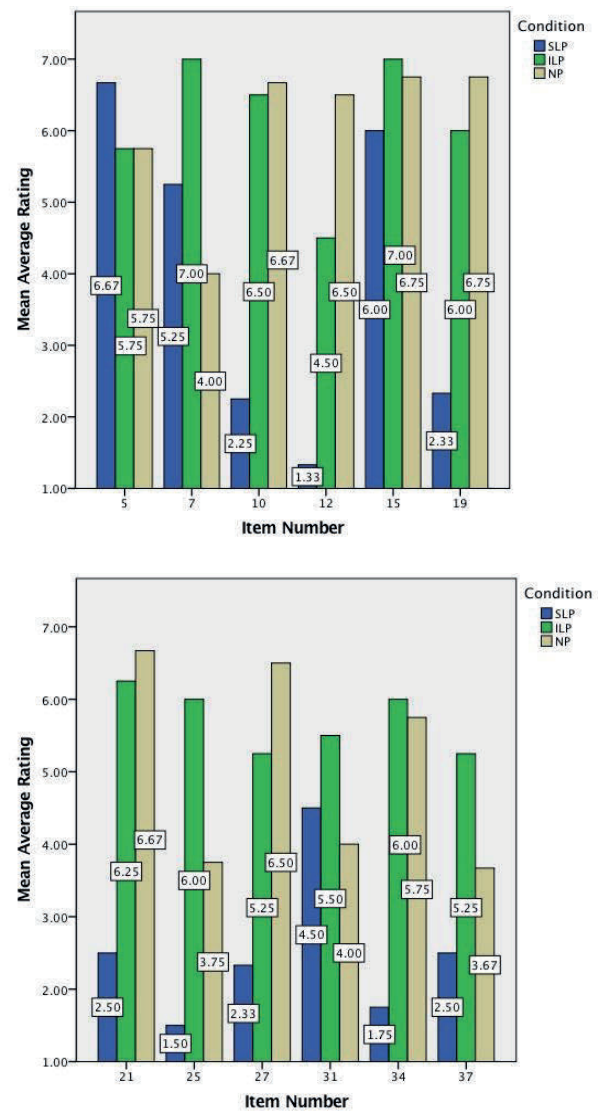


Figure 14: Results (control group).

Table 15 gives the results for the item sentences in the three conditions and compares the ratings from the student group with those of the control group (CG). For each sentence, the three conditions are in the order SLP / ILP / NP in the third column. The last column gives the value of the control group rating minus the student rating.

Item	Sentence	Condition (SLP / ILP / NP)	Ratings		
			Students	CG	Difference
5	In New York, there are many buildings...	dirty	4.93	6.67	1.74
		tall	5.19	5.75	0.56
		skyscrapers	4.79	5.75	0.96
7	Last Friday at John's party, there were many guests ...	drunk	3.70	5.25	1.55
		intelligent	5.04	7.00	1.96
		students	3.32	4.00	0.68
10	When Bush was elected, there were many people ...	present	3.74	2.25	-1.49
		stupid	5.09	6.50	1.41
		doctors	4.68	6.67	1.99
12	At the meeting, there was not a single person ...	hungry	3.82	1.33	-2.49
		beautiful	4.29	4.50	0.21
		an American	4.45	6.50	2.05
15	At school, there are many pupils ...	tired	4.12	6.00	1.88
		young	4.61	7.00	2.39
		girls	4.71	6.75	2.04
19	In times of crisis, there is no solution ...	possible	4.11	2.33	-1.78
		perfect	4.29	6.00	1.71
		an alternative	4.76	6.75	1.99
21	In our classroom, there is one window ...	open	2.94	2.50	-0.44
		round	4.97	6.25	1.28
		an exit	5.07	6.67	1.60
25	In our school library, there are many books ...	missing	2.30	1.50	-0.80
		boring	4.14	6.00	1.86
		novels	3.71	3.75	0.04
27	When we walked near the river, there was a car ...	burning	3.00	2.33	-0.67
		red	4.58	5.25	0.67
		a taxi	5.18	6.50	1.32
31	Back in 1950, there were many women ...	sick	3.90	4.50	0.60
		blond	3.45	5.50	2.05
		housewives	3.18	4.00	0.82
34	When they were needed, there were no helpers ...	available	4.09	1.75	-2.34
		brave	5.25	6.00	0.75
		firemen	4.81	5.75	0.94
37	In many Southern countries, there are lots of children ...	unemployed	3.16	2.50	-0.66
		fat	3.64	5.25	1.61
		criminals	4.32	3.67	-0.65

Table 15: Average ratings for item sentences with SLP / ILP / NP conditions.

Table 16 shows the differences between the ratings of the three conditions for the item sentences. The ILP – SLP and the NP – SLP difference reflects the violation costs of the ILP / NP conditions. The table shows that the violation costs are considerably higher for the control group.

Item	Students			Control group		
	ILP – SLP	NP – SLP	ILP – NP	ILP – SLP	NP – SLP	ILP – NP
5	0.26	-0.14	0.40	-0.92	-0.92	0.00
7	1.34	-0.38	1.72	1.75	-1.25	3.00
10	1.35	0.94	0.41	4.25	4.42	-0.17
12	0.47	0.63	-0.16	3.17	5.17	-2.00
15	0.49	0.59	-0.10	1.00	0.75	0.25
19	0.19	0.65	-0.47	3.67	4.42	-0.75
21	2.03	2.13	-0.10	3.75	4.17	-0.42
25	1.84	1.41	0.43	4.50	2.25	2.25
27	1.58	2.18	-0.60	2.92	4.17	-1.25
31	-0.45	-0.72	0.27	1.00	-0.50	1.50
34	1.16	0.72	0.44	4.25	4.00	0.25
37	0.48	1.16	-0.68	2.75	1.17	1.58
Aver.	0.90	0.76	0.13	2.67	2.32	0.35

Table 16: Rating differences for item sentences.

Table 17 shows the ratings of the filler sentences for students and natives. The difference in the rightmost column is the value of the control group minus the student value.

Item No.	Sentence	Ratings		
		Students	Control group	Difference
28	Suddenly, there was a loud noise next door.	2.48	1.09	-1.39
24	There is a cinema in our town, but it is expensive.	1.77	1.09	-0.68
13	There is a funny man at the corner.	2.18	2.64	0.46
18	At the competition, Philip raced the horse tired.	4.48	5.82	1.34
23	Mike painted the house red last week.	2.25	1.64	-0.61
41	Bill wiped the table clean.	3.25	1.27	-1.98
20	Alice drank the barkeeper under the table.	5.10	2.18	-2.92
42	*Jake knocked the door open for a minute.	4.84	4.45	-0.39
38	*John loaded the hay into the wagon full.	5.01	5.82	0.81
26	Josh drew the model naked.	3.07	3.64	0.57
8	Mary hates to drink her tea cold.	2.62	1.55	-1.07
14	William drove the car drunk after he went to the party.	4.12	4.55	0.43
30	Ray left the room angry.	2.61	1.45	-1.16
36	*Peter likes his girlfriend blond.	4.53	3.09	-1.44
39	Over there in the garden, people are trying to have a barbecue.	3.16	2.00	-1.16
2	There is the room I was looking for!	2.37	2.82	0.45
29	It was obvious that Peter had no idea what he was doing.	1.98	1.00	-0.98
1	It has never been more difficult to get a good job.	2.10	1.27	-0.83
6	To John, I talked at the party.	5.50	6.27	0.77
40	An interesting book about dinosaurs, Irene read last week.	4.85	6.00	1.15
35	Mike gave to Deborah a bottle of the wine she liked to much.	3.79	3.00	-0.79
16	Bill never returned to Elizabeth the book he borrowed three years ago.	4.38	3.73	-0.65
22	Down the street rolled an extremely expensive sports car.	4.02	2.73	-1.29
17	Outside stood ten police officers.	4.11	1.82	-2.29
3	Never did I think about leaving my home town.	5.83	4.36	-1.47
9	Not only did Susan pass the test, but she also got the best grade.	4.78	1.09	-3.69
11	Of all the animals, only the whale is bigger than the elephant.	3.58	1.91	-1.67
4	*Electrical disturbances on Earth are frequently caused with storms on the surface of the sun.	3.75	4.91	1.16
32	?I was really lucky to get a beautiful photograph of the sun setting over the lake with Bob's camera.	3.37	2.09	-1.28
33	*When I learned that I had won a price, it was the happiest feeling that I had ever achieved.	3.88	3.09	-0.79

Table 17: Average ratings for filler sentences.