

“Semantically Vacuous Elements:
Adjectival Inflections and the Article *ein* in German”
(provisional title)

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Preface

Anyone teaching German as a foreign language knows that mastering the adjectival endings and *ein*-words is particularly challenging for students. I became interested in these grammatical points almost 15 years ago when I started working as a Teaching Assistant in the United States. My attention has been captured by these phenomena ever since. A while ago, this interest was refueled by the phrase *Eine Störche!* uttered by my dad during a hike. With my family interested in language, a discussion followed where we agreed that this phrase could be loosely rendered as ‘Wow! So many storks!’. However, my parents are, to this day, surprised that a singular article like *ein* ‘a’ can combine with a plural noun. Wow, indeed! This book attempts to shed some light on this and other issues. In particular, I will focus on two elements: *ein*-words and adjectival inflections.

Thinking back, although the chapter on *ein*-words was the first to be written for my dissertation, it has taken the longest to present it in a more polished form. Although the basic idea is still the same, many details, empirical and analytical, have been added. In the meantime, adjectival inflections have become a second major point of interest for me. Again, while the basic system has already been laid out in Roehrs (2009a: Chap. 4), more “exotic” cases are discussed in the following pages. I believe it is these new details about *ein*-words and adjectival inflections that reveal the true nature of these elements allowing us to formulate some new and interesting hypotheses.

It is my hope that due to its richness of data and analyses, many of which new, this book will be of interest to anyone working on semantically vacuous elements, in general, and on the syntax and semantics of the DP, in particular. With the main focus on German, the book will not be the final word on these topics as the investigation of other languages will surely reveal more interesting facts and lead to other theoretical insights. However, I hope that this book will make a contribution toward the description and explanation of these parts of the grammar, topics I believe have not received due attention. I would be glad if it inspired more work on these, I believe, fascinating empirical and theoretical issues in German and other languages.

The material in this book was presented at different linguistic colloquia and conferences between 2004 and 2012: Baylor University; Honolulu, HI; Porto, Portugal; The Graduate Center, CUNY; University of Amsterdam, the Netherlands; University of California at Berkeley; University of North Texas, University of Pennsylvania; University of Wisconsin at Milwaukee; Yale University. I thank the respective audiences for questions and comments, especially, Marcel den Dikken, Volker Gast, Tom Leu, Erik Schoorlemmer, and Kerstin Ullrich. Parts of Chapter 4 are based on Roehrs (2006a: Chapter 5, Part II). Chapter 7 was supported by a Faculty Research Grant (G34217) from the University of North Texas, which I hereby gratefully acknowledge.

I dedicate this book to my favorite biologist for encouraging me to track down the *Ur*-creatures that gave birth to the beasts discussed in the following pages, to my favorite teacher for persuading me to present this wilderness in a clear fashion, and to my favorite psychiatrist for trying to keep me out of harm’s way. *Danke, Siggi, Rosen und Keule!* I hope I have not failed you guys!

Denton, Month Year
Dorian Roehrs

Chapter 1: Introduction

1. Vacuous Elements – an Imperfection of Language?

In many languages, ordinary sentences contain a nominative subject. Nominative case is often taken to be “structural”, that is, assigned under certain syntactic conditions. This type of case has received an enormous amount of attention in the linguistic literature. In the generative tradition, structural case – often spelled Case – is frequently represented by uninterpretable features. Recently, Chomsky (e.g., 2000: 119) has pointed out that uninterpretable features may be an imperfection in the design of languages. Specifically, structural case may receive no interpretation in either PF or LF. Putting oneself in the position of a language engineer, one may wonder why these elements exist at all.

Besides these abstract features, there are also word-level elements that raise similar issues. Although these elements do get an interpretation in PF, they seem to have no semantics either. In the next section, I briefly illustrate two such cases that have been intensively discussed in the literature: expletive *there* and the proprial article. The former has left a tremendous impact on the field of linguistics; the latter somewhat less so. In the second section, I discuss two elements that have received much less attention in this regard: German adjective inflections and the indefinite article *ein* ‘a’. I will suggest that given a certain perspective, these elements are not a design flaw after all.

1.1. The Clause

Sentence pairs such as (1) have received an enormous amount of attention in the literature. Clauses like (1b) are usually referred to as *there*-existentials:

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

Note first that both sentences in (1) have very similar meanings: they are about a man being in the garden. Importantly, as Hazout (2004: 396) points out, *there* itself cannot have any semantics. For instance, if *there* were a deictic element, its distal semantics should clash with the proximal meaning of *here* in (2a). Evidently, this is not the case. Second, the unaccusative predicate *arrive* assigns one theta role in (2b), namely to the subject *three men*. With the classical Theta-Criterion satisfied, *there* cannot be an argument or a predicate. If *there* makes no semantic contribution, then we expect that it can be left out without a significant loss in meaning. This is borne out as can easily be verified in (2c):

- (2) a. There are too many people here.
 b. There arrived three men.
 c. Three men arrived.

If *there* is indeed an expletive (i.e., pleonastic) element, then the slight semantic contrast between (2a) and (2b) above cannot stem from *there* but must be due to something else.

There are many accounts that try to come to terms with *there*-existentials (for a brief survey of some of the relevant issues, see, e.g., Lasnik & Uriagereka with Boeckx 2005: 153-169). For concreteness, let me briefly illustrate the basic account in Chomsky (1991 [reprinted in 1995]), one of the first proposals in the Minimalist tradition.

Relevant for current purposes, Chomsky (1995: 154-7) assumes the Principle of Full Interpretation, according to which all elements in a linguistic expression must have an interpretation in LF. Above, we showed that *there* is semantically vacuous; that is, it can, by itself, not be interpreted. To explain the grammaticality of *there*-constructions, Chomsky proposes that *there* is an LF-affix that the overt noun phrase, the associate, adjoins to. As the expletive is licensed by adjunction of another element at LF, Full Interpretation is not violated. For current purposes, I will assume that this is basically correct. With pleonastic elements available in the clause, one might expect that they can also appear in the nominal domain.

1.2. The Noun Phrase

In a seminal paper, Longobardi (1994) develops a theory of noun movement in syntax and LF to account for a number of differences and similarities between the Romance and Germanic languages. With current purposes in mind, Longobardi (1994: 651) suggests that the following alternation can be related to the *there*-existentials in the previous section. Specifically, similar to above, the nominal may appear in a high position, (3a), but also in a lower position, (3b). The latter option is possible when the definite article is present:

- (3) a. *Gianni mi ha telefonato.* (Italian)
Gianni me has called
'Gianni called me.'
- b. *Il Gianni mi ha telefonato.*
the Gianni me has called
'Gianni called me.'

Importantly, both noun phrases in (3a) and (3b) are interpreted as specific definite; that is, the definite article in (3b) does not make a semantic contribution (see also Vergnaud & Zubizarreta 1992). In fact, note that if the definite article in (3b) were to make a contribution, it would raise issues with regard to the redundancy of certain semantic components. In particular, as is well-known, singular definite articles typically presuppose the existence of a unique entity. At the same time, proper names already denote unique individuals by themselves. To avoid this issue, we can claim that the proprial article functions as an expletive element similar to *there* above.

Longobardi proposes that (3a) and (3b) differ in that (3a) involves movement of the noun to D. Among others, this N-to-D movement lexically licenses the null D position of a syntactic argument and it obviates a default existential interpretation. With the discussion of *there*-existentials in mind, let us assume that this movement is overt in (3a) but covert in (3b). There is other distributional and morphological evidence that the noun undergoes movement and that this article is different from other types of determiners.

Simplifying somewhat, Longobardi (1994: 623) points out that the proper name can precede or follow a possessive adjective. Compare (4a) and (4b). Importantly, if the proper name follows the possessive adjective, the definite article must appear. Observe the difference in grammaticality between (4b) and (4c):

- (4) a. *Gianni mio ha finalmente telefonato.*
 Gianni my has finally called
 ‘My Gianni finally called.’
- b. *Il mio Gianni ha finalmente telefonato.*
 the my Gianni has finally called
 ‘My Gianni finally called.’
- c. * *Mio Gianni ha finalmente telefonato.*
 my Gianni has finally called

Similar to the paradigm in (3), he proposes that the noun moves from a lower position as in (4b) to the higher position D as in (4a). The example in (4c) is out because the empty D is not lexically licensed in syntax, something the Romance languages require.

Second, Longobardi (1994: 656) provides evidence that pleonastic articles can be morphologically different from substantial articles. Compare (5a) involving a proper name to (5b) containing a common noun:

- (5) a. *en Pere* (Catalan)
 the Peter
 ‘Peter’
- b. *el gos*
 the dog
 ‘the dog’

Given the difference in (5), we have a strong argument that articles come in different types with different semantics.

To sum up, I take it as established that there are expletive elements in the clause as well as in the noun phrase. To review some of the advantages, the assumption of semantically vacuous elements allows us to avoid certain issues involving contradictions (e.g., deixis) and redundancies (e.g., uniqueness). Furthermore, the assumption of such elements explains that these elements can be left out without a significant change in meaning. In order not to violate Full Interpretation, the pleonastic element must be licensed. Interestingly, in both cases, this licensing process involves movement of the nominal to the expletive element. In the two accounts above, we have also observed that expletive elements can be bound (i.e., affixal) or free morphemes.

With this in mind, one might wonder if there are other semantically vacuous elements. In fact, one might wonder why these elements exist in the first place. The first question will be discussed in quite some detail for the noun phrase in German. The second question is much harder and will only be briefly addressed in this book. I will suggest that these types of elements

facilitate language acquisition. In that sense, I believe that semantically vacuous elements are not an imperfection of language.

2. Scope of the Book and Survey of the Chapters

2.1. Adjectival Inflections and the Article *ein* 'a'

Taking German as the main language under investigation, this monograph focuses on two elements. While adjectival inflections and *ein* 'a' are overt elements and thus receive an interpretation in PF, I will argue that they are semantically vacuous. Adjectival inflections are affixes and *ein* is, at least in some cases, a free morpheme. I will suggest below that the former is licensed by movement of the adjective stem and the latter by that of certain covert operators.

Let me provide a brief illustration of the reasons why I believe these elements are of such great interest. Similar to the cases in the previous section, adjectival inflections and *ein* seem to exhibit semantic properties that lead not only to a certain amount of redundancy but also to some contradictory conclusions. These issues disappear if we assume that these elements are semantically vacuous. In fact, there is evidence that they also show characteristics of having no meaning at all.

Tradition has it that adjectives in German can take a strong or a weak ending. The distribution of these endings is sometimes referred to as the strong/weak alternation of adjectival inflection. It is often suggested that the type of ending correlates with (in-)definiteness. In particular, a strong (ST) inflection occurs in an indefinite context, (6a), and a weak (WK) ending in a definite environment, (6b):

- (6) a. *lauter dumme Idioten*
many stupid(ST) idiots
'many stupid idiots'
- b. *wir dummen Idioten*
we stupid(WK) Idiots
'us stupid idiots'

However, a weak inflection can also occur in an indefinite context and a strong ending is certainly possible in a definite environment as well. Consider (7a) and (7b):

- (7) a. *mancher kluge Freund*
some smart(WK) friend
'many a smart friend'
- b. *Peters kluger Freund*
Peter's smart(ST) friend
'Peter's smart friend'

It is clear from the two paradigms in (6) and (7) that strong endings do not correlate with indefiniteness or weak endings with definiteness. Below, I will demonstrate that this holds more

generally. Faced with these contradictory patterns, I will propose that adjectival inflections are semantically vacuous; that is, the strong/weak alternation is not a reflex of (in-)definiteness. If these elements are indeed without semantics, then we expect that they can be left out without a change in meaning.

As is well-known, adjectival inflections do not appear under certain conditions. Specifically, while adjectives must be inflected before the noun, (8a-b), they remain uninflected when they follow it, (8c):

- (8) a. *ein auf seine Frau stolzer Mann*
 an of his wife proud(ST) man
 ‘a man proud of his wife’
- b. *der auf seine Frau stolze Mann*
 the of his wife proud(WK) man
 ‘the man proud of his wife’
- c. *{ein / der} Mann unglaublich stolz auf seine Frau*
 a / the man incredibly proud of his wife
 ‘a / the man incredibly proud of his wife’

Comparing (8a) and (8b) to (8c), there is no change in (in-)definiteness. To be clear, then, the presence or absence of adjectival inflections makes no difference with regard to (in-)definiteness. In fact, I will demonstrate below that these elements are not a reflex of other semantic concepts such as (non-)restrictiveness of the interpretation of modifiers, referentiality, number, or emotiveness either. With this in mind, consider the following noun phrases where (9a) is in the nominative and (9b) is in the dative. In keeping with the facts above, the strong and weak endings occur both in indefinite and definite contexts:

- (9) a. *{sein / ein} rotes Auto*
 his / a red(ST) car
 ‘his / a red car’
- b. *mit {seinem / einem} roten Auto*
 with his / a red(WK) car
 ‘with his / a red car’

With semantic reasons like (in-)definiteness unlikely to explain the strong/weak alternation, it seems more promising to find an explanation elsewhere. Considering the cases in (9), let us assume that possessive pronouns consist of a possessive element (*s-*) and *ein* ‘a’. If so, the types of adjectival endings seem to be a function of preceding *ein*. One might claim then that the strong/weak alternation is a reflex of the semantics of *ein* (perhaps depending on the different morphological cases). However, like above, *ein* exhibits not only contradictory properties with regard to the semantics but also characteristics of having no meaning at all.

It is often claimed that *ein* is semantically singular in meaning. Specifically, (10a) makes mention of the fact that a stork was seen and (10b) emphasizes the fact that only one stork has a certain property:

- (10) a. *Wir haben gestern einen Storch gesehen.*
 we have yesterday a stork seen
 ‘We saw a stork yesterday.’
- b. *Nur EIN Storch war auf der Wiese!*
 only one stork was in the meadow
 ‘Only one stork was in the meadow.’

Crucially, *ein* can also imply the existence of a second individual such that the first clause in (11a) often, but not always, occurs with the second one put in parenthesis. In fact, *ein* can be part of a noun phrase denoting a more numerous plurality of entities, (11b):

- (11) a. *Der eine Storch blieb stehen (, der andere flog weg).*
 the one stork remained standing, the other flew away
 ‘One of the two storks stopped walking, the other flew away.’
- b. *Eine Störche waren da!*
 a(PL) storks were there
 ‘Wow! So many storks were there!’

Similar to adjectival endings, we seem to be faced with a contradictory state of affairs; that is, *ein* seems to imply not only singularity but also different pluralities. Again, I will propose that *ein* has no semantics at all. If so, then we expect that *ein* can be left out without a change in meaning.

To illustrate this point, consider nominals in predicate contexts. Note that the example in (12a) involves *ein* but that the one in (12b) does not:

- (12) a. *Er ist ein Mann.*
 he is a man
 ‘He is a man.’
- b. *Er ist Lehrer.*
 he is teacher
 ‘He is a teacher.’

It is clear that both of these predicate nominals denote a property; that is, *ein* does not seem to make a semantic contribution with regard to number. Rather, the presence of *ein* is a function of the different types of nouns in (12). Thus, similar to adjectival endings, we may conclude that the presence or absence of *ein* makes no difference with regard to the semantics, here illustrated with number. In fact, I will show below that this type of element is not a reflex of other semantic concepts such as indefiniteness or a certain type of emotiveness either.

To recapitulate, we have illustrated some cases where adjectival inflections and *ein* seem to imply contradictory conclusions about their semantic contribution. At the same time, we have seen that these elements seem to have no semantics at all. We suggested that adjectival inflections and *ein* are semantically vacuous. Returning to the more general issues, what is

interesting then about adjectival endings and *ein* is that they are overt elements but that they receive no interpretation in LF.

2.2. Main Hypotheses

If it is true that adjectival inflections and *ein* are semantically vacuous, then one may wonder what their function is; that is, why they exist at all. This question is particularly interesting in view of the fact that similar to the expletives in the first section, these elements can also cooccur. In other words, one of the occurrences seems to be redundant. Again, this can be illustrated for both adjectival inflections, (13a), and *ein*, (13b), assuming that the negative article *kein* ‘no’ consists of a negative element and *ein* and that *’ne* is the reduced form of feminine *eine*:

- (13) a. *frischer heißer Kaffee*
fresh(ST) hot(ST) coffee
‘fresh hot coffee’
- b. *keine so ’ne Frau*
no so a woman
‘no such woman’

Note first that neither of the two adjectives in (13a) can have a weak ending or can occur with no ending at all. Similarly, *’ne* in (13b) cannot be left out. Now, if adjectival inflections and *ein* were to make specific semantic contributions, then it would remain unclear why several instances of the same elements can, and in these cases must, co-occur. Again, this curious fact finds a natural explanation if we assume that adjectival endings and *ein* are semantically vacuous. However, I will suggest that they are not entirely devoid of function.

Beginning with the commonalities, let us first point out that although this book will focus on inflections on adjectives, it is well-known that determiners have the same endings. Compare (14a) to (14b):¹

- (14) a. *frisch-er Kaffee*
fresh-ST coffee
‘fresh coffee’
- b. *d-er Kaffee*
the-ST coffee
‘the coffee’

In the absence of evidence to the contrary, I will assume that the inflections in (14a) and (14b) are the same. Note again that a strong ending can occur in both indefinite and definite contexts. Let me refer to both the strong and the weak endings as ‘adjectival’ inflections. With this in place, we can state the main hypotheses that adjectival endings and *ein* have in common:

¹ There is one important qualification here. Unlike adjectives, determiners typically do not have a weak ending. As we will see in Chapter 2, this follows from the fact that on the one hand, determiners are the triggers for weak endings but on the other, they co-occur only under certain conditions.

- (15) Adjectival inflections and *ein* are
- a. expletive elements,
 - b. make certain nominal features visible, and
 - c. indicate different sizes of nominal structure with inflections performing this task in the higher layers of the DP and *ein* in the lower layers.

The main claims about the differences are:

- (16) Different types of adjectival inflections indicate nominal structures involving different degrees of embedding of adjectives in simple vs. complex DPs.
- (17) *Ein* supports overt semantic operators (e.g., NEG) and “flags” the presence of covert semantic operators (e.g., TYPE).

Having stated the main hypotheses of this book, let me provide a brief survey of the individual chapters.

2.3. *Survey of the Chapters*

The book pursues two goals. First, it attempts to provide a survey of certain synchronic aspects in the nominal domain in German. In particular, chapters 2-7 discuss adjectival inflection, *ein*-words, and consequences of the proposed analyses.

The second goal is to find commonalities between these different phenomena; that is, to tie these analyses together to offer some remarks about the larger issues involved. The eighth and final chapter focuses on identifying similarities and differences of adjectival inflections and *ein* in the nominal constructions discussed in the previous chapters. There we engage in a summary discussion of the hypotheses in (15) to (17). Furthermore, making a few relevant comparative remarks throughout the book, I will show that German differs from even closely related languages like Norwegian or Yiddish on these points. We will wind up suggesting that at least in German, these two vacuous elements presumably facilitate the acquisition of the language.

It is important to point out that both of these goals go in partially different directions. Specifically, a survey tries to be fairly exhaustive but discussing the larger issues is an attempt to see what different sub-domains, empirical or theoretic, have in common. As such, discussing issues to some comprehensive degree tends to move the focus away from traits shared by different domains. However, as already briefly illustrated above, the discussion of one phenomenon often forms the background for the analysis of another. It is due to the shared properties and the interwoven argumentation that I believe that adjectival inflections and the article *ein* should be discussed in tandem.

The book is organized into two primary chapters (2, 4), four supporting chapters (3, 5-7), and a conclusion (8):

Chapter 2 (*The Structural Nature of Adjectival Endings*) Taking the system developed in Roehrs (2009: Chapter 4) as a point of departure, this chapter investigates the inflectional behavior of adjectives in a wide range of nominal constructions, many of which are typically not discussed in this respect. Pulling together some of the strings of other previous work, it reaches the novel conclusion that the strong/weak alternation of adjectival inflections is due to different syntactic structures and several mechanisms. Illustrating that the Scandinavian languages are

different in this regard, weak endings in German are the result of a reduction process (Impoverishment) occurring in a regular DP. In contrast, strong endings surface as the unreduced (elsewhere) case. It is argued that several other mechanisms “mask” this general picture.

Chapter 3 (*Some Consequences of the Analysis*) This chapter discusses some consequences of the first part of the book. Specifically, it is shown that weak adjectival endings raise issues for structures involving Predicate Inversion (Bennis, Corver & den Dikken 1998) and for accounts proposing the presence of certain null nouns (van Riemsdijk 2005). Furthermore, it is argued that the present analysis is not compatible with certain discontinuous noun phrases (i.e., split topic constructions) if simply analyzed as movement (van Riemsdijk 1989) but only if analyzed as involving the separate base-generation of two nominals where one or both of these nominals later undergo movement (Fanselow 1988). Finally, it is suggested that non-restrictive adjectives must have the same basic structure as restrictive ones and that strong endings are not “referential” in nature but serve to make nominal features visible.

Chapter 4 (*Ein-words and Adjectival eine*) The indefinite article and singularity numeral have been discussed for English in quite some detail (Perlmutter 1970). However, German and many other languages have not received as much attention in this empirical domain. Exemplifying with Yiddish, it is shown that care must be taken if one attempts to compare different, even very closely related, languages in this part of the grammar. In view of these potential issues, this chapter is intended to plug that empirical and theoretical hole for German only. Illustrating different types of *ein*-words, it is argued that there are two types of *ein* in German: semantically vacuous *ein*, which forms part of a number of complex forms (e.g., *kein* ‘no’ and *mein* ‘my’), and adjectival *eine*, which is an independent element that can only occur in definite contexts.

Chapter 5 (*Possessive ein-words*) This chapter presents the first consequence of the second major component of this book. Revisiting and modifying Anderson (1983-84), it is proposed that all possessives consist of a head and a possessor complement. Assuming that certain possessive heads are made up of a possessive element and vacuous *ein*, this composite analysis accounts for a number of distributional and inflectional asymmetries vis-à-vis proper name possessives, on the one hand, and vis-à-vis pronominal possessives in older varieties of German, on the other. It is shown that older varieties of German are more similar to the Modern Scandinavian languages than both of these languages are to Modern German. I propose that over time possessive pronouns were split into two parts: a possessive element and *ein*.

Chapter 6 (*Ein and Emotiveness*) This chapter discusses another consequence. Comparing the different interpretations of pronominal and copular constructions such as *du Bauer* ‘you peasant’ and *du bist Bauer* ‘you are a farmer’, the addition of *ein* as in *du bist ein Bauer* seems to bring about an additional emotive reading. Not only does *Bauer* denote ‘farmer’ now but also ‘peasant’, where the referent is ascribed certain stereotypical properties of a profession without implying that he actually works in that profession. I will argue that *ein* is not responsible for this effect. Rather, following Rauh (2004) and de Swart, Winter & Zwarts (2007), I propose that this emotive reading is due to certain pragmatic restrictions and the realization operator REL. The presence of the latter is “flagged” by *ein*.

Chapter 7 (*Ein and Number*) This chapter presents a third consequence of Chapter 4. Comparing again the nominal and clausal domains, I show that the DP is very restricted with regard to morphological and semantic number; that is, a singular DP is singular in interpretation and a plural DP is plural in interpretation. In contrast, the CP is, under certain conditions, more flexible in its interpretations; for instance, *ihr seid Arzt* ‘you(PL) are doctor(SGL)’ involves a

non-plural noun that is compatible with a plural pronoun and its meaning. I propose that DPs always project NumP for concord but that copular constructions may optionally lack NumP, provided NumP is the highest phrase of the predicate nominal. It is shown that *ein* does not determine number, neither morphological nor semantic, but that it flags the presence of a certain amount of structure and an operator.

Chapter 8 (*Concluding Remarks*) This chapter ties the previous chapters together. Focusing on the two major threads of this book, it concludes that both adjectival inflections and *ein* make morpho-syntactic features visible and that both are semantically vacuous elements. Furthermore, both elements indicate structure in the noun phrase where adjectival inflections are not only a reflex of different structural sizes but also indicate different degrees of embedding of adjectives. Moreover, unlike inflections, *ein* also makes certain semantic operators visible. Finally, the chapter closes with some cases that cannot be covered in this book and some brief remarks as to what all semantically vacuous elements might have in common.

Chapter 2: The Structural Nature of Adjectival Endings

1. Introduction

One of the most interesting features of the Germanic languages is the fact that adjectives can take – what is traditionally called – strong or weak endings. Illustrating with German, compare the following typical inflectional alternation on adjectives where the ending is strong (ST) when no determiner is present and it is weak (WK) when there is a determiner. Let us exemplify these patterns in the nominative case using a singular masculine mass noun and a plural count noun (for a complete survey of all the combinations of gender, number, and case, see Duden 1995):

- (1) a. *frischer Kaffee*
fresh(ST) coffee
'fresh coffee'
- b. *der frische Kaffee*
the fresh(WK) coffee
'the fresh coffee'
- (2) a. *nette Frauen*
nice(ST) women
'nice women'
- b. *die netten Frauen*
the nice(WK) women
'the nice women'

These are the basic patterns. I will label the phenomenon involving the two related forms of the adjective 'the strong/weak alternation'. Although it is actually the ending of the adjective that alternates, I will frequently refer to these cases simply as strong or weak adjectives.

These inflectional patterns have been extensively discussed in the literature. At first glance, one might claim that the strong and the weak endings correlate with an indefinite or definite interpretation of the noun phrase. In the (a)-examples above, the interpretation with the strong adjectives is indefinite but in the (b)-examples, the interpretation with the weak adjectives is definite. In other words, one could suggest that these different inflections are a reflex of the varying semantics of the noun phrase.

Traditional discussions of this topic claim that this is indeed the case in the older Germanic languages (for some interesting recent discussion, see Lohrmann 2010: 60-62). However, as Harbert (2007: 130-137) points out, this is not without problems. In fact, he claims that the two sets of endings developed from a – what he calls – semi-regular distribution toward regularization and functionalization. This development occurred in different ways: in the Scandinavian languages, the alternation signals (in-)definiteness (cf. Lohrmann 2011); in German, it developed into an economy principle such that the strong ending is limited to exactly one per noun phrase (Esau 1973).

While I basically concur with Harbert, I believe the German facts are more complicated. Note already here that Esau's economy condition does not account for multiple occurrences of strong endings in cases like *frischer schwarzer Kaffee* 'fresh black coffee'. Before we turn to a detailed discussion of the strong/weak alternation in German, let me provide two types of evidence that German is indeed different from the Scandinavian languages; that is, that the German inflections do not correlate with (in-)definiteness. This point can be made on the basis of language-internal and language-external considerations.

Starting with the latter, it is well-known that adjectives in vocatives behave differently: in German, the adjective is strong; in the Scandinavian languages, here exemplified by Norwegian, the adjective is weak:

- (3) a. *Dummer Idiot!* (Modern German)
 stupid(ST) idiot
 'Stupid idiot!'
- b. *Dumme idioten!* (Norwegian)
 stupid(WK) idiot-the
 'Stupid idiot!' (Svenonius 1993b: 208)

Parallel to (3), possessives involving proper names also show a different inflection on the adjective in the two languages:

- (4) a. *Peters großes Auto*
 Peter's big(ST) car
 'Peter's big car'
- b. *Pers store bil*
 Per's big(WK) car
 'Per's big car'

I know of no evidence that shows that the definiteness value of these vocatives and possessives is different in the two languages and yet, both languages show different endings on the adjective. In this holds true, then adjectival endings do not reliably indicate the definiteness of noun phrases across different Germanic languages. Interestingly, this lack of correlation can be made even more forcefully language-internally.

Depending on the morphological case, indefinite noun phrases and possessives involving pronouns take either a strong adjective or a weak adjective. Compare the noun phrases in the nominative in (5a) to those in the dative in (5b):

- (5) a. *{ein / mein} großes Auto*
 a / my big(ST) car
 'a / my big car'
- b. *mit {einem / meinem} großen Auto*
 with a / my big(WK) car
 'with a / my big car'

However, it is not clear that in German different morphological cases are related to different values for definiteness. In fact, this alternation can even be exemplified with one and the same lexical item where the morphological case remains unchanged. For instance, the quantifier *manch-* ‘some’ is indefinite. If it is inflectionless, the adjective is strong; if it has a strong ending, the adjective is weak. The latter case is marked by square brackets, (6a). Similarly, the pronominal determiner *wir* ‘we’ is definite but can occur with both types of endings, (6b) (% marks a less preferred but certainly possible form):

- (6) a. *manch[e] nette[n] Studenten*
 some[ST] nice(ST/[WK]) students
 ‘some nice students’
- b. *wir {netten / %nette} Studenten*
 we nice(WK/%ST) students
 ‘we nice students’

To summarize, then, it is clear that at least in German, different adjectival endings do not correlate with differences in definiteness.¹

The following discussion will focus on German throughout with a few cross-linguistic remarks if the phenomenon under discussion shows an interesting contrast between German and another language. Restricting the discussion to attributive adjectives, I will reach the conclusion that, at least in German, adjectival inflections are semantically vacuous and that the strong/weak alternation is not simply a surface phenomenon. Rather, it is, in part, a reflex of different structures of the noun phrase. In fact, this alternation will be argued to be a good probe into the structure, but not the semantics, of the nominal domain. In light of this claim, a number of other cases appear to be “exceptional”. It is proposed that the inflectional patterns of nominal elements in German are the reflex of several mechanisms that “mask” the main underlying mechanism. To make this point, I will return to the above examples and add many others.

In more detail, it is proposed that the derivation of the weak ending must take a certain structure into account. It is argued that it is not just the presence of certain determiners that brings about a weak ending but that a weak ending is only possible in one structural constellation. In particular, I propose that an inflection is weak when its host, the adjective, occurs in a regular DP and undergoes a certain morphological process. This process is taken to be Impoverishment and is triggered by a determiner. The diverse distribution of the strong endings illustrated at length below is explained by the claim that Impoverishment does not occur, either because there is no determiner or because the determiner or the adjective is in a different position.

The chapter is organized as follows: the first part of the chapter contrasts the one context where weak inflections are found (i.e., garden-variety DPs) with several other contexts where strong endings occur. It is proposed that the latter cases involve different structures. Section 3

¹ In joint work, Marit Julien and I show that German and Norwegian differ quite generally in this regard. For instance, documenting with nine sets of data (possessives involving proper names and pronominals, embedded and unembedded proper names, “disagreeing” pronominal DPs, appositives, definite adjectives, vocatives, and discontinuous noun phrases), we show in Julien & Roehrs (2012) and Roehrs & Julien (2012) that German consistently has a strong ending but Norwegian has a weak ending.

provides an explanation of all these cases in terms of the (non-)application of the mechanism Impoverishment, which is partially “masked” by some additional, secondary mechanisms. Section 4 discusses some previous proposals and section 5 concludes the chapter.

2. Garden-variety DPs vs. Other Nominals

In this section, I contrast ordinary noun phrases with less canonical nominal constructions. I will follow much of the research tradition initiated by Abney (1987) and assume that the former type of case involves a regular DP-structure. With the determiner in a separate DP-layer and the adjective in a Specifier just below that, I assume that this is the crucial constellation to derive the weak endings on adjectives in German. It will be proposed that determiners are responsible for bringing about the weak endings on adjectives (for the actual mechanics, see section 3). In contrast, the more “exotic” cases will be argued to involve structures, different from regular DPs and different from one another. Some independent evidence will be provided for the individual structures (for detailed discussion, see the original sources).

Proposing that weak endings occur in regular DPs only, there are methodologically two distinct options to come to terms with the strong endings: (i) one could claim that the determiner is in a position where it cannot have an impact on the adjective; (ii) one could claim that the adjective itself is outside the determiner’s regular domain of influence.² Note that in each of these scenarios, the structural relation between the determiner and the adjective differs from that of ordinary DPs. The following discussion will feature both options. For expository clarity, the “special” position of either the determiner or the adjective will be marked by square brackets in the relevant tree diagrams. Note finally that with the exception of indefinite pronoun constructions (section 2.2), all noun phrases involve definite determiners and one might expect weak endings on the adjectives. As we will see, this is not borne out. Again, the adjectival inflection in German cannot be a reflex of the definiteness of the containing noun phrase.

2.1. Regular DP vs. Low Right-Adjunction: Close Appositions

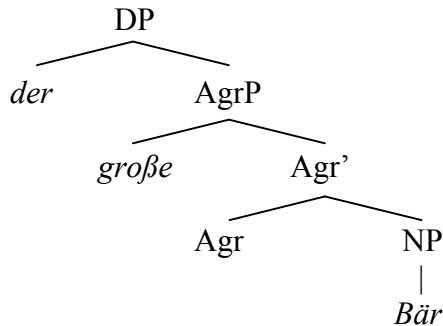
Let us begin with a garden-variety noun phrase, (7a), and compare it to a noun phrase where a name-like nominal such as *Großer Bär* ‘Big Bear’ is attached to the right of another nominal, (7b). It is clear that the former must involve a weak and the latter a strong ending on the adjective:

- (7) a. *der große(*r) Bär*
 the big(WK/*ST) bear
 ‘the big bear’
- b. *der Indianer Große*(r) Bär*
 the indian big(ST/*WK) bear
 ‘the Red Indian Big Bear’

² As a third option, one could suggest that both the determiner and the adjective are in non-canonical positions. To keep things simple, I will not consider this possibility.

Turning first to (7a), I follow much work on the structure of the noun phrase and assume that the determiner is in DP (Abney 1987), the adjective is in the Specifier of AgrP (Cinque 1994, 2010) and the noun projects an NP (for a general survey, see Alexiadou, Haegeman & Stavrou 2007). In other words, the structure of ordinary DPs is as follows:³

(8) *Regular DP-structure (simplified)*



I take this to be the structural constellation where the weak endings come about (again, for the actual mechanics, see section 3). With the adjective strong in (7b), something else must be assumed to explain that example.

In certain dialects in German, proper names can take an optional article as in *(die) Anna* ‘Anne’. As noted by Löbel (1991), this optional proprial article is not possible with close appositions, (9a), and the name has to follow the noun it specifies, (9b):⁴

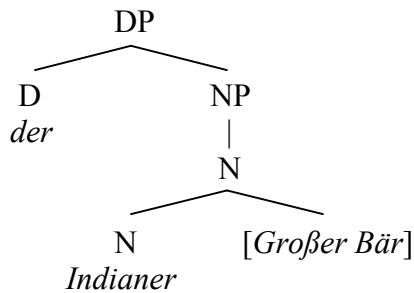
- (9) a. *die Tochter (*die) Anna meines Bruders*
 the daughter the Anna of.my brother
 ‘Anne, my brother’s daughter’
- b. * *die Tochter meines Bruders (die) Anna*
 the daughter of.my brother the Anna

I propose that a different structure is involved in (7b), where the name-like element is attached to the head noun of the DP (e.g., Roehrs 2009b):

³ This structure is simplified in as much as I abstract away here from some other DP-internal phrases (for discussion, see Julien 2005a, Roehrs 2009a). With successive-cyclic movement of determiners from a lower position (section 3), the presence or absence of other phrases does not make a difference for the account developed below.

⁴ The second example improves significantly if there is a long pause after *Bruder* ‘brother’ (see the discussion of loose appositions in section 2.3).

(10) *Close appositions*



Note that the adjective is not in the Specifier position below the determiner – the constellation that brings about the weak ending. This, then, is the first context for a strong ending.

2.2. *Regular DP vs. Mid Right-Adjunction: Indefinite Pronoun Constructions*

Roehrs (2008) argues that indefinite pronoun constructions involve several different types. With current purposes in mind, there are two types relevant here: one type shows a weak ending (see also Roehrs to appear), (11a), and the other shows a strong ending, (11b):

- (11) a. *jeder andere^(%r)*
 every(one) different(WK/[%]ST)
 ‘everyone different’
- b. *wer andere^{*(r)}*
 someone different(ST/*WK)
 ‘someone different’

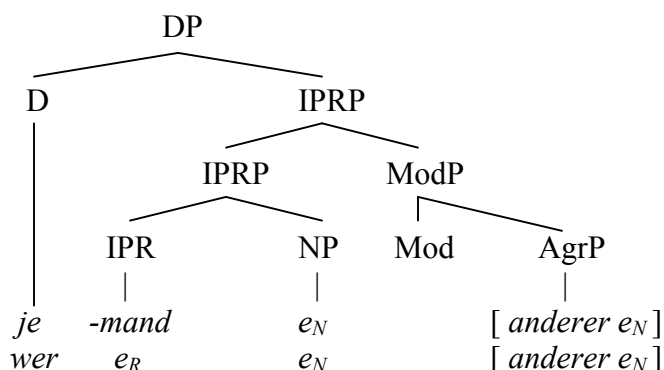
It is argued there that, although both types involve concord between the pronominal element and the adjective, they involve different structures. If so, this also means that concord can only be a necessary, but not sufficient, condition for the occurrence of a weak ending. Turning to the individual structures, let us first point out that there are other important differences between these two types. Among others, the first type allows an overt noun but the second crucially does not:

- (12) a. *jeder andere Mann*
 every(one) different(WK) Mann
 ‘every different man’
- b. * *wer andere(r) Mann*
 someone different(ST/WK) Mann
 ‘some different man’

As discussed in that paper, I assume that the former case involves a regular DP-structure with the option of overtly realizing the head noun and that the second involves a completely different structure. In particular, it is suggested for the latter that the adjective is part of a Modifier Phrase

(ModP), which is right-adjoined to an Indefinite Pronoun Restrictor Phrase (IPRP). For examples like *jemand/wer anderer* ‘somebody different’, the structure looks as follows (e stands for a null element):⁵

(13) *Indefinite pronoun construction*



Notice again that the adjective is not in the Specifier position below the determiner. Next, we turn to a third type of adjunction.

2.3. *Regular DP vs. High Right-Adjunction: Loose Apposition*

A typical case of a – what is sometimes called – ‘loose apposition’ is given in (14a) below. Like in the two other cases above, the adjective can only be strong. This is in contrast to the loose apposition in (14b) and the pronominal DP in (14c) (for the detailed discussion of the last type of example, see the next section):

- (14) a. *Wir, begeisterte(*n) Linguisten, fordern mehr Unterstützung.*
 we enthusiastic(ST/*WK) linguists demand more support
 ‘We, enthusiastic linguists, demand more support.’
- b. *Wir, die begeisterte*(n) Linguisten, wollten mehr Unterstützung.*
 we the enthusiastic(WK/*ST) linguists wanted more support
 ‘We, the enthusiastic linguists, wanted more support.’

⁵ Note that I put the quantifying, determiner-like element under D. Also, with the discussion of the introduction in mind, one might object that a strong ending is expected here as this is an indefinite construction. Importantly though, a strong ending also occurs in the dative (genitives are marginal in general, see Roehrs 2009b):

(i) *mit {jemand / %wem} anderem*
 with someone different(ST)
 ‘with someone different’

In other words, this indefinite pronoun construction is different from the noun phrases involving *ein* ‘a’ (e.g., *mit einem anderen Mann* ‘with a different(WK) man’). As the latter are usually used to exemplify the inflectional alternation in indefinite contexts, indefinite pronouns deserve discussing in the current context. Note also that the adjective in (i) can also be weak (*anderen*) with *jemand* and is preferred to be so with *wem*. However, I argue in Roehrs (2009b) that this type of alternation is due to a phonological rule (see also section 3.2).

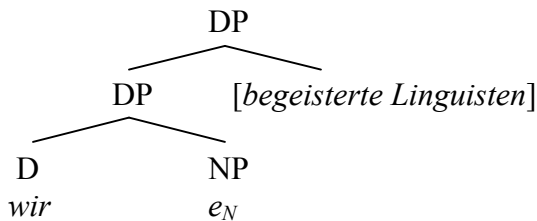
- c. *wir begeisterten Linguisten*
 we enthusiastic(WK) linguists
 ‘we enthusiastic linguists’

Unlike the two adjunction cases from sections 2.1 and 2.2, the nominal following *wir* in (14a) is not a name-like element (cf. low adjunction) and can have an overt head noun (cf. mid adjunction). Moreover, these constructions have a distinctive intonation contour and a genitive complement to the head noun can only precede this type of apposition:

- (15) a. *die Professoren unserer Uni, sehr nette Leute*
 the professors of.our univ, very nice people
 ‘the professors of our university, very nice people’
- b. * *die Professoren, sehr nette Leute, unserer Uni*
 the professors, very nice people, of.our univ

In order to capture the fact that only a strong adjectival ending is possible in (14a), I propose that this is another case of right-adjunction. To account for the differences, I would like to suggest that adjunction is higher in the structure, namely to the DP-level (cf. Delorme & Dougherty 1972):⁶

- (16) *Loose appositions*



As in the cases above, the adjective is not in the Specifier below the determiner, here the pronoun. Note that the pronominal element in (16) is taken to have a null noun as part of its complement. In the next section, we consider cases where the pronoun co-occurs with an overt noun.

2.4. *Regular DP vs. Complex Specifier inside DP: Dis-agreement in Pronominal DPs*

Postal (1966) argues that pronouns are determiners (for more recent discussion, see Roehrs 2005). A typical case is given in (17a). What is interesting about this case is that both types of endings are, with some differences in preference, possible. Furthermore, Roehrs (2006b) discusses some pronominal DPs where plural pronouns and singular head nouns combine despite

⁶ On this analysis, an issue arises that has to do with a ban of adjunction to an argument where adjunction is assumed to interfere with the assignment of a theta-role (Chomsky 1986). One way to approach this issue is to follow Bošković (2004) in assuming that this type of adjunction to DP occurs once the DP has received a theta-role and has moved out of its base-position. In other words, we could extend Bošković’s discussion of acyclic merge of floating quantifiers to loose appositives.

the fact that they disagree in morphological number, (17b). Importantly, though, only strong endings are possible here:

- (17) a. *ihr* {*dummen* / %*dumme*} *Idioten*
 you(PL) stupid(WK/%ST) idiots
 ‘you stupid idiots’
- b. *ihr* *dumme**(s) *Pack*
 you(PL) stupid(ST/*WK) gang
 ‘you stupid gang’

It is pointed out there that semantic agreement in number must hold between all these elements. For instance, like the pronominal determiner *ihr* ‘you(PL)’, both *Idioten* ‘idiots’ and *Pack* ‘gang’ imply several individuals. This is different from garden-variety determiners such as *diese* ‘these’, which are more restrictive and do not tolerate morphological dis-agreement at all (e.g., **diese Pack* ‘these gang’).

Turning briefly to some other properties, without a special intonation contour, agreeing nominals (e.g., *dumme(n) Idioten* ‘stupid idiots’) or dis-agreeing nominals (e.g., *dummes Pack* ‘stupid gang’) cannot be iterated and both of these nominals cannot occur with one another. In other words, in the unmarked case there can be only one overt noun in the pronominal DP. Furthermore, a (plural) adjective related to the pronoun can neither follow nor precede the dis-agreeing nominal:

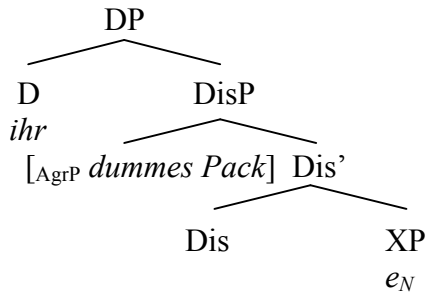
- (18) a. *ihr dummes Pack* (**junge(n)*)
 you stupid(ST) gang young(ST/WK)
 ‘you stupid (young) gang’
- b. *ihr* (**dumme(n)*) *junges Gemüse*
 you stupid(ST/WK) young(ST) vegetable(s)
 ‘you (stupid) young folks’

In order to capture these facts, Roehrs (2006b) proposes that the pronominal determiner can optionally select either AgrP resulting in the (ordinary) agreeing cases or a Dis-agreement Phrase (DisP) bringing about the dis-agreeing cases.⁷ More specifically, I assume that pronominal DPs with an agreeing adjective and noun involve a regular DP where the pronoun is in the DP-layer, the adjective is in Spec,AgrP, and the noun is in NP (see section 2.1, also Roehrs 2005). In contrast, pronominal DPs with a dis-agreeing nominal have a different structure where the entire dis-agreeing element is assumed to be in Spec,DisP.⁸

⁷ With adjunction less constrained, above-mentioned restrictions are best stated in terms of selection.

⁸ For more justification of this structure, see Chapter 7, where it is shown that a bare noun such as *Bauer* ‘peasant/farmer’ must be singular in interpretation in dis-agreement cases such as *Sie Bauer* ‘you peasant’ but not in *Sie als Bauer* ‘you as a farmer/farmers’, which involves *als* ‘as’. To capture this difference, I will argue there in more detail that the former involves a Specifier (i.e., Spec,DisP) but the latter is a case of adjunction.

(19) *Transitive pronouns (Disagreement)*



Note now that there is a clear difference between the agreeing DP in (17a) and the dis-agreeing case in (17b). In the former, the adjective and its projected AP reside in Spec,AgrP; in the latter, the adjective projects an AP and the noun involves an NP, together making up an AgrP. This AgrP is located in Spec,DisP. Crucially, then, while the adjective is in the Specifier below the determiner in (17a), the adjective in (17b) is also in the Specifier below the determiner but it is more deeply embedded (cf. AP vs. AgrP, which contains AP). In sum, then, it is not surprising that (17a) shows a weak adjective (for the less preferred strong adjective, see section 3.3) but that (17b) does not. Presumably, the adjective in the latter establishes its own agreement relation with the overt noun inside the embedded AgrP. In Chapter 3, we will return to the discussion of different layers of embedding in the context of Predicate Inversion.

So far, we have discussed four cases, where the adjective is outside the determiner's domain of influence. Next, we turn to cases, where the determiner itself is in a position where it cannot bring about a weak ending.

2.5. *Regular DP vs. Outside of DP Proper: Intensifiers*

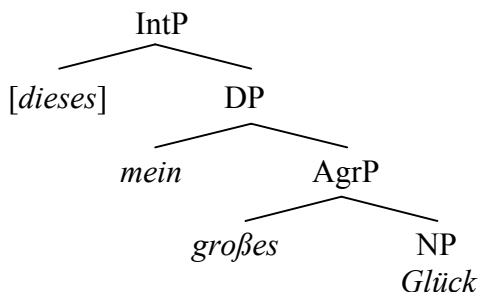
Roehrs (2009a: Chap. 4) discusses some cases where determiners or determiner-like elements may co-occur (also Wood 2007). To get the discussion off the ground, consider first (20a), where the demonstrative occurs with a weak adjective. In contrast, the possessive element occurs with a strong adjective, (20b). Now, the demonstrative and the possessive element can be combined as in (20c). Importantly, the adjective must be strong:

- (20) a. *dieses große*(s) Glück*
 this great(WK/*ST) happiness
 'this great happiness'
- b. *mein große*(s) Glück*
 my great(ST/*WK) happiness
 'my great happiness'
- c. *dieses mein große*(s) Glück*
 this my great(ST/*WK) happiness
 'this my great happiness'

In other words, the presence of the demonstrative does not play a morphological role for the adjective in (20c). This is surprising given that it does have an impact in (20a).

As is well-known, the demonstrative can only occur to the left of the possessive (cf. **mein dieses große(s) Glück* ‘my this great happiness’) and it seems to function as some kind of intensifier (Wood 2007). To explain this different behavior in the morphology, syntax, and semantics, it is proposed in Roehrs (2009a) that the demonstrative is merged in an Intensifier Phrase (IntP), which is on top of the DP:

(21) *Intensifiers*



As can easily be verified, although the adjective is in the Specifier below the DP-level, it is not immediately below the much higher demonstrative.

2.6. *Regular DP vs. Separate Base-generation: Split NPs*

Fanselow (1988) and van Riemsdijk (1989) discuss discontinuous noun phrases, often referred to as split NPs. Putting it in simple terms, the lower part of a noun phrase occurs in a higher position and the higher part of the same noun phrase is in a lower position. This type of construction has a number of interesting properties. Among others, an adjective with a weak ending in a non-split noun phrase, (22a), will be strong if it occurs in the higher position, (22b):

- (22) a. *Ich habe immer nur diese bunte*(n) Hemden da getragen.*
 I have always only these colored(WK/*ST) shirts there worn
 ‘I have always worn only these colored shirts there.’
- b. *Bunte*(n) Hemden habe ich immer nur diese da getragen.*
 colored(ST/*WK) shirts have I always only these there worn
 ‘As for colored shirts, I have always worn only these there.’

Fanselow (1988) proposes that the two nominals in the split NP are base-generated separately in the VP and one of them eventually undergoes movement (for some discussion, see Chapter 3). Some independent evidence for this comes from the fact that the discontinuous noun phrase can have two determiners:

- (23) *‘N Hemd habe ich immer nur dieses getragen.*
 a shirt have I always only this worn
 ‘As for a shirt, I only wore this one.’

With the two nominals assembled separately from one another, it should be clear that the adjective in (22b) was never in the Specifier below the determiner.

To sum up this section, we have discussed one context where weak endings occur (regular DP) and six contexts in which strong endings surface (the adjective may be part of three different types of adjunction, it may be deeply embedded inside a Specifier, the determiner may be outside of the DP proper, and the determiner and adjective are in their typical positions but both occur in a discontinuous noun phrase). In each and every case, the adjective or the determiner is in a different position as regards the assumptions about the structure of regular (continuous) DPs. Some independent evidence was provided for the assumption of different structures.

More generally, if this is correct, then the strong/weak alternation of adjectival inflection appears to be a reflex of different structures. In fact, the different types of inflections may indicate the degree of embedding of adjectives (Spec,AgrP vs. Spec,AgrP inside Spec,DisP) and a certain amount of structure (DP vs. IntP on top of DP). In the next part of the chapter, we provide the main account for the weak and strong endings and discuss some “unexpected” cases in regular DPs.

3. Derivation of Adjectival Endings in Regular DPs

In the previous section, we saw that there are several structures in which the adjective has a strong ending but only one structure with a weak one. With the exception of one structure, all constructions involved definite determiners and we concluded that adjectival inflections in German cannot be a reflex of definiteness. I would like to propose that these inflections are semantically vacuous. Furthermore, showing that concord is only a necessary condition for the appearance of the weak ending (section 2.2), we pointed out that this ending is only possible in a regular DP, where the adjective is in a Specifier right below the determiner.

Now, given the diverse distribution of the strong endings, we can suggest that the latter instances involve some type of elsewhere case. I take this to mean that the strong endings surface when a certain structure or mechanism is not involved. In other words, underlyingly “strong” endings may be realized as weak endings only under certain specific conditions but as strong endings in all other circumstances.

In particular, I will propose that the weak endings follow from the mechanism Impoverishment. Assuming that this mechanism can only occur in regular DPs, it is taken to reduce fully specified abstract feature bundles. These reduced feature bundles are then spelled out as the weak endings. If this is on the right track, then a number of other cases involving a regular DP appear to be “exceptional”. I will argue that the main mechanism may be “masked” by other, secondary mechanisms. It is important to point out that the latter only hold in well-defined contexts; that is, they are restricted to certain combinations of “case + gender” or “case + number” and do not hold in a general fashion. To be clear, then, this part of the chapter proposes that the inflectional surface patterns of attributive adjectives in German do not receive a homogenous account but rather are the result of (at least) three different mechanisms.⁹

⁹ There are other proposals that discuss the distribution of adjectival endings. These proposals focus on the stereotypical cases and do not discuss the cases in the first part of this chapter and in the remaining sections. In order to keep the focus on the less canonical cases, these proposals will be only briefly discussed in section 4.

If this discussion is tenable, then it has certain implications for other proposals. In Chapter 3, I will discuss two analyses in this respect (Predicate Inversion and null nouns) and argue that weak adjectives in such structures do not follow from the system developed here. In contrast, strong adjectives will be shown to present a problem for analyses of discontinuous noun phrases involving only movement. Finally, we will show there that weak inflections on non-restrictive adjectives imply that the latter have a similar structural analysis as restrictive ones and that strong endings are not “referential” but simply serve to make nominal features visible. Before we turn to these consequences, let me lay out the current proposal on more detail.

3.1. *Impoverishment – Ordinary Weak Endings*

Traditionally, German is taken to have an inventory of five strong and two weak endings (Duden 1995, but see Roehrs 2009a: Chap. 4) where the latter form a proper subset of the former. These endings distribute in a certain way. As already briefly discussed in the introduction, if there is no (overt) determiner, then all adjectives surface with a strong ending, (24a). If a determiner is present, the strong ending is on the determiner and all the adjectives must be weak, (24b):

- (24) a. *frische*(r) schwarze*(r) Kaffee*
 fresh(ST/*WK) black(ST/*WK) coffee
 ‘fresh black coffee’
- b. *de-r frische(*r) schwarze(*r) Kaffee*
 the(ST) hot(WK/*ST) black(WK/*ST) coffee
 ‘the fresh black coffee’

These are the stereotypical cases. As is well-known, the strong inflection on the adjective and determiner are the same. Let us summarize this determiner-adjective interaction in the following generalization (e stands for a null element; < stands for precede; * stands for multiple occurrences):

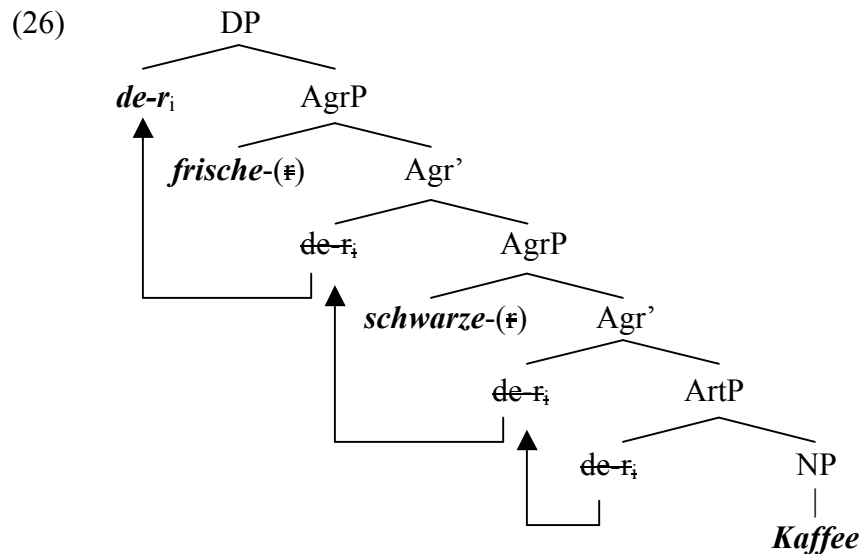
- (25) a. $e_D < \text{STRONG}_A^*$
- b. $\text{STRONG}_D < \text{WEAK}_A^*$

Among others, this generalization is meant to describe the fact that some combinations of these strong and weak endings do not exist; for instance, a weak element in *-e(n)* cannot be followed by a strong one in *-er/-es/-em*.

It is important to point out that the grammaticality judgments in (24) are very sharp. I propose that the morphological mechanism Impoverishment explains these data.¹⁰ While I cannot go into all aspects of the account here (for more detailed discussion, see Sauerland 1996, Roehrs 2009a: Chap. 4), I assume that underlyingly, endings are abstract feature bundles that, if reduced by Impoverishment, are spelled out as weak endings. If they are not reduced, they surface as strong endings. On this analysis, it is not surprising that the (reduced) weak endings form a proper subset of the (unreduced) strong endings.

¹⁰ Other recent accounts employing Impoverishment include Halle & Marantz (2008), Harley (2008), and Nevins (2011).

In more detail, it is argued in Roehrs (2009a: Chap 4) that the determiner moves from a position below the adjective, called the Article Phrase (ArtP), to the DP-level in a successive-cyclic fashion.¹¹ Assuming the ancillary mechanism Percolation, the fully specified feature bundles of the adjectival inflections are reduced by Impoverishment, which is triggered by the presence of a determiner in a local domain. Let us illustrate these operations with (24b):¹²



This analysis provides an explanation of why either all adjectives are strong or all are weak. Below, we provide an indication that Impoverishment must proceed bottom-up.

Sternefeld (2008a: 255) reports work by Horst Simon, who observes that the negative article can be repeated in dialectal German:¹³

- (27) *Ich hab kein blaues kein Kleid nicht.* (dialectal German)
 I have no blue(ST) no dress not
 'I don't have a blue dress.'

Sternefeld concludes that another position is needed for the second (low) negative article. Above, I have identified this position as Art. If indeed Impoverishment proceeds bottom-up and locally, then we predict that the highest element or perhaps even elements will not undergo it; that is, several strong elements could be possible although Impoverishment occurred with lower elements in the structure.

¹¹ For similar ideas, see Schoorlemmer (2009), which is discussed in section 4.5 below, and Heck, Müller & Trommer (2008), who propose that a definiteness feature moves from N to D when a pre-nominal adjective is present.

¹² In Distributed Morphology, vocabulary items including affixes are inserted after Impoverishment. In other words, I use the double strike-through on the adjectival inflection in (26) for illustrative purposes.

¹³ Note that some caution is in order here as I have not been able to find independent confirmation for this type of data in German. In Scandinavian, this syntactic distribution has been reported on several occasions (e.g., Delsing 1993: 143, Julien 2002: 269):

- (i) *en stor en ful en kar* (Northern Swedish)
 a big an ugly a man
 'a big ugly man'

In this regard, consider first (28a) and (28b), where both *alle* ‘all’ and *diese* ‘these’ trigger Impoverishment on the following adjective. Crucially, both of these elements can co-occur and when they do, both must appear with a strong ending, (28c). Again, note that the strong endings of these elements are identical to those of adjectives and as such they should receive a similar account. Now, if we make the plausible assumption that similar to adjectives, the inflections on determiners and determiner-like elements can undergo Impoverishment, then the latter mechanism cannot have occurred on either *alle* or *diese*. Importantly, the adjective in (28c) is still weak. I propose that *diese* moves from below the adjective in both (28b) and (28c) bringing about a weak ending on the adjective. In contrast, while *alle* also moves from below the adjective in (28a), it crucially does not in (28c). As already suggested for a similar case in section 2.5, I assume that *alle* is an intensifier here. As such, it is base-generated higher up in the structure (i.e., in IntP), where it does not trigger or undergo Impoverishment:¹⁴

- (28) a. *alle kleine*(n) Autos*
all(ST) small(WK) cars
‘all small cars’
- b. *diese kleine*(n) Autos*
these(ST) small(WK) cars
‘these small cars’
- c. *alle diese(*n) kleinen Autos*
all(ST) these(ST) small(WK) cars
‘all these small cars’

This is not an isolated case and similar examples can be provided, for instance: *diese meine netten Freunde* ‘these my nice friends’. Note that the assumption of base-generating the determiner-like element in Spec,IntP explains why determiners do not have weak endings. Furthermore, the sequence of two strong endings on determiner-like elements indicates more structure on top of the DP; that is, adjectival inflections are indicators of abstract structure. To sum up thus far, it appears then that Impoverishment occurs locally and in a bottom-up fashion.

Turning to the strong endings on the adjectives (sections 2.1-2.6), it should be clear that they do not appear in the relevant structural configuration, which involves a Specifier in the local domain of a determiner. As a consequence, these feature bundles do not undergo Impoverishment, remain unaltered, and are spelled out as strong inflections. With this in place, let us turn to more cases that are less-often discussed in the literature. It will be shown that making certain assumptions, they also follow straightforwardly from the system developed above. As a result, we will further refine the discussion in Roehrs (2009a).

¹⁴ This argument only goes through if intensifiers can, at least in principle, trigger Impoverishment (see Roehrs 2009a: 171, to appear on the discussion of *ein* in *ein jeder* ‘(an) every’). Furthermore, if intensifiers can trigger Impoverishment, then adjunction of the intensifier to DP (perhaps à la Bošković 2004) could not explain the strong ending on the demonstrative in (28c). On current assumptions (see Roehrs 2009a: 151-52), an adjoined intensifier would be in a position to trigger Impoverishment on the demonstrative located in Spec,DP.

3.1.1. Inflections in Complex Adjective Phrases

If Impoverishment occurs in a local domain, then the question arises how adjectival inflections that appear to be deeply embedded can undergo this type of feature reduction.¹⁵ Consider (29), where an adjective takes an argument. Interestingly, this argument is separated from the adjective by the degree word *sehr* ‘very’. Despite the presence of these elements, the adjective alternates between exhibiting a strong or a weak ending, as can be seen in (29a) and (29b):

- (29) a. *ein [auf seinen Sohn sehr stolzer] Vater*
 an of his son very proud(ST) father
 ‘a father very proud of his son’
- b. *der [auf seinen Sohn sehr stolze] Vater*
 the of his son very proud(WK) father
 ‘the father very proud of his son’

We briefly discuss the strong adjectives with *ein*-words in subsection 3.1.3. As to (29b), I follow, among many others, Zamparelli (2000: Chap. 7) and Neeleman, van de Koot & Doetjes (2004) and assume that adjectives have an extended projection, similar to verbs and nouns (Grimshaw 1991, van Riemsdijk 1998b). In particular, with Corver (1991, 1997), I will assume that the extended projection of the adjective includes a Degree Phrase (DegP). Furthermore, assuming that theta-role assignment occurs in a local fashion (i.e., within AP), the intervening degree word implies that the argument must have moved to the left, stranding the adjective. This in turn implies that the extended projection of the adjective has more structure on top of DegP. This is where the dislocated argument surfaces. If this is so, then the question arises how the adjectival inflection can undergo Impoverishment, given that it appears to be so deeply embedded in the structure.

Basically following Corver (2006: 68), Leu (2008a) and others, I propose that adjectives and their inflections are base-generated in separate positions: while the adjective forms the bottom part of the extended projection, the inflection closes this structure off. Moving top-down, I assume that the inflection projects an Inflectional Phrase (InflP), whose head hosts the abstract feature bundle eventually realized as a strong or weak ending.¹⁶ Furthermore, I assume that there is a functional phrase (FP), which can form the landing site for the argument. Finally, DegP is on top of AP. The basic structure is provided in (30a).¹⁷ Now, with the PP-argument moved to Spec,FP, I propose that FP moves to Spec,InflP. This is illustrated in a simplified fashion in (30b):

¹⁵ In Roehrs (2009a), it is assumed that Percolation is local (i.e., within one phrase). If one were to give up that assumption, one could claim that Percolation goes all the way down the structure and deeply embedded weak inflections would be explained. However, this alternative raises questions about the strong endings in section 2. Consequently, I would like to keep the strongest and thus most interesting version of the account here.

¹⁶ With regard to adjectives, I diverge here from Roehrs (2009a), where adjectives and Infl (=X in the latter work) are generated together. For determiners, we can still assume that their stems are suffixed by Infl (=X) in the base or we could try to modify this in the framework of Roehrs (2011a).

¹⁷ While I cannot explore this in detail here, there are good reasons to believe that the structure in (30a) is more complex. Furthermore, with the inflection separated from the adjective, the difference in German between attributive adjectives, which have an inflection, and predicative ones, which do not, can be captured by assuming that InflP is present in the former cases but not in the latter.

- (30) a. [InflP Infl [FP F [DegP Deg [AP Adj]]]]
 b. [InflP [FP [PP *auf seinen Sohn*] F *sehr stolz*]_k Infl-*e* [... t_k ...]]

The feature bundle is then spelled out on the element to its immediate left. More concretely, the adjective *stolz* ‘proud’ will surface as *stolze*; that is, the moved adjective stem provides an appropriate host for the inflection. This derivation has a number of advantages. On the one hand, Impoverishment can occur in a local fashion (the inflection is in Infl and InflP itself is in Spec,AgrP) and on the other, the inflected adjective is, on the surface, adjacent to the head noun, a restriction that has been widely noted (e.g., Williams 1982, also Roehrs in prep. a). If this is on the right track, then we can also account for some other cases.

Based on work by van Riemsdijk (1998a: 673), Roehrs (2006a: 222) discusses some cases where the adjectival inflection is not on the adjective itself but on an element that is part of the extended projection of the adjective. Like above, the adjective alternates:

- (31) a. *ein [so schnell wie möglich-es] Aufräumen*
 a so quick as possible(ST) cleaning
 ‘a cleaning as quick as possible’
 b. *das [so schnell wie möglich-e] Aufräumen*
 the so quick as possible(WK) cleaning
 ‘the cleaning as quick as possible’

Due to their anomalous properties, the inflections of these cases are sometimes analyzed as “phrasal” suffixes. As in the examples above, the question arises how the deeply embedded inflection can undergo Impoverishment on our assumptions. Furthermore, it is not clear how the inflection can occur on the non-head in the first place.

I believe that the above discussion can shed some light on these issues. Let us assume that the adjectival head cannot move out of the comparative structure (CompP) marked by square brackets in (32). In order to provide an appropriate overt host for the feature bundle in Infl, CompP moves to Spec,InflP. Again simplifying somewhat, this can be illustrated as follows:

- (32) [InflP [CompP *so schnell wie möglich*]_i Infl-*e* [... t_i ...]]

This, then, allows Impoverishment not only to occur in a local fashion, just like above, but also explains the unexpected position of the adjectival inflection. We return to adjectives as extended projections in the context of non-restrictive adjectives in Chapter 3. Next, we turn to some examples from the introduction that set German apart from Scandinavian.

3.1.2. Inflections with Vocatives and Complex Proper Names

It is well known that singular countable nouns typically have overt determiners. Under certain conditions, these determiners do not appear. In the introduction, we briefly discussed vocatives:

- (33) *dummer Idiot*
 stupid(ST) idiot
 ‘Stupid idiot!’

There are several ways to account for the strong ending in (33). On the one hand, we could claim that a relevant determiner is absent or, on the other, we could claim that a null determiner is present. In both scenarios, Impoverishment would not take place (for the discussion of null determiners, see the next subsection). Let us repeat one more time that adjectival inflections in German do not reflect definiteness. To see this again, we discuss some instances that, to the best of my knowledge, have not received any attention in this regard before.

Let us consider two types of cases. First, certain exclamations license the absence of a determiner directly before the noun and even before an inflected but following adjective, (34a) (see Dürscheid 2002: 70). Interestingly, a definite, but not indefinite, determiner can precede the adjective. Compare (34b) to (34c):

- (34) a. *Schwein, schwarzes!*
 pig black(ST)
 ‘Stupid bastard!’
- b. *Schwein, das schwarze!*
 pig the black(WK)
- c. * *Schwein, ein schwarzes!*
 pig a black(ST)

It is clear that both (34a) and (34b) have a similar, but not identical, reference; for instance, adding *du* ‘you(SGL)’ before *Schwein* gives a better result in (35a) than (35b). However, adding *das* ‘the’ gives a better result in (35b) than (35a). A definite determiner is not possible in (35c):

- (35) a. {*Du* / ??*Das*} *Schwein, schwarzes!*
 you(SGL) / the pig black(ST)
 ‘You / The stupid bastard!’
- b. {??*Du* / *Das*} *Schwein, das schwarze!*
 you(SGL) / the pig the black(WK)
- c. * {*Du* / *Das*} *Schwein, ein schwarzes!*
 you(SGL) / the pig a black(ST)

With a pronoun possible in (35a) and a definite article in (35b), we conclude that these structures are definite. Returning to the above data, we can observe that the adjective in (34a) is strong in a definite context. Importantly, considering the ungrammaticality of (34c) and the definite reference of (34a), it seems implausible that an indefinite determiner is or was present in (34a) to license the strong ending on the adjective.

Second, a determiner can also be left out when the relevant nominal is used as part of a keyword list or in a (sub-)title of a piece of writing. Illustrating with related examples from history books, we see again that when the determiner is absent, the adjective is strong. Compare (36a) to (36b). Interestingly, an indefinite article is possible here but the noun phrase cannot

function as a proper name anymore; for instance, now it can describe another knightly order such as the *Johanniter* ‘Johannites’, (36c):¹⁸

- (36) a. *Deutscher Ritterorden*
 German(ST) knight.order
 ‘the Order of the Teutonic Knights’
- b. *der Deutsche Ritterorden*
 the German(WK) knight.order
- c. *ein deutscher Ritterorden*
 a German(ST) knight.order

To be clear, unlike the common nominal in (36c), (36a) and (36b) have the same definite interpretation and I take these phrases to be different morpho-syntactic versions with the same reference. Now, since proper names are definite, we cannot suggest that an indefinite determiner is or was present in (36a) to license the strong ending. If so, we have another case in (36a) where a strong adjective appears in a definite context. In order to account for the weak ending in (36b), Impoverishment must, on current assumptions, have taken place. Note in passing that this also means that certain complex proper names must have internal structure and cannot be “frozen” forms (see also Longobardi 1994). Next, we take up the discussion of possessives from above. Here, a strong ending may appear in a regular DP despite the presence of a determiner or a determiner-like element.

3.1.3. Inflections with *ein*-words and other Possessives

It is well-known that *ein*-words (i.e., the indefinite determiner *ein* ‘a’, the numeral *EIN* ‘one’, the negative determiner *kein* ‘no’, and possessive elements like *mein* ‘my’) occur with a strong adjective in three cases (but see also Roehrs 2009a: Chap. 4): in the nominative masculine and in the nominative/accusative neuter, (37a). In all the other instances, the adjective must be weak as illustrated with a dative in (37b):

- (37) a. *(m-)ein großes Auto*
 (my) a big(ST) car(NEUT)
 ‘a / my big car’

¹⁸ This is different in the Scandinavian languages, where the adjective keeps a weak ending independent of the presence of a preceding determiner. Comparing (ia-b), this can be seen with proper names (for the discussion of (ib), see Lohrmann 2010: 126). A similar point can be made with noun phrases in contexts of familiarity, (ic) (see Delsing 1993: 118):

- (i) a. *Det hvite hus* (Bokmål)
 the white(WK) house
 ‘the White House’
- b. *Vita huset* (Swedish)
 white(WK) house-the
 ‘the White House’
- c. *Ta (den) nya bilen!*
 take the new(WK) car-the
 ‘Take the new car!’

- b. *mit (m-)einem großen Auto*
 with (my) a big(WK) car
 ‘with a / my big car’

To be clear, the presence of possessive *m-* does not make a difference for the inflection on the adjective. In view of these data, we need to say something about the determiners that do not trigger Impoverishment. In order to explain why only some determiners have this property, we will not modify the general system laid out above but blame this behavior on some specific property. To make a plausible suggestion in the current framework, let us relate the above cases to possessives involving proper names and unprecedented adjectives. These instances also exhibit some exceptional behavior but in a slightly different way.

The Saxon Genitive construction has a proper name as its possessor. It is proposed in Chapter 5 that the proper name and the suffix *-s* make up a Possessive Phrase (PossP). This PossP moves from a low base position to Spec,DP. Most relevant for current purposes, the adjective has a strong ending in the nominative and dative:

- (38) a. *(Marias) kaltes Bier*
 Mary’s cold(ST) beer
 ‘Mary’s cold beer’
- b. *mit (Marias) kaltem Bier*
 with Mary’s cold(ST) beer
 ‘with Mary’s cold beer’

Like above, the presence of the possessive does not have an impact on the adjectival inflection. Unlike above, the adjective here is also strong in the dative. As such, possessives involving proper names are in stark contrast to pronominal possessives such as *mein* ‘my’ (and the other *ein*-words). This calls for different explanations. Interestingly, there is an indication that Saxon Genitives involve some kind of determiner in D. This can be gleaned from the inflectional behavior in the genitive.

As is well-known, (superficially) unprecedented adjectives have two types of endings. As already seen in (38) above, these adjectives are strong. There are only two exceptions where the adjective is weak. These involve the masculine and neuter genitives, (39a). Once again, the presence of a proper name possessive does not make a difference, (39b):

- (39) a. *statt {kalten / *kaltes} Bieres*
 instead.of cold(WK/*ST) bier(NEUT.GEN)
 ‘instead of cold beer’
- b. *statt (Marias) kalten Bieres*
 instead.of Mary’s cold(WK) bier(GEN)
 ‘instead of (Mary’s) cold beer’

On the current analysis and making minimal assumptions, the weak ending implies the presence of a determiner triggering Impoverishment. I suggest that this determiner is a null article (\emptyset).

Let us summarize thus far. The presence of possessives, be they pronominal *m*- or proper name possessives such as *Marias*, does not have an impact on the inflection of the adjective. Furthermore, there are three instances where adjectives preceded by *ein* have a strong ending (the remaining instances are weak). Moreover, assuming that unpreceded adjectives actually have the null determiner \emptyset in front, there are two instances where these adjectives are weak (the remaining instances are strong). In order to explain the inflectional behavior of the adjectives in these cases, let us first consider noun phrases without possessives. In Chapter 5, we return to the possessive constructions and suggest that the different types of possessives are only compatible with certain articles, *m*- with *ein* and *Marias* with \emptyset .

While I cannot do full justice here to all the intricacies of the account, Roehrs (2009a) proposes that *ein* and \emptyset are determiners with exceptional properties. They are similar in that both may move to the DP-level at different times; they differ in that articles with different feature specifications do that. For current purposes, I assume here that the three exceptional instances of *ein* move to the DP-level late. The same goes for \emptyset except for the masculine and neuter genitive instances (for more detailed discussion and motivation, see Roehrs 2009a: Chap. 4). Moving to the DP-level late, Impoverishment is not triggered and the adjectives surface with strong endings.¹⁹

Next, I turn to some other “exceptions” in well-defined contexts. These cases exhibit unexpected weak or strong endings in the same configuration as above, namely in the regular DP.

3.2. Phonological Rule – An Unexpected Weak Ending

In the previous section, we saw examples where two co-occurring adjectives have the same ending, with either all endings being strong, (40a), or all endings being weak, (40b):

- (40) a. *frische*(r) schwarze*(r) Kaffee*
 fresh(ST/*WK) black(ST/*WK) coffee
 ‘fresh black coffee’
- b. *de-r frische(*r) schwarze(*r) Kaffee*
 the(ST) hot(WK/*ST) black(WK/*ST) coffee
 ‘the fresh black coffee’

There is one much-discussed exception to this: in the masculine and neuter dative, there is the possibility that although there is no overt determiner, the second adjective can exhibit a weak ending. Compare (41a-b). As is clear from (41c-d), patterns with a weak ending on the first adjective are not possible (% indicates variation with speakers):

- (41) a. % *mit frischem schwarzem Kaffee*
 with fresh(ST) black(ST) coffee
 ‘with fresh black coffee’

¹⁹ One way to instantiate this is by assuming that at that point in the derivation, Percolation does not occur anymore. Taking Percolation to be syntactic, that is, part of structure building, Impoverishment cannot “spread” anymore.

- b. % *mit frischem schwarzen Kaffee*
with fresh(ST) black(WK) coffee
- c. ?? *mit frischen schwarzem Kaffee*
with fresh(WK) black(ST) coffee
- d. ?? *mit frischen schwarzen Kaffee*
with fresh(WK) black(WK) coffee

Once again, notice that the weak ending in (41b) cannot mark definiteness. These patterns have a number of peculiar properties. First, the grammaticality judgments are less sharp than in the previous section. Second, these inflectional distributions are restricted to the two instances above. For instance, this is not possible in the feminine gender:

- (42) a. *mit guter roter Sauce*
with good(ST) red(ST) sauce
'with good red sauce'
- b. * *mit guter roten Sauce*
with good(ST) red(WK) sauce

Third, as discussed in more detail in Roehrs (2009b), different authors report different possibilities, which I will refer to here as dialects. Considering the two inflectional options in table 1 (column 1), Gallmann (1996, 2004), Schlenker (1999), and Demske (2001: 53) describe dialect 1; Müller (2002) discusses dialect 2; and Schlenker (1999) also reports that some speakers have dialect 3. As far as I know, dialect 4 does not exist. In other words, all speakers have at least one of the two inflectional distributions in their language:

Table 1: Different Dialects for the Masculine/Neuter Dative

	Dialect 1	Dialect 2	Dialect 3	Dialect 4
Adj+m Adj+m	√	√	??	??
Adj+m Adj+n	√	?	√	??

In order to explain these exceptional properties, I propose in that paper that the alternation in (41a-b) follows from a phonological rule:

- (43) R₁: m -> n / [...]_A + ____ #

The application of the rule is optional in dialect 1, “costly” in dialect 2, and obligatory in dialect 3.²⁰ Making certain other assumptions, this rule explains the unexpected weak endings in regular DPs of dialects 1 and 3 (for more details, see Roehrs 2009b; for *m~n* alternations in indefinite

²⁰ The grammaticality judgments in table 1 are taken from the original sources. It is not clear to me if the degree of ungrammaticality of the respective bad pattern in dialect 2 or 3 is the same. Depending on the ultimate answer to this question, one could suggest that the rule in (43) simply does not apply in dialect 2 at all.

pronoun constructions, see the same paper). Next, we turn to a different type of restriction in the dative.

3.3. Disambiguation – Unexpected Strong Endings

As discussed in section 2.4, pronouns are determiners. If this is so, then the weak ending in (44) is not surprising and follows from the system laid out above. However, the very possibility of the strong ending and its smaller degree of preference call for an explanation:

- (44) *ihr* {*netten* / %*nette*} *Studenten*
 you(PL) nice(WK/%ST) students
 ‘you nice students’

Before moving on, observe again that the strong ending in (44) and similar instances below cannot mark indefiniteness.

In Roehrs (2009a), I propose that pronouns are ambiguous between determiners (which trigger Impoverishment) and quantifiers (which do not). This lexical option accounts for the two possibilities in (44). I assume the same for *manch(e) nette(n) Studenten* ‘some nice students’. What is left to explain now is the difference in preference between the strong and the weak ending with the uninflected pronoun in (44). Morphologically, we will see below that different combinations of “case + gender” or “case + number” result in different preferences. I will claim that these distributions are due to a certain preference and a certain requirement to disambiguate the noun phrase morphologically.

Noun phrases in German inflect for three morphological features: gender, case, and number. Given that certain pronouns are ambiguous in gender or case (but not number) and that both a strong and weak ending is possible on the adjective, only the (strong) adjectival inflection can overtly disambiguate the relevant morphological category.²¹ First, we discuss cases where gender is (preferably) disambiguated by the adjectival ending. In the second subsection, we turn to morphological case, which must be disambiguated by the adjectival ending.

3.3.1. Preferred Disambiguation of Morphological Gender

As can be seen in (45), many personal pronouns can, at least in principle, be followed by both a weak and a strong adjective (see also Duden 2007: 39).²² Recall from above that this general optionality follows from the assumption that personal pronouns are ambiguous between determiners and quantifiers. Putting (45a) aside for a moment, we notice in the dative a preference for the weak ending in (45b) versus the strong ending in (45c). This seems to correlate with a difference in gender: (45b) has a feminine head noun and (45c) has a masculine one (the neuter patterns with the masculine, not shown here). Importantly, although gender is

²¹ Abstracting away from certain spelling conventions, the only pronoun ambiguous in number is *sie*, which translates as ‘she’, ‘they’, or ‘you(SGL/PL, formal)’. However, the first two cases are third person, which are not “transitive” in general; that is, they cannot appear with an overt noun or adjective; for the third case, see Roehrs (2006b) and Chapter 7. Note also that adjectives can only have these disambiguating functions if they are actually present in the noun phrase.

²² Singular non-third-person pronouns in the nominative (*ich* ‘I’, *du* ‘you(SGL)’) and accusative (*mich* ‘me’, *dich* ‘you(SGL)’) only occur with strong adjectives. As such, they behave like the three “exceptional” *ein*-words discussed above and I assume that they receive a similar account (Roehrs 2005, 2009a). Note also that pronominal DPs in the genitive do not exist.

inherently specified on the head noun, it manifests itself overtly not on the head noun but on a different, related element. With the dative singular pronoun appearing in the same form for all genders, only the adjective can overtly exhibit gender inside pronominal DPs. Now, note that the adjectival ending *-en* is multiply ambiguous and cannot reliably indicate different genders:

- (45) a. *wir {netten / %nette} Studenten*
 we nice(WK/%ST) students
 ‘we nice students’
- b. *mir {großen / %großer} Gans*
 me great(WK/%ST) goose(FEM)
 ‘me stupid idiot’
- c. *mir {großem / %großen} Esel*
 me great(ST/%WK) donkey(MASC)
 ‘me stupid idiot’

The same patterns in (45b) and (45c) hold for the second-person singular pronoun in the dative (*dir* ‘you’). I propose that German prefers to disambiguously mark grammatical gender in the morphology, as in masculine (45c), unless it leads to – what sounds like – the sequence of two strong endings, as in feminine (45b).²³ It seems, then, as if speakers tend to avoid similar endings on co-occurring but lexically different elements (i.e., pronouns and adjectives). I take this to be some kind of economy condition (cf. Esau 1973) that, if possible, disfavors redundant morphological disambiguation.

Returning to the nominative plural in (45a), note that it patterns with the feminine in (45b); that is, both prefer a weak ending. However, the general acceptability of a weak ending is due to different reasons in these instances. Notice first that the plural datum does not involve any disambiguation at all: gender considerations do not hold in the plural in German; number and case are clearly provided by the pronoun. Thus, the preferred weak ending cannot be due to disambiguation. I suggest that this inflectional pattern conforms to the stereotypical distribution discussed in section 3.1, where an adjective following a determiner is overwhelmingly weak. If so, we have a plausible account of why the multiply ambiguous ending *-en* is the best option here. To be clear, then, while the feminine (45b) tends to *avoid* a (redundant) strong ending, the plural (45a) generally *prefers* a weak ending. We turn to a restriction in the accusative case.

²³ Interestingly, when no *-r* is present on the pronoun, (ia), a strong ending is fully grammatical. At first glance, this may look like confirmation of the text proposal. However, note that the datum in (ia) is a pronominal DP involving morphological disagreement. As shown in section 2.4, these cases involve a different structure explaining why the weak ending here is very marked. Finally, compare (45b) to a regular DP in the dative, which is completely ungrammatical with two strong endings, (ib):

- (i) a. *mit euch {blöder / ??blöden} Bande*
 with you(PL) stupid(ST/??WK) gang
 ‘with you stupid gang’
- b. *der {großen / *großer} Gans*
 the(ST) big(WK/*ST) goose
 ‘the great idiot’

Again, that the strong ending in the feminine in (45b) is at all possible has to do with the fact that unlike regular determiners, pronouns are lexically ambiguous.

3.3.2. Required Disambiguation of Morphological Case

It will be recalled from above that both strong and weak endings are possible in the pronominal DP. With *-en* ambiguous between a strong and a weak ending in the dative plural, these two options cannot be teased apart in that feature combination, (46a). Importantly, however, only a strong ending is possible in the accusative plural, (46b).

- (46) a. *von uns netten Schülern*
 from us nice(ST/WK) pupils(DAT)
 ‘from us nice pupils’
- b. *für uns nette(*n) Schüler*
 for us nice(ST/*WK) pupils
 ‘for us nice pupils’

The same patterns hold for the second-person plural pronoun in the dative and accusative (*euch* ‘you’). Note that while the non-third-person pronouns are the same in the dative and accusative plural, the head noun has a case inflection in the dative (but not in the accusative) and may potentially disambiguate the two instances. However, as discussed by Wegener (1995: 154-63) and Gallmann (1996: 289), this case inflection has become somewhat unstable. If so, it may not reliably distinguish the two cases. Given that the weak ending *-en* in the accusative plural is identical to the ambiguous inflection in the dative plural, only the strong ending *-e* in the accusative plural can disambiguate these instances. Unlike with gender as above, non-nominative case must be distinguished in the plural. This difference may ultimately follow from the fact that unlike morphological gender, case has grammatical function as it may distinguish between direct and indirect objects.

To sum up, in the cases discussed above, all the weak endings are in the same configuration (regular DP) and Impoverishment (section 3.1) and a phonological rule (section 3.2) explains them. The strong endings in this structural configuration are due to something else: the lexical ambiguity of pronouns allows them, the desire to disambiguate (masculine) gender prefers them, and the disambiguation of dative vs. accusative case in the plural requires them (section 3.3). If no morphological disambiguation is at issue, the weak ending is preferred, presumably a reflex of the stereotypical pattern discussed in section 3.1. We arrive then at three different mechanisms that explain the strong/weak alternation.²⁴

To highlight some of the points of the previous sections, let us discuss some older proposals.

4. A Brief Critique of some Previous Proposals

Abney (1987) stimulated much important research on the noun phrase. However, most of the discussions of German have concentrated on the structure of the DP (e.g. Haider 1988; Felix 1990; Löbel 1990a,b; Vater 1991) and only surprisingly few contributions have been devoted to the explanation of morphosyntactic phenomena such as the distribution of adjectival inflections.

²⁴ There are presumably still other mechanisms that are needed to explain the whole range of nominal inflections in German. For instance, Gallmann (1996) discusses some cases where the inflection of the noun plays a crucial role (but see also Sternefeld 2008b: pp. 712).

It is perhaps telling that three monographs on the DP, Bhatt (1990), Wegener (1995), and Demske (2001), discuss only three different types of analyses at length (they all discuss Olsen 1991b). In this section, I review some of these proposals.

First, I examine a more “traditional” account of the adjectival inflection and then I turn to Olsen (1989a, 1989b, 1991a, 1991b), Gallmann (1996, 1998), and Demske’s (2001) HPSG proposal.²⁵ Finally, I turn to a more recent account (Schoorlemmer 2009). All these analyses discuss only the stereotypical cases but not the less canonical structures. As laid out above, I believe, however, that it is these structures that reveal the true nature of adjectival inflections in German.

4.1. Eisenberg (1999)

Tradition has it that adjectival inflections fall into three different types: strong, weak, and mixed. Eisenberg (1999: 233) attempts to reduce the number of adjectival inflectional patterns to two: roughly, while keeping the strong one, he collapses the weak and the mixed paradigms into one. He calls the first “nucleus oriented” (“kernorientiert”) and the latter “head oriented” (“kopforientiert”). “Nucleus” refers to the head noun and “head” refers to the (overt) determiner. Starting with the latter, Eisenberg (1999) states that the head oriented inflection of the adjective is predictable if the inflection on the head, that is the determiner, is “known”. Concretely, the adjective in (47a) is strong because the indefinite determiner has no inflection. On the other hand, the adjective in (47b) is weak because the indefinite determiner is strong (I continue to use the traditional terms “weak” and “strong”):

- (47) a. *ein kluger Schüler*
 a smart(NOM.ST) student(MASC)
 ‘a smart student’
- b. *einem klugen Schüler*
 a(DAT.ST) smart(WK) student(MASC)
 ‘a smart student’

To rule out cases such as **ein-er kluge Schüler*, where *ein* has a strong ending in the three exceptional instances, Eisenberg stipulates that *ein* ‘a’ has no inflection in the nominative masculine and nominative/accusative neuter. In these cases, the adjective will be strong.

The strong paradigm is nucleus oriented, that is, it is dependent on the head noun. This nicely predicts different adjectival inflections with reference to the absence vs. presence of case marking on the nucleus: in (48a), the adjective is strong, with the nucleus having no inflection; in (48b), the adjective is weak, with the nucleus showing genitive case marking:

- (48) a. *kalter Tee*
 cold(NOM.ST) tea(MASC)
 ‘cold tea’

²⁵ This part of the chapter is based on Roehrs (2006a: 175-191).

- b. *kalten* *Tee-s*
 cold(WK) tea(MASC.GEN)
 ‘cold tea’

If both an inflected determiner and an inflected nucleus are present, Eisenberg (1999: 234) assumes head oriented inflection:

- (49) *eines* *klugen* *Kopf-es*
 a(GEN.ST) smart(WK) head(MASC.GEN)
 ‘a smart head’

Besides this “overlap” in determination of the adjectival inflection, there are some flaws with the nucleus oriented inflection. For example, consider an example in the dative masculine/neuter. Gallmann (1996: 289) states that the dative *-e* can appear on masculine/neuter nouns with a preceding inflected adjective (or determiner):

- (50) *aus hartem* *Holz(e)*
 from hard(DAT.ST) wood(NEUT.DAT)
 ‘made of hard wood’

However, the adjective has to be strong even if overt case marking is present on the nucleus (cf. Gallmann 1996: 310 fn. 30):

- (51) * *aus harten* *Holze*
 from hard(WK) wood(NEUT.DAT)
 ‘made of hard wood’

Crucially, although the presence of the ending *-e* in (50) gives an archaic flavor, the example in (51) is sharply ungrammatical. This case then does not fall under either the head oriented paradigm (as there is no determiner and it does not apply) or under the nucleus oriented one (since, despite the presence of a case ending on the nucleus, the adjective cannot be weak). Finally, and more generally, implied in the two types of inflections (head and nucleus) is the claim that the “government” of inflection in the noun phrase is bi-directional: both the determiner and the head noun contribute some features. However, it is not likely that both contribute the same. If this were the case, then we would not only expect loss of inflection on the head noun as documented by Wegener (1995: 154-63) and Gallmann (1996: 287-88) but also on the determiner in some cases. In other words, the question arises of why the relevant inflection is not obligatory with all nouns, as in (52a), but it is obligatory with all determiners, as in (52b) (this imaginary loss of inflection is represented by schwa here):

- (52) a. *d-es* *Barock*
 the(GEN.ST) baroque (MASC/NEUT)
 ‘the baroque’

- b. * *d[ə] Wein-s*
 the(WK) wine(MASC.GEN)
 ‘the wine’

This problem does not arise if we do not attempt to explain the weak adjectival ending in the genitive masculine/genitive in (48b) by reference to the overt marking of the noun only (cf. also Müller 2002b: 135).

To conclude, recall that Eisenberg’s proposal makes use of the vague notion of “knowing” the inflection of the head with head oriented inflection. This begs the question as to how and why the strong ending got on the determiner in the first place. Furthermore, there are some minor details that could be improved upon: the stipulation that certain cases of *ein* are basically indeclinable and the problems with the nucleus oriented inflection in the dative and genitive (for the latter two points, see Roehrs 2009a: Chap. 4).

4.2. *Olsen (1989a, 1989b, 1991a, 1991b)*

In a series of papers (1989a, 1989b, 1991a, 1991b), Olsen discusses inflection within the German DP (I will refer only to her last paper, since that contains the main relevant insights). Assuming Abney’s (1987) DP-Hypothesis, she proposes that phi-features are located under D. These features involve person, number, gender, and case. Abbreviated as AGR, they need to be made visible. She assumes that agreement within the DP is brought about through the selection of a complement NP by a functional head D and percolation of superscripts from NP down the tree. Here are the relevant definitions (my translations):²⁶

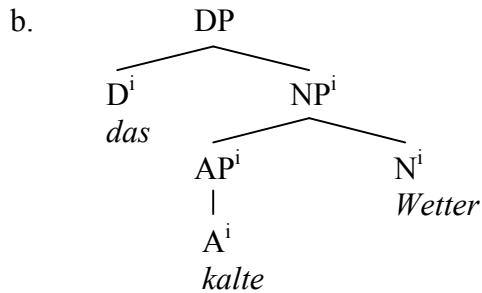
- (53) a. *Principle of morphological realization*
 Grammatical features are rendered phonologically visible.
- b. *Agreement chain:*
 An agreement chain consists of an uninterrupted sequence of identical indices which are brought about by functional selection, which holds between an AGR-category and its complement.

As an illustration, the example in (54a) is derived as in (54b):

- (54) a. *das kalte Wetter*
 the(NOM.ST) cold(WK) weather(NEUT)
 ‘the cold weather’

²⁶ These are the original definitions (Olsen 1991b: 40, 38):

- (i) a. *Prinzip der morphologischen Realisierung*
 Grammatische Merkmale werden phonologisch sichtbar gemacht.
- b. *Kongruenzkette:*
 Eine Kongruenzkette besteht aus einer ununterbrochenen Folge identischer Indizes, die auf der Basis der funktionalen Selektion entsteht, die zwischen einer AGR-Kategorie und ihrem Komplement erfolgt.



AGR is made visible under D by the definite determiner *das*, which has a strong inflection. An identical superscript is on NP (by functional selection) and on N and A (by percolation). To ensure unique realization of the grammatical feature, Olsen follows Emonds' (1987: 615) Invisible Category Principle:

(55) *Invisible Category Principle*

A closed category B with positively specified features C_i may remain empty throughout a syntactic derivation if the features $C_i \dots$ are all alternatively realized in a phrasal sister of B.

To illustrate, the Invisible Category Principle restricts the realization of the comparative to just one overt maker:

- (56) a. [DEG more] brightØ
 b. [DEG Ø] bright-er

Relevant for the discussion of adjectival inflection, this principle allows the realization of AGR on a sister node, the adjective in (57b), and it rules out two strong endings in (57c):

- (57) a. *das kalteØ Wetter*
 the(NOM.ST) cold(WK) weather(NEUT)
 'the cold weather'
- b. [D Ø] *kalte-s Wetter*
 cold(NOM.ST) weather(NEUT)
 'cold weather'
- c. * *da-s kalte-s Wetter*
 the(NOM.ST) cold(ST) weather(NEUT)
 'the cold weather'

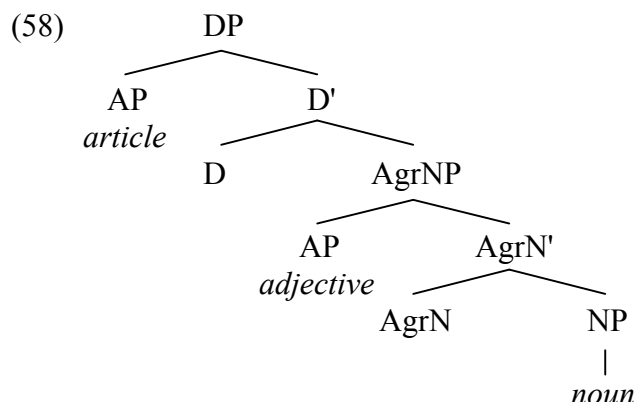
The weak ending in (57a) is assumed to be the "unmarked" inflection of the adjective (Olsen 1991b: 44). Crucially, the strong ending can only be realized on the sister node (i.e., the adjective but *not* the noun), if D is empty (57b). In order to rule out cases such as **ein-es kalte Wetter*, where *ein* would have a strong ending in the three exceptional cases, Olsen (1991: 47 fn. 14)

stipulates that *ein* ‘a’ does not have an inflection in the nominative masculine and the nominative/accusative neuter.

Besides cases where AGR is present but does not have to be overtly realized (*ein Auto* ‘a car’; *Karls Auto* ‘Karl’s car’), unmodified mass nouns do not involve a DP-level in Olsen’s account and thus no AGR is present. Bhatt (1990: 191) and others have pointed out that this leads to the problem that these noun phrases have to enter DP-external agreement relations without AGR. Furthermore, while Olsen (1991b: 44) states that one strong inflection in (57) exemplifies a tendency for economical realization of features or an avoidance of redundancy, it raises issues about strong endings that appear on stacked adjectives: *frisch-es kalt-es Wasser* ‘fresh cold water (for other problems, see Wegener 1995: 159-63, Bhatt 1990: 44).

4.3. Gallmann (1996, 1998)

Gallmann (1996: pp. 295) assumes the following structure for the noun phrase: article words are in the Specifier position of DP, with the head D being empty. Adjectives are also assumed to be in Specifier positions, either in the Specifier position of an iterative AgrNP or, alternatively, as multiple specifiers of AgrN. Both article words and adjectives are assumed to be adjectival heads in APs:



Gallmann proposes to derive the distributions of the inflections by two types of agreement relations, Spec-head and head-head. Besides the simple Spec-head relation of D with its Specifier, covert N-to-D raising brings about the necessary constellations between the noun and the Specifier positions containing the adjectives: here both the head-head relation (between raising N and AgrN) and the Spec-head relation (between Spec,AgrNP and AgrN) hold. He discusses two versions of his proposal.

According to version A, the relevant agreement feature is the abstract feature [f]. This feature is always present in D. Its presence or absence in N is responsible for the alternation between strong and weak inflections. Gallmann provides the following definitions (my translations):²⁷

²⁷ Here are the original definitions (Gallmann 1996: 299):

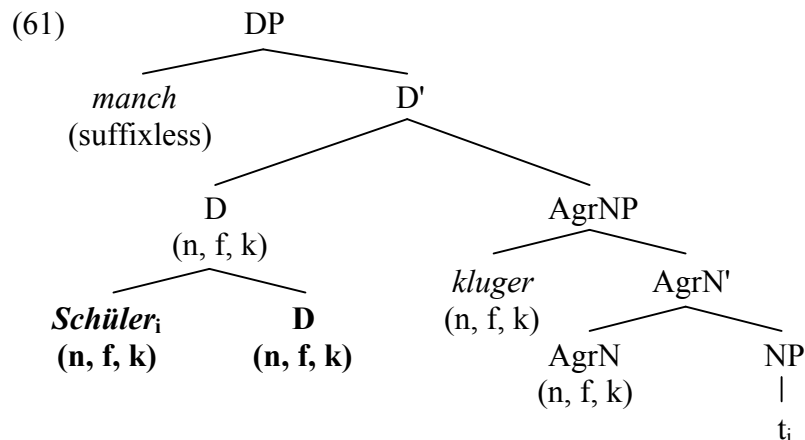
- (i) a. “Starke” (pronominale) Adjektivflexion (Version A)
Ein Adjektiv oder ein Artikelwort ist genau dann stark flektiert, wenn es das Merkmal *f* aufweist.
- b. Steuerung der Adjektivflexion (Version A)

- (59) a. “Strong” (pronominal) adjectival inflection (version A)
An adjective or an article word is strongly inflected, if and only if it has the feature f .
- b. Distribution of the adjectival inflection (version A)
The inflected head A^0 of an AP shows the feature f ,
a) if the AP is in Spec,DP (= article word)
b) if the AP is in Spec,AgrNP and AgrN 0 (i.e., N 0) has the feature f .

There are two more essential assumptions: (i) uninflected (suffixless) adjectival word forms have no feature for f , number, gender, or case; (ii) inflected adjectives without f are weak. To illustrate, consider the following examples (n = number and gender, k = morphological case):

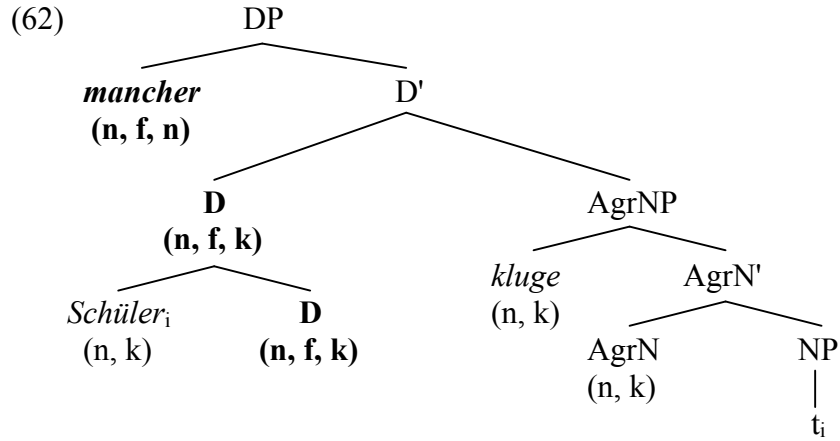
- (60) a. *manch* *klug-er* *Schüler*
A 0 A 0 (n, f, k) N 0 (n, f, k)
(suffixless) (strong)
‘some smart student’
- b. *manch-er* *klug-e* *Schüler*
A 0 (n, f, k) A 0 (n, k) N 0 (n, k)
(strong) (weak)

Simplified, one can state that the presence of the feature f in N brings about the strong ending in (60a): it is on the head noun (and thus by N-to-D raising, head-head and Spec-head agreement on the adjective) and consequently the adjective is strong by (59a). The following tree diagram shows the feature distribution after covert N-to-D movement (abstracting away from intermediate landing sites such as AgrN):



Der flektierte Kern A 0 einer AP weist das Merkmal f auf,
a) wenn die AP in Spec-DP steht (= Artikelwort)
b) wenn die AP in Spec-AgrNP steht und AgrN 0 (bzw. N 0) das Merkmal f aufweist.

If D agrees with the article word in its Specifier, there is no feature *f* in N and consequently the adjective is weak. Consider the tree for (60b):



In order to avoid the co-occurrence of a strong ending on both a determiner and an adjective, it is assumed that D can only agree with either N in (61) or Spec,DP in (62).

In a later part of the paper, Gallmann (1996: 304) attempts to reduce the feature *f* to a mere label. This is version B of his proposal. Relevant for our purposes, Gallmann makes the distinction between primary and secondary agreement relations. Spec-head relations are always primary. In contrast, head-head relations are only primary if they hold in isolation and not in combination with a Spec-head relation. In other words, if a head-head relation co-occurs with a Spec-head relation, this double agreement “weakens” the head-head relation such that it is more like an “echo”-agreement. The latter scenario involves secondary agreement. Crucially, primary agreement leads to the strong inflection and secondary agreement to the weak ending. More generally, what was formerly achieved by the presence of *f*, is now brought about by certain agreement configurations.

To illustrate the second version of Gallmann’s account, consider first (61). Here, we find pure head-head agreement between D and N, which is primary. Consequently, the adjective is strong. In (62), there are two agreement relations: a Spec-head relation between D and Spec,DP and a head-head relation between D and N. As the former is primary, the article in Spec,DP is strong. The “weakened” head-head relation results in a weak ending on the adjective. The primary agreement relations in (61) and (62) are given in bold print.

Apart from a number of technical issues (e.g., the “inertness” of suffixless article words such as *ein*; determiners in Spec,DP, which would not allow any extraction from the DP, cf. Gavrusseva 2000), the distribution of *f* in N, or, alternatively, the “ranking” of primary over secondary inflection merely follows from the definitions themselves. Furthermore, the strong inflection on the adjective in (61) is only an *indirect* consequence of the primary head-head agreement between N and D. Spec-head agreement between AgrN and Spec,AgrNP must be present also in this case, as otherwise the adjective would not agree at all. In conclusion, despite the empirical coverage of Gallmann’s (1996) proposal, it seems desirable to me to derive these phenomena in a less stipulative manner.

4.4. Demske (2001)

Pointing out problems with both Olsen (1991b) and Gallmann (1996), Demske (2001) discusses proposals in the representational framework of Head Phrase-Structure Grammars (HPSG) (for a GPSG proposal, see Zwicky 1986). Borrowing ideas from Kiss (1995), agreement in the noun phrase is brought about by both head-complement and head-modification relations. The first relation is based on a selection mechanism between the head D and the complement NP which involves categorial, semantic, and crucially also morphological selection. Similar to Olsen (1991b), phi-features (abbreviated as AGR) can appear on both the head and the complement by way of identical indices. The strong/weak adjective alternation is a function of a binary feature DECL(ension) [strong/weak] and the second agreement relation “head-modification”.

To illustrate, article words with DECL *strong* select complements with DECL *weak* and the ones with *weak* select *strong*. (63a) exemplifies the weak and (63b) the strong adjectival inflection:

- (63) a. article word [AGR [1]; DECL *strong*; SUBCAT< NP [AGR [1]; DECL *weak*]>]
 b. article word [AGR [1]; DECL *weak*; SUBCAT< NP [AGR [1]; DECL *strong*]>]

The value for AGR(eement) indicates that both the article word and the NP (by the head-complement relation) and the adjective (by the head-modification relation) share the same feature with regard to case, number, and gender. The feature DECL on the article brings about the distribution of the adjectival inflection. This head-complement selection represents a one-way relationship through government by the article and results in the mutual complementarity of the strong and weak endings.

Unlike Kiss (1995), Demske (2001: 95) follows Pollard & Sag (1994), who claim that rather than head-complement, the Spec-head relation is relevant. In other words, Demske (2001) locates the article word in the Specifier position of NP. According to her, this will allow for a straightforward mutual determination of features in the noun phrase by the article and the noun. For instance, the article determines definiteness and the noun contributes its inherent features (such as gender). The basic claim involving selection in (63) remains unchanged. There are also some issues with this proposal.

Besides reservations about the assumed structure of the noun phrase, one may voice criticism about other aspects of her account. For instance, according to (63), an article can, in principle, be either strong or weak. Under this assumption, cases such as (64) can only be ruled out by assigning a lexical feature (DECL *strong*) to *ein* in the dative neuter:

- (64) * *mit einen rotem Auto*
 with a(WK) red(DAT.ST) car(NEUT)
 ‘with a red car’

Considering the regularity of inflection in general, this does not seem a desirable (or needed) feature for a lexical entry. Furthermore, Demske (2001: 56 fn. 24) states that it is actually not correct to say that articles alternate between strong and weak. Rather, they are inflected (and thus strong) or they are not inflected at all. Alternatively then, in order to avoid listing *all* determiners and their respective features in the lexicon, Demske might suggest that only *some* determiners

are lexically listed (perhaps with the feature “uninflected”, the other determiners being strong by default, or vice versa). However, this would lead to giving up the straightforward account in (63), involving only two features: determiners would now be strong or uninflected but adjectives would be strong or weak. In order to account for (64), we are faced with either a lexical account or giving up the two-feature dichotomy, both making the analysis less attractive.

Recently, the interest in nominal inflections seems to have been rekindled. Let me briefly discuss one account that shows a number of similarities to the proposal made above.

4.5. *Schoorlemmer (2009)*

In a recent dissertation, Schoorlemmer makes the proposal to account for the strong/weak alternation by employing certain aspects of the Agree relation (Chomsky 2000). His novel claim is that the agreement relation between the adjective and the noun is not direct but rather indirect; that is, it is mediated by another element. In general terms, if this element is present and mediates the agreement between the adjective and the noun, the adjectival inflection is spelled out as strong. In contrast, if this agreement relation does not hold, then the features on the adjective are not valued/specified and the inflection is spelled out as weak. The latter instance is interpreted as a default option. This account of agreement is labeled Indirect Agree.

Given certain space considerations, I cannot do full justice to all the details of Schoorlemmer’s proposal. In what follows, I will limit myself to the illustration of the basic account leaving many interesting features unexplored. However, it will become clear that there are also certain shortcomings in this type of proposal.

In Chomsky’s Agree system, probes have uninterpretable features and appropriate goals have the corresponding interpretable features. If the probe c-commands the goal, the former can value/specify its features on the basis of the latter. In Schoorlemmer’s terms, the probe and the goal share their features. Given that adjectival inflections are dependent on the phi-features of other elements, Schoorlemmer proposes that they are probes for nominal phi-features.

Specifically, adjectival inflections vary for gender and number. In addition, they may also exhibit properties of definiteness and case. The former is particularly clear in the Scandinavian languages and the latter in German.²⁸ Given that probes must c-command their goals, he suggests that adjectives are higher than nouns, which are specified for gender and number, but they are also higher than determiners, which are specified for definiteness (note that case is a DP-external feature). In other words, adjectives c-command not only nouns but also determiners.

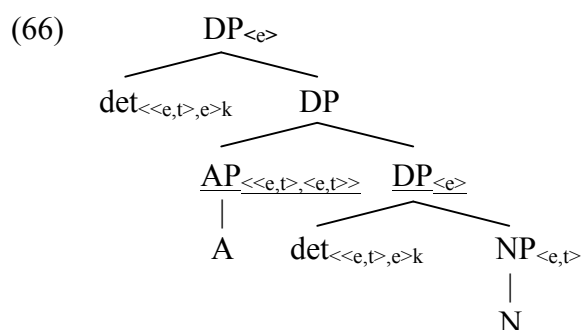
Note now that adjectives can also function as restrictive modifiers; that is, they participate in determining the reference of the noun phrase. As such, adjectives on their restrictive interpretation are often assumed to be in the scope of the determiner where scope is interpreted as the relevant c-command domain (for some discussion, see Chapter 3 below). This leads Schoorlemmer to the following C-command Paradox:

²⁸ Erik Schoorlemmer (p.c.) points out that in his interpretation, the adjectival inflections in Swedish are not exponents of (in-)definiteness; that is, they are not probes for this feature. Rather, these inflections are sensitive to (in-)definiteness. To my mind, the introduction of the concept of “sensitivity” needs to be further motivated, especially in view of certain differences between Swedish and German. Furthermore, its theoretical status and difference to common probes need to be made more precise. This is so because Schoorlemmer employs a feature-sharing framework, which is based on hierarchical notions such as c-command or dominance.

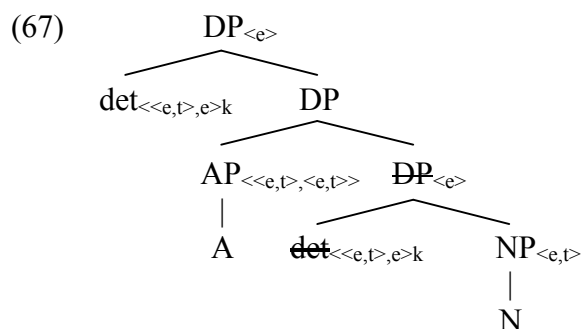
- (65) Attributive adjectives with weak adjectival inflection must be c-commanded by a definite D for their interpretation, but they must c-command a definite D in order to license their inflection (Schoorlemmer 2009: 12).

It appears then as if there must be two positions for determiners, one above adjectives for interpretatory purposes and one below for agreement reasons. Schoorlemmer proposes to resolve this apparent paradox by assuming that the determiner moves from the lower position to the higher position (cf. Roehrs 2006a, 2009a).

The movement of the determiner is triggered by the presence of an adjective. Adopting the general framework of Heim & Kratzer (1998), consider the simplified structure in (66). Note now that the adjective (type $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$) cannot combine with the lower DP (type $\langle e \rangle$). The location of this type mismatch is indicated by underlining the incompatible elements. To resolve this mismatch, the determiner is moved to the left periphery:



At PF, the lower copy of the determiner is deleted; at LF, the lower copy of the determiner as well as its projection are deleted (Schoorlemmer 2009: 27). This is indicated by crossing out the relevant elements in (67):



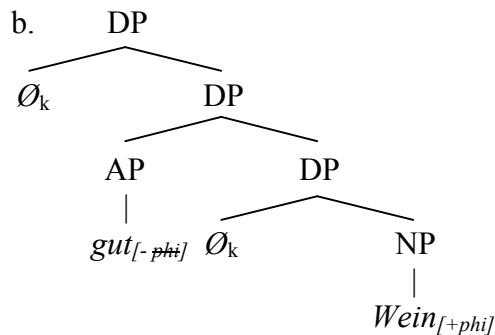
Observe now that at PF, this leaves only one, the higher copy of the determiner. This gives the right surface order. As for LF, with the lower copy of the determiner and its projection deleted, the adjective can now combine with NP. This yields an element of type $\langle e, t \rangle$, which itself can combine with the determiner. This brings about the right semantics of the noun phrase. Basically, all noun phrases with an attributive adjective have this much in common.

Turning to the strong/weak alternation, recall that Schoorlemmer claims that adjectives and nouns do not enter into an agreement relation directly. Rather, this relation is mediated by another element; that is, the agreement relation is indirect. Importantly, for the adjective not to c-

command the noun and thus enter into a direct agreement relation with it, the agreement relation is taken to be based on dominance. Specifically, considering the structure in (67), the adjective does not dominate any of the nodes of the noun. Let us first discuss the strong inflections and then the weak endings.

Recall that Indirect Agree is a function of a mediating head. Mediating heads are proposed to be case-assigners such as little *v*, T and presumably other elements. These heads have uninterpretable phi-features and thus function as probes. For concreteness, let us assume that *guter Wein* ‘good wine’ is a subject and the DP-external case-assigner is T. Assuming a null article (\emptyset), the DP in (68a) is assembled as in (68b). After merging the DP in the clause, the mediating head T probes down the tree and finds the noun phrase *guter Wein*. With the adjective the closest potential goal, T inspects the features on the adjective. However, the adjective does not have interpretable features, here marked as [-phi]:

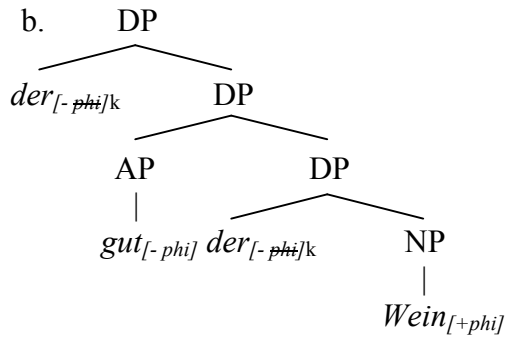
- (68) a. *guter Wein*
good(ST) wine
‘good wine’



As a consequence, the probe looks further down the structure and finds the noun. Since the noun does have the relevant interpretable features, both T and the noun enter into an Agree relation and they share their features. Now, since T had entered an agreement relation with the adjective before, T also shares its features with the adjective. With all its uninterpretable features licensed, the adjective is spelled out with a strong inflection. This is marked by crossing out the uninterpretable phi-features in (68). To be clear, indirect agreement and feature sharing explain the strong ending (for more details, see Schoorlemmer 2009: 145-6).

Turning to the weak ending, Schoorlemmer assumes that unlike null articles (Schoorlemmer 2009: 156), overt articles are probes too; that is, they have uninterpretable features. This has consequences for the DP-internal agreement relations. Specifically, when the determiner probe is merged with the noun, it inspects the interpretable features of the noun. Both enter into an Agree relation and share their features. As all the features on the determiner have been specified, the determiner becomes a deactivated probe. Next, the adjective is merged and due to type mismatch, the determiner moves to the left periphery:

- (69) a. *der gute Wein*
the good(WK) wine
‘the good wine’



At this point, the DP is merged in the clause and T probes down the tree to find a goal. The closest goal is the determiner of the noun phrase. With its features already specified by the noun, the determiner deactivates T as probe. As both the determiner and T are deactivated, the features on the adjective remain unspecified. As a consequence, they are spelled out as weak by default. In a way, the determiner blocks the Agree relation between T and the adjective.

This is, in a nutshell, Schoorlemmer's basic proposal. To account for all the basic data in German, Schoorlemmer (2009: pp. 201) has to make some other assumptions with regard certain features. I will not review these finer points here. Rather, let me point out again that this proposal makes some claims about the structure of the DP that are similar to the ones put forth in this book. Specifically, the determiner is also merged in a low position and undergoes subsequent movement to the left periphery. While I cannot compare both proposals in much detail here, note that there are some very general differences.

For instance, while it is the strong inflections in Schoorlemmer's analysis that are due to a specific operation (Indirect Agree), it is the weak endings in the current account that are brought about by a certain mechanism (Impoverishment). Now, as illustrated in the first part of this chapter, the strong endings occur in more diverse contexts than the weak ones. I interpreted these types of inflections as the elsewhere case. As such, I believe the current proposal is better able to handle these instances. After these general remarks, let me point out some more specific issues with Schoorlemmer's account.

Although the C-command Paradox plays an important part in motivating the structure of the noun phrase, the actual account involving indirect agreement is based on the notion of dominance (not c-command). As far as I can see, this undermines the original motivation for the structure derived from the adjectival inflections. Furthermore, to motivate the movement of the determiner, semantic types are interpreted as part of the syntactic feature bundles. It appears then as if semantic elements (types) and semantic operations (Functional Application) are either relocated into syntax or duplicated there (but see also Schoorlemmer to appear).

Moreover, it is not entirely obvious that little *v*, T and other mediating heads have the full range of uninterpretable phi-features (e.g., gender). Finally, while I cannot discuss this in detail here, it is my impression that Schoorlemmer's system works best for the Scandinavian languages but is less straightforward for German. For instance, the "mixed" paradigm is left for future research and the cross-linguistic differences between possessives and vocatives discussed in the introduction to this chapter do not follow from this uniform account.²⁹

²⁹ As alluded to above, the strong inflections are especially problematic. Without going into too much detail here, note that the presence vs. absence of the mediating head is an important issue for strong adjectives in vocatives. Furthermore, some of the complex noun phrases, discussed in the first part of this chapter, involve more feature

To sum up, all proposals reviewed in this section discuss the basic patterns with different degrees of success and explanatory force. Importantly, none of these proposals address the less canonical cases. It is my belief though that these cases reveal the true nature of adjectival endings in German. While this may turn out to be wrong, all analyses should eventually discuss these more exotic structures to identify their range of empirical coverage and to determine their consequences for the linguistic systems involved.

5. Summary and Conclusion

One goal of this book is to provide a detailed survey of the strong/weak alternation of adjectives in German and to determine the exact conditions for the emergence of the weak and strong endings. In the course of the discussion, we isolated one structure, the regular DP, where weak endings occur. Illustrating that concord is a necessary (but not a sufficient) condition, it was proposed that the weak endings are underlyingly fully specified feature bundles that get reduced by Impoverishment and are eventually spelled out as the weak inflections. Impoverishment is triggered by the determiner, which moves across the Specifier positions containing the adjectives.

In light of this discussion, a number of unexpected weak and strong endings were discussed. It was suggested that there are other mechanisms: besides Impoverishment, there is a phonological rule and morphological disambiguation, the latter being preferred for gender but required for case (see table 2). We also investigated six contexts where strong endings surface. In each case, some independent evidence was provided that suggests that different structures are indeed involved. Importantly, arguing that Impoverishment proceeds locally and in a bottom-up fashion, we suggested that in these different structures, the feature bundles remain unreduced and are spelled out as the strong endings. In that sense, the strong endings are the elsewhere case, which explains their diverse occurrences.

Table 2: Summary Chart

Construction: Example	Inflection: Analysis (section number)
Regular DP: <i>der heie schwarze Kaffee</i>	Weak: <i>Impoverishment (3.1)</i>
Regular DP: <i>%mit frischem schwarzen Kaffee</i>	Weak: <i>Phonological Rule (3.2)</i>
Regular DP: <i>mir groem Esel</i>	Strong: <i>Disambiguation of Gender (3.3.1)</i>
Regular DP: <i>uns nette Schler</i>	Strong: <i>Disambiguation of Case (3.3.2)</i>
Close Appositions: <i>der Indianer Groer Br</i>	Strong: <i>Low Right-Adjunction (2.1)</i>
Indefinite Pronoun Constructions: <i>wer anderer</i>	Strong: <i>Mid Right-Adjunction (2.2)</i>
Loose Apposition: <i>wir, begeisterte Linguisten</i>	Strong: <i>High Right-Adjunction (2.3)</i>
Dis-agreement in Pronominal DPs: <i>ihr dummes Pack</i>	Strong: <i>Complex Specifier inside DP (2.4)</i>
Intensifiers: <i>dieses mein groes Glck</i>	Strong: <i>Outside of DP Proper (2.5)</i>
Split-NPs: <i>bunte Hemden ... diese da</i>	Strong: <i>Separate Base-generation (2.6)</i>

To be clear, we proposed that there are several mechanisms that are responsible for the strong/weak alternation. It remains to be seen if all these (and perhaps other) mechanisms can be

sharing relations than there are mediating heads. This raises the question as to how strong adjectives in the different sub-structures of these nominals can be explained.

reduced in number at some more abstract level of investigation. The previous proposals discussed in the final section of this chapter do not discuss the whole range of data and as a consequence, reach very different conclusions. Another goal of this book is to draw some more general conclusions.

In this chapter, we showed that adjectival inflections in German do not correlated with (in-)definiteness. I proposed that these inflections are semantically vacuous. We argued that the strong/weak alternation is a reflex of different structures: on the one hand, a weak ending can only occur in AgrP; on the other, assuming that determiners are also subject to this alternation, a strong inflection can be in IntP, DP, and given certain conditions also in AgrP. If this is on the right track, then we can utilize the strong/weak alternation as a probe into the structure of other nominals. With this in place, we turn to some consequences for other types of proposals. The discussion of some consequences will reveal other properties of adjectival inflections.

Chapter 3: Some Consequences of the Analysis

1. Introduction

In this chapter, we turn to some consequences of the analysis developed in the previous chapter. We will consider four types of accounts. We will show that weak adjectival endings present problems for structures involving Predicate Inversion. Second, we will see that similar issues arise for analyses postulating null nouns. Third, discussing discontinuous noun phrases, it will be argued that strong endings on topicalized adjectives are only compatible with split NPs being analyzed as the base-generation of two separate nominals but not as movement involving one nominal. Fourth, returning to weak endings, we show that adjectives involving a restrictive or a non-restrictive interpretation have the same basic structure. The discussion of these consequences will document some other features of adjectival inflections. For instance, we will demonstrate that strong endings are not “referential” but simply serve to make nominal features visible. We begin with Predicate Inversion.

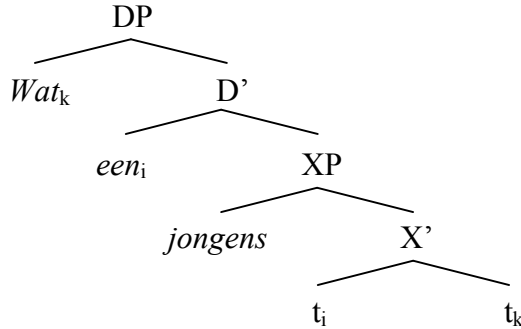
2. Weak Endings in Structures Involving Predicate Inversion

Taking Dutch as their empirical basis, Bennis, Corver & den Dikken (1998) (henceforth BC&D) discuss – what they call – ‘*wat*-exclamative constructions’, (1a). Like some other constructions they investigate, (1b), a singular indefinite article is compatible with a plural noun. They call this article spurious. The article is syntactically obligatory in the first construction but not in the second, where its presence or absence has semantic consequences (see den Dikken 2006: 171):

- (1) a. *Wat *(een) jongens!* (Dutch)
 what a boys
 ‘What boys!’
- b. *idioten van (een) mannen*
 idiots of a men
 ‘idiots of men’

Adopting the general framework of den Dikken (1995), they propose a small clause structure with some further functional positions on top. Considering (2) below, the small clause is represented by XP and the functional structure by DP. The nominal *jongens* ‘boys’ is assumed to be the subject, *wat* ‘what’ is the predicate, and *een* ‘a’ is the head of the small clause. They propose that D is an [+EXCL] operator, which needs to be lexicalized. As a consequence, *een* raises from X to D. The predicate *wat* undergoes Predicate Fronting to Spec,DP, a type of A’-movement, which for them, results in something similar to Verb Second in the clause (their tree diagram on page 106 is slightly adapted here):

(2)



The counterpart of the *wat*-exclamative in German is different. First, unlike in Dutch, the prepositional element *für* 'for' must be present, (3a). Second, the spurious article is not obligatory and seems to be possible in some dialects only (% indicates dialectal variation; all cases in (3b) were delivered by an informal *Google*-search). Note that this *ein* has a typical plural ending:

(3)

- a. *Was *(für) Ferien!*
what for holidays
'What holidays!'

- b. % *Was für eine {Ferien / Typen / Idioten / Frauen}!*
what for a(PL) holidays / guys / idiots / women

After these preliminary observations, let us return to the main line of investigation. To make these cases relevant, let us see how an adjective, especially its inflection, fares when it is added to the subject of the small clause.

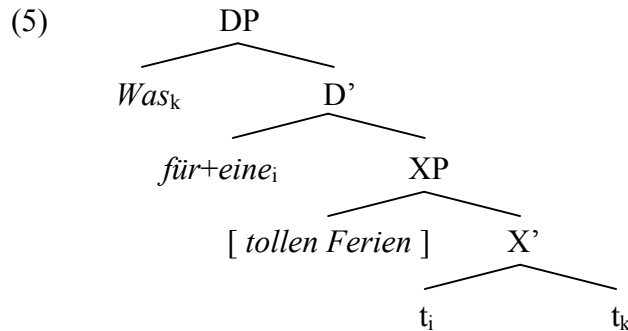
While adjectives are certainly possible here, there is an interesting asymmetry. With no (overt) determiner present, the adjective has a strong ending, (4a). It should be clear that this is expected and basically follows from the system developed in Chapter 2. Something interesting happens when the spurious article is present. Under this condition, the adjective must be weak, (4b):

(4)

- a. *Was für tolle(*n) Ferien!*
what for great(ST/*WK) holidays
'What great holidays!'

- b. % *Was für eine tolle*(n) Ferien!*
what for a(PL) great(WK/*ST) holidays

With BC&D's discussion in mind, the structure for (4b) would presumably look as follows:



The question that arises now is how to account for the weak ending in (4b), given this structure.¹

Note first that the Predicate Inversion structure, simplified in (6a) below, is configurationally identical to the disagreement case discussed in Chapter 2, section 2.4. In particular, in both cases, the adjective and noun form complex Specifiers. In other words, unlike regular DPs, both cases in (6) have an additional layer of embedding. Furthermore, both the spurious article and the pronoun move from a lower position across this Specifier (not indicated here):

- (6) a. [DP ... *eine* [XP [A_{WEAK} N] X [...]]]
 b. [DP pron [DisP [A_{STRONG} N] Dis [...]]]

Now, despite these structural and derivational commonalities, (6a) involves, at least at first glance, morphological agreement and semantic dis-agreement, and (6b) involves semantic agreement and morphological dis-agreement. Crucially, morphological agreement correlates with the weak ending and morphological dis-agreement with a strong ending.

As seen above, German *ein* exhibits a typical plural ending in these cases. Compare *ein-e* ‘a(PL)’ with *dies-e* ‘these’. It appears then as if the spurious article morphologically agrees but semantically dis-agrees with the noun (or, at least, it does not agree with it). BC&D (1998: 94, 97) explicitly claim that the indefinite article does not form a constituent with the following noun. In their base position, though, the noun and the indefinite article are in a Spec-head relation. This, for instance, explains certain agreement patterns in English (e.g., *What a man* / **a men!*). In order to explain the plural morphology in German, we could assume that English *a* is specified for semantic and morphological number but that German *ein* has only an unspecified morphological feature: [α PL morph] (see Chapter 4). Now, while the morphological feature can be valued in the relevant Spec-head relation, the lack in German of a feature involving semantic number makes *ein* (but not *a*) compatible with a plural noun. So far, so good. Note, however, that this Spec-head relation in and of itself does not explain the weak ending on the adjective.

Recall from Chapter 2, section 2.2 that concord is not a sufficient condition for a weak ending. What is required is an appropriate structure. As is clear from the discussion above, the

¹ Some remarks are in order here. Note first that in their discussion of *N of a N*-constructions, BC&D allow a preposition and a spurious article to occupy the same head position. In other words, the structure in the main text should in principle be fine. Second, they state explicitly (p. 112), that *wat*-exclamatives do not involve the intermediate phrase FP (between XP and DP), where *een* would be in F and *wat* would, as an instance of Predicate Inversion, move through Spec,FP on its way to Spec,DP (see their discussion of *wat voor*-interrogatives on pages 109-110). Note, however, that even if we assumed the latter possibility for German, the problem to be discussed in the main text would still remain.

Predicate Inversion structure is not a regular DP – the adjective is more deeply embedded. This leaves the occurrence of the weak ending unexplained in the system developed above. However, one might suggest that the structure in (5) is not correct. For instance, one option might be to assume that there is a null article present in Spec,XP. However, as documented in Chapter 2, null articles take a strong adjective. In other words, a null determiner cannot account for the weak ending.

As a second alternative, one could suggest that the adjective is in a different position than assumed in (5). Interestingly, for ordinary DPs such as (7a), den Dikken (2006: 49) proposes the structure in (7b), where the adjective is in the Specifier position of a Relator Phrase (RP) and the noun is in the complement position of it. Non-pronunciation is marked by capital letters:

- (7) a. a big butterfly
- b. [DP/NumP *a* [RP [AP *big*] [RELATOR [NP *butterfly*]]]]

Noun phrases with a definite determiner presumably have a similar structure. Importantly, the adjective is also in the Specifier below the determiner, just as in the ordinary cases in Chapter 2 (note that this holds independently of whether or not the adjective is base-generated or moved there). This is basically what I assumed in (5) where RP in (7b) forms the subject located in Spec,XP. Note also that NumP in (7b) cannot form the subject in (5) as it would involve a null article in the plural, an option already rejected above.

Returning to the issue of the weak inflection, if one were to offer an account employing Impoverishment, one would have to find a different structure where the adjective is not part of the small clause subject in (5). If successful, one would then wind up with different structures for modified nouns in ordinary DPs and modified nouns in *wat*-exclamatives. This in turn raises other questions. Whatever will turn out to be the case, this discussion, once again, makes clear that under current assumptions, the inflection of the adjective is closely tied to the structure of the noun phrase as a whole narrowing down the choices of possible analyses of certain constructions.

To sum up this section, at best, one could state that the indefinite article in these constructions is not entirely spurious in German. Accepting BC&D's structure, one would need to modify the analysis in Chapter 2 to account for the weak adjective. This modification should preferably not be a second (construction-specific) mechanism that simply serves to "save" the Predicate Inversion analysis. At worst, the weak ending on the adjective hints at the fact that BC&D's structure is not on the right track (for other issues, see Matushansky 2002).

In the next section, we consider another type of analysis that may account for the spurious article. We will see that this type of proposal is also ill-equipped to deal with weak endings.

3. Weak Endings in Structures Involving Null Nouns

Extending the proposal of Leu (2008a,b), van Riemsdijk (2005) also discusses the spurious indefinite article in Dutch. Discussing various constructions, here is an example involving a non-*wh*-exclamative (see also Bennis, Corver & den Dikken 1998: footnote 7):

- (8) *Die auto heeft een deuken!* (Dutch)
 that car has a dents

Unlike the Predicate Inversion analysis, van Riemsdijk argues for the presence of a semi-lexical null noun. He labels this element TYPE. Based on his structure on page 173, the datum in (8) is analyzed as follows where !!! stands for an exclamative operator:

- (9) !!!.....[_{DP} [[_D (een)] [_{DEG} [[_n TYPE] *deuken*]]]]

With this in place, let us return to the discussion of the spurious article and weak adjectives in German.

The presence of a null noun allows for a different analysis of the spurious article. Unlike with Predicate Inversion, the ending on *ein* could also be interpreted as feminine. Compare *ein-e* ‘a(FEM)’ to *dies-e* ‘this(FEM)’. In order to account for the feminine gender, one could then follow van Riemsdijk in that a null noun with feminine gender is present. Such a noun in German is *Art* ‘kind’, which would remain unpronounced in certain, “affective” contexts:

- (10) a. *eine Art Leute*
 a kind people
 ‘a kind of people’
 b. *eine ART Leute*
 a TYPE people

To be clear, the postulation of a null noun leads to an analysis different from Predicate Inversion structures. Note, however, that weak adjectives once again present a problem for this type of conjecture. To see this, let us add an adjective again, (11a). There are two ways to analyze it on these assumptions. Consider (11b) and (11c):

- (11) a. % *Eine coolen Leute kamen zur Party!*
 a cool(WK) people came to.the party
 ‘Some cool people came to the party!’
 b. (*) *eine coolen ART Leute*
 c. (*) *eine ART coolen Leute*

There are strong indications that the two analyses in (11b) and (11c) are not correct. Starting with (11b), we point out that *-en* is not a possible ending, strong or weak, in the feminine nominative (which is actually *-e*). As for (11c), we observe that *-en* on *cool* can only be a strong ending in the dative plural (the strong endings in the other cases in the plural are *-e* or *-er*). In the dative plural, the head noun usually takes *-n* (e.g., *mit coolen Leuten* ‘with cool people’). Crucially though, *Leuten* is not at all possible in (11a). This means that *coolen* cannot be in the dative plural and thus cannot be strong. If so, then *coolen* in (11c) must be weak. Recalling that null articles lead to strong inflections, *coolen* does not have its own determiner leaving the weak inflection unexplained. We conclude then that the presence of a null feminine noun cannot

explain (11a). In other words, weak endings also present a problem for this type of analysis (for other issues, see Corver & van Koppen 2011: footnotes 6, 24).

More generally, it is clear that on the system developed in Chapter 2, the indefinite determiner must form a regular DP with the adjective. Furthermore, for Impoverishment to be triggered, the spurious article cannot be inserted late in the derivation. While I cannot fully discuss all these constructions here, note that they are, in some sense, “affective” or “emotive”. What one would need, then, is a mechanism that licenses the overt occurrence of the plural indefinite article in this context. We briefly return to this in Chapter 8 suggesting that *ein* can flag covert operators.

Having documented that weak adjectival endings pose a challenge for structures involving Predicate Inversion and null nouns, adjectival endings also play an important role in the analysis of other constructions. In the next section, we discuss strong adjectives that raises issues for certain analyses of split NPs.

4. Strong Endings in Structures Involving Split NPs

Discontinuous phrases have received much attention in the literature. German is interesting in that it allows the lower part of a noun phrase to be left dislocated. Compare (12a) to (12b). The topicalized element in (12b) functions as a (contrastive) topic and the lower nominal forms a focus. These two parts are related by a “bridge intonation contour”:

- (12) a. *Ich habe keine Bücher gelesen.*
 I have no books read
 ‘I have read no books.’
- b. */BÜcher habe ich KEINE gelesen.*
 books have I none read.
 ‘As for books, I have read none.’

To establish some terminology, I refer to this construction as ‘split NP’, to the left nominal as ‘split-off’, and to the right one as ‘source’.² This type of construction is characterized by a number of properties that indicate both movement and separate base-generation. With current purposes in mind, we will focus on the behavior of adjectives.

Van Riemsdijk (1989: 122) observes that the linear order of the adjectives in the split NP corresponds to the one without a split. Compare the sequences of adjectives in the unsplit examples in (13) to those in the split ones in (14):

- (13) a. *ein neues amerikanisches Auto*
 a new American car
 ‘a new American car’

² Some other names for this construction are ‘split topicalization’ (van Riemsdijk 1989) or ‘split-topic’ (Diesing 1992). I will be using the term split NP despite the fact that I fully adopt the DP-hypothesis. Also, since the construction is semantically relatively homogenous, I will provide only some translations where the split-off is usually introduced by *As for* ..., ... as exemplified in (12b).

- b. * *ein amerikanisches neues Auto*
 a American new car
- (14) a. ***Ein amerikanisches Auto*** kann ich mir ***kein neues*** leisten.
 an American car can I REFL no new afford
- b. * ***Ein neues Auto*** kann ich mir ***kein amerikanisches*** leisten.
 an new car can I REFL no American afford

This can be straightforwardly explained under a movement analysis (for details, see momentarily). In section 4.4, we turn to the discussion of *ein* in the split-off showing that *ein* in (14a) cannot be inserted late.

In contrast, adjectival endings differ in regular and discontinuous noun phrases. In particular, the adjective in a regular, unsplit DP is weak, (15a). However, if the adjective is topicalized, it must be strong, (15b):

- (15) a. *Ich habe keine bunten Blumen gekauft.*
 I have no(ST) multi-colored(WK) flowers bought
 ‘I have bought no multi-colored flowers.’
- b. ***Bunte Blumen*** habe ich ***keine*** gekauft.
 multi-colored(ST) flowers have I no(ST) bought

A strong ending on an unpreceded adjective is exactly what we expect if the two noun phrases are base-generated independently of each other. In more detail, with Chapter 2 in mind, the weak ending in (15a) shows that Impoverishment must have taken place, in the presence of a determiner in a certain structural constellation. The strong ending in (15b) implies that Impoverishment has not occurred. This implies that either there is no appropriate structure or no determiner present (or both). Crucially, notice that late separation, that is, generating all elements in a regular DP and then moving the lower part out would bring about a (wrong) weak ending.

To be clear, then, discontinuous DPs exhibit paradoxical properties in the behavior of adjectives in German. Adding some more characteristics (for detailed discussion, see, e.g., Roehrs 2011b), let us summarize them in table 1.

Table 1: Summary of the Properties of Split NPs

movement	separate base-generation
sequence of adjectives	unexpected strong / weak endings
sequence of complements/modifiers	non-constituents
	<i>welch</i> ‘which’
Binding	two determiners
islands (relative clause)	islands (subject, dative indirect objects, definite noun phrases)

In what follows, I discuss two basic types of analyzes (see also van Hoof 2006 and references cited therein). On the one hand, I will show that movement involving one noun phrase faces problems in the account of strong adjectival endings. On the other hand, it will be demonstrated that base-generation of two independent noun phrases is completely compatible with the discussion in Chapter 2.

4.1. Movement out of the Source

Van Riemsdijk (1989) and Bhatt (1990: 249-250) argue for movement of the split-off out of the source. Adopting the DP-hypothesis, the above data can be analyzed as follows (see also Pafel 1995):

- (16) a. *Ein amerikanisches Auto kann ich mir kein neues leisten.*
 an American car can I REFL no new afford
- b. *[Ein amerikanisches Auto]_i kann ich mir [DP kein neues [t_i]] leisten..*

To explain the presence of *ein* in the split-off, it is assumed that this element is inserted later in the derivation. As briefly discussed above, this analysis immediately explains the restrictions on the sequence of adjectives:³

- (17) a. * *ein amerikanisches neues Auto*
 a American new car
- b. * *Ein neues Auto kann ich mir kein amerikanisches leisten.*
 an new car can I REFL no American afford

We return to the discussion of *ein* and the sequence of adjectives briefly below. However, under these assumptions, the change of the adjectival ending from weak to strong becomes mysterious:

- (18) a. *Ich habe keine bunten Blumen gekauft.*
 I have no(ST) multi-colored(WK) flowers bought
 ‘I have bought no multi-colored flowers.’
- b. *[Bunte Blumen]_i habe ich [DP keine [t_i]] gekauft..*
 multi-colored(ST) flowers have I no(ST) bought

Note that a strong ending on an unpreceded adjective is exactly what we expect if the two noun phrases were independent of each other, that is, were not related by movement. Moreover, this inflectional distribution even extends across the same part of speech, such that several instances of adjectives may have different kinds of endings in the same sentence when split up (cf. Haider 1993: 215 for similar data). Compare (19a) to (19b):

³ The judgments in (17) are not uncontroversial and probably too strong (see, Fanselow & Ćavar 2002: 79-80, Ott 2011a: 30).

- (19) a. *Ich habe keine großen bunten Blumen gekauft.*
 I have no(ST) big(WK) multi-colored(WK) flowers bought
 'I have bought no big multi-colored flowers.'
- b. *Bunte Blumen habe ich keine großen gekauft.*
 multi-colored(ST) flowers have I no(ST) big(WK) bought

Again, a movement analysis does not account for the different endings on the two adjectives. Let us turn to a second type of analysis involving movement.

4.2. Movement but not out of the Source

Fanselow & Ćavar (2002) show that while islands such as (20b) are observed (datum from Grewendorf 2002), others do not exhibit the relevant effect. The latter type is illustrated by these authors with a subject island, (21b):

- (20) a. *Ich weiß nicht, wer aufrichtige Politiker kennt.*
 I know not who sincere politicians knows
 'I don't know who knows sincere politicians.'
- b.* *Politiker weiß ich nicht, wer aufrichtige kennt.*
 politicians know I not who sincere knows
- (21) a.* *An Maria haben mich keine Briefe erschreckt.*
 to Mary have me no letters frightened
- b. *Briefe an Maria haben mich keine erschreckt.*
 letters to Mary have me no frightened

Similarly, they show that dative indirect objects can be split up and there is no definiteness effect, at least for some speakers. In order to account for this and the other paradoxical properties (see again table 1 above), Fanselow and Ćavar (2002) hypothesize that split NPs involve movement but crucially *not* out of the DP to be split up. I agree with this assessment and as far as I am aware, a consensus seems to be emerging that this is indeed the correct characterization of the facts.

As a technical implementation, they argue for a different type of account adopting the copy-and-delete approach to movement (Chomsky 1995). Moving the entire DP, they propose that deletion may affect *both* copies. Glossing over some of the details here, they suggest that the determiner is deleted in the higher copy and the head noun in the lower one. This derives (22a) as in (22b):

- (22) a. *Wagen hat er sich noch k-einen leisten können.*
 car has he REFL yet n-one afford could
- b. {~~einen~~ Wagen} hat er sich noch k- {einen ~~Wagen~~} leisten können

At first glance, this analysis of distributed deletion seems to receive strong confirmation from the fact that the deletion of the higher copy of the determiner may, under certain conditions, be suspended, deriving (23a) as in (23b):

- (23) a. *Einen Wagen hat er sich noch k-einen leisten können.*
 a car has he REFL yet n-one afford could
- b. {einen Wagen} hat er sich noch k- {einen ~~Wagen~~} leisten können

However, upon closer inspection, it turns out that both determiners do not have to be the same, (24a). In fact, when the determiner in the source is definite, the one in the split-off cannot be definite, (24b):

- (24) a. *Einen Wagen hat er sich nur diesen leisten können.*
 a car has he REFL only this afford could
- b. * {Diesen / Den } Wagen hat er sich nur diesen leisten können.
 this / the car has he REFL only this afford could

Now, if a copy-and-delete type of analysis were correct, we would expect the grammaticality judgments in (24) to be the reverse. One might suggest then that this type of contrast could be handled by repair rules. However, in section 4.4, we will see that there is some indication that *ein* in (24a) is probably not due to some “late” insertion process.

Returning to the main line of argument, we observe again that under this type of proposal, the strong adjectival endings are not compatible with the analysis in Chapter 2. Specifically, constructing a regular DP first, we would expect a weak ending on a split-off adjective, contrary to fact. In view of this and some other issues (e.g., the licensing of Negative Polarity Items, see Bosse 2009: 278), a different technical implementation is called for.⁴

4.3. Separate Base-generation

That data above can be analyzed as involving the base-generation of two separate nominals in the VP and moving one of them (or both) to the left. There have been several attempts to execute this basic idea. These proposals take as their point of departure Fanselow and Ćavar’s (2002) generalization that split NPs involve movement but crucially *not* out of the DP to be split up. Specifically, Bosse (2009) proposes an analysis where she links split NPs to Restrictive Elliptical Appositives (Riemsdijk 1998b). Ott (2011a) argues for an account that involves the breaking of a symmetric bare-predication structure. Third, Roehrs (2011b) also argues for the base-generation

⁴ There is a third type of analysis involving movement. Tappe (1989) argues for a combination of different base-generations and movement. In particular, the split-off is base-generated in Spec,CP and the source is base-generated in situ. The lower part of the source is proposed to move into the complement position of the split-off. The example in (ia) is derived as in (ib):

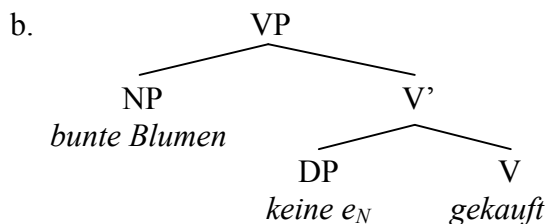
- (i) a. *So*(nen) Wagen kann ich mir keinen leisten*
 such a car can I REFL none afford
- b. [_{DP} so’nen [_{NP} Wagen]_i] kann ich mir [_{DP} keinen t_i] leisten

This proposal leads Tappe to revise standard assumptions about chains. However, the assumption of movement into a complement position should be avoided if at all possible.

of two separate nominals. While all three analyses are compatible with our assumptions in Chapter 2, let us for concreteness consider the third analysis in some detail.

Basing the following account of Fanselow (1988), Roehrs (2011b) proposes that there is a division of labor between the syntax and the semantics. In particular, I suggest in that paper that split NPs involve the separate base-generation of an argumental DP and a predicative part in the same local domain, the VP. The argumental part contains an empty noun (e_N). The initial stages of the derivation of (25a) are illustrated in (25b):

- (25) a. *Bunte Blumen habe ich keine gekauft..*
multi-colored(ST) flowers have I no(ST) bought



Both the argumental part and the predicate nominal undergo movement to the left. The DP moves for case, the NP is topicalized. Arguing that the overt nominal in Spec,CP and e_N are predicates of the same type $\langle e, t \rangle$, the “free” overt predicate in Spec,CP is closed off by interpreting it in e_N of the argumental DP filling e_N with semantic content at the same time. Returning to inflection, it is clear that the adjective is not in the same nominal as the determiner and as such, Impoverishment does not apply. As a consequence, the feature bundle is not reduced and spelled out as the strong ending. This gives the desired result. To be clear, proposals involving separate base-generation are completely compatible with the analysis in Chapter 2.

Turning briefly to the restriction on the sequence of adjectives, I propose that the movement characteristics follow from movement of the split-off and the calculation of e_N in the source. In particular, the sequence of the adjectives is accounted for if we assume that e_N is semantically calculated on the basis of the material of the split-off. In other words, the split-off is interpreted in e_N and selectional restrictions can be “checked” after semantic reconstruction (for details, see Roehrs 2011b). Let us briefly return to the discussion of *ein*.

4.4. *Ein in the Split-off*

We saw in the first two sections of this chapter that *ein* is not entirely spurious in that it triggers a weak ending on a following adjective. This means that *ein* could not be inserted late. There is independent evidence from indefinite pronoun constructions for this conclusion.

As illustrated in Chapter 2, adjectives can follow an indefinite pronoun, (26a). Interestingly, an adjective preceded by an indefinite article cannot, (26b):

- (26) a. *etwas Amerikanisches*
something American
‘something American’

- b. * *etwas ein Amerikanisches*
something an American

At first glance, one might claim that this is a phonological restriction such that the pronoun and *ein* cannot be adjacent. However, consistent with (26b), split NPs formed on the indefinite pronoun construction cannot involve an indefinite determiner in the split-off either. Compare (27a) to (27b):

- (27) a. **(Ein) amerikanisches** hat er sich nur **eins** leisten können.
an American has he REFL only one afford could
'As for American ones, he has been able to afford only one.'
- b. **(*Ein) Amerikanisches** hat er sich **etwas** leisten können.
an American has he REFL something afford could

Considering *nichts* (**ein*) *Amerikanisches* 'nothing American', the same facts hold if the source involves a negative element:

- (28) a. **(Ein) amerikanisches** hat er sich noch **keins** leisten können.
an American has he REFL yet none afford could
'As for American ones, he has not been able to afford one yet.'
- b. **(*Ein) Amerikanisches** hat er sich noch **nichts** leisten können.
an American has he REFL yet nothing afford could

In view of the ungrammaticality in (27b) and (28b), a phonological restriction involving adjacency of the pronoun and *ein* cannot explain the ungrammaticality of (26b). As such, I take this to be a syntactic and/or semantic restriction. Now, in order to explain the ungrammaticality of these indefinite pronoun constructions, *ein*, or rather its abstract feature bundle, must be present in narrow syntax. If so, then the presence of *ein* in (27a) and (28a) cannot be a "late" (i.e., PF) phenomenon on parity of assumption.

Let us briefly turn to adjectival inflections in the context of semantic concepts such as (non-)restrictiveness of interpretation of adjectives and referentiality. In keeping with the current discussion, we will see that these endings make no semantic contribution in German.

5. Weak Endings on Non-restrictive Adjectives

As documented in detail in Chapter 2, adjectives are usually weak if they follow a determiner. Note that these types of examples can actually have two interpretation. The restrictive interpretation of the adjective is given in (29a) and the non-restrictive interpretation is provided in (29b). The latter is clearly brought out by the addition of *übrigens* 'by the way':

- (29) a. *der alte Mann*
the old(WK) man
'the man that is old'

- b. *der (übrigens) alte Mann*
 the incidentally old(WK) man
 ‘the man, who is (by the way) old’

With the above analysis in mind, this implies that both restrictive and non-restrictive interpretations involve the same (regular) structure to which Impoverishment has applied. In other words, non-restrictive adjectives cannot be inserted late, that is, after Impoverishment has occurred.⁵

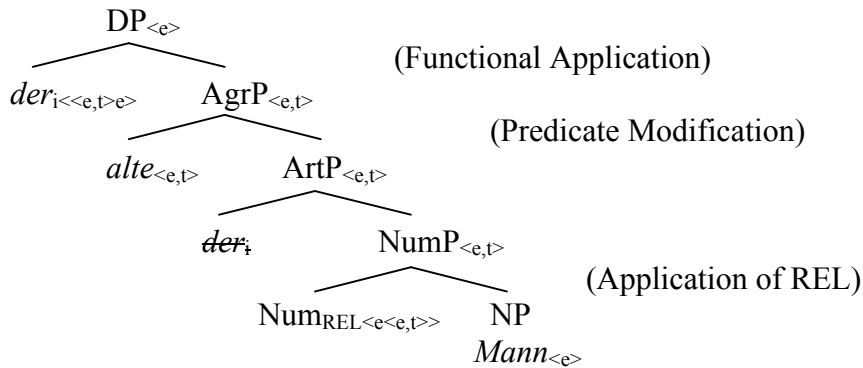
In Roehrs (2009a: 104), I suggest that the main structural difference between the restrictive and the non-restrictive interpretation involves the absence or presence of a null co-indexed *pro*. This can be schematically represented as follows:

- (30) [*der* [(*pro*_i) *alte*] *Mann*]_(i)
 the old man

In order to account for the uniform inflectional behavior of the adjective, let us be a bit more specific about the relevant structures and derivations. With the focus on the morpho-syntax, I will only briefly discuss the semantics. I start with the restrictive interpretation.

Recall from Chapter 2 that the determiner moves from below the adjective to the DP-level, (31). Given this structure and the presence of a determiner, Impoverishment occurs bringing about the weak ending. As to the semantics, the kind noun combines with the realization operator REL to yield a predicate (see Chapter 6). This predicate connects with the adjective by Predicate Modification. The resulting conjunction of the two predicates is combined with the determiner by Functional Application. This supplies an individual:

- (31) *Restrictive Interpretation*

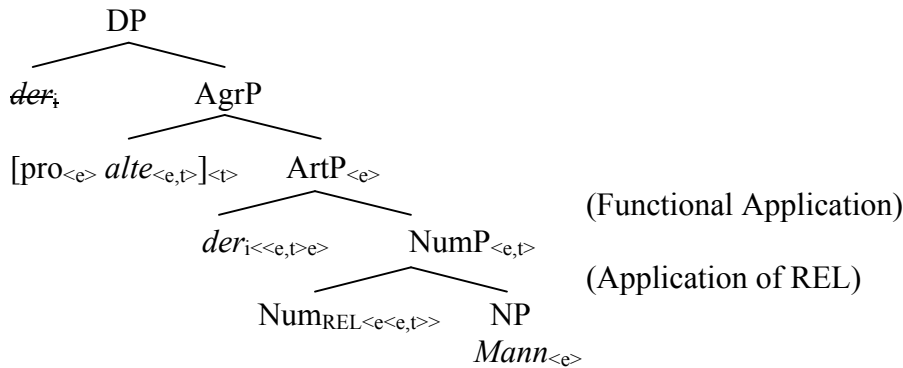


⁵ In other languages, the strong/weak alternation does indicate such a difference in interpretation. In Icelandic, the adjectives with a weak ending are restrictive in interpretation, (ia), but adjectives with a strong ending are non-restrictive, (ib) (see Delsing 1993: 132 fn. 25; Thráinsson 1994: 166, 2007: 3, 89; and Sigurðsson 2006: 200 fn. 3):

- (i) a. *guli billinn* (Icelandic)
 yellow(WK) car-the
 ‘the car that is yellow’
 b. *gulur billinn*
 yellow(ST) car-the
 ‘the car, which is yellow’

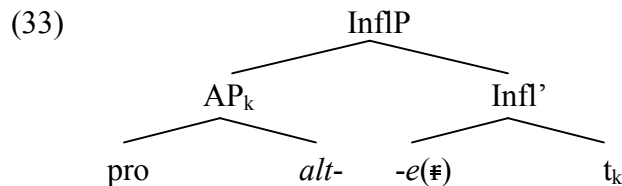
The structure for the non-restrictive reading is basically the same. Unlike above, however, the determiner is interpreted in its base-position. As a consequence, the adjective is outside the scope of the determiner, (32). The adjective itself is combined with *pro* by Functional Application yielding a truth value. Assuming a model of multiple semantic spell-out, this element is then “sent off” for interpretation (for details, see Roehrs 2009a: pp. 102):

(32) *Non-restrictive Interpretation*



To be clear then, the determiner in both cases has moved to the DP in syntax but is interpreted in different positions at LF. Consider the internal structure of the modifier in Spec,AgrP in more detail.

Recall from Chapter 2, section 3.1.1 that adjectives involve extended projections. In particular, we suggested that they consist of an adjective stem at the bottom and an inflectional head at the top. In order for the stem to combine with its inflection, the stem along with its dependents moves to Spec,InflP. The minimal structure is as follows:



Note now that independent of the presence of *pro*, Impoverishment can occur in a local fashion; namely on the highest head of the extended projection. In other words, given this structure, Impoverishment is compatible with different interpretations of the adjective. If this is accepted, then we can continue to claim that weak adjectival inflections indicate one and the same structural constellation and are independent of the semantics. Finally, we turn to referentiality.

6. Adjectival Endings Make Nominal Features Visible

In the previous chapter, we argued that adjectival inflections are semantically vacuous. However, there is evidence that they are nominal, and not clausal, in character. Recalling that the strong endings on determiners are the same as those on adjectives, this evidence comes from the optional ending on certain demonstrative elements. One might claim then that these strong

inflections are “referential”, and not “propositional”, in nature. Note that referentiality is a semantic concept. I will suggest that this is not the case. Rather, these endings simply make nominal features visible. The different semantics stem from the demonstrative element in combination with different types of null elements.

Alexiadou *et al.* (2011: 31) point out that inflected *dieses* ‘this’ is an anaphor for nouns only but uninflected *dies* ‘this’ is an anaphor for both nouns and clauses. Compare (34a) to (34b) (data slightly adapted; see also Helbig & Buscha 2001: 229-230):

- (34) a. *Hans hat ein rotes Buch. {Dieses / Dies} war sehr teuer.*
 Hans has a red book. This was very expensive
 ‘Hans has a red book. It was very expensive.’
- b. *Daß Maria bereits angekommen ist, {*dieses / dies} weiß ich genau.*
 that Mary already arrived is this know I well
 ‘I am positive that Mary has already arrived.’

In other words, both demonstratives seem to be semantically different. As these two elements differ in inflection, one might claim that adjectival endings have semantics after all. In particular, since inflected *dieses* can only refer back to noun phrases, one might suggest that inflectional endings are “referential” in nature. I believe this interpretation of the facts is not correct.

It is fairly well-known that, when an element in an anaphoric context is declinable, the inflection is obligatory (cf. Roehrs 2011b). Compare the base structures in (35) to the anaphoric contexts in the split NPs in (36):

- (35) a. *ein lila(nes) Kleid*
 a purple(INFL) dress
 ‘a purple dress’
- b. *zehn Kleider*
 ten dresses
 ‘ten dresses’
- (36) a. *Kleid habe ich ein lila*(nes).*
 dress have I a purple
 ‘As for dresses, I have a purple one’
- b. *Kleider habe ich zehn.*
 dresses have I ten
 ‘As for dresses, I have ten’

If this holds more generally, then in order to explain the apparently optional ending on *dies(es)* in (34a), we have to assume that there are two independent elements, a declinable *dieses* and an indeclinable *dies*. In other words, we cannot simply assume that *dies* is based on *dieses*, where the ending has been deleted in PF (see Gallmann 2004: 154 fn. 3, Roehrs 2009a: 159 fn. 33). If the latter were the case, we would expect the inflection to be always present, on a par with (36a).

In Roehrs (2011b) I argue that the sources in (36) contain a null noun (see also section 4.3 above). Returning to the demonstrative elements in anaphoric contexts, let us make parallel assumptions and suggest that their structure for the nominal case in (34a) is as in (37a). As for the clausal instance in (34b), I assume for concreteness that the demonstrative combines with a propositional element, here illustrated with TP, (37b):

- (37) a. [DP {*dieses* / *dies*} [NP e_N]]
 b. [DP {**dieses* / *dies*} [TP e_T]]

Starting with *dies*, note that this demonstrative element is inflectionless. I propose that there are no special licensing conditions on it and it is fine in both nominal and clausal contexts. Turning to *dieses*, observe now that *-es* is a neuter inflection. Given the presence of a null noun in (37a), the inflection on *dieses* is licensed and this demonstrative can be part of a nominal anaphor. In order to explain the ungrammaticality of *dieses* in (37b), I suggest that the nominal features of the inflectional ending on the demonstrative cannot be licensed as there is no noun present. Consequently, *dieses* cannot serve as a propositional anaphor.⁶

Returning to the main line of argument, I propose that the different semantics and morphology result from the element following *dies(es)*, either a null nominal, (37a), or a null clausal element, (37b). If so, we can maintain the claim that adjectival endings have no semantics by themselves. They serve to make nominal features visible. There is an interesting consequence of this discussion.

Returning to the distribution of inflections on adjectives, the two forms of the demonstrative *dies* and *dieses* can only take a weak adjective, with the proviso that *dies* only occurs in the nominative and accusative singular:

- (38) *dies(es) schöne Kleid*
 this(INFL) pretty(WK) dress
 ‘this pretty dress’

If *dies* and *dieses* are indeed two separate elements, then a weak inflection on an adjective is not a function of a preceding strong ending but rather of a preceding determiner (cf. also Chapter 2, Section 3.3.). Interestingly, the article *ein* ‘a’ is somewhat different.

Similar to *dies(es)*, *ein* can also occur in an anaphoric context, (39). Unlike *dies(es)*, *ein* must have an ending:

- (39) *Zwei Männer standen auf der Straße. Ein*(er) von ihnen kam zur Tür.*
 two men stand in the street one(INFL) of them came to.the door
 ‘Two men were standing in the street. One of them came to the door.’

With the above discussion in mind, we conclude that there can be only one type of *ein* functioning as a determiner. Second, like the inflection on *dieses* and other adjectival elements,

⁶ There are dialects that do not make this difference; that is, *dieses* is also possible as a propositional anaphor (see, e.g., Duden 1995: 336, Griesbach & Schulz 1965: 148). I assume that in these dialects, the licensing conditions on the neuter inflection are different. There are several options: either a null noun is possible in propositional contexts or neuter is licensed as a default option.

the ending on *ein* makes nominal features visible. In the next chapter, we discuss *ein* in more detail. We will see that there are actually two types of *ein*. However, the second type of *ein* is not a determiner as in (39) but an adjective that only occurs in definite contexts.

7. Conclusion

In this chapter, we turned to four consequences of the analysis laid out in Chapter 2. We discussed two influential types of proposal – Predicate Inversion and null nouns. We argued that the weak endings on adjectives in these structures do not follow from the system developed in Chapter 2. This means that we either have to modify the present account or change the other proposals. It seems clear, however, that the indefinite article in German is not entirely spurious in these constructions.

Next, we turned to some consequences for the discussion of discontinuous noun phrases. Illustrating paradoxical properties involving the sequence of adjectives and the inflections on these adjectives, we showed that analyses involving movement with one noun phrase cannot account for the strong ending in the split-off under current assumptions. In contrast, accounts involving the base-generation of two separate nominals and subsequent movement are completely compatible with the analysis of Chapter 2. We also provided evidence that *ein* cannot be inserted late.

Finally, we suggested that non-restrictive adjectives have a similar structural analysis as restrictive ones, the main difference being the presence of a null co-indexed pronoun in the former. In other words, inflectional endings do not signal (non-)restrictiveness of the interpretation of adjectives. In a similar vein, we argued that adjectival inflections are not “referential” in nature but make nominal features visible.

More generally, we can maintain the conclusion that adjectival endings are a reflex of the structure but not of the semantics. Furthermore, besides clues about the structural sizes of the involved nominals, this chapter has shown in more detail that adjectival endings are also sensitive to different degrees of embedding of their hosts, the adjectives. In the next chapter, we turn to the discussion of *ein* in more detail. We will see that *ein* shares some of the properties of adjectival inflections.

Chapter 4: *Ein*-words and Adjectival *eine*

1. Introduction

1.1. Preliminaries and Basic Data

As is well-known, German noun phrases have determiners. For instance, depending on the context, a singular noun may occur with the appropriate form of the indefinite article, which in speech is often reduced, (1a), or with the definite article or its (almost) homophonous demonstrative counterpart, (1b) (reduction of the stem is marked by parentheses or apostrophe; the ambiguous status of *die* as the article ‘the’ or the demonstrative ‘that’ is indicated as DET(erminer) in the gloss):

- (1) a. *(ei)ne Freundin*
a girlfriend
‘a girlfriend’
- b. *die Freundin*
DET girlfriend
‘the / that girlfriend’

However, indefinite and definite determiners cannot co-occur. This applies to both reduced and unreduced indefinite articles as well as to definite articles and demonstratives:

- (2) a. * *(ei)ne {(ei)ne / die} Freundin*
an a / DET girlfriend
- b. * *die {die / ‘ne} Freundin*
DET DET/ a girlfriend

The same distributional restrictions hold if the simple demonstrative *die* ‘that’ is replaced by the complex demonstrative *diese* ‘this’ (for the discussion and references of demonstratives, see Roehrs 2010).

Casting the empirical net wider, let us point out that possessives like *mein* ‘my’ and the negator *kein* ‘no’ are also in complementary distribution with the indefinite article, the definite article, and the demonstrative. Compare (3a) to (3b-c):

- (3) a. *nicht {‘ne / die} Freundin*
not a / DET girlfriend
‘not a / the / that girlfriend’
- b. * *meine {‘ne / die} Freundin*
my a / DET girlfriend

- c. * *keine* {‘ne / die} *Freundin*
 no a / DET girlfriend

Note that the indefinite article in (3a) is only grammatical in a certain context (see section 4.2). In view of this mutually exclusive distribution, I will refer to the possessive and the negation as possessive article and negative article.

Interestingly, the distribution is partially different when *ein* is stressed, indicated here with capital letters. Similar to (3a), the negation particle *nicht* is compatible with *eine*, (4a). Unlike (3b), *ein* can, when stressed, co-occur with the possessive article, (4b). Importantly, this element is still impossible with the negative article or the indefinite article, (4c-d) ((4c) is adopted from Fanselow 1988: fn. 29):

- (4) a. *nicht EINE Freundin*
 not one girlfriend
 ‘not one girlfriend’
- b. *meine EINE Freundin*
 my one girlfriend
 ‘my one girlfriend’
- c. * *keine EINE Freundin*
 no one girlfriend
- d. * *(ei)ne EINE Freundin*
 an one girlfriend

It seems clear that the difference between the determiner-like elements in (4b) and (4c-d) relates to definiteness. Thus, besides stress and non-reduction, definiteness seems to be a relevant factor in the distribution of *ein*. In other words, any account that aspires to be on the right track needs to take the different stress and reduction patterns of the indefinite element and its syntactic-semantic context into account.

In what follows, I will focus on German *ein*. This element is, in certain ways, different from its counterpart(s) in other languages. Before embarking on the discussion of the German facts, let us briefly see what some of the relevant differences to other languages are. This will bring into focus certain issues that one faces when one wants to compare different languages, even very closely related languages. Unlike Chapter 2, I will focus here on Yiddish, which is like German in some regards but quite different in others. Since I am not aware of any detailed analysis of this topic in Yiddish, I will base the following discussion on my own preliminary work (Roehrs 2011d,e).

Like German, Yiddish combines a noun with an indefinite article, a possessive article, a negative article, and the singularity numeral, (5a). However, Yiddish is different in at least three aspects. First, Yiddish allows an inflected possessive pronoun to precede an indefinite article, (5b); the negative article can co-occur with the numeral for ‘one’, (5c); and the inflected singularity numeral may precede an indefinite article, (5d). The following data are taken from Lockwood (1995: 54, 66) and Weinreich (1999: 195, 205):

- (5) a. *{a / mayn / keyn / eyn} bruder* (Yiddish)
 a / my / no / one brother
 ‘a / my / no / one brother’
- b. *mayner a bruder*
 mine a brother
 ‘a brother of mine’
- c. *keyn eyn land*
 no one country
 ‘not a single country’
- d. *eyner a mentsh*
 one a person
 ‘a certain person’

While the sequences in (5a) presumably receive a similar analysis as in German, the options in (5b) through (5d) are less straightforward. In particular, I argue in Roehrs (2011d) that the inflected possessive pronoun in (5b) is in a higher position than the possessive in German (4b) above. Turning to (5c), one factor that might be relevant to explain the difference between this Yiddish datum and German (4c) is the fact that Yiddish has negative concord whereas German does not.

As for (5d) and similar to (5b), Yiddish presumably involves a different structure than German (4d). Specifically, in Roehrs (2011e) I propose that (5d) involves an indefinite demonstrative structure where both – what look like – the inflected numeral and the indefinite article form a complex Specifier in Spec,DP. Furthermore, besides the well-known sequence *aza khaver* ‘(such.a =) such a friend’, Yiddish also allows *epes a khaver* ‘(something a =) some friend’. Again, the latter is not possible in German. It appears then as if Yiddish is more permissive in what type of complex Specifiers it allows.

What this brief illustration makes clear is that great care must be taken when one attempts to compare different languages in this part of the grammar. There seem to be many factors, perhaps confounding factors, that need to be taken into consideration. Currently, many languages seem to lack a detailed description and analysis of this empirical domain (for English, however, see Perlmutter 1970). Unfortunately, this also holds for German. Taking a look at the relevant literature (see section 6), one notices that there is relatively little discussion about the morpho-syntax and semantics of all the different kinds of *ein*. In what follows, I will try to provide a more comprehensive, although surely not exhaustive, discussion of this type of element in German.

1.2. Initial Taxonomy of *ein*

I will assume the following initial classification, which contains three main types of *ein* and some subtypes. Below, I propose in detail that certain elements are composite forms consisting of the article and another part:

- (6) a. *ein* as an Article:
- Indefinite Article
 - Vacuous Article:
 - *ein* as Part of a Composite:
 - Possessive
 - Negation
 - *ein* in Predicative Noun Phrases
 - Complex Determiner
- b. *ein* as a Numeral
- c. *ein* as an Adjective

I will refer to the types of *ein* in (6a) and (6b) collectively as *ein*-words; the type in (6c) will be called adjectival *eine*. In fact, reducing the numeral to the article, I will propose below that there are just two types of *ein*: the article and the adjective. Thus, the two designations (*ein*-word and adjectival *eine*) reflect the analysis to be developed below. Before we go into any specifics, consider first some illustrative examples:

- (7) a. Indefinite Article
Ich habe (ei)n (frisches) Brot mitgebracht.
 I have a (fresh) bread brought
 'I have brought a (fresh) bread.'
- b. Possessive
Ich habe mein (frisches) Brot mitgebracht.
 I have my (fresh) bread brought
 'I have brought my (fresh) bread.'
- c. Negation
Ich habe kein (frisches) Brot mitgebracht.
 I have no (fresh) bread brought
 'I have brought no (fresh) bread.'
- d. Predicative
Meine Mutter ist (eine) Rechtsanwältin.
 my mother is a lawyer
 'My mother is a lawyer.'
- e. Complex Determiner
Ich habe ein jedes (frisches) Brot mitgebracht.
 I have an every (fresh) bread brought
 'I have brought each (fresh) bread.'

- f. Numeral
Ich habe EIN (frisches) Brot mitgebracht.
 I have one (fresh) bread brought
 ‘I have brought one (fresh) bread.’
- g. Adjective
Ich habe das eine (frische) Brot mitgebracht.
 I have the one (fresh) bread brought
 ‘I have brought the one (fresh) bread.’

These are the most common cases (for the brief discussion of less canonical cases, see Chapter 8; for the complex determiner *ein jeder* ‘(an) every’, see Roehrs to appear, Zimmermann 2011).

To preview, one goal of this chapter is to provide a more comprehensive survey of the different types of *ein* with the intention of ultimately reducing them in number. I will propose that there are two lexical types of *ein*: the article and the adjective (cf. Pafel 2005: 179). The second goal is to determine the properties of the different types of *ein*. I will show that both *eins* make certain nominal features visible. Furthermore, I will argue that the article is semantically vacuous but adjectival *eine* is not. In other words, the article is, in a number of ways, similar to adjectival inflections discussed in Chapter 2.

In more detail, I propose that the possessive article, the negative article, and the singularity numeral are composite forms consisting of the indefinite article and another component. Leaving aside the investigation of the possessive (Chapter 5) and the negation part (Chapter 8), most of the discussion will focus on the article, the numeral, and adjectival *eine*. Some differences between these three elements will be argued to follow from their different featural specifications and others from their different positions in the syntactic tree. Deriving the numeral from the combination of the indefinite article and another element, I account for the identical morphology but the different semantics of the numeral and article. In other words, the numeral is related to the article in a way that adjectival *eine* is not.

The chapter is organized as follows. In order to motivate the approach that some *eins* should be treated in the same way, I will first illustrate certain morphological similarities between these different kinds of *ein*. In section 3, some phonological and semantic differences will be pointed out. These differences will be summarized in table 1 below. The bipartite proposal involving different feature specifications and different syntactic positions will be discussed in sections 4 and 5, respectively. Section 6 discusses a former proposal and section 7 forms the conclusion.

2. Similarities

In what follows, I will concentrate on morphological similarities in four related contexts. Let us take the following sentences as basic. Specifically, note that while the *ein*-words have no ending in (8a-b), *eine* has a weak ending in (8c):

- (8) a. Indefinite Article/Possessive/Negation/Numeral
Ich habe immer nur {(ei)n / mein / kein / EIN} frisches Brot mitgebracht.
 I have always only a / my / no / one fresh bread brought
 ‘I have always brought only a / my / no / one fresh bread.’
- b. Predicative
Das ist vielleicht (ei)n frisches Brot!
 that is perhaps a fresh bread
 ‘This is really fresh bread.’
- c. Adjective
Ich habe nur das eine frische Brot mitgebracht.
 I have only the one fresh bread brought
 ‘I have only brought the one fresh bread.’

With these reference points in mind, I discuss the occurrence of the strong ending on *ein* in split NPs, split NPs with a fronted adjective, elided nouns, and fronted adjectives with an elided noun. Note that split NPs and elided nouns need special contexts to be felicitous (for some brief discussion of split NPs, see Chapter 3).

2.1. Split NPs

Comparing (8) to (9), split NPs with a “stranded” adjective have the same morphology as non-split noun phrases:¹

- (9) a. Indefinite Article/Possessive/Negation/Numeral
Brot habe ich immer nur {(ei)n / mein / kein / EIN} frisches mitgebracht.
 bread have I always only a / my / no / one fresh brought
 ‘As for bread, I have always brought only a / my / no / one fresh one.’
- b. Predicative
Brot ist das vielleicht (ei)n frisches!
 bread is that perhaps a fresh
 ‘As for bread, this is really a fresh one.’
- c. Adjective
Brot habe ich nur das eine frische mitgebracht.
 bread have I only the one fresh brought
 ‘As for bread, I have only brought the one fresh one.’

¹ *Immer nur* ‘always only’ and *kein* ‘no’ are incompatible in the examples to follow. Thus, in order to check the grammaticality judgments for *kein*, *immer nur* must be left out. Also, to investigate the relevant aspects of the morpho-syntax of predicates in split NPs, I chose a non-canonical (emotive) construction (but see also Ott 2011a: 70 fn. 23).

2.2. Split NPs with a Fronted Adjective

If the adjective is in a higher position, the *ein*-words exhibit a strong ending, (10a-b). Interestingly, the stranded *ein*-words have an optional schwa (see also Roehrs 2009a: 156, Sternefeld 2008a: 152), where the option with the schwa seems to be, at least to my ears, of elevated style. With a determiner preceding, there is no change for *eine* in (10c):²

- (10) a. Indefinite Article/Possessive/Negation/Numeral
(Frisches) Brot habe ich immer nur {ein(e)s / mein(e)s / kein(e)s / EIN(E)S} mitgebracht.
 (fresh) bread have I always only a / my / no / one brought
- b. Predicative
(Frisches) Brot ist das vielleicht ein(e)s!
 (fresh) bread is that perhaps one
- c. Adjective
(Frisches) Brot habe ich nur das eine mitgebracht.
 (Fresh) bread have I only the one brought

Comparing the inflections on the adjectives in section 2.1 to the ones on the *ein*-words here, we can observe that they are the same. Similar to Chapter 2, I propose that these inflections make nominal features such as number, gender, and case visible. Parallel facts hold when the noun is elided.

2.3. Adjectives followed by an Elided Noun

Noun phrases with elided nouns have the same morphology as non-elided ones:

- (11) a. Indefinite Article/Possessive/Negation/Numeral
Ich habe immer nur {(ei)n / mein / kein / EIN} frisches mitgebracht.
 I have always only a / my / no / one fresh brought
- b. Predicative
Das ist vielleicht (ei)n frisches!
 that is perhaps a fresh (one)

² When *ein* is stranded by itself, it is actually stressed. This makes the indefinite article ambiguous with the numeral (see below). Note that even if another stressed element such as *so* ‘such’ is added, the unreduced form of *ein* is still much better here:

(i) *Brot habe ich immer nur so {ein(e)s / *'ns / *'nes} mitgebracht.*
 bread have I always only such a brought

In Chapter 3, I claimed that *ein* in the source in (i) is followed by a null noun. As null elements have special, independent licensing conditions, it is not clear to me if this instance of *ein* is the unreduced article or the numeral (which consists of the article and an additional element).

- c. Adjective
Ich habe nur das eine frische mitgebracht.
 I have only the one fresh brought

2.4. Fronted Adjectives with an Elided Noun

Like 2.2, if the noun phrase is split and the adjective is in a higher position, *ein*-words carry the strong ending, (12a-b). Again, there is no change for *eine* in (12c):

- (12) a. Indefinite Article/Possessive/Negation/Numeral
Frisches habe ich immer nur {ein(e)s / mein(e)s / kein(e)s / EIN(E)S} mitgebracht.
 fresh have I always only a / my / no / one brought
- b. Predicative
Frisches ist das vielleicht ein(e)s!
 fresh is that perhaps one
- c. Adjective
Frisches habe ich nur das eine mitgebracht.
 fresh have I only the one brought

To summarize, with the exception of adjectival *eine*, all *ein*-words are marked by the emergence of the strong ending when “stranded” by themselves. Similar to the cases involving overt nouns in section 2.2, I suggest again that the inflections on the *ein*-words make nominal features visible.

3. Differences

In this section, I focus on three phonological and semantic differences: encliticization, stressability, and semantic singularity (see also Pafel 2005: 180).

3.1. Encliticization

With reduced forms of the indefinite article independently possible, I take encliticization to be instantiated when the indefinite article undergoes further phonological changes with its preceding element, its host. For instance, coronal *n* as the reduced form of *ein* becomes *m* when it is encliticized onto a word ending in a labial sound (Wiese 1996: 166). Now, note that cliticization to a preceding word is only possible with a (non-composite) indefinite article and predicative *ein*:

- (13) a. Indefinite Article/Possessive/Negation/Numeral
*Ich hab' { 'm / *m'm / *k'ŋ / *M } (frisches) Brot mitgebracht.*
 I have a / my / no / one (fresh) bread brought

- b. Predicative
Ich bleib' ('m junger) Lehrer.
I remain a young teacher
- c. Adjective
* *Ich habe gestern nur dem 'men (frischen) Brot zugesprochen.*
I have yesterday only the one (fresh) bread eaten

3.2. Stressability

With regard to the possibility of bearing stress, some of the judgments in 3.1 reverse. The types of *ein* fall into three groups: first, the indefinite article may not be stressed; second, the possessive, negation, and *ein* in predicative noun phrases may be stressed; and third, the numeral and adjectival *eine* must be stressed:

- (14) a. Indefinite Article/Possessive/Negation/Numeral
Ich habe {'N / MEIN / KEIN / *ein} (frisches) Brot mitgebracht.*
I have a / my / no / one (fresh) bread brought
- b. Predicative
Meine Mutter ist EINE Lehrerin.
my mother is one teacher
- c. Adjective
Ich habe nur das {'ne / EINE} frische Brot mitgebracht.*
I have only the one fresh bread brought

Although usually stressed, I will not give adjectival *eine* in capital letters below in order to better distinguish it from the singularity numeral. More importantly, with the exception of the numeral and adjectival *eine*, it seems clear that stress has a semantic effect. For instance, following Higginbotham (1987: 68 footnote 4)'s discussion of English, (14b) suggests that my mother is not just a teacher but one teacher among others.³

3.3. Semantic Singularity

While the indefinite article usually implies singularity of the object, (15a), the numeral emphasizes singularity as opposed to plurality, (15b):

- (15) a. *Ich habe (ei)n Mädchen geküßt.*
I have a girl kissed
'I have kissed a girl.'
- b. *Ich habe EIN Mädchen geküßt (nicht ZWEI).*
I have one girl kissed not two
'I have kissed one girl (not two).'

³ In fact, stressed *EIN* in (14b) might be a numeral in a predicative context.

Turning to the vacuous instances, *ein* as part of the possessive article or negative article has no relevance with regard to semantic singularity (see also below). Furthermore, unlike *ein* by itself, these two *ein*-words can take a head noun with plural morphology, (16a-b). Note also that a predicative noun phrase does not denote an object but a property, (16c). As such, semantic singularity does not seem to be a relevant notion here either (see Chapter 7). Finally, nominalized infinitives and generic noun phrases make no claim about singularity of the event or object either, (16d-e) (the last two pieces of data are adopted from Bisle-Müller 1991: 115, 151):⁴

- (16) a. *Ich fahre meine Autos.*
I drive my cars
'I drive my cars.'
- b. *Ich fahre keine Autos.*
I drive no cars
'I drive no cars.'
- c. *BMW ist (ei)n Auto.*
BMW is a car
'BMW is a car.'
- d. *{(Ei)n /*EIN} Abweichen vom Kurs ist nicht gut.*
a / one departing from the course is not good
'Departing from one's course is not good.'
- e. *{(Ei)n /*EIN} Wal ist ein Säugetier.*
a / one whale is a mammal
'A whale is a mammal.'

As to adjectival *eine*, recall that, like the numeral *EIN* in (17a), this type of *ein* is stressed (although I do not mark it as such), (17b). Crucially though, unlike the numeral, adjectival *eine* usually presupposes the existence of a second entity and thus implies plurality of the members of the relevant kind:

- (17) a. *EIN Mann*
one man
'one man'

⁴ While (16d) is not compatible with the numeral for 'one', it is fine with adjectival *einmalig* 'one-time':

(i) *(Ei)n einmaliges Abweichen vom Kurs ist verzeihbar.*
a one-time departing from the course is forgivable
'Departing from one's course one time is forgivable.'

Presumably, this has to do with the event structure of the nominal. Also, both (16d) and (16e) can take a definite article.

- b. *der eine Mann*
the one man
'the one man'

In fact, as noted by M. Müller (1986: 43), *eine* in (17b) has a partitive sense, presupposing a set of typically two entities in the relevant world of discourse (cf. also Vater 1982: 71). Note that this duality presupposition cannot come from the (singular) definite article, which typically presupposes uniqueness. Importantly, *eine* must be preceded by a definite element, and it is usually contrasted with a second DP containing *andere* 'other':⁵

- (18) *Der eine Mann kam, der andere nicht.*
 the one man came the other not
 'One of the men came, the other did not.'

Last but not least, like *ein* in the possessive and negative composites, adjectival *eine* can also be morphologically plural. In this case, adjectival *eine* presupposes two sets of elements. Compare (18) to (19):

- (19) *die einen, die anderen*
the one the other
'these, those'

Below, we will see that this duality presupposition can be cancelled.

The differences discussed above are summarized in table 1 (the properties are coded as follows: OK = “optional”; +/- = inherent; N.A. = not applicable):

⁵ The same is possible in Yiddish (from Reershemius 1997: 362):

- (i) ...tsvey brider ...Der eyner hot zikh ungerufn Elon un der tsveyter Aladan. (Yiddish)
two brothers the one has REFL called Elon and the second Aladan
'...two brothers... The first was called Elon and the second Aladan.'

That this type of *ein* is indeed special becomes clear in Norwegian. This language has a singularity numeral for the neuter gender, (iia). However, in the construction under discussion, the expected form *ette* is impossible and only the non-neuter form can be used, (iib) (Marit Julien, p.c.):

- (ii) a. *ett stort hus* (Norwegian)
one big(ST) house
'one big house'
- b. *det ene store hus-et*
the one(WK) big(WK) house-def
'one of the big houses'

Table 1: Summary of the Differences between the Types of *ein*

kinds of <i>ein</i>			enclitic	stress	sem. singularity	morphologically plural
article	indefinite		OK	-	+	-
	vacuous	possessive	-	OK	N.A.	OK
		negation	-	OK	N.A.	OK
		predicative	OK	OK	N.A.	-
numeral			-	+	+	-
adjective			-	+	OK (with canceled presupposition)	OK

These are the most common properties. Having set out the basic similarities and differences, I turn to accounting for them. Before I do so, note here that encliticization of *ein* is not possible if *ein* is stressed or part of a composite. I will not have much more to say about this here. Also, in the course of the following discussion, we will refine the statements about the indefinite article, especially with regard to semantic and morphological number.

4. Step 1 of the Proposal: Morphology and Semantics

Recall from section 1 that determiners may, independent of word order, not co-occur, (20a). There were basically two potential exceptions to this generalization: (i) definite determiners may occur with stressed *eine* and (ii) *diese* ‘this’ can occur with possessive articles. Consider (20b) and (20c):⁶

- (20) a. * *meine / keine / diese / die* / ‘ne Freundin
my / no / this / DET / a girlfriend
- b. {*meine / diese / die*} *eine Freundin*
my / this / DET one girlfriend
‘my / this / that / the one girlfriend’
- c. *diese meine Freundin*
this my girlfriend
‘this my girlfriend’

Furthermore, recall from section 2 that the indefinite article (including predicative *ein*), possessive articles, the negative article, and the singularity numeral exhibit the same inflectional behavior. In other words, semantically quite diverse elements behave morphologically the same.

⁶ In poetic or elevated German, possessive elements can also be combined with a definite article, (i):

(i) *Du bist die meine.*
you are the my
‘You are mine.’

We discuss this form in more detail in Chapter 5.

In this and the next section, I will attempt to account for these and some other facts. Let me provide a brief preview of the account of *ein*.⁷

Starting with (20a), we will follow much discussion in the literature and assume that indefinite and definite articles are in D and demonstratives are in Spec,DP. Furthermore, it is well-documented for German that only one such element can be in the DP-level. If so, this restriction – whatever will ultimately account for it⁸ – explains the non-co-occurrence of these three elements in one and the same DP. Turning to the two remaining elements in (20a), that is, to the possessive and the negative articles, we will develop a composite analysis of *meine* and *keine* (and other elements) below, where these elements consist of an abstract head denoting possession or negation and vacuous *ein*. Among others, this proposal explains the non-co-occurrence of the latter two elements with articles and demonstratives, on the one hand, and the identical morphology of the various composites and *ein*, on the other.

If this is on the right track, then *eine* in (20b) cannot be derived from vacuous *ein* and must be a different element. If so, the distribution in (20b) does not present a true exception to the above generalization. I will propose that this type of *ein* is an adjective in a high Specifier position. Turning finally to (20c), this datum has greater potential of being an exception. However, as already discussed in Chapter 2, this type of *diese* is not in Spec,DP but a semantic intensifier in Spec,IntP (also section 5.2.3). Let us flesh out these preliminary remarks.

4.1. Composite Elements: Article *ein* as a Supporting Element

Following others (see below), it was suggested in Roehrs (2009a: Chap. 4) that *ein* is part of the negative article *kein*, possessive articles like *mein*, and the singularity numeral *EIN*, (21a-c). We will see in Chapter 6 that *ein* also indicates the presence of the realization operator REL, (21d). Completing the picture, I propose that unlike these elements, adjectival *eine* is not a complex element, (21e):⁹

- | | | | |
|------|----|---|---------------|
| (21) | a. | (vacuous) <i>ein</i> + NEG | → <i>kein</i> |
| | b. | (vacuous) <i>ein</i> + POSS _(1st Pers. Sgl.) | → <i>mein</i> |
| | c. | (vacuous) <i>ein</i> + Ø _[+Sgl.] | → <i>EIN</i> |
| | d. | (vacuous) <i>ein</i> + REL | → <i>ein</i> |
| | e. | (non-composite) <i>eine</i> _{ADJ} | |

To be clear, the element on the right of the arrow is taken to be the spell-out of the combination of the elements on the left of it. In particular, employing Distributed Morphology (DM, Halle &

⁷ For the discussion of some previous proposals, see section 6. It will become clear that, when one studies these accounts, one cannot help but notice that opinions diverge considerably with regard to the nature of this kind of indefinite element. Furthermore, none of these proposals discusses all the different kinds of *ein*. While the current analysis does surely not discuss all instances either, it strives to be more comprehensive than its predecessors.

⁸ Usually, the Doubly-filled DP filter is brought into play here, which in and of itself does not present an explanation (for some discussion, see Giusti 1997: 109, 2002: 70; Roehrs 2011d).

⁹ The featural specifications on the abstract elements could also be expressed in the framework of feature geometry (see Harley and Ritter 2002, McGinnis 2005).

Marantz 1993), we derive the negation, possessive, and singularity numeral as the spell-out forms of abstract heads involving negation (NEG), possession (POSS), and singularity (\emptyset) in combination with the adjacent, semantically vacuous article *ein* ((21d) is slightly different, see below). In fact, with vocabulary insertion occurring late, *ein* is actually an abstract set of (semantically vacuous) features in the syntax, which, when spelled out, functions as a supporting element. For ease of exposition, I will continue to refer to this element simply as vacuous *ein*. As it would take me too far afield here, I will remain agnostic about the actual mechanisms that form the composite elements. These operations are, in part, dependent on other syntactic assumptions, for instance, on the analysis of negation (see, e.g., Zeijlstra 2011: 119).

There are two immediate advantages of this proposal. With these elements made up of *ein* and another component, it is easy to see how semantically quite diverse elements can share an identical morphology. Furthermore, with the article *ein* present, it follows that a second determiner cannot occur and the complementary distribution with other determiners follows straightforwardly. Interestingly, noun phrases involving indefinite articles may have different interpretations with regard to specificity. As will be reported momentarily, these interpretations are often claimed to be tied to different positions, for instance, D and Card. One might suggest then that vacuous *ein* also supports $D_{[+Spec]}$ and $Card_{[-Spec]}$. However, this does not seem likely.

It is well-known that indefinite articles are weak determiners (Milsark 1974). Furthermore, indefinite noun phrases may have different readings (see, among many others, Fodor & Sag 1982, Harbert 2007: 140, Zamparelli 2005: 760; also Diesing 1992 and Hallman 2004). For instance, they can be non-specific or specific in interpretation. Compare (22a) to (22b):

- (22) a. *Ich würde nur (ei)n Auto mit lila Punkten kaufen.*
 I would only a car with purple dots buy
 ‘I would only buy a car with purple dots.’
- b. *Ich habe gestern (ei)n Auto mit lila Punkten gekauft.*
 I have yesterday a car with purple dots bought
 ‘I bought a car with purple dots yesterday.’

Without going into any detail here, these readings are supported by noun phrase-external factors, for instance, mood. I will basically follow Jackendoff (1977: 105) and Bowers (1988) in that weak determiners may be in different positions inside the noun phrase (licensed by these noun phrase-external factors). To make the discussion concrete, let us assume that there are two positions inside the DP relevant for the different readings: D, the head of DP, and Card, the head of CardP, which is located just below the DP (Julien 2005a, Roehrs 2009a). Specifically, on the weak, non-specific reading, I assume that the indefinite article surfaces in Card and on the strong, specific reading, it appears in D (cf. Chomsky 1995: 342; Zamparelli 2000: 264-5; Alexiadou, Haegeman & Stavrou 2007: 225). In fact, assuming with Roehrs (2009a) that *ein* originates in ArtP, the indefinite article actually moves to Card if the nominal has a weak reading and to D if the nominal has a strong reading. Let us return to the discussion of (21d).

Note that specificity can also be made visible by the definite article (e.g., *das Auto* ‘the car’). As such, I will assume that vacuous *ein* + $D_{[+Spec]}$ is not a composite form. Rather, I will claim in Chapter 7 that vacuous *ein* (or a definite article) “flags” the presence of the realization operator REL. In Chapter 8, I will suggest that there are two ways to make operators visible by

ein: support where the operator itself is also visible, as claimed for (21a-c), and flagging where the operator itself remains invisible as in (21d) and in some other cases. If this is tenable, then the term indefinite article seems inappropriate but I will continue with traditional terminology.

4.2. Some Evidence for the Composite Analyses

In the previous subsection, we left open the actual mechanism(s) that will bring about the composite forms. However, in order to constrain the grammar, let us formulate a requirement on the morphology. In more detail, let us make the assumption that there is an adjacency requirement for the two elements that undergo operations in DM. With this in mind, let us consider the composite elements from section 4.1 in more detail.

4.2.1. The Negative Article *kein* ‘no’

It seems to be an established fact that *kein* ‘no’ consists of NEG + *ein*. While a more comprehensive discussion must await another occasion, I will begin by illustrating this with a morpho-syntactic argument. Considering (23), it seems clear that the contraction of NEG and *ein* is obligatory in certain cases, optional in others, but cannot occur in yet others:

- (23) a. *Ich habe {*nicht (ei)n / kein} Buch gekauft.*
 I have not a / no book bought
 ‘I bought no book/I did not buy a book.’
- b. *Ich habe {nicht (ei)n / kein} BUCH gekauft, sondern (ei)n HEFT.*
 I have not a / no book bought but a booklet
 ‘I did not buy a book but a booklet.’
- c. *(Ei)n Buch habe ich nicht gekauft.*
 a book have I not bought
 ‘I bought no book/I did not buy a book.’

Specifically, with ordinary stress, NEG and *(ei)n* form the negative article, (23a). This is different with contrastive stress, (23b). Finally, when NEG and *(ei)n* are not adjacent, (23c), both elements are spelled out separately, with unsupported NEG being realized as *nicht*.¹⁰ Now, the fact that NEG can be realized in two different ways depending on the stress pattern and the adjacency of *ein*, argues for the fact that *kein* is a composite form.

Consider a second piece of evidence for this composite analysis. The examples in (24a) and (24b) establish that negation is higher than the degree particle *so* ‘such’ and that the latter can intervene between negation and the indefinite article. However, with an intervening *so*, negation is not adjacent to *ein* and, consequently, these two elements cannot be spelled out as *kein* by the morphology, as in (24c) and (24d):

¹⁰ Note that *ein* and *kein* can co-occur in split NPs:

(i) *(Ei)n Buch habe ich keins gekauft.*
 a book have I none bought
 ‘As for books, I bought none.’

Considering the strong ending on *kein* in (i), I assume that a null noun follows the negative article (see Chapter 3). In other words, there are two base-generated nominals in (i), each with its own *ein*. As such, the grammaticality of this example is not an argument against *kein* requiring adjacency of NEG and *(ei)n*, which is illustrated in (23c).

- (24) a. *nicht so (ei)n Idiot*
not such an idiot
'not such an idiot'
- b. * *so nicht (ei)n Idiot*
so not an idiot
- c. ?* *kein so Idiot*
no such idiot
- d. * *so kein Idiot*
so no idiot

For the discussion of *kein so 'n Idiot* '(no so'a =) no such idiot', see Chapter 8; for other syntactic and semantic arguments, see Kratzer (1995: 144-147), Pafel (2005: 186-7), von Stechow & Iatridou (2007: 467-468) and Zeijlstra (2011); for English, see Klima (1964: pp. 273).

4.2.2. Possessive Articles such as *mein* 'my'

While certain possessives can both precede and follow the head noun, possessive articles can only precede the noun:

- (25) a. *{Marias / Meine} Freundin ist nett.*
Mary's / my girlfriend is nice
'Mary's / My girlfriend is nice.'
- b. *Die Freundin {Marias / *meine} ist nett.*
the girlfriend Mary's / my is nice

Furthermore, possessive articles can combine with demonstratives under certain conditions. Specifically, they can follow but not precede the demonstrative:

- (26) a. *Diese meine Freundin ist nett.*
this my girlfriend is nice
'This my girlfriend is nice.'
- b. * *Meine diese Freundin ist nett.*
my this girlfriend is nice

As discussed in more structural detail in Chapter 5, these facts follow from the assumption that possessive articles consist of a possessive element and *ein*. On the one hand, *ein* can, as an article, only precede the noun explaining the restriction in (25). On the other, it cannot occur outside the DP proper accounting for (26). There is other evidence for a composite analysis.

It is well-known that the stem of the possessive article agrees in gender with its antecedent but that the ending of the possessive article agrees in number, gender, and case with the head noun, (27a). Furthermore, besides gender, the stem of the possessive also agrees in

person and number with the antecedent, as can easily be seen in (27b). These agreement relations are illustrated with different indices here:

- (27) a. *Peter_i hat s_i+einer_k Freundin_k geholfen.*
 Peter has his girlfriend helped
 ‘Peter helped his girlfriend.’
- b. *Ich_i habe m_i+einen_k Freunden_k geholfen.*
 I have my friends helped
 ‘I helped my friends.’

These apparent mismatches in agreement are straightforwardly explained by the composite analysis (for more detailed discussion, see Chapter 5; for a composite analysis of Dutch possessive pronouns, see Corver 2003: 4, Corver & van Koppen 2010: 114). Note also that the inflections on *ein* have a different status from the possessive element in that the former are semantically vacuous and simply make nominal features like number, gender, and case visible.

4.2.3. The Singularity Numeral *EIN* ‘one’ and the Indefinite Article (*ei*)*n* ‘a’

As to the singularity numeral, we will discuss the advantages of a composite analysis in section 5 in quite some detail. Note already here that structurally nothing can intervene between Spec,CardP, where \emptyset is located, and Card, where *ein* is (for the tree structure, see section 5). The same holds for the strong reading of this indefinite element where \emptyset has moved to Spec,DP and the supporting element *ein* is in D. These are all Specifier-Head constellations, where adjacency inherently holds. Thus, both elements can be spelled out by the morphology as the numeral. When \emptyset is not present, the vacuous article is spelled out as *ein* under Card or D. Finally, recall again that adjectival *eine* is not a composite element.

To sum up, I take two points as established: the negative article *kein* ‘no’, possessive articles such as *mein* ‘my’, and the singularity numeral *EIN* ‘one’ are composites and they are post-syntactic spell-outs. As we have seen and will see throughout this chapter, this analysis has a number of advantages, allowing for a fairly simple account of the different kinds of *ein*. Before we turn to some syntactic differences, let us consider some of their morphological and semantic differences in more detail.

4.3. Featural Specifications of the Different Types of *ein*

Starting with adjectival *eine*, we saw in section 3 that this element behaves morphologically like a regular adjective; that is, it can have a weak ending that is either morphologically singular or plural: e.g., *die eine* ‘(the one[WK] =) this’ vs. *die einen* ‘(the one[WK] =) these’. Recall in this regard that determiners do not have a weak ending. Furthermore, as noted there, *eine* has partitive semantics in that it usually presupposes the existence of two elements or two sets of elements. Moreover, as briefly mentioned above, there is a licensing condition on adjectival *eine*. In particular, besides the definite and the (simple) possessive articles, *eine* can also co-occur with other definite elements, (28a-c):

- (28) a. *Peter sein einer Sohn*
 Peter his one son
 ‘Peter’s son’
- b. *Peters einer Sohn*
 Peter’s one son
 ‘Peter’s son’
- c. *Dieser eine Junge hat viele Wunder vollbracht.*
 this one boy has many miracles accomplished
 ‘This one boy has performed many miracles.’

Let us assume that (28a) and (28b) have essentially the same structure (see Chapter 5). In both cases, adjectival *eine* presupposes the existence of another son. This is different in (28c), where a demonstrative is present. In this case, there is no presupposition that there is a second boy with the relevant property. In a similar vein, (29a) below consists of a specificational nominal and a singular subject and there is no presupposition that there is a second man with such a property. Furthermore, Orrin Robinson (p.c.) raises the question as to whether the duality presupposition can disappear when one nominal containing adjectival *eine* is coordinated with another involving a numeral, (29b). This is indeed the case:

- (29) a. *Du bist der eine Mann, der mich geliebt hat.*
 you are the one man that me loved has
 ‘You are the one man that has loved me.’
- b. *Meine eine Freundin und seine zwei sind ausgegangen.*
 my one girl-friend and his two are gone out
 ‘My one girl-friend and his two went out.’

To be clear, then, although *eine* has adjectival morphology in each case, it may lack the presupposition property under certain conditions (M. Müller 1986: 45). I will tentatively suggest for (28c) that the demonstrative determiner, with its strong deictic force, cancels the presupposition of adjectival *eine*. Furthermore, *eine* is not (strongly) stressed here, presumably also a reflex of the presence of word stress on the demonstrative.¹¹ As to (29a), I assume that adjectival *eine* inside specificational nominals are subject to the same cancelling effect when the latter occur in singular contexts. Turning to (29b), I assume that the coordination of the two nominals leads to a list-type effect where the different numbers of the people involved are contrasted. This resultant contrast also allows a singularity reading of adjective *eine*.

With these qualifications in mind, I suggest that *eine* is an adjective that can only occur in definite contexts. Recall that the duality presupposition cannot stem from a singular definite

¹¹ With a contrastively stressed adjective, adjectival *eine* is not stressed itself and does not seem to have the usual presupposition property either:

Ich habe das eine FRISCHE Brot mitgebracht.
 I have the one fresh bread brought
 ‘I have brought the one fresh bread.’

Apparently, stress and the presupposition of duality are connected in some way. I have to leave this interesting issue for future research.

determiner. On the one hand, this determiner carries a uniqueness presupposition; on the other, other definite elements can also license adjectival *eine*. Rather, I assume that this distributional restriction has to do with *eine*'s own (contribution to the) duality presupposition, which is dependent on a definite contexts. To conclude, making a distinction between morphological and semantic features, I suggest that *eine*_{ADJ} has an unvalued/unchecked feature for morphological number but a specification for semantic number: [α PL morph; +PL sem unless in the context of a demonstrative, singular specificational nominals, contrastive coordination, etc.].

Turning to the other elements, they all consist of vacuous *ein* and another component. Above, I suggested that the wider linguistic context (e.g., different moods) licenses the different readings of indefinites with regard to specificity, which DP-internally involves different positions of *ein*. I will now claim that the immediate linguistic context of the indefinite also results in certain interpretations of *ein* itself and its hosting DP as a whole. Starting with *EIN*, if vacuous *ein* is in the context of \emptyset_{EIN} , this composite is interpreted as the singularity numeral. In particular, I assume that \emptyset is inherently specified for [+count] and [-PL]. As such, *EIN* is individuating and implies spatial integrity (which is a property of elements with different defining subparts, that is, spatially delimited elements). The specification for \emptyset_{EIN} is: [-PL morph; -PL sem].

As for the indefinite article, I suggest that *ein* lacks a feature for definiteness and countability. This can be seen in felicitous combinations involving definite possessives and mass nouns, (30a). Recall also that *ein* is compatible with plural nouns, (30b):¹²

- (30) a. *m+eine Milch*
POSS a milk
'my milk'
- b. *k+eine Frauen*
NEG a women
'no women'

In Chapter 8, I suggest that countability comes from a different element in the noun phrase. This is in keeping with claims made by other authors. For example, Wiese & Maling (2005: 8) claim that countability stems from the head noun but Panagiotidis (2002: 58, 2003a: 421), developing ideas of Delfitto & Schrotten (1991), suggest that it originates with Num. If these claims are on the right track, then we can maintain that *ein* is semantically vacuous. Since *ein* agrees with singular and plural nouns, I suggest that this element has morpho-syntactic features. In particular, I assume that it has an unvalued/unchecked feature for morphological number: [α PL morph].

For ease of reference, let us juxtapose the three types of *ein* and their specifications:

¹² Even with singular count nouns, there is not necessarily a uniqueness presupposition. The following example is taken from Vater (1984: 33) (for fuller discussion, see Reis 1977):

(i) *Mein Arm tut mir weh!*
my arm does me pain
'My arm hurts.'

- (31) a. *ein*: [αPL morph]
 b. \emptyset_{EIN} : [-PL morph; -PL sem]
 c. *eine*_{ADJ}: [αPL morph; +PL sem unless in the context of a demonstrative, etc.]

Note that these specifications are not complete. For instance, (31a) and (31c) are also assumed to have unvalued/unchecked features for morphological gender and case. Furthermore, there is an interesting interaction between (31a) and (31b). As proposed in the next section, the numeral *EIN* derives from the combination of (31a) and (31b), where the inflection on *ein* exhibits nominal features like gender and case but \emptyset_{EIN} brings about morphological and semantic number.

5. Step 2 of the Proposal: Syntax

In the first subsection, I propose in more syntactic detail that synchronically, the numeral *EIN* derives, in certain respects, from the indefinite article even though historically, the relationship is the reverse. With the different specifications from above in mind, the remaining differences between these two elements are argued to derive from the two different positions they occupy in the syntactic tree. In the second subsection, adjectival *eine* is shown to be independent of the indefinite article and occupies a third position.

5.1. Article vs. Numeral

In this subsection, I first provide two pieces of evidence that the numeral *EIN* is in a different position than the indefinite article. Then I proceed to derive the numeral from the indefinite article, at least certain aspects of the numeral.

5.1.1. Uniform Positions of all Numerals

Numerals are in a different position than determiners. A simple piece of evidence comes from (32a). I assume that when no determiner is present and the DP is specific, the numeral is in Spec,DP. The picture is slightly more complicated with *ein*-words. In the last section, we discussed the different interpretations of *ein* with regard to specificity and we proposed that *EIN* consists of the singularity part \emptyset and vacuous *ein*. In particular, we followed previous work in claiming that when specific, \emptyset is in Spec,DP and vacuous *ein* is in D but when nonspecific, \emptyset is in Spec,CardP and vacuous *ein* is in Card. In other words, just like other numerals, \emptyset is located in phrasal positions. In contrast, vacuous *ein* appears in head positions. Returning to (32), depending on the interpretation, the article is in D or in Card in (32b). As for (32c), the singularity part \emptyset is in Spec,DP or Spec,CardP and the supporting element *ein* in D or Card. In other words, there are two positions involving phrases and two positions involving heads.¹³

- (32) a. *die zwei Männer*
 DET two men
 ‘the / those two men’

¹³ Despite certain differences between the singularity and the other numerals, Barbiers (2005: 171) also assumes the same position for all numerals (see also footnote 16). For typological discussion of numerals, see Hurford (2003).

- b. *(ei)n Mann*
 a man
 ‘a man’
- c. *EIN Mann*
 one man
 ‘one man’

There are two issues that need to be addressed here.

First, if the article and the numeral (or a part of it) are in different positions, then we need to explain why the two cannot co-occur, (33a-b). This is presumably not due to semantic reasons as other (adjectival) elements emphasizing singularity are possible, (33c). In fact, under the right conditions, *ein* can occur with a non-singularity numeral, (33d) (for this option in Dutch, see Bennis, Corver & den Dikken 1998: 112).¹⁴

- (33) a. * *(ei)n EIN Mann*
 a one man
- b. * *EIN (ei)n Mann*
 one a man
- c. *(ei)n {einziger / einzelner } Mann*
 a sole / individual man
 ‘a sole / individual man’
- d. % *Was für ((ei)ne) zwei Frauen!*
 what for a two women
 ‘What two (great) women!’

The ungrammaticality of (33a-b) follows from the assumptions above. Depending on the interpretation, both \emptyset and *ein* are either in the DP-level or in the CardP-level. Furthermore, proposing that \emptyset and *ein* are spelled out together as *EIN* under adjacency, we can explain why an article cannot co-occur with the singularity numeral but only with other numerals.

¹⁴ As is expected from the above discussion, adjectival *eine* is also ungrammatical here, (ia), since it is only licensed in a definite context, (ib).

- (i) a. * *ein einer Bruder*
 a one brother
- b. *Peters einer Bruder*
 Peter’s one brother
 ‘Peter’s first brother’

Furthermore, an indication that adjectival *eine* is different from *einziger* ‘only’ can be seen in Negative Polarity contexts:

- (ii) a. *Du bist der {einzige / ??eine} Mann, der mich je geliebt hat.*
 you are the only / one man that me ever loved has
 ‘You are the only man that has ever loved me.’
- b. * *Du bist {der / ein} Mann, der mich je geliebt hat.*
 you are the / a man that me ever loved has

Turning to the second issue, we have documented above that the indefinite article and the singularity numeral have the same morphology. What is interesting to note is that, under certain conditions, the German numerals for ‘two’ and ‘three’ can take an ending in the genitive. In this case, these numerals and the following adjective have an identical ending. This is in stark contrast to *EIN*, which does not have the same ending as the adjective:

- (34) a. *das Auto zweier netter Freunde*
the car of.two(ST) nice(ST) friends
‘the car of two nice friends’
- b. *das Auto EINES netten Freundes*
the car of.one(ST) nice(WK) friend
‘the car of one nice friend’

Assuming that all numerals are in the same position, we need to explain this unexpected morphological difference between the numerals for ‘one’ vs. ‘two’ (and ‘three’).

Historically, the indefinite article derives from the numeral for ‘one’. Importantly, the inflectional behavior of the singularity numeral has changed over time. In particular, Old High German *éin* inflects like Modern German *zwei* and *drei* but crucially not like Modern German *EIN*. Focusing on the inflections of the numeral and the following adjective, compare (34) to (35) (the (a)-example is taken from Demske 2001: 76):

- (35) a. *mit éinemo rôtemo tûoche* (Old High German)
with one(ST) red(ST) scarf
‘with one red scarf’
- b. *mit EINEM roten Tuch*
with one(ST) red(WK) scarf

It is clear, then, that the singularity numeral in these two varieties of German is, in certain ways, different and should not receive the same account.

Recall that diachronically, the indefinite article derives from the numeral for ‘one’. On a somewhat speculative note, we could suggest that in the development from Old High German to Modern German, *éin* split into two parts: (vacuous) *ein* + \emptyset_{EIN} . If we make this assumption, then it is not implausible to suggest that synchronically, the numeral *EIN* derives from the indefinite article, at least in certain respects. Specifically, modern German *EIN* has the morphological properties of a determiner because it consists in part of vacuous *ein*; it has the semantic properties of a numeral because it involves \emptyset . In Chapter 5, I return to this kind of diachronic split into two components in the context of *mein* ‘my’ and *kein* ‘no’.

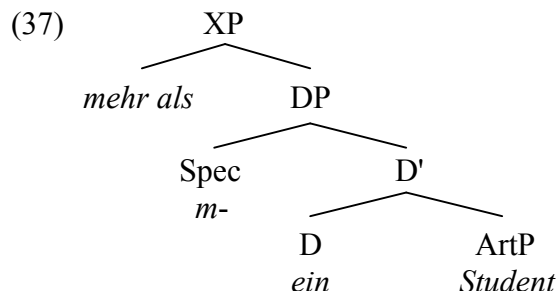
5.1.2. Different Scope of *mehr als*

The second piece of evidence that the article and the numeral are in different positions derives from scopal facts. To begin, *mehr als* ‘more than’ can take scope over the entire noun phrase where the nuclear stress is on the noun. In this case, it is implied in (36a) that the relevant person is more than just a student (perhaps he is also the speaker’s friend), and in (36b) that not only

exactly the one hundred students came but perhaps other students came or even other people with different “occupations”:¹⁵

- (36) a. *Er ist [mehr als mein Student].*
 he is more than my student
 ‘He is more than my student.’
- b. *Es kamen [mehr als die hundert Studenten].*
 there came more than the one hundred students
 ‘More than the one hundred students came.’

Illustrating for (36a), the possessive element moves to Spec,DP and the article moves to D. If so, the scopal element must be outside the DP (the exact location is not important for my point here):



To be clear, *mehr als* c-commands the entire DP.

Second, *mehr als* may also take scope over numerals. For the following sentences to be true, it must hold for (38a) that at least two students came and for (38b) that at least one hundred and one did:

- (38) a. *Es kam [mehr als EIN] Student.*
 there came more than one student
 ‘More than one student came.’
- b. *Es kamen die [mehr als HUNDERT] Studenten.*
 there came the more than one hundred students.
 ‘The more than one hundred students came.’

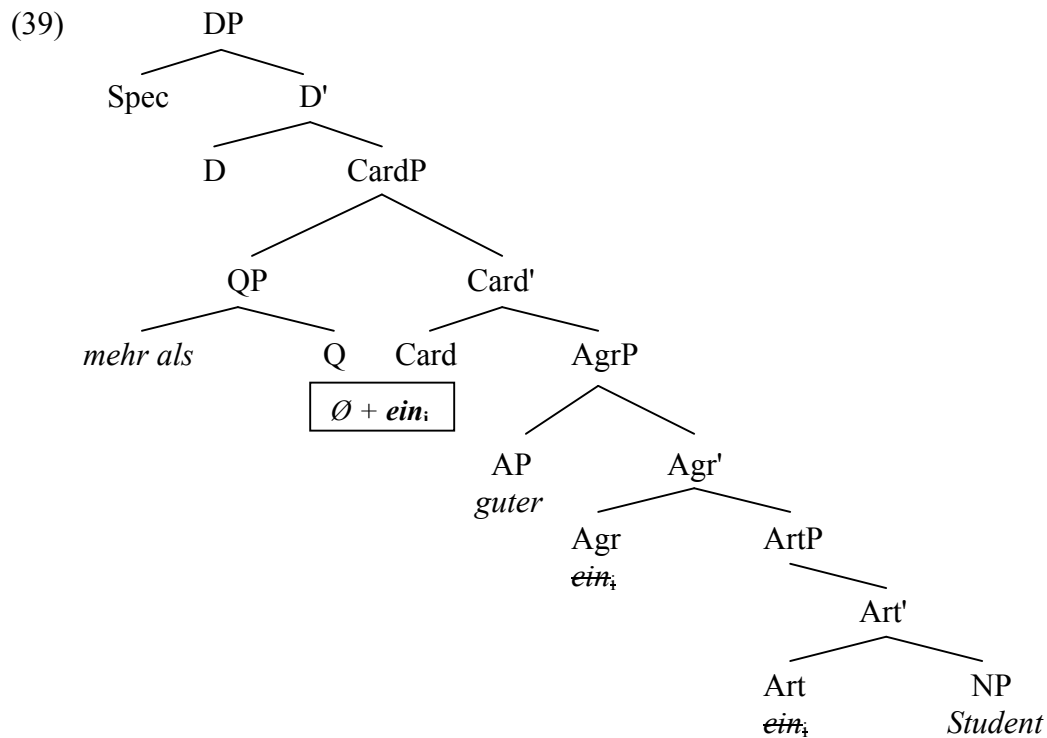
Crucially, whereas *mehr als* has an obviously different position with regard to the definite determiner in (36b) and (38b), it precedes the *ein*-words in both (36a) and (38a). In order to derive the different scopal readings, I propose that *mehr als* may also be in different positions when it precedes *ein*. This, in turn, will provide an argument that the two different types of *ein* are in different positions. Consider this in more detail.

In the first case, *mehr als* c-commanded the entire DP. For the second case, let us now follow Svenonius (1993a: 445-6), who points out that, in order to prevent a modifier from taking scope over the entire noun phrase, this modifier and its modifiee must be “buried” inside a

¹⁵ Note that German does not have a definiteness effect in this context (e.g., Boeckx 2002, Haerberli 2002: pp. 270).

Specifier position. If we assume that the same holds for modifiers and their numeral modifyees, then numerals are also in a Specifier position (rather than in a head position in the extended projection of the noun). Following Julien (2005a) and Roehrs (2009a), I assume that this position is Spec,CardP (or after movement Spec,DP).

With this in mind, recall from section 4 that I claim that the numeral *EIN* consists of contentful \emptyset and vacuous *ein*. More precisely, the abstract feature bundle responsible for singularity and stress (cf. Barbiers 2005: 168) is taken to have no independent phonological realization (which makes it quite different from other numerals). For simplicity's sake, I will continue referring to this feature bundle as \emptyset . As with all null elements, \emptyset needs to be licensed. In the case under discussion, I assume that \emptyset is supported by the adjacent feature bundle in Card, which does have a phonological realization. As suggested above, the morphology then spells out \emptyset and the article as the numeral, basically deriving the numeral from the article:¹⁶



To be clear, unlike in the first case, here *mehr als* c-commands the numeral *EIN*, or more precisely, the element \emptyset , which is the semantically active part. Finally, recall that, in order to derive the strong reading of the numeral, I assume that the article and \emptyset move to D and Spec,DP, respectively and morphological spell-out occurs in the DP-level.

To sum up, if only one copy in a movement chain is pronounced, then deriving the numeral from the combination of \emptyset and the vacuous article has a number of advantages. On the

¹⁶ Several authors (e.g., Bernstein 1993: 128, Julien 2002: 274) share the intuition that the indefinite article is merged lower and then raises to the DP. In contrast to the text proposal, they basically derive the indefinite article from the numeral. As far as I can see, there are a number of issues with this assumption, at least for Modern German (for some issues in English and presumably also German, see Perlmutter 1970: footnote 10, 13): for instance, it is unclear to me how to account for the morphological differences between *ein* and the other numerals; second, it is not clear how to account for morphological differences of *ein* in the three exceptional cases in unsplit and split noun phrases in a non-stipulative way (see Roehrs 2009a: Chap. 4).

one hand, we can put all numerals in the same phrasal position(s) and explain the different scopal effects with the various *ein*-words. On the other, we can account for the facts that *EIN* inflects like the indefinite article and that both of these elements cannot co-occur. In other words, the splitting of the numeral into two abstract underlying parts and their subsequent composite spell-out accounts for the hybrid properties of *EIN*.¹⁷

Finally, as other numerals are non-composite forms, they can co-occur with determiners, including *ein* under certain conditions. Consider again (33d), repeated here as (40a), and (40b):

- (40) a. % *Was für ((ei)ne) zwei Frauen!*
 what for a two women
 ‘What two (great) women!’
- b. *Es waren keine zehn Leute da.*
 it were no ten people there
 ‘There were not even ten people.’

5.2. Article vs. Adjective

Above, I derived some of the morpho-syntactic aspects of the numeral from the indefinite article. Among others, this accounted for the fact that the numeral and the article may not co-occur although they are in different positions. This now makes the prediction that, when *ein* does occur with a determiner, this *ein* cannot be the indefinite article (or the numeral). I will argue that this instance of *ein* is adjectival. In what follows I provide more evidence for this categorically different *ein*, suggesting that it is in yet another position.

5.2.1. Different Morphology

As amply documented in section 2, the indefinite article and the singularity numeral cannot have an ending when an overt noun follows. Furthermore, unlike the former two, adjectival *eine* is only possible in a definite context. Consider (41a). The same facts hold when a *von*-possessive is added in the left periphery, (41b).¹⁸ In contrast, with an ‘s-possessive, the judgments reverse.

¹⁷ With the singularity numeral consisting of two elements, one might expect that, under certain conditions, both may be realized separately at the same time. This is the case in Badiot, for instance (Haiman & Benicà 1992: 152):

- (i) *da ona na skwadra* (Badiot)
 from one a team
 ‘from one team’

In (i), there are two copies of the vacuous article: one enters into a relation with \emptyset bringing about the singularity numeral, the other is realized as an independent instance of the article (cf. Cardinaletti & Giusti 2006: 51). Thus, the overt (non-)co-occurrence of the two elements appears to be a language-specific fact (my hunch is though that the parallel Yiddish case discussed in the introduction is different). Furthermore, a composite analysis involving \emptyset could also explain the alternation between the indefinite article and the numeral for ‘one’ in some other languages closely related to standard German:

- (ii) a. *a(n)* vs. *one* (English)
 b. *a(n)* vs. *eyn* (Yiddish)
 c. *een* vs. *één* (Dutch)
 d. *a* vs. *ōa* (southern German dialects)

In some of these cases, spell-out of the relevant component(s) results in quite different surface forms.

¹⁸ There is an interesting restriction for (41b). While a definite article is possible, a demonstrative is not, (ia). When the *von*-phrases follows the head noun, both the article and the demonstrative are possible, (ib):

- (i) a. *von Peter {der / ?*dieser} Sohn*

Most importantly, adjectival *eine* can have a strong ending and an overt noun can follow, (41c). This is exactly the same with a regular adjective, (41d):

- (41) a. {‘*n(*er)* / *EIN(*ER)* / **einer*} *Sohn*
 a / one / one son
 ‘a / one son’
- b. *von Peter* {‘*n* / *EIN* / **einer*} *Sohn*
 of Peter a / one / one son
 ‘a / one son of Peter’
- c. *Peters* {*‘*n* / **EIN* / *einer*} *Sohn*
 Peter’s a / one / one son
 ‘Peter’s first son’
- d. *Peters größer Sohn*
 Peter’s big son
 ‘Peter’s big son’

As is expected, concomitant with the different possible elements in (41a-b) vs. (41c), there is a difference in the semantics: while there is no duality presupposition in the former, it is present in the latter. In other words, the nominal in (41c) can be juxtaposed with *Peters anderer Sohn* ‘Peter’s other son’. Furthermore, besides the different inflections on *ein*, this semantic distinction correlates with another morpho-syntactic difference: the definite article is possible in (41a-b) but not in (41c). Consider (42a-b). In fact, with a definite article present, adjectival *eine* is possible again, (42c):

- (42) a. (*von Peter*) *der Sohn*
 of Peter the son
 ‘Peter’s son’
- b. * *Peters der Sohn*
 Peter’s the son

-
- b. of Peter the / this son
 ‘the son of Peter’
 {*der* / *dieser*} *Sohn von Peter*
 the / this son of Peter
 ‘the / this son of Peter’

Assuming that the article is in D and the demonstrative in Spec,DP, we might claim that this restriction follows from the assumption that only one phrase can occupy Spec,DP in (ia). However, it is more likely that this is a semantic restriction. An indication for the latter is that the *von*-phrase can co-occur with *all* ‘all’, which is in a (recursive) IntP:

- (ii) ? *Von Peter all die Bücher habe ich noch nicht gelesen.*
 of Peter all the books have I yet not read
 ‘I have not yet read all of Peter’s books.’

For detailed discussion, see Roehrs (2011c).

- c. (*von Peter*) *der eine Sohn*
 of Peter the one son
 ‘Peter’s one son’

In Roehrs (2011c,d), I propose that the possessive in (41a) is outside the DP proper but the one in (41b) is in Spec,DP. It follows that the former allows different determiners but the latter does not (at least no overt determiners, see Chapter 5).

Furthermore, as already seen above, the article and the numeral have different endings than the following adjective. This is illustrated here again in the nominative and dative neuter, (43a-a’). Now, considering (41c-d) above, we expect that when adjectival *eine* co-occurs with a regular adjective, they both have the same ending. This is borne out, (43b-c):

- (43) a. {(ei)n / EIN} *frisches* *Brot*
 a / one fresh(NOM.ST) bread
 ‘a / one fresh bread’
- a’. {(ei)nem / EINEM} *frischen* *Brot*
 a(DAT.ST) / one(DAT.ST) fresh(WK) bread
- b. *das* *eine* *frische* *Brot*
 the(NOM.ST) one(WK) fresh(WK) bread
 ‘the one fresh bread’
- b’. *dem* *einen* *frischen* *Brot*
 the(DAT.ST) one(WK) fresh(WK) bread
- c. *Peters einer lieber Sohn und Peters anderer lieber Sohn verstehen sich gut.*
 Peter’s one nice son and Peter’s other nice son understand REFL well
 ‘Peter’s first nice son and Peter’s second nice son get along well.’

In order to derive the adjectival endings in a uniform way (see Chapter 2), I propose that adjectival *eine* is merged in a position similar to that of other adjectives, presumably the highest Spec,AgrP (see also Gallmann 2004: 155, Pafel 2005: 179).

5.2.2. Different Semantics

Besides the difference with regard to singularity mentioned above, numerals can be modified by *mehr als* ‘more than’ whereas adjectival *eine* cannot:

- (44) a. [*Mehr als EIN Student*] *kam zur Party.*
 more than one student came to.the party
 ‘More than one student came to the party.’
- b. [*Mehr als HUNDERT Studenten*] *kamen zur Party.*
 more than one hundred students came to.the party
 ‘More than one hundred students came to the party.’

- c. * *Der [mehr als eine] Student kam zur Party.*
the more than one student came to.the party
- d. *Die [mehr als HUNDERT] Studenten kamen zur Party.*
the more than one hundred students came to.the party
'The more than one hundred students came to the party.'

Again, adjectival *eine* is a different element.

5.2.3. Co-occurrence with Possessive *ein*-words

As seen above, unlike the negative and indefinite articles, possessives may occur with adjectival *eine*, slightly adapting (4b-d) and (28a) here as (45):

- (45) a. * *keine eine Freundin*
no one girlfriend
- b. * *(ei)ne eine Freundin*
an one girlfriend
- c. *meine eine Freundin*
my one girlfriend
'my one girlfriend'
- d. *Peter seine eine Freundin*
Peter his one girlfriend
'Peter's girlfriend'

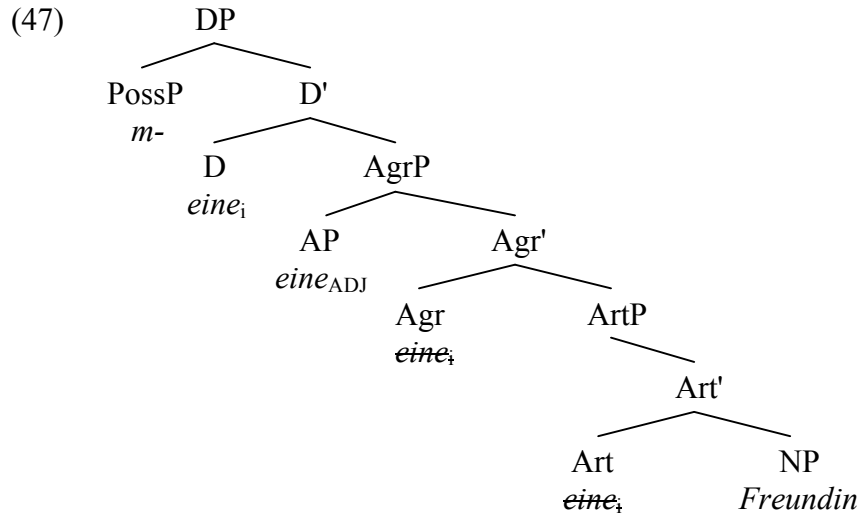
The sequence of two *eins* in (45a) and (45b) cannot be ruled out by haplology, which, roughly, describes the reduction of identical sequences of sounds (see Bhatt 1990: 201 for the discussion of (45b) in this regard; more generally, see Neeleman & van de Koot 2006). If this were the case, we would expect (45c-d) to be ungrammatical as well, contrary to fact. Note that the right instance of *ein* in (45) is morphologically ambiguous in the feminine between the numeral and the adjective. For completeness' sake, let us consider each analysis in turn.

As already discussed above, the indefinite article and the numeral *EIN* cannot co-occur. Deriving the numeral from the indefinite article, we expect only one copy after Copy deletion and spell-out of the composite, ruling out (45a-d) under such an analysis. This is confirmed in the masculine gender, which clearly disambiguates the relevant morphology. Specifically, recalling that possessive articles are also composite forms, the numeral in (46a) cannot occur with another article but adjectival *eine* in (46b) can:

- (46) a. (**kein* / **n* / **ein* / **mein* / **Peter sein*) *EIN Freund*
no / a / a / my Peter his one friend
'one friend'

- b. {*kein / *'n / *ein / mein / Peter sein} einer Freund
 no / a / a / my Peter his one friend
 'my / Peter's one friend'

Turning to adjectival *eine* in more detail, (45a-b) are ruled out by the semantics in multiple ways: adjectival *eine* implies duality, which is incompatible with the null set, implied by *kein*, and the singleton set, implied by the indefinite article.¹⁹ In addition, (45a-b) are also out as adjectival *eine* is not in a definite context here. No such semantic problems arise for the possessives in (45c-d), which are definite and, as pointed out above, do not presuppose a null set or a singleton set (see also footnote 12). Note now that if we claim that *ein* as part of the possessive and adjectival *eine* are of different lexical categories, then we can state that they do not stand in a relevant morpho-syntactic relation with one another. If so, it is expected that both types of *ein* can co-occur, which is the case:



Unsurprisingly, like possessive articles, *diese* 'this' can also co-occur with adjectival *eine*, (48a). As discussed in Chapter 2, *diese* and *meine* can co-occur, (48b). In fact, as can be witnessed in (48c), adjectival *eine* can appear with both of these elements at the same time:

- (48) a. *diese eine Freundin*
 this one girlfriend
 'this one girlfriend'
- b. *diese meine Freundin*
 this my girlfriend
 'this my girlfriend'

¹⁹ As proposed above, *ein* itself does not determiner semantic number. Rather, I propose in Chapter 7 that semantic number is the result of an interplay between NumP and NP.

- c. (?) *diese meine eine Freundin*
 this my one girlfriend
 ‘this my one girlfriend’

On current assumptions, *diese* is in Spec,DP in (48a) but in Spec,IntP in (48b-c); *meine* in (48b-c) is in Spec,DP. Thus, these distributions are expected to be possible. Conversely, if we assume just one type of *ein*; that is, if we derive both the numeral *EIN* and adjectival *eine* from (vacuous) *ein*, then a number of distributions are hard to account for.

In more detail, as already mentioned above, the indefinite article and the numeral have no ending when they appear before the noun, (49a). Interestingly, while a definite determiner cannot precede either of them, (49b), *ein* with a weak inflection is possible here, (49c). Finally, recall again that a Saxon Genitive possessor can occur with *ein* if it has a strong inflection, (49d):

- (49) a. $\{(ei)n / EIN\}$ *Mann*
 a / one man
 ‘a / one man’
 b. * *der* $\{(ei)n / EIN\}$ *Mann*
 the a / one man
 c. **(der) eine* *Mann*
 the one(WK) man
 ‘the one man’
 d. *Peters* $\{*EIN / einer\}$ *Sohn*
 Peter’s one*(ST) son
 ‘Peter’s one son’

Under current assumptions, the indefinite article in (49b) is ruled out because only one article can appear in a noun phrase. If we assume that *EIN* consists, in part, of (vacuous) *ein*, then we can rule out the other option of (49b) under the same assumption. In other words, these cases are not ruled because *ein* does not have a weak adjectival ending but, rather, there are two articles in the DP, *der* and (vacuous) *ein*, but only one of them can originate in ArtP and move to the left periphery. Turning to (49c-d), if we assume – as we have all along – that adjectival *eine* is a non-composite form, then it is predicted to occur with another article in (49c). Similarly, if we assume that possessives such as (49d) involve a null determiner (Chapters 2 and 5), then this distribution follows from the same assumptions. To be clear, then, assuming two basic types of *ein*, we can explain why sometimes *ein* cannot occur with another article but sometimes it can, provided *eine* appears in a definite context.

The claim that *ein* can be an adjective is further strengthened if we treat *eine* as categorially parallel to *andere* ‘other’ in (50a). In particular, the adjectival status of the latter becomes apparent in that it cannot license a singular count noun by itself, (50b), but requires the presence of a determiner, (50c).²⁰

²⁰ For the discussion of *folgendes* ‘following’ in (50b), see Roehrs (2009a: 167-168) and van de Velde (2011). Another indication for categorial parallelism comes from the fact that adjectival *eine* can also be co-ordinated with *andere*, as in the following idiom:

- (50) a. *Meine eine Tochter kam, meine andere nicht.*
 my one daughter came, my other not
 ‘One of my daughters came, the other did not.’
- b. *{Folgendes / *Anderes} Beispiel illustriert das.*
 following / other example illustrate this
 ‘The following / other example illustrates this.’
- c. *Das {folgende / andere} Beispiel illustriert das.*
 the following / other example illustrate this
 ‘The following / other example illustrates this.’

That the determiner must be present is exactly what we also saw in (49c). Furthermore, we saw in section 5.2.2 that adjectival *eine* cannot be modified by *mehr als* ‘more than’. Something similar holds for adjectival *eine* when modified by the degree particle *so* ‘such’. Compare (51a) and (51b). Consistent with that, the adjective *andere* can only be interpreted as ‘different’ under this condition, (51c):

- (51) a. *so (ei)n Mann*
 so a man
 ‘such a man’
- b. * *der so eine Mann*
 the so one man
 ‘that kind of man’
- c. *der so andere Mann*
 the so {different / [#]other} man
 ‘the so different man’

Thus, the ungrammaticality of (51b) and the interpretative restriction in (51c) fit well with the discussion above, where I showed that adjectival *eine* often co-occurs with *andere* in the meaning of ‘other’. This provides more evidence that *eine* is adjectival.

In the next section, we turn to some previous proposals. Unlike adjectival endings discussed in Chapter 2, there are much fewer analyses of *ein*.

(i) *der [eine oder andere] Mann*
 the one or other man
 ‘some men’

This argument must be taken with a pinch of salt though as the relevant interpretation of *eine* is different here; that is, the idiom does not denote just two people.

6. A Brief Critique of a Previous Proposal

In the traditional literature, the indefinite and the definite article are usually discussed together, with the former taken to be the indefinite counterpart of the latter (for German, see Duden 1995: pp. 303). Recognizing certain shortcomings of this juxtaposition, a number of other views have emerged. For example, Perlmutter (1970) derives English *a(n)* as an unstressed version of the numeral *one* (see also footnote 16) and Higginbotham (1987: 47) argues that the indefinite article in predicate nominals is an adjective meaning ‘one’. Elaborating on work by Oomen (1977), Vater (1982, 1984, 2002) proposes that there is no indefinite article at all but only a numeral/quantifier (“Quantor”). He mainly discusses German but his empirical coverage is meant to be wider.

It is interesting to point out that all alternative proposals make different claims and have different empirical foci. Recall now that I showed above that German and Yiddish seem to differ in some of the empirical details and care must be taken when one wants to compare different languages in this part of the grammar. Similar to adjectival inflections in Chapter 2, I believe that it is these details that show the true nature of *ein*. In what follows, I will discuss only Vater’s proposal. As far as I am aware, this proposal seems to have received fairly wide acceptance, at least for German. To give just one example, although providing a critique of some points in Vater (1982, 1984), Bisle-Müller (1991: 100-116) reaches a similar conclusion.

Arguing against the traditional opposition of the indefinite vis-à-vis the definite article, Vater (1982, 1984, 2002) proposes that *ein* is not the indefinite counterpart of definite *der* ‘the’. According to Vater, this element is not indefinite as *ein* can lead not only to a nonspecific but also to a specific interpretation of the containing noun phrase (for examples, see section 4.1 above). In addition, it denotes a specific amount, namely singularity. Furthermore, this element is not an article as *ein* is not necessarily “localizing” in function in the sense of Hawkins (1978).

Rather, Vater proposes that *ein* is a cardinal numeral, that is, a type of quantifier that denotes a specific number of entities (also Oomen 1977). Generalizing his discussion, he claims that determiners or articles only involve definite elements. In contrast, the other determiner-like elements belong to a different part of speech, the numerals/quantifiers. He provides some empirical arguments for this claim. Below, I will return to these arguments. Let us start with some syntactic observations.

First, Vater points out that like other quantifiers, *ein* can undergo quantifier float:

- (52) a. *Antrag habe ich keinen gestellt.*
application have I no made
‘As for applications, I have made none.’
- b. *Antrag habe ich einen gestellt.*
application have I one made
‘As for applications, I have made one.’

Second, like other numerals, *ein* can co-occur with a determiner:

- (53) a. *die zwei Bücher*
the two books
‘the two books’

- b. *das eine Buch*
the one book
'the first book'

Turning to some semantic arguments, Vater argues that like other cardinals, *ein* can individuate mass nouns. Glossing over some of the details, the interpretation in (54a) can involve certain types of bread or certain amounts of bread. Modulo the singular, the example in (54b) has a similar range of readings. Importantly, the definite article does not have this individuating function; that is, the example in (54c) is ambiguous between a mass and a count reading:

- (54)
- a. *zwei Brote*
two breads
'two types / loaves of bread'
 - b. *ein Brot*
one bread
'one type / loaf of bread'
 - c. *das Brot*
the bread
'the bread'

Furthermore, Vater points out that *ein* in combination with a definite article has a partitive meaning. As just pointed out, the example in (54c) has two readings. Following certain aspects of Perlmutter (1970), Vater (1984: 39) proposes that the mass interpretation only involves a definite article, (55a). In contrast, the definite singular count reading involves *ein*, which is deleted, (55b). Interestingly, *ein* can also surface. In this scenario, the interpretation is, according to Vater, partitive. This is indicated by the translation in (55c):

- (55)
- a. *das Brot*
the bread
'the bread'
 - b. *das ~~ein~~ Brot*
the one bread
'the bread'
 - c. *das eine Brot*
the one bread
'one of the breads'

After this brief illustration, let us return to the above arguments pointing out some shortcomings.

Note that the first syntactic argument does not involve quantifier float but rather a different type of discontinuous noun phrase. In Chapter 3, I labeled this construction split NP.

One argument against Vater's view is that under certain conditions, this type of split does allow determiners to be stranded:

- (56) *Hemden habe ich immer nur diese da getragen*
shirts have I always only these there worn
'As for shirts, I have always worn only these there.'

Given this possibility, one could maintain the claim that *ein* is an article.

Turning to the second syntactic argument, it is true that determiners and quantifiers can co-occur. However, there are also cases where two determiners can be combined, (57a). The same holds for two quantifiers, (57b):

- (57) a. *diese meine Freunde*
these my friends
'these friends of mine'
- b. *ein jeder von uns*
an every of us
'each of us'

Again, given these options, one could continue to claim that *ein* is an article when it co-occurs with another determiner. As for the semantic arguments, I agree that *ein* seems to be individuating in nature. However, I will suggest in Chapter 8 that *ein* is not responsible for this effect but rather it flags the presense of an operator. Finally, let us discuss the partitive interpretation in more detail.

Vater claims that *ein* preceded by a definite article can be paraphrased as *ein* followed by a genitive noun phrase in the plural. Consider (58). Vater (1982: 72) explicitly states that *ein* here presupposes a larger set of elements. However, I believe this claim is not accurate. Rather, while the paraphrase does indeed imply a larger set, *ein* preceded by the definite article as in (58a) presupposes just a second element.²¹ Furthermore, as mentioned above, this duality presupposition can be cancelled when a demonstrative replaces the definite article, (58b). Importantly, the partitive reading in the paraphrase cannot be cancelled:

- (58) a. *das eine Buch – eins der Bücher*
the one book – one of.the books
- b. *dieses eine Buch – eins dieser Bücher*
this one book – one of.these books

I take this to mean that the paraphrases do not capture the correct semantics of this *ein*. In other words, *ein* is not the singularity numeral here. Furthermore, I believe that other numerals do not invoke this partitivity either; that is, *die zwei Bücher* 'the two books' does not mean 'two of the books'. I conclude that this *ein* is of a different type. Above, I suggested that this *ein* is

²¹ Recall from above, that adjectival *eine* can also involve two sets of elements. Interestingly, Börjars (1998: 18 fn. 7) points out for Swedish that these two sets can be of different sizes.

adjectival, an element only licensed in a definite context. Besides these issues, it is also worth pointing out that a number of other types of *ein* are not discussed.

Note first that Vater does not discuss reduced forms. However, as can be seen in (59), the form of *ein*, reduced or unreduced, does make an important difference with regard to grammaticality judgments:

- (59) a. *Geben Sie mir *(ei)nen!*
give you me one
'Give me one!'
- b. *Geben Sie mir (ei)nen Apfel!*
give you me one / a apple
'Give me an / one apple!'

Furthermore, predicative nominals, (60a), and cases in the plural, (60b) are not mentioned in the discussion at all:

- (60) a. *Er ist (ein) Lehrer*
he is a teacher
'He is a teacher.'
- b. *Eine Störche!*
a(PL) storks
'Wow! So many storks!'

It is quite clear that the noun phrases in (60a) and (60b) have nothing to do with singularity: (60a) denotes a property and (60b) involves a plurality.

Finally, Vater treats the negator *keinen* 'no' as an unanalyzed form and possessives such as *mein* 'my' are not discussed at all. Since inflections are not discussed by him, I believe an important morpho-syntactic generalization over the different *ein*-words is being missed. As illustrated in detail above, these elements share a number of morpho-syntactic properties and should be discussed in tandem. In this respect, let us point out again that inflections provide important clues about the lexical items in the noun phrase and the structure of the noun phrase as a whole.

To sum up, I agree with Vater (and others) that *ein* is not an indefinite article (although I keep the name for convenience). I disagree with him (and others) that *ein* is the singularity numeral. Rather, I claim that this element is a semantically vacuous element. Recall that adjectival *eine* is different in this regard.

7. Conclusion

One goal of this chapter was to provide a more comprehensive survey of the different types of *ein*. Arguing that *ein* cannot involve the singularity numeral only, I examined three types: the article, the numeral, and the adjective. In order to capture the morphological similarities and the non-co-occurrence between the article and the numeral, I proposed to derive the numeral from

the article, assuming the null element \emptyset , which is supported by the article. Adjectival *eine* was proposed to be an independent element. In order to account for the differences, I suggested that the three elements have different specifications and are in different positions in the syntactic tree. Table 2 below summarizes these differences:

Table 2: Summary of the Properties of the Types of *ein*

kinds of <i>ein</i>		morphology	semantics	position
article <i>ein</i>	vacuous (indefinite, possessive, negation, predicative)	α PL		Card or D (depending on the reading, weak vs. strong)
	numeral \emptyset_{EIN}	-PL	-PL	Spec,CardP or Spec,DP
adjective <i>eine</i> _{ADJ}		α PL	+PL (unless in certain contexts)	(high) Spec,AgrP

It is clear that the conditions where adjectival *eine* loses its duality presupposition deserve more attention.

The second goal was to identify more general properties of *ein*. Similar to adjectival inflections in Chapter 2, we concluded here that *ein* makes certain morpho-syntactic features visible and is semantically vacuous. In the next three chapters, we turn to some consequences of the analysis. In particular, we will discuss possessive *ein*-words and *ein* in relation to semantic concepts such as emotiveness and number. We will find confirmation of the conclusions reached thus far. Furthermore, we will see that *ein* can also indicate a certain amount of structure in the noun phrase and it can “flag” the presence of covert operators.

Chapter 5: Possessive *ein*-words

1. Introduction

In this chapter, we turn to the first consequence of the proposal laid out in Chapter 4. Recalling that possessive *ein*-words are composite forms, we will discuss certain differences between various possessive constructions in German.¹ For instance, there is an interesting asymmetry in the syntactic distribution of possessives involving proper names and those consisting of pronominal elements. Whereas the former can both precede and follow the head noun, the latter can only precede it. Compare (1) to (2):

- (1) a. *Peters Buch*
Peter's book
'Peter's book'
- b. *das Buch Peters*
the book Peter's
'Peter's book'
- (2) a. *sein Buch*
his book
'his book'
- b. * *das Buch sein*
the book his

Interestingly, older varieties of German are different in at least two ways. On the one hand, while adjective endings are strong in Modern German, they are weak in Old High German. Compare (3a) to (3b). Furthermore, unlike in current varieties, older forms of the language allow the possessive pronoun to follow the head noun. Compare (2b) to (3c):

- (3) a. *mein lieber Sohn*
my dear(ST) son
'my dear son'
- b. *mîn liobo sun* (Old High German)
my dear(WK) son
(Demskey 2001: 67)
- c. *(ther) fater min*
the father my
'my father'
(Demske 2001: 173)

¹ This chapter is based, in part, on Roehrs (2011c). For references on possessives, see that paper.

Let me point out already here that in these two points, Old High German is similar to the Scandinavian languages. I will propose that the properties of the pronominal possessive in Modern German follow from the decompositional structure discussed in the previous chapter and its absence in the other cases.

The chapter is organized as follows: in section 2, I will present evidence that possessives are not in D but in different, phrasal positions. I will then propose that possessives involve a constituent base-generated in a lower position of the noun phrase. I will argue that possessives can and, in some cases, must move to the DP-level. In section 3, I return to adjectival inflections and some other agreement facts. Before the conclusion, I discuss pronominal possessives and adjectival inflection in older varieties of German.

2. The Proposal

First, I present some evidence that possessives are in phrasal positions. After that, I will propose that they involve constituents that can move inside the matrix DP.

2.1. Possessives are not in D but in Other Positions

Abney (1987: 79) proposes (but ultimately “disprefers” the idea, p. 85) that the *-s* in the Saxon Genitive Construction in (4a) is in D. Considering overt distributional evidence from certain varieties of Scandinavian, (4b-c), we notice that possessives may co-occur with determiners, which are typically assumed to be in D.²

- (4) a. Peter’s car
- b. *Finas te rö märrn* (Finland Swedish)
 Fina’s DEF red mare-DEF
 ‘Fina’s red mare’
 (Delsing 2003: 27)
- c. *min (den) sorte kat* (Danish)
 my DEF black cat
 ‘my black cat’
 (Julien 2005a: 234)

Interestingly, possessives can also occur lower in the structure, namely between the determiner and the head noun. In fact, they can surface on both sides of the same adjective:

² Unlike these Scandinavian dialects, Yiddish allows the indefinite article to intervene between the possessor and the possessum:

(i) *mayner a guter khaver* (Yiddish)
 mine a good friend
 ‘a good friend of mine’

I assume that Yiddish involves a different analysis. For a detailed comparison of these two types of cases, see Roehrs (2011d).

- (5) a. *in dhemu heilegin **daniheles** chiscribe* (Old High German)
in the holy Daniel's scripture
'in Daniel's holy scriptures'
(Demske 2001: 227)
- b. *in dheru **sineru** heilegun chiburdi*
in the his holy birth
'in his holy birth'
(Harbert 2007: 155)

Assuming that D can host only one element, we conclude that the possessives including *–s* are not in D.³ Furthermore, as is well-known, pronominal possessives may occur in different positions in one and the same language. Besides the distribution in (5b), older varieties of German also allow the determiner to be absent and the possessive pronoun to follow the noun:

- (6) a. *(ther) **min** fater* (Old High German)
the my father
'my father'
(Demske 2001: 173)
- b. *(ther) fater **min***
the father my

In section 4, I will propose that pronominal possessives in Old High German and Middle High German have a different analysis than in Modern German. In particular, the possessives in the older varieties are adjectival and as such, they are not composite forms in the relevant sense.

2.2. Possessives as PossP

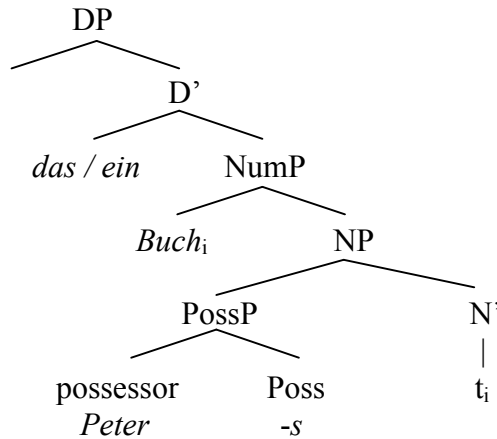
In Roehrs (2011c), I basically follow Anderson (1983-84) in treating possessives as involving Possessive Phrases (cf. also Abney's 1987: 84-5 KP in Spec,DP). Discussing the Saxon Genitive Construction in English, Anderson proposes for noun phrases with non-theta head nouns that they involve a lexical possessive head (*'s*). This possessive head assigns case and a theta role to the possessor and together these two elements form a Possessive Phrase (PossP). Locating PossP in a Specifier position, possessives involve constituents. While I followed many aspects of Anderson's proposal in that paper, I diverged from her in certain ways. For instance, I extended her analysis to Possessor Doubling Constructions such as *Peter sein Buch* '(Peter his =) Peter's book' (for the latter parallelism, see, e.g., Fiva 1985, Krause 1999, and also Weiß 2008). We start with possessives involving proper nouns.

With current purposes in mind, proper name possessives in post-nominal position can be analyzed as follows. The possessive head *–s* takes the possessor as its argument projecting a PossP. Following, among many others, Julien (2005a) and Roehrs (2009a), I assume that PossP is base-generated in Spec,NP and that the head noun has moved to Num. Abstracting away from unnecessary details, the example in (7a) is derived as in (7b):

³ As witnessed in (4a), the possessive and the determiner do not always co-occur. In fact, they rarely do in the Germanic languages. However, the data in (4b-c) and (5) indicate that these two elements are not in the same position. That means that their frequent complementary distribution cannot follow from a purely structural account involving the same position. I return to this issue below.

- (7) a. $\{das / ?ein\}$ *Buch Peters*
 the / a book Peter's
 'the / a book of Peter'

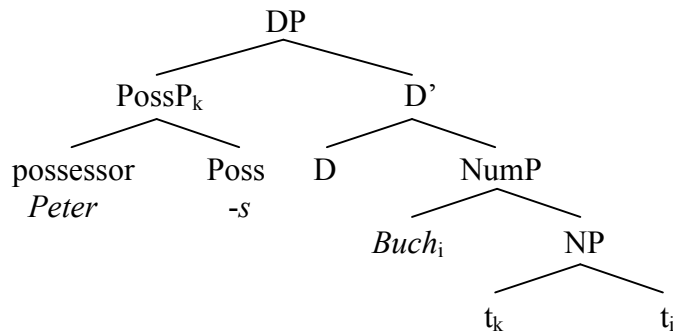
b. *Post-nominal Proper Name Possessives*



Pre-nominal possessives involving proper names are similar, the main difference being that PossP moves as a constituent to Spec,DP:

- (8) a. *Peters Buch*
 Peter's book
 'Peter's book'

b. *Pre-nominal Proper Name Possessives*

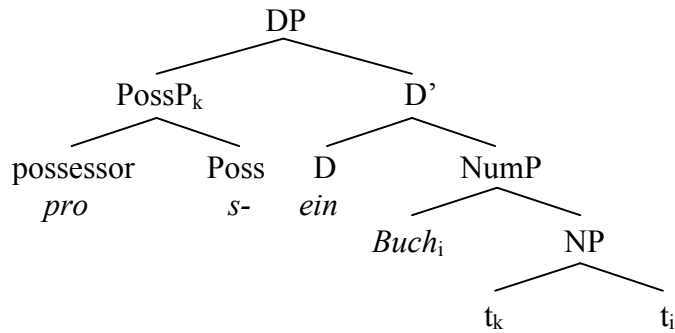


Below, I will take up the issue of the presence vs. absence of articles in D fleshing out the current structure a little more.

Turning to the pronominal possessives, recall that we proposed in Chapter 4 that possessive *ein*-words are decompositional consisting of abstract POSS and vacuous *ein*. In line with the proposal of the Saxon Genitive, I suggest that possessive *s*- has null *pro* as its possessor argument. Together, they make up PossP. PossP moves to Spec,DP and *ein* surfaces in D:

- (9) a. *sein Buch*
 his book
 ‘his book’

b. *Pre-nominal Pronominal Possessives*



While I cannot discuss this in detail here, the possessor can also be overt as in *Peter sein Buch* ‘Peter his book’ bringing about the Possessor Doubling Construction. If these considerations are tenable, then we have a straightforward account for the syntactic asymmetry pointed out in the introduction.

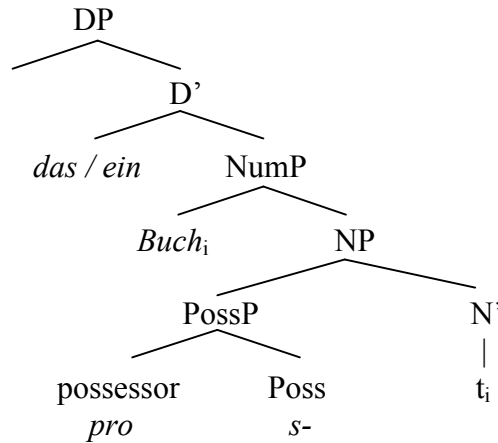
If possessive *ein*-words are indeed composite forms, then post-nominal *sein* ‘his’ is impossible as *ein* can, for independent reasons, not be in a position lower than the noun:

- (10) a. * *Buch ein*
 book a
- b. * *{das / ein} Buch ein*
 the / a book a

In other words, if PossP remains in situ, then the possessive element and *ein* are not adjacent. Consequently, they cannot combine leading to ungrammaticality:

- (11) a. * *{das / ein} Buch sein*
 the / a book his

b. *Post-nominal Pronominal Possessives*



To sum up, the proposal that pronominal possessives are decompositional but proper name possessives are not explains the distributional options of these two types of possessives in German. Consider more complicated structures.

Let us begin with (12a). As just discussed, the possessive head is part of PossP and moves to Spec,DP. In Roehrs (2009a), I suggested that a demonstrative preceding a possessive is in the Specifier position of an Intensifier Phrase (IntP). Among others, this explained the strong endings on both the demonstrative and the possessive article (see also Chapter 2). As can easily be verified, adjacency between *ein* and the possessive element holds in (12a). Consequently, the possessive article can be spelled out by the morphology. When the possessive pronominal precedes the demonstrative, we find ungrammaticality, (12b):

- (12) a. *diese* [_{DP} *m+eine Freundin*]
 this my girl-friend
 ‘this my girl-friend’
- b. * *m+eine* [_{DP} *diese Freundin*]
 my this girl-friend

Let us assume that other determiner-like elements can, at least in principle, be in such a high position as *diese* in (12a). The *von*-possessive in (13a) is a case in point (see Roehrs 2011c,d). We also know that determiners can combine with elements outside the DP proper, as in (13b), where the determiner *der* ‘the’ has contracted with the preposition *zu* ‘to’:

- (13) a. *von Peter die Freundin*
 of Peter the girl-friend
 ‘Peter’s girl-friend’
- b. *zur Freundin*
 to.the girl-friend
 ‘to the girl-friend’

I argue in Roehrs (2009a) that *ein* can move across other phrases, for instance, adjective phrases. With the demonstrative in Spec,DP, the movement of *ein* in (12b) would presumably circumvent a doubly filled DP-layer and might lead us to expect that the example is fine. The question arises, then, why (12b) is ungrammatical.

I propose that the demonstrative presents an intervener. This blocks movement of *ein* outside of the DP proper. Since the possessive head and *ein* cannot end up in adjacent positions, they cannot be spelled out by the morphology. This explains the ungrammaticality of (12b).⁴ The syntactic structure proposed above and the assumption of a composite form also explain adjectival inflection and other agreement phenomena.

3. Adjectival Inflection and Other Phenomena

Chapter 2 showed that the presence of possessives in German, be they pronominal *s-* or proper name possessives such as *Peters*, does not have an impact on the inflection of the adjective. In particular, we observed that adjectives following *sein* pattern with those following *ein*, (14a), and that adjectives preceded by *Peters* behave like those preceded by the null article \emptyset , (14b):⁵

- (14) a. *mit (s-)einem großen Bier*
 with (his) a big(WK) beer
 ‘with a / his big beer’
- b. *mit (Peters) kaltem Bier*
 with Peter’s cold(ST) beer
 ‘with Peter’s cold beer’

Recall again that *sein* consists of the possessive element *s-* and *ein*. Furthermore, Chapter 2 argued that determiners trigger Impoverishment and the assumption of a null determiner explained the weak ending on “unprecedented” adjectives in the masculine and neuter genitive. Recall also that the *-s* on *Peter* is not in D but part of PossP and that PossP itself is in Spec,DP. With these points in mind, I propose now that *Peters* co-occurs with \emptyset . We arrive at the following constellations:

- (15) a. *s+ein Bier*
 h- a beer
 ‘his beer’
- b. *Peters \emptyset Auto*
 Peter’s car
 ‘Peter’s car’

⁴ This argument only goes through if *ein* cannot be base-generated in IntP. The latter would follow if Spec,IntP only tolerates DemP, (12a), and PossP, (13a), but not a (second) full DP containing *ein*.

⁵ Note that *wessen* ‘whose’ and *dessen* ‘his’ behave like proper name possessives:

- (i) *mit (wessen / dessen) kalter Milch*
 with whose / his cold(ST) milk
 ‘with whose / his cold milk’

In other words, as a question word *wessen* is morpho-syntactically related to *Peters* and *dessen* (but not *sein*).

There are some interesting issues that arise now. First, in both cases in (15), there seems to be a feature clash with regard to definiteness: the possessive is definite and the article appears to be indefinite. Second, in both cases, there seems to be a feature clash with regard to countability: a mass noun combines with *ein* and a count noun with \emptyset . In the canonical cases, *ein* combines with a count noun and \emptyset with a mass noun. As proposed in Chapter 4, I claim that *ein* is unmarked for both definiteness and countability. I will assume that the same holds for \emptyset . In other words, I propose that these elements are featurally deficient articles. What is left to answer now is the question of why *s-* only combines with *ein* and the proper name possessive only with \emptyset .

As discussed in more detail in Chapter 4, POSS is supported by *ein*. In fact, we will suggest more generally in Chapter 8 that *ein* flags the presence of operators. This explains the ungrammaticality of (16a-b). In order to rule out the proper name possessive occurring with the indefinite or definite article, (16c), more needs to be said:⁶

- (16) a. * *s- \emptyset Bier*
 h- \emptyset beer
- b. * *s-(d)-as Bier*
 h-(th)-e beer
- c. * *Peters {ein / das} Auto*
 Peter's a / the car

This part of the proposal involves two separate steps.

Norwegian has an interesting alternation where the affixal determiner is missing when the possessive precedes the head noun, (17a), but it is present when the possessive follows it, (17b):

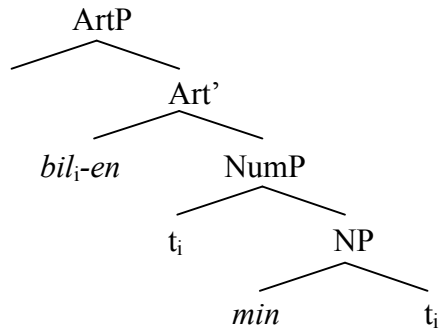
- (17) a. *min bil* (Norwegian)
 my car
 ‘my car’
- b. *bil-en min*
 car-DEF my

To explain this difference, Julien (2005b) proposes that the occurrence of the definite determiner is blocked in a certain Spec-head relation. This particular constellation holds if the possessive moves from its low base position through the Specifier of an intermediate phrase that has the article in its head position. In Roehrs (2009a), I called this phrase Article Phrase (ArtP; Julien’s *nP*). It is located below DP and just above NumP.

Starting with (17b), the possessive is base-generated in Spec,NP. The head noun moves from N to Art to support the affixal article. The relevant part of the tree is as follows (for further details, see Julien 2005a and Roehrs 2009a):

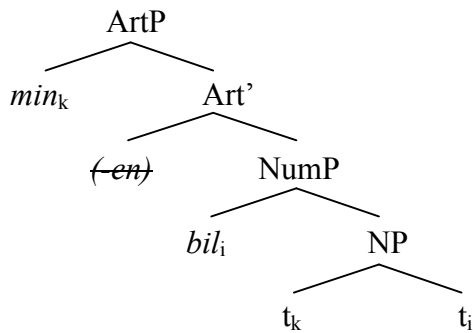
⁶ In Chapter 4, we discussed possessives where *ein* is indeed present but crucially is stressed and has a strong ending: *Peters einer Sohn* ‘Peter’s (first) son’. However, this instance of *ein* has a number of special properties and was analyzed as an adjectival element located below the null determiner.

(18) *Post-nominal Possessives*



The derivation of the pre-nominal possessive in (17a) is slightly different. Unlike above, the possessives moves, on its way to Spec,DP, through Spec,ArtP. There, the presence of the possessive suppresses the surfacing of the suffixal article. The head noun only moves to Num:

(19) *Pre-nominal Possessives*



While this explains the Norwegian case above, let us point out that there are some dialects that allow the determiner to surface: *Pers boka* ‘Per’s book(-DEF)’. I will assume then that this mechanism is quite general but has language-specific reflexes, disallowing the determiner in some dialects but allowing it in others. Before I make this discussion relevant to the cases in German, we need to discuss the feature-specifications of possessives in some detail.

It has been well-known since Kripke (1971) that proper names are rigid designators. This is in stark contrast to pronouns, which are not. If this is expressed by features, then proper names have presumably more feature specifications than pronouns and impose stricter requirements on their morpho-syntactic surroundings. Let me propose then that due to certain feature specifications, possessives involving proper names are only compatible with null articles in German. These are the articles typically occurring with mass nouns. I assume that they are the least specified, that is, the most deficient articles.⁷ Let us now combine these two strands of the discussion.

⁷ At least, this holds for German. Recall from above that a definite suffixal article can occur with a pre-nominal proper name possessive in some Scandinavian dialects. This calls for a different explanation. For concreteness, I assume that the features of these articles are different from those in German. One fact that points in this direction is that unlike German, some Scandinavian dialects allow – what I will call – Triple Definiteness (datum taken from Julien 2005a: 109):

I propose that different types of possessives are only compatible with certain articles. While possessive *s-* can only be supported by *ein*, proper name possessives are only compatible with \emptyset . To explain the ungrammaticality of **Peters {ein/das} Auto* ‘Peter’s a/the car’, I suggest that *ein* and *das* are suppressed by the proper name possessive in the Spec-head relation in ArtP. To be clear, then, depending on the type of possessive moving through Spec,ArtP, only certain determiners are merged in Art.

Returning to adjectival inflection, recall that articles move from ArtP via AgrP to the DP-level; that is, articles are base-generated below adjectives. The discussion of *ein* and \emptyset in Chapter 2 claimed that articles may move to the DP-level at different times. Depending on when the particular instances of the articles move up, they may or may not trigger Impoverishment on the adjective. Now, with the determiners *ein* and \emptyset present, we have an explanation why possessives do not trigger Impoverishment in German; that is, why they have no influence on adjectival inflection. There is more evidence for a composite analysis of possessive *ein*-words.

It is well-known that the stem of the possessive article agrees in gender with its antecedent but that the ending of the possessive article agrees in number, gender, and case with the head noun, (20a). Furthermore, besides gender, the stem of the possessive also agrees in person and number with the antecedent, as can easily be seen in (20b). These agreement relations are illustrated with different indices here:

- (20) a. *Peter_i hat s_i+einer_k Freundin_k geholfen.*
 Peter has his girlfriend helped
 ‘Peter helped his girlfriend.’
- b. *Ich_i habe m_i+einen_k Freunden_k geholfen.*
 I have my friends helped
 ‘I helped my friends.’

These apparent mismatches in agreement features are straightforwardly explained by the composite analysis. On the one hand, the possessive element POSS is in Spec,DP agreeing with the DP-external possessor. On the other, *ein* is in D undergoing concord inside the matrix DP. Note again that unlike the former relation, the latter only makes nominal features visible.

4. Poetic and Older Varieties of German

As already documented in section 2.1, the possessive pronoun can be sandwiched between a determiner and a head noun in Old High German. This is also possible in Middle High German, (21a). As pointed out in Chapter 4, this is still, with some restrictions, possible in poetic or elevated German today, (21b):

-
- (i) *desse dei to eldste husa* (Norwegian)
 these DEF two oldest house-PL.DEF
 ‘these two oldest houses’

- (21) a. *der sîner snelheite er mohte sagen danc* (Middle High German)
to.the his speed he could say thanks
‘He could thank his speed.’
(from *Nibelungenlied*, adventure 34, stanza 23, line 2)
- b. *Du bist die meine.*
you are the my
‘You are mine.’

Importantly, this distributional possibility is very restricted today. Unlike in the older German varieties, an adjective and/or noun cannot follow in Modern German, (22a). Furthermore, the definite article cannot be replaced by a demonstrative, (22b):

- (22) a. * *Du bist die meine {Hübsche / Freundin / hübsche Freundin}.*
you are the my beautiful / girlfriend / beautiful girlfriend
- b. * *Du bist diese meine.*
you are this my

Considering these stylistic and syntactic restrictions, I assume that the distributional possibility in (21b) is partially lexicalized, that is, part of an older grammar. I propose that the possessive element is not a composite form in that grammar. If so, this makes the prediction that this possessive element can be in different positions. While not possible in Modern German, we have already seen above that older varieties of German and the Scandinavian languages show the pronominal possessive also in post-nominal position. Let us make some tentative remarks as to why this may be so.

Recall from Chapter 4 that I tentatively suggested that Old High German *éin* ‘one’ was split into two components in the development of the language, (23a). With this in mind, we can claim now that possessive pronouns were also split up into two parts over time, (23b). Note that this process is tied to Early New High German Diphthongization, which changed [i:] to [ai]. As for the negative article, judging from the diachronic development of *kein* ‘no’ described in Paul, Wiehl & Grosse (1989: 235), it appears as if the negative article has always involved two components, (23c). Importantly though the inner make-up seems to have changed from the combination of a negative element with the singularity numeral to a negative element with the indefinite article (we will briefly discuss split-scope phenomena in Chapter 8):

- (23) a. *éin* -> \emptyset +*ein*
one $\emptyset_{\text{EIN}+\text{a}}$
- b. *mīn* -> *m* +*ein*
my POSS+a
- c. *ne(c)h+ein* -> *nekein* -> *k* +*ein*
not +one NEG+a

To be clear, unlike the Modern German *ein*-words, the counterparts of these elements in Old High German and in the Scandinavian languages are not composite forms. This difference in

decompositionality is also compatible with a change in inflection that adjectives in German went through.

As illustrated above, adjectives behave the same after indefinite articles and possessive articles in Modern German, (24a). Again, this followed from our decompositional account. In contrast, as pointed out by Demske (2001: 82), adjectives in Old High German were strong after the indefinite article but weak after possessive pronouns, (24b). This implies that the indefinite article and the possessive element were not related to each other in the older varieties of German. As might be expected, the Scandinavian languages pattern with the older forms of German, (24c):

- | | | | |
|------|----|---|-------------------|
| (24) | a. | <i>mein lieber Sohn</i>
my dear(ST) son
'my dear son' | (Modern German) |
| | b. | <i>mîn liobo sun</i>
my dear(WK) son
'my dear son'
(Demske 2001: 67) | (Old High German) |
| | c. | <i>min kjære sønn</i>
my dear(WK) son
'my dear son' | (Norwegian) |

Interestingly, vocatives in Old High German also had a weak ending, just as they do in the Scandinavian languages today:

- | | | | |
|------|----|--|-------------------|
| (25) | a. | <i>Dummer Idiot!</i>
stupid(ST) idiot
'Stupid idiot!' | (Modern German) |
| | b. | <i>liobo man</i>
dear(WK) man
'dear man'
(Demske 2001: 67) | (Old High German) |
| | c. | <i>Dumme idioten!</i>
stupid(WK) idiot-the
'Stupid idiot!'
(Svenonius 1993b: 208) | (Norwegian) |

It seems clear then that Modern German underwent a number of changes during its diachronic development (for the discussion of some diachronic issues, see Demske 2001, Alexiadou 2004, and Wood 2007). I suggest again that part of this change is due to the split up of certain elements into two components.

5. Conclusion

In this chapter, we discussed the first consequence of the analysis in Chapter 4. By way of background, I briefly argued that all possessives consist of a possessive head and a possessor phrase. The latter can be both overt and covert (*pro*). Together these elements make up a PossP. It was proposed that this possessive structure may move inside the matrix DP as a constituent. More to the point, I showed in detail that possessive *ein*-words are special in Modern German in a number of ways.

Assuming that they consist of POSS and vacuous *ein*, this explained certain synchronic and diachronic distributional asymmetries. In particular, unlike proper name possessives and pronominal possessives in the older varieties of German, Modern German possessive *ein*-words can only appear in pre-nominal position. The assumption of a decompositional structure also explained why possessives have no influence on adjectival inflections and it explained certain other agreement patterns. With these points in mind, we can maintain the above conclusion that *ein* indicates morpho-syntactic, but not semantic, properties.

Chapter 6: *Ein* and Emotiveness

1. Introduction

In Chapter 4, we claimed that *ein* is semantically vacuous. Having discussed the first consequence in the previous chapter, we now turn to two more. In this and the next chapter, we discuss *ein* with regard to emotiveness and number. Before we start, let me point out that the next two chapters are meant to be broader in their empirical and theoretical range; that is, they discuss *ein* in the context of both the DP and the CP. Specifically, we will provide a more detailed survey of two (partially known) restrictions.

Focussing on the contribution of *ein*, we will identify three types of readings in this chapter where the notion of emotiveness will be of importance in out-of-the-blue contexts in the singular. In the next chapter, we will isolate restrictions with regard to both morphological and semantic number in the plural. To contextualize the following discussion, let me begin with some general remarks.

It is by now a fairly standard assumption that clauses and noun phrases are parallel in meaning and structure (e.g., Chomsky 1970 and Abney 1987). This can most easily be seen in (1), which juxtaposes a verb and its arguments with its derived nominal counterpart. It is important to point out that both the verb in the sentence and the noun in the noun phrase have an agentive subject (*the Romans*) and an affected object (*the city*):

- (1) a. The Romans destroyed the city.
 b. the Romans' destruction of the city

Based on these similarities in meaning, a certain structural parallelism has come to be established. Considering (2), NP is taken to be the nominal counterpart of VP. Furthermore, NumP is similar to AgrP, DP to TP and PP to CP:¹

- (2) a. CP TP AgrP VP
 b. PP DP NumP NP

These and other observations have led to the general methodology that equates the noun phrase with the clause. This line of investigation has been very fruitful in its empirical discoveries and theoretical innovations (for a survey, see Alexiadou, Haegeman & Stavrou 2007). This and the next chapter intend to add to this body of work focusing on certain combinations of “pronoun + noun” in simple DPs and copular CPs. Unlike the cases in (1) above, I will investigate copular sentences and noun phrases that involve non-theta nouns.

Starting with some cases in the plural, observe that the main difference between these DPs and CPs is the presence of an auxiliary in the CP:

¹ This alignment based on Grimshaw (1991) is far from uncontroversial. For instances, other authors have proposed that DP is parallel to CP (e.g., Szabolcsi 1994).

- (3) a. *wir Linguisten*
 we linguists
 ‘us linguists’
- b. *Wir sind Linguisten.*
 We are linguists
 ‘We are linguists.’

In other words, these structures are fairly similar to each other and involve comparatively little complexity. Specifically, taking the auxiliary to be semantically vacuous, I will assume that this verbal element simply indicates the presence of more structure, for instance, TP. As such, the auxiliary is similar to *ein* in the singular cases as we will see below. To be clear, focusing on these types of constructions affords us a fairly simple and direct comparison of the workings of *ein* in the nominal and clausal domains and allows us to avoid certain complications.

Overall, I will reach the conclusion that *ein* makes no semantic contribution and that the nominal and clausal combinations of “pronoun + noun” are fairly similar (albeit not entirely identical). The differences between the two domains will follow from certain assumptions about the different pragmatics involved, lexical differences between certain overt and covert elements (*als* ‘as’ vs. ALS), and the obligatoriness of NumP in the DP but its “optionality” in the CP. If this discussion is on the right track, then we provide additional evidence that the nominal and sentential domains are essentially parallel. With these general remarks in mind, we begin our investigation. Postponing the discussion of number to the next chapter, we start by illustrating *ein* in an emotive context.

In more detail, I will compare the structural and interpretatory differences of constructions where pronouns combine with bare nouns, (4), or with nouns preceded by overt elements like *als* ‘as’ or *ein* ‘a’, (5). Recalling Chapter 4, the latter is provided in its reduced form ‘*n*’. Interestingly, nouns such as *Bauer* are ambiguous in that they have a neutral/literal meaning (‘farmer’) and an emotive/figurative meaning (‘peasant’). However, this ambiguity disappears in these different types of DP and CP in interesting ways (# = interpretation is not available; % = possible but somewhat less prevalent):

- (4) a. *du Bauer*
 you peasant / #farmer
 ‘you peasant’
- b. *Du bist Bauer.*
 you are farmer / #peasant
 ‘You are a farmer.’
- (5) a. *du als Bauer*
 you as farmer / #peasant
 ‘you as a farmer’
- b. *Du bist ‘n Bauer.*
 you are a peasant / %a farmer
 ‘You are a peasant/a farmer.’

In general, comparing the (a)-examples to the (b)-examples, we find a near complementary distribution of the two readings of the noun. This is in need of an explanation. For instance, contrasting (4b) to (5b), one could claim that *ein* brings about the semantic difference. However, we will suggest that the added emotiveness in (5b) stems from the interaction between the realization operator REL and nouns lexically specified as [+emotive]. I will propose that on the one hand, *ein* indicates the presence of syntactic structure above NP and on the other, it flags the presence of the realization operator REL. As such, similar to adjectival inflections, we will maintain that *ein* is a reflex of the structure but not of the semantics.

The chapter is organized as follows. Section 2 discusses three different readings in the DP and CP and the role emotiveness plays in them. In section 3, we provide the proposal and detailed derivations for these different readings. Section 4 summarizes the main findings of this chapter.

2. Three Different Readings

This section investigates the parallelism between the nominal and clausal domains with regard to certain readings. We focus on three different interpretations. As a point of departure, let us establish some terminology by briefly looking at the readings of singular DPs first. Basically following den Dikken's (2006: Chapter 6) discussion of binominal structures of the type *N of a N*, the three relevant interpretations are illustrated in (6). For lack of a better term, I will label the first case 'ordinary' reading. The second and the third case will be called 'comparative' and 'capacity' readings:²

- (6) a. Ordinary reading:
 du Idiot
 you idiot
 'you idiot'
- b. Comparative reading:
 du Schwein
 you pig
 'you pig'
- c. Capacity reading:
 du als Landwirt
 you as farmer
 'you as a farmer'

We may paraphrase each of these three readings as follows:

² Note that den Dikken labels the capacity reading as 'attributive', a term I would like to avoid.

- (7) the unique x (informally addressed) such that
- a. x is an idiot
 - b. x is, in a certain way, similar to a pig
 - c. x is being singled out in the capacity of a farmer

In more detail, restricting ourselves for now to out-of-the-blue contexts, the ordinary reading in the DP is most often negatively emotive (Vater 2000) but a positive connotation is also possible. In this regard, Rauh (2004) provides the following example: *du Glückspilz* ‘(you luck.mushroom =>) lucky you’. Assuming that the pronoun and noun stand in a predication relation with one another (see section 2.3), I suggest that this type involves direct predication. In a similar vein, the second reading is typically also emotive but unlike the first case, it involves indirect predication; that is, the predication seems to be mediated by a predicate such as *like* or *similar to*.³ Note that epithetically used nouns like *Schwein* ‘pig’ in (6b) characterize the individual in their entirety but there is no implication that the individual being addressed is actually a pig.

Finally, in contrast to the first and the second cases, the capacity reading is neutral. Furthermore, like the second reading, it involves indirect predication, which in this case is mediated by elements such as *as* or *in the capacity of*. As noted by Rauh (2004: 85-6, 94), these *als*-nominals clearly presuppose the presence of other properties but only the overt one following *als* ‘as’ is taken to be relevant. In contrast to the comparative reading, then, which characterizes individuals in their entirety, the capacity reading zooms in on a certain aspect of the individual.

With this general set-up in place, it is important to point out that the restrictions to be discussed reveal themselves with certain types of nouns only. In particular, as is well-known pronominal DPs in the singular only allow an emotive noun like *Idiot* ‘idiot’, (8a). In contrast, copular constructions can involve a bare predicate noun only when the relevant nominal is – what is often labeled – a ‘role’ noun like *Landwirt* ‘farmer’, (8b). Neutral non-role (i.e., kind) nouns such as *Mann* ‘man’ pattern like a role noun in the DP, (8a), but like an emotive noun in the CP, (8b):

- (8) a. *du {Idiot / ??Landwirt / ??Mann}*
 you idiot / ?? farmer / ??man
 ‘you idiot’
- b. *Du bist {(‘n) Landwirt / *(‘n) Idiot / *(‘n) Mann}*.
 you are a farmer / an idiot / a man
 ‘You are a farmer/an idiot/a man.’

Comparing (8a) to (8b), it becomes clear that true minimal pairs between the DP and CP are not possible. In other words, in out-of-the-blue contexts, there do not seem to be lexical items that share properties of both emotive and role nouns; that is, there are no nouns (N) that allow licit patterns such as *du N_I* ‘you N’ as well as *Du bist N_I* ‘You are an N’. The generalization to be explained, then, is that emotive nouns cannot involve role nouns and role nouns (in their literal meaning) are not emotive. Expressed in more structural terms, emotive nouns can occur in the

³ This is what I assume for now. Below, I will suggest that the comparative reading follows from the realization operator REL.

DP but require *ein* in the CP and role nouns cannot occur in the DP but can be bare in the CP. Let me point out already here that these restrictions only hold in the singular.

Now, while adding an evaluative adjectival modifier creates minimal pairs, this covers up the lexico-semantic and syntactic differences in (8) above:

- (9) a. *du blöder {Idiot / Landwirt / Mann}*
 you stupid idiot / farmer / man
 ‘you stupid idiot/farmer/man’
- b. *Du bist *('n) blöder {Landwirt / Idiot / Mann}*.
 you are a stupid farmer / idiot / man
 ‘You are a stupid farmer/idiot/man.’

So, in order to probe into certain restrictions, we will use unmodified emotive and role nouns.⁴ In the course of this chapter, we will provide an explanation for the fact that true minimal pairs are not possible in the singular, at least not in out-of-the-blue contexts. This account will combine Rauh’s (2004) proposal for the DP cases with de Swart, Winter & Zwarts’ (2007) analysis of the CP cases. Furthermore, we will clarify the role *ein* plays in these cases. First though, let us be more precise about the two types of nouns: emotive and role.

Starting with the latter type of noun, de Swart, Winter & Zwarts (2005: 453) provide a convenient summary of the properties of bare predicate nominals such as *Landwirt* ‘farmer’:⁵ (i) they form a restricted class of nouns (typically, names for professions, nationalities, and religions), (ii) they only exhibit a restricted range of interpretations (what they call ‘capacities’), (iii) they allow capacity qualifiers such as *by profession*, (iv) they exhibit number neutrality, and (v) they combine with certain adjectives, which remain uninflected (at least, in Dutch). In the discussion below, we revisit (i), (ii), and (iv) and employ de Swart, Winter & Zwarts’ (2007) technical instantiation.

Turning to emotive nouns, there seem to be two types: inherent (e.g., *Idiot* ‘idiot’) and “coerced” (e.g., *Schwein* ‘pig’, *Bauer* ‘[farmer/]peasant’). The latter type of noun has both a neutral/literal and an emotive/figurative meaning. In the neutral/literal meaning, the noun denotes the property of ‘pig’ or ‘farmer’; in the emotive/figurative meaning, the noun denotes certain features of a stereotypical representative of the relevant kind. In other words, while the individuals under discussion are ascribed certain features of a pig or farmer, there is no implication for the second type of noun that the individuals are actually pigs or farmers.

In sum, while certain role nouns only have a neutral/literal meaning, other nouns have an additional emotive/figurative one.⁶ Conversely, some emotive nouns do not have a neutral meaning but others do. Let us summarize these cases in the following chart:

⁴ We will concentrate on countable nouns (for the discussion of the notion countable, see Allan 1980, also Chapters 7 and 8) and basically leave aside group nouns and *pluralia tantum* nouns. Also, we will abstract away from special cases such as “royal” *ihr* ‘you’ and “nursely” *wir* ‘we’.

⁵ For relevant discussion, see also Stowell (1989, 1991), Kupferman (1991), and more recently Alexiadou 2005: pp. 814; Déprez 2005; Matushansky & Spector 2005; Munn & Schmitt 2005: pp. 846; Winter 2005: pp. 780; and Zamparelli (2008). The latter paper also contains detailed critical discussion of earlier work on this topic.

⁶ For the latter reading, there are other names found in the literature: metaphorical, extended, approximative, subjective, descriptive, “gradable”, and [+scalar]. Also, note that this difference in interpretative possibilities also holds true for regular kind nouns and proper names; for instance, while *Obelisk* ‘obelisk’ and *Joachim* ‘Joachim’ pattern with *Landwirt* ‘farmer’, *Säule* ‘column/pillar’ and *Willi* ‘Willy/idiot’ align with *Bauer* ‘farmer/peasant’.

Table 1: Different Types of Count Nouns

meaning	<i>Landwirt</i>	<i>Bauer</i>	<i>Idiot</i>	<i>Schwein</i>
neutral	‘farmer’	‘farmer’	-	‘pig’
emotive		‘farmer(-like)’	‘idiot’	‘pig(-like)’

To be clear, then, the word pairs in table 1 are intriguing in that one element is unambiguous and the other is potentially ambiguous. To account for this difference, we must assume some amount of lexical specification (if so, we might also expect some dialectal and cross-linguistic variation in this regard, which I think is true). We return to the issue of lexical specification below.

Let us now turn to the data and see how role and emotive nouns pattern in the three readings. We will compare the relevant readings in the DP to those of the CP. We will start with cases in the plural that contain unambiguous nouns. We will see that with the exception of the capacity reading involving *als* ‘as’, there are no restrictions in these cases.

2.1. Plural

As can be seen in (10) and (11) below, role as well as inherent emotive nouns are equally possible in ordinary readings:

- (10) a. *ihr Landwirte*
you farmers
‘you farmers’
- b. *Ihr seid Landwirte.*
you are farmers
‘You are farmers.’
- (11) a. *ihr Idioten*
you idiots
‘you idiots’
- b. *Ihr seid Idioten.*
you are idiots
‘You are idiots.’

Something similar holds for the comparative reading with coerced emotive nouns:

- (12) a. *ihr Schweine*
you pigs
‘you pigs’
- b. *Ihr seid Schweine.*
you are pigs
‘You are pigs.’

Turning to the capacity reading, we note that only certain predicate nouns are possible. In particular, role nouns (and certain kind nouns, see below) are fine but emotive nouns, as pointed out in Lawrence (1993: 93) and Rauh (2004: 86), are not. It seems to me that the latter also holds true for kind nouns that have a more general, hypernym-like denotation:

- (13) a. *ihr als Landwirte*
 you as farmers
 ‘you as farmers’
- b. ?? *ihr als {Idioten / Schweine / Personen}*
 you as idiots / pigs / persons

I believe that the restriction shown in (13b) is probably due to the fact that *als* ‘as’ singles out a person with regard to a specific capacity or skill. Importantly, this quality must be restrictive enough such that only a few people typically have it. In other words, while it is clear that not each and every person is a farmer, every human being is a person and can presumably be in someone else’s bad books. To be clear, only *Landwirte* ‘farmers’ singles out the addressed individuals in the relevant way but the other nouns do not.

Turning to ambiguous nouns such as *Bauer* ‘farmer/peasant’, they are possible in the neutral/literal and emotive/figurative meanings in the simple DP and copular case, (14a-b), where both an ordinary and comparative reading is possible. In contrast, the restriction just discussed emerges again in the *als*-nominal, (14c):

- (14) a. *ihr Bauern*
 you farmers / peasants
 ‘you farmers/peasants’
- b. *Ihr seid Bauern.*
 you are farmers / peasants
 ‘You are farmers/peasants.’
- c. *ihr als Bauern*
 you as farmers / #peasants
 ‘you as farmers’

In other words, the capacity reading in (14c) is the summation of the neutral/literal reading of the noun and *als* ‘as’.

2.2. Singular

The cases in the singular are more restricted. While the same readings as above are in principle possible, some well-known restrictions with regard to the predicate noun will appear. As with the plural cases above, we start with the unambiguous nouns in the ordinary reading.

Recalling that we focus on out-of-the-blue contexts, we already noted in the introduction that role nouns are not possible in the DP but that they pattern more freely in the CP:

- (15) a. ?? *du Landwirt*
you farmer
- b. *Du bist ('n) Landwirt.*
you are a farmer
'You are a farmer.'

Unlike role nouns, inherent emotive nouns are possible in the DP but must co-occur with a determiner in the CP:

- (16) a. *du Idiot*
you idiot
'you idiot'
- b. *Du bist *('n) Idiot.*
you are an idiot
'You are an idiot.'

In the comparative reading, the distribution is identical to the cases of the ordinary reading involving inherent emotive nouns:

- (17) a. *du Schwein*
you pig
'you pig'
- b. *Du bist *('n) Schwein*
you are a pig
'You are a pig.'

In other words, emotive nouns, be they inherent or coerced, pattern alike. Finally, we turn to the capacity reading.

Similar to the cases in the plural, only certain common nouns are possible in *als*-nominals:

- (18) a. *du als Landwirt*
you as farmer
'you as a farmer'
- b. ?? *du als {Idiot / Schwein / Person}*
you as idiot / pig / person

I assume that the restriction involved in (18b) is the same as that seen in the plural above.

Unlike the DP cases, the clause does not involve *als* 'as' in the capacity reading, (19a). However, this reading can be brought out when the modal particle *vielleicht* 'really' is added to the copular structure, (19b). What is interesting to note is that even an unambiguous neutral role noun can "take on" an emotive connotation in such a context (with a negative reading being

somewhat easier to obtain). Crucially, the indefinite article becomes obligatory under this condition:⁷

- (19) a. * *Du bist als ('n) Landwirt.*
 you are as a farmer
- b. *Du bist vielleicht *('n) Landwirt!*
 you are PRT a farmer
 ‘You are some farmer!’

In more detail, observe that the modal particle invokes a [+scalar] capacity reading; that is, the person being addressed is described as being good or bad in the capacity of a farmer.

Finally, when inherent or coerced emotive nouns combine with the modal particle, the ordinary and comparative readings get intensified, (20a). Briefly returning to the cases in the plural, we basically find the same as we just did in the singular. This is simply illustrated here with *Landwirte* ‘farmers’, (20b):

- (20) a. *Du bist vielleicht 'n {Idiot / Schwein}!*
 you are PRT an idiot / pig
 ‘You are really an idiot/pig.’
- b. *Ihr seid vielleicht 'n paar Landwirte!*
 you are PRT a couple (of) farmers
 ‘You are some farmers!’

Let us briefly take stock here.

2.3. Interim Summary

To sum up, as seen above, an emotive reading is not only brought about by inherent or coerced emotive nouns such as *Idiot* ‘idiot’ or *Schwein* ‘pig’ but also by modal particles such as *vielleicht* ‘really’. More generally, as can be seen in table 2 below, DPs and CPs in the plural have basically the same readings and only the capacity reading differs in emotiveness:

Table 2: Summary of the Readings in the Plural

	Ordinary reading	Comparative reading	Capacity reading
DP	Emotive/Neutral	Emotive	Neutral [<i>als</i>]
CP	Emotive/Neutral	Emotive	Emotive [<i>vielleicht</i>]

⁷ These constructions can take – what Delsing (1993: 36) calls – an ‘implicit argument’. To illustrate with German, the example (19b) can be “extended” by the dative pronoun *mir* ‘me’:

- (i) *Du bist mir vielleicht *('n) Landwirt!*
 you are me PRT a farmer
 ‘(To me,) you are some farmer!’

It seems to me that the implicit argument brings out more clearly the capacity reading where the presence of other properties is presupposed but only the overt predicate is taken to be relevant. I will stick to the simpler cases in the main text.

The singular cases are more restricted, especially in the ordinary reading. In particular, the ordinary reading in the DP only allows (inherent) emotive nouns but the other two readings in the DP are like in the plural. As for the CP, role nouns take an optional article in the ordinary reading but emotive and kind nouns require a determiner in all readings. In other words, *ein* appears in both neutral and emotive contexts:

Table 3: Summary of the Readings in the Singular

	Ordinary reading	Comparative reading	Capacity reading
DP	Emotive [<i>du Idiot</i>]	Emotive [<i>du Schwein</i>]	Neutral [<i>du als N</i>]
CP	Neutral [(<i>ein</i>) role N] Emotive/Neutral [<i>ein N</i>]	Emotive [<i>ein Schwein</i>]	Emotive [<i>vielleicht ein N</i>]

Some more remarks are in order here. Starting with the singular (table 3), it is interesting to observe that the ordinary reading and the capacity reading are complementary in the DP (cf. the absence vs. presence of *als* ‘as’). Furthermore, emotiveness has less structure in the nominal domain (there is no *als* ‘as’ present) but more structure in the clausal domain (*ein* ‘a’ is present). In fact, the bidirectional entailment “non-emotive \leftrightarrow *als*” holds in the DP and, assuming that pronouns are determiners (Postal 1966), the unidirectional entailment “emotive \rightarrow determiner” holds in both domains. Finally, as mentioned above, the unidirectional entailment “no determiner \rightarrow role noun” holds in the CP.

Interestingly, these entailments allow the combination of a role noun and *ein*. This state-of-affairs is neatly summarized for the clause by de Swart, Winter & Zwarts (2005: 451), who point out that the reading of a bare noun is basically a subset of the readings of the corresponding “*ein* + noun” (also Zamparelli 2008: 114).⁸ In other words, while a bare noun can only be neutral/literal in meaning, the same noun preceded by *ein* can be both neutral/literal and emotive/figurative. Below, we will see that the occurrence of *ein* is simply a side-effect and does not cause this emotiveness extension in interpretation.

Returning briefly to the plural (table 2), the facts are somewhat different. First, *als* ‘as’ does not have to be present for a neutral reading in the DP (e.g., *ihr Linguisten* ‘you linguists’), and second, *ein* is not present in the plural (for some exceptional cases, see Chapter 8). With this in place, let us finally turn to ambiguous nouns in singular contexts.

2.4. Ambiguous Nouns

With the above discussion in mind, our expectation is that only certain readings are possible in certain constructions. In fact, in the relevant cases, there should be a complementary loss of ambiguity. This is indeed borne out. Let us consider examples involving *Bauer* ‘farmer/peasant’. To compare the distribution of the readings, we organize the data here according to syntactic domain.

⁸ To be fair, note that de Swart *et al.* (2007) seem to have retreated from this position. However, I believe their former generalization is correct; in this regard, see for instance the discussion of John F. Kennedy’s famous sentence *Ich bin ein Berliner* in Eichhoff (1993). I thank Veronika Ehrich for this reference and some discussion of this topic.

Starting with the nominal domain, we expect that the simple DP involves an (emotive) comparative reading and the *als*-nominal has a neutral capacity reading. This is exactly what we find in (21a) and (21b), respectively:

- (21) a. *du Bauer*
 you peasant / #farmer
 ‘you peasant’
- b. *du als Bauer*
 you as farmer / #peasant
 ‘you as a farmer’

Turning to the sentential cases, a bare role noun should only have a neutral ordinary reading, (22a), a noun with an indefinite article should be ambiguous between an (emotive) comparative and a neutral ordinary reading, (22b), and the case involving the modal particle *vielleicht* ‘really’ should be ambiguous between an intensified (emotive) comparative and an emotive capacity reading, (22c). Again, this is exactly what the data bear out:

- (22) a. *Du bist Bauer.*
 you are farmer / #peasant
 ‘You are a farmer.’
- b. *Du bist ‘n Bauer.*
 you are a peasant / %a farmer
 ‘You are a peasant/a farmer.’
- c. *Du bist vielleicht ‘n Bauer!*
 you are PRT a peasant / a farmer
 ‘You are some peasant/some farmer!’

Note then that while *Bauer* is only ambiguous in the presence of *ein* ‘a’, *ein* by itself does not have an “emotivizing” function as it does allow a neutral ordinary reading of *Bauer*. Finally, let us complete the picture with neutral non-role nouns.

As already seen in section 2.1, kind nouns such as *Mann* ‘man’ are awkward in the DP, (23a). Importantly, although non-emotive, they nonetheless require *ein* in the CP, (23b):

- (23) a. ?? *du Mann*
 you man
- b. *Du bist *('n) Mann.*
 you are a man
 ‘You are a man.’

This difference between role and (neutral) kind nouns is taken up in the next section. We will see that the appearance of *ein* is a side-effect of the presence of a semantic operator indicating structure on top of NP. We will continue to claim that *ein* is semantically vacuous. We will also

provide an explanation of some of the other highlighted properties of the aforementioned constructions. The proposal is based on two important works, de Swart, Winter & Zwarts 2007 and Rauh 2004, that manifest an interesting division of labor, at least in the DP.

3. Proposal

In order to account for the (near) parallel readings in the nominal and sentential domain, I will basically follow de Swart, Winter & Zwarts' (2007) discussion of the copular cases and extend it to the nominal domain. Let us start with their assumption that put simply, predication involves membership of an element in a set of ordinary/individual entities. In other words, for a noun to denote a set of entities and, thus, function as a predicate, it must be of the semantic type $\langle e, t \rangle$.

There are basically two ways to combine a predicate noun (type $\langle e, t \rangle$) with another element (by Functional Application): either the predicate noun is a functor and takes an element of type $\langle e \rangle$ as an argument (e.g., a referential subject) or the predicate noun itself functions as an argument and the other element is a functor of type $\langle \langle e, t \rangle, e \rangle$ (e.g., a definite determiner). We will see that both possibilities are instantiated, the former in the sentential domain, as de Swart *et al.* discuss, and the latter in the nominal domain, as I claim here. Let us start by providing some background.

3.1. Combining Two Previous Proposals

To begin, de Swart *et al.* propose that common nouns come in two types: role nouns (what they call 'capacity' nouns) and kind nouns.⁹ Both sorts of nouns are of type $\langle e \rangle$ and have to be mapped to type $\langle e, t \rangle$ if they are to function as predicate nouns. For role nouns, they propose two options: a direct path, where the capacity operator CAP takes the role noun and returns the predicate counterpart; or an indirect path, where the role noun undergoes kind coercion (basically resulting in a kind noun), which then combines with the realization operator REL bringing about the predicate counterpart. In the former case, CAP is assumed to be part of the NP but in the latter case, REL is part of NumP, which triggers the presence of the indefinite article.¹⁰ Note that CAP and REL are mutually exclusive; that is, when one applies, the other cannot. As for (regular) kind nouns, they simply combine with REL, projecting a NumP and thus *ein* 'a'.¹¹ For the most part, I will follow Swart *et al.*'s proposal. However, I will refine it in certain ways.

For instance, the two paths to derive a predicate nominal are taken to explain the fact that bare role nouns are only neutral/literal in meaning but role nouns preceded by *ein* 'a' are both

⁹ There are two notions of capacity here: an interpretative one (a certain type of reading) and a lexical one (certain groups of words). As will become clear, these notions are not identical. For instance, certain kind nouns may also occur in capacity readings (see section 3.4). In order to avoid confusion, I will continue calling the relevant lexical items 'role' nouns.

¹⁰ In Chapter 8, I will suggest more generally that *ein* flags the presence of certain semantic operators.

¹¹ A different proposal is made by Zamparelli (2008: 125), who claims that role nouns are ambiguous between nominals that denote certain classes of human beings and nominals that denote abstract well-established activities that identify those classes of human beings. Unlike the former, the latter nominals lack an inherent value for abstract gender, which in turn is taken to explain the lack of the indefinite article. To the extent that I understand this correctly, this basically implies the existence of two lexical items for every role noun. In contrast, the text proposal takes one relevant lexical item as its point of departure, which, I believe, is more desirable, and proposes two operations for the role noun to be able to function as a predicate.

neutral/literal and emotive/figurative (Swart *et al.*'s 2005 generalization). As such, de Swart *et al.* relate overt morphological cues directly to the relevant interpretative differences. Assuming that number morphology (-s, *ein*) is associated with NumP, their proposed minimal structures of predicate nominals are as follows (also Munn & Schmitt 2005: 827, cf. Déprez 2005: 866):¹²

- (24) a. N -> [NP] -> CAP
 b. N-s -> [NumP [NP]] -> REL
 c. *ein* N -> [ArtP [NumP [NP]]] -> REL

Comparing (24a) to (24c), let me point out that *ein* indicates the presence of structure beyond NP and the presence of a certain semantic operator. Thus far, the proposal seems straightforward.

However, it is not entirely clear which part of de Swart *et al.*'s account derives the emotive/figurative reading. Although intuitively attractive at first glance, I will show that the emotive/figurative reading does, most likely, not derive from kind coercion but from REL. Furthermore, as already briefly pointed out in section 2.1, the figurative extension of the literal meaning must take a certain lexical specification of the head noun into account. Finally, I will extend their proposal to the nominal domain. Consider these points in more detail.

Recall our pairs of nouns where one element can only be neutral/literal in meaning (e.g., *Landwirt*) but the other can, under certain conditions, be ambiguous (e.g., *Bauer*). Let us start with *Bauer* 'farmer/peasant'. It is clear from their proposal that the emotive/figurative reading is not derived from the direct path involving CAP. If this were the case, a bare noun could have an emotive/figurative reading, contrary to fact. This leaves the indirect path where kind coercion and REL are at work. With REL present, NumP will be projected and the indefinite article will be present too. Unlike the bare noun, *ein Bauer* can have both a literal and a figurative reading, which is correct. The question then arises whether kind coercion or REL (or both) is responsible for the figurative reading. As we will see momentarily, the answer is not entirely straightforward and involves several considerations. We will wind up suggesting that in combination with a lexical feature, REL brings about the interpretative extension.

First, turning to *ein Landwirt* 'a farmer', we observe that with the article present, ArtP and NumP must be present and hence REL. Consequently, kind coercion must have occurred. However, this nominal has a literal meaning only. This means that certain nouns do not undergo extension of their literal meaning. As such, nouns must be lexically specified as to whether or not they can undergo this interpretative extension. In other words, neither kind coercion nor REL will automatically invoke the figurative extension. To answer the above question, other, inherent kind nouns are of particular relevance.

Second, names for animals (e.g., *Schwein* 'pig') can only have a figurative meaning when combined with a pronoun referring to a person. Since these nouns are inherent kind nouns, they do not undergo kind coercion. As such and making minimal assumptions, REL must be

¹² Note that de Swart *et al.* call cases like (24b-c) 'Marked Nominals'. Furthermore, these authors assume that (24c) actually involves the indefinite article in the DP-level. With the discussion of the previous chapters in mind, I will assume that the predicate nominal is of a smaller size; that is, in the absence of modifiers, predicate nominals preceded by *ein* do not involve DP but ArtP in the framework of Roehrs (2009a).

responsible for this extension in meaning.¹³ However, REL performing this task cannot be the whole story. Recalling the above discussion of the role noun *Landwirt*, certain (other) inherent kind nouns (e.g., *Katze* ‘cat’ or *Regal* ‘shelves’) do not seem to be able to undergo this extension easily or at all either (see also the pairs in footnote 6).

Once again, it seems that certain vocabulary items (or groups of items) involve a lexical feature that disallows these items to undergo this extension (*Landwirt*), that allows this extension (*Bauer*), or that seems to require it (*Schwein*). To keep the number of lexical features to a minimum, I make the plausible assumption that *Schwein* is like *Bauer* in that its literal meaning ‘pig’ is excluded for pragmatic reasons (and not by a lexical feature) when the relevant entity is not (or cannot be) a pig. Under this condition, *Schwein* predicates of this entity a property that is stereotypical of a pig.

For concreteness, let us assume that the relevant lexical items are specified as, say, [+emotive] if they are able to undergo the extension; that is, while *Landwirt* is not specified for this feature, both *Bauer* and *Schwein* are marked [+emotive]. To be clear, then, I will basically follow de Swart, Winter & Zwarts (2007) with certain refinements for the clause. Now, if REL is indeed responsible for the emotive/figurative extension, then we can continue to claim that *ein* makes no semantic, but only a morpho-syntactic, contribution. Before I extend the discussion to the DP, it is important to point out that the full explanation of the nominal cases involves a(nother) pragmatic aspect as part of the account.

So far, we have only considered pragmatically neutral, out-of-the-blue examples for the ordinary reading, (25a). However, as Rauh (2004) discusses in detail, these cases become perfect given an appropriate context. Two of her examples may suffice here, (25b-c) (stress is indicated here by capital letters):

- (25) a. ?? {*ich* / *du*} *Linguist*
I / you linguist
- b. *Ihr Literaturwissenschaftler mögt den jetzigen Zustand für angemessen halten, aber ich LINGUIST halte die Linguistik für weit unterrepräsentiert.*
‘You literature scholars may consider the current status quo as adequate but I linguist consider linguistics as quite underrepresented.’
- c. *Wenn noch nicht einmal du LINGUIST die neue Rechtschreibung beherrscht, wer sollte es dann?*
‘If not even you linguist have mastered the new spelling rules, who else could do that?’

While I cannot do full justice to all the facets of her account here (e.g., the different stress patterns involved), Rauh’s basic proposal is based on the different deictic qualities of the personal pronouns involved and two Gricean maxims.

As a rule, *ich* ‘I’ and *du* ‘you(SGL)’ are disambiguously specified in their deixis such that the identity of the person concerned is clear in a given context. Additional restrictive information provided by an NP complement (e.g., *Linguist*) is not needed and by Grice’s maxim of quantity

¹³ Alternatively, one could also suggest here that a null predicate, call it LIKE, is responsible for the extension in meaning (cf. den Dikken’s 2006: 178 predicate SIMILAR in the comparative binominals). However, I will proceed on minimal assumptions; that is, I will assume that REL brings about the figurative extension.

(informally: “be as informative as required but not more”) redundant and thus marked. Given a different, more involved context as in (25b-c) above, such a complement may make a relevant contribution and, as such, it is allowed by Grice’s maxim of relation (informally: “be relevant”). With this in mind, evaluative NP complements such as *Idiot* ‘idiot’ are always relevant and thus always possible. Finally, plural pronouns are less deictically specified and thus basically always allow further restrictive material in the complement position (for more details, see especially pp. 91 in her paper). Let us now relate Rauh’s (2004) proposal for the DP to de Swart, Winter & Zwarts’ (2007) account of the CP.

As we will discuss in detail in Chapter 7, all DPs must have NumP and as such, REL is always present. With the discussion of the clause in mind, this makes both the neutral/literal and the emotive/figurative interpretation in the DP, at least in principle, possible. Now, recalling Rauh’s (2004) pragmatic account of the DP, only the emotive/figurative reading of a singular DP remains possible in pragmatically neutral contexts. In contrast, singular DPs in a different, appropriate context or plural DPs in general can have both readings. To be clear, then, the explanation of the DP involves a straightforward extension of Swart *et al.* (2007), once we assume that NumP is always present and that a pragmatic aspect must be part of the account. Combining these two proposals will also explain the fact that in out-of-the-blue contexts, there are no true minimal pairs between pronominal DPs and copular CPs involving bare predicate nouns (section 3.3). If so, the absence of minimal pairs should not be taken as an argument that DPs and CPs are fundamentally different after all.

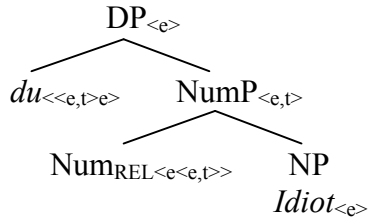
Let us now turn to the explanation of the individual readings in the DP and CP starting with – what we have called – the ordinary reading. I focus on the cases in the singular where we have identified most restrictions.

3.2. Ordinary Reading

I propose that the ordinary reading involves direct predication. What I mean by that is that the pronoun and noun combine with one another without invoking a figurative extension of the literal meaning of the head noun. I will follow the Postal view on pronominal DPs (Postal 1966); that is, I assume that these nominals consist of a head noun and a pronominal determiner. To keep the exposition simple, I will abstract away from the lower base-position of the determiner and its movement to the DP-level. Furthermore, I will assume here and argue below that NumP is sandwiched between the head noun and the pronominal determiner. As such, pronominal DPs exhibit a regular DP structure (see also Roehrs 2005, 2006b, Chapter 2). Consider the example in (26a) and its structural analysis in (26b) (^C = depending on the context):

- (26) a. *du {Idiot / ^C??Landwirt / ^C??Mann}*
 you idiot / ??farmer / ??man

b. *Ordinary Reading in DP*

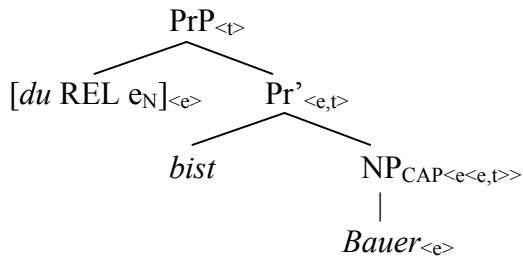


Turning to the semantics, I assume that pronominal determiners are, like definite articles, of type $\langle\langle e, t \rangle, e \rangle$. I take *Idiot* ‘idiot’ to be a kind noun (type $\langle e \rangle$), which combines with the REL operator in NumP to give a predicate nominal (type $\langle e, t \rangle$). Functional Application can apply now between the pronominal determiner and the predicate nominal resulting in an element of type $\langle e \rangle$. (In Chapter 7, I discuss the ungrammaticality of cases such as **du ‘n Idiot* ‘you an idiot’.)

Similar to the DP, the ordinary reading in the clause is not figurative. However, this is due to a different reason. For simplicity’s sake, I will adopt fairly traditional tree representations, which, I believe, enjoy fairly wide currency. I assume that the clause involves a Predication Phrase (PrP, Bowers 1993).¹⁴ Abstracting away from further movements to the left (i.e., outside the PrP, see Chapter 7), the underlying structure of (27a) is given in (27b):

- (27) a. *Du bist Bauer.*
 you are farmer
 #you are peasant

b. *Ordinary Reading in CP*



With *Bauer* a role noun, it is of type $\langle e \rangle$. Recall that unlike other types of nouns, role nouns can combine with CAP. The latter is located in NP and brings about a predicate nominal (type $\langle e, t \rangle$). Turning to the pronoun, I assume that it is not simply “intransitive” but more complex. In particular, I assume that there is – as in the pronominal DP just discussed – a head noun. I suggest that this head is an unpronounced kind noun, say, e_N (cf. PERSON in Rauh 2004: 89). The latter combines with REL to give a predicate nominal (type $\langle e, t \rangle$). This complex null

¹⁴ There are other possibilities; for instance, the auxiliary could select a Small Clause (e.g., Hoekstra 1984: 231). Note also that Bowers (1993) employs PrP in the DP. However, I will follow here the more familiar structural view of DPs already applied above (for more details, see, e.g., Julien 2005a). The resulting differences in names for functional phrases should not be taken as an indication that the DP and CP are not parallel.

element $REL(e_N)$ can now function as an argument to the pronominal functor, resulting in an element of type $\langle e \rangle$.

Continuing the semantic derivation and assuming that the copula is semantically vacuous, the pronominal DP (i.e., $du(REL(e_N)) = \langle e \rangle$) and the predicate nominal (i.e., $CAP(Bauer) = \langle e, t \rangle$) combine by Functional Application to give a truth value (type $\langle t \rangle$). Note now that (27a) cannot have the comparative ‘peasant’-reading as CAP (but not REL) brought about the predicate nominal involving *Bauer*. Finally, in order to account for the full grammaticality of these types of examples, observe that the predicate noun makes an assertion about the subject and as such, it is informative and relevant from the pragmatic point of view.

To summarize, the ordinary reading in the nominal domain is emotive (but recall also Rauh 2004) and neutral in the sentential domain. Both cases involve direct predication; that is, there is no figurative extension in the DP (the head noun is inherently emotive) and the CP involves a role noun in combination with CAP. Next, we will discuss cases with figurative extension.

3.3. Comparative Reading

As a point of departure, let us start with more complex comparative structures. It is well-documented that an attributive adjective and its head noun agree in phi-features. This means that the adjectives in (28) below are, most likely, in the extended projection of the following noun. Furthermore, we proposed in Chapter 2 that, when an adjective has a weak ending in German, it must have undergone Impoverishment. This in turn implies that the adjective is in the Specifier just below the determiner (the strong ending on the adjective was explained by the assumption that pronouns are lexically ambiguous):

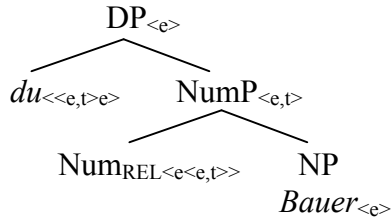
- (28) a. *mir {großen / %großer} Gans*
 me great(WK/%ST) goose(FEM)
 ‘me stupid idiot’
- b. *mir {großem / %großen} Esel*
 me great(ST/%WK) donkey(MASC)
 ‘me stupid idiot’

In other words, these comparative constructions have the pronominal determiner, the adjective, and the noun in a regular DP structure. Let’s proceed with our less complicated examples from above.

Recall that I proposed that the comparative reading involves figurative extension of the literal meaning of the head noun. We proposed that this is due to REL. This fits well with the assumption that NumP is present in the DP. The example in (29a) is derived as in (29b):

- (29) a. *du Bauer*
 you peasant
 #you farmer

b. *Comparative Reading in DP*

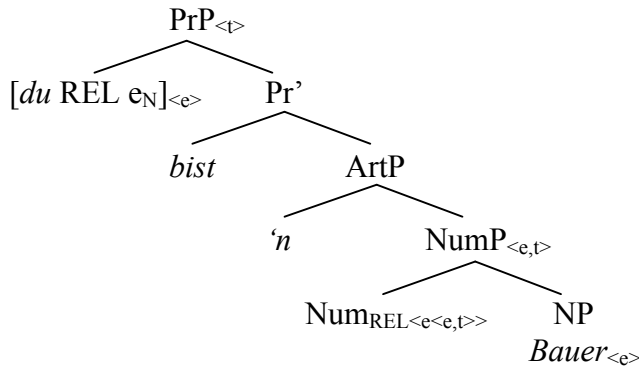


As for the interpretation, the role noun *Bauer* undergoes kind coercion and combines with REL in NumP. As the noun is lexically marked as [+emotive], it can undergo interpretative extension, which is, unlike the literal reading, felicitous in out-of-the-blue contexts. This complex element combines then with the pronoun resulting in the reading: the unique x (informally addressed) such that x is, in some way, similar to a farmer.

If this discussion of the DP is tenable, the comparative reading in the CP should, ideally, involve a similar account. The example in (30a) is derived as in (30b):

- (30) a. *Du bist 'n Bauer.*
 you are a peasant
 % you are a farmer

b. *Comparative Reading in CP*



Like above, *Bauer* undergoes kind coercion and then combines with REL in NumP. Structurally, this brings about *ein* 'a'. Semantically, the complex element REL(*Bauer*), which is of type <e,t>, combines with the pronominal DP (of type <e>) to give a truth value (type <t>). Note that since this noun is specified [+emotive] and recalling that the interpretative extension by REL is not automatic, *Bauer* has the option of keeping its literal meaning or undergoing an interpretative extension. This derives the two readings in (30a) above. Note in passing that the ordinary reading of the role noun involves the indirect path here and as such, more structure and more operations than in the direct path. This might explain why the combination of *ein* and *Bauer* in its literal meaning is somewhat less easily available.

For completeness' sake, let me mention that combinations of "*ein* + N" can also result in ordinary readings: for instance, *Du bist 'n {Idiot / Mann}* 'You are an idiot / a man'. Specifically, with *Idiot* and *Mann* kind nouns, they combine with REL in NumP bringing about *ein*. The

remainder of the derivation basically proceeds as above. Note again that *ein* does not have an “emotivizing” function; that is, *ein* is an expletive element.

To sum up, the comparative reading in the nominal and sentential domain involves the operator REL in NumP. In combination with an [+emotive] role noun, this results in a figurative reading in the DP (Rauh 2004) and ambiguous readings in the clause. Note now that the interaction between de Swart, Winter & Zwarts’ (2007) and Rauh (2004) also affords us an explanation of why there are no true minimal pairs of the type *du N_i* ‘you N’ and *Du bist N_i* ‘You are an N’ in pragmatically neutral contexts.

Specifically, all pronominal DPs involve NumP and thus REL, which may bring about emotive/figurative extension of the meaning of the head noun. Now, Rauh’s pragmatic proposal explains why only inherently emotive kind nouns (*Idiot*), [+emotive] kind nouns (*Schwein*), and [+emotive] role nouns (*Bauer*) are possible in the DP. In contrast, de Swart *et al.* argue that bare predicate nouns in the CP only involve NP and thus CAP. With REL absent here, this only allows the occurrence of role nouns, either inherently neutral role nouns (*Landwirt*) or [+emotive] role nouns (*Bauer*). Due to the absence of REL, the latter can only have the neutral/literal meaning. To be sure, then, the former proposal forces the noun to be emotive in the DP and the latter explains why it can only be neutral in the CP. We turn to the last reading.

3.4. Capacity Readings

Above, we saw that DPs involving *als* ‘as’ have a (neutral) capacity reading, which can be paraphrased as “in the capacity of / with regard to being”, (31a). In the CP, the modal particle *vielleicht* ‘really’ invokes an emotive capacity reading: “bad/good in the capacity of / with regard to being” and it intensifies the comparative reading, (31b):

- (31) a. *du als Bauer*
 you as farmer / #peasant
 ‘you as a farmer’
- b. *Du bist vielleicht ‘n Bauer!*
 you are PRT a farmer / a peasant
 ‘You are some farmer/some peasant!’

Starting with the DP, I will make the fairly straightforward proposal that *als* ‘as’ brings about the capacity reading. As to the CP, I would like to suggest that in combination with the modal particle, the null equivalent of *als* (i.e., ALS) derives the corresponding clausal reading.¹⁵ Like all null elements, ALS has to be licensed. I assume that the modal particle is responsible for that. For concreteness’ sake, suppose that the modal particle is an operator, that ALS is some kind of emotiveness variable (cf. *some* in the English translations), and that the former binds the latter. Schematically, we arrive at the following where the data in (31a-b) are derived as in (32a-b):

- (32) a. [*du als Bauer*]
- b. *vielleicht_i [ein ALS_i Bauer]*

¹⁵ If so, both *als* ‘as’ and its null counterpart ALS are not like Chinese *de*, which is a meaningless element (den Dikken 2006, den Dikken & Singhapreecha 2004).

To determine the syntactic properties of these two capacity constructions, let us consider the latter in combination with third-person pronouns. As is well-known, these pronouns are syntactically more restrictive and will therefore help us find a plausible structural analysis.

Unlike pronouns of the first and second person, third-person pronouns cannot directly combine with adjectives and/or overt nouns. Compare (33a) to (33b). However, they can be modified by relative clauses, (33c) (see Vater 1985, Rauh 2003). In other words, (33a) is on a par with (33c). Assuming the traditional adjunction analysis for relative clauses, I propose that *als Bauer* is adjoined to the pronoun (cf. Rauh 2004: 94), schematically illustrated in (33d):

- (33) a. *er als Bauer*
 he as farmer
 ‘he as a farmer’
- b. * *er {Gute(r) / Bauer / gute(r) Bauer}*
 he good / farmer / good farmer
- c. *er, der gerade durch die Tür gekommen ist*
 he, who just through the door come is
 ‘he, who just came through the door’
- d. Adjunction-type Analysis
 du [als Bauer]

Turning to the clausal counterpart, recall from Chapter 4 that *ein* ‘a’ cannot have an ending when an adjective and/or a noun follows, (34a-b). This holds independently of the presence of the modal particle. Rather, inflected *ein* is only possible when the modifier is a relative clause or when no relevant element follows, (34c). Thus, in order to explain the absence of the inflection on *ein*, I propose that similar to the adjective in (34a), *ALS Bauer* is in a Specifier. This is shown in simplified form in (34d):

- (34) a. *Er ist vielleicht ein (guter) Bauer!*
 he is PRT a/one(-) good farmer
 ‘He is some great farmer.’
- b. * *Er ist (vielleicht) einer {Gute(r) / Bauer / gute(r) Bauer}*
 he is PRT a/one(INFL) good / farmer / good farmer
- c. *Er ist einer (, der viel arbeitet).*
 he is one(INFL) who much works
 ‘He is one that works a lot.’
- d. Specifier-type Analysis
 ein [ALS Bauer] e_N

To sum up so far, we have seen some evidence that *als Bauer* is most likely in an adjoined position and that *ALS Bauer* is in a Specifier. Importantly, among many others, de Swart *et al.* (2007: 200) note that modifiers such as relative clauses and adjectives make optional determiners obligatory. This is particularly clear with role nouns:

- (35) a. *Er ist *('n) Bauer, der viel arbeitet.*
 he is a farmer that much works
 ‘He is a farmer that works a lot.’
- b. *Er ist *('n) guter Bauer.*
 he is a good farmer
 ‘He is a good farmer.’

Before we provide the detailed structures for (33d) and (34d), let us combine the discussion about the lack of inflection on *ein* in (34) and the one about the obligatory presence of *ein* in (35). I will claim that these facts follow from different considerations.

Starting with the latter, I suggest that *ein* is present because the modifiers in (35) combine with their nouns by Predicate Modification. Notice that this operation conjoins elements of type $\langle e, t \rangle$. Now, for the noun to be of this type, it must have combined with REL first. As we know from above, this operator implies the presence of NumP and thus *ein*.¹⁶ With *du als Bauer* parallel to (35a), we need to qualify this statement slightly. Specifically, the pronominal *du* must involve a complex structure. As assumed all along, *du* is a determiner with NumP and a null noun in its complement structure. To explain the absence of *ein* here, we will suggest below that also other elements can flag REL. Turning to (35b) in more detail, note that a semantic explanation where Predicate Modification brings about *ein* as a side-effect, is not enough to explain the morphological restriction that *ein* be inflectionless here.

Discussing split NPs, Roehrs (2009a: pp. 160, also Chapter 3 above) proposes that the null noun in the source DP must be licensed by an overt element in a position higher than ArtP. Illustrating with the negative article, note that, when an adjective is present in the source, (36a), an element (i.e., the adjective) is present above ArtP. As such, *ein* moves to the DP-level late and surfaces without an inflection. In contrast, when no such modifier is present in the source, (36b), *ein* must move to the DP-level in syntax surfacing with an inflection:

- (36) a. *Wein ist das kein guter e_N!*
 wine is this no good
 ‘As for wine, this is no good one.’
- b. *Guter Wein ist das keiner e_N!*
 good wine is this none
 ‘As for good wine, this is not one.’

Returning to (34d), with *ALS Bauer* in a high Specifier position, we can explain the lack of inflection on *ein* on a par with (36a).¹⁷

¹⁶ For some discussion of why CAP cannot be involved here, see Chapter 7.

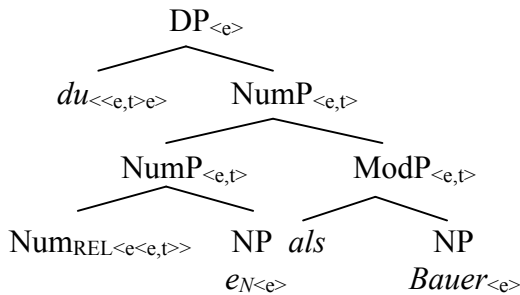
¹⁷ To the extent that *ein* can be followed by *als Bauer*, it must have an inflection: *ein*(-er) als Bauer*. This fits well with the adjunction-type analysis of *als Bauer* in (33d).

To be clear, then, *du* and *ein* are present due to REL. The presence or absence of the inflection on *ein* is due to certain structural requirements on the licensing of null nouns. Note that this is also in keeping with our discussion of adjectival inflections in Chapter 2, where inflections were taken to make nominal features visible. With this much in place, let us now consider the relevant analyses in more detail. We start with the (neutral) capacity reading in the DP.

Above, I proposed that the pronominal *du* involves a complex structure and that *als Bauer* is in an adjoined structure. I assume that this type of adjunction is instantiated by a Modifier Phrase (ModP, see Rubin 1996). I interpret *als* as the head of ModP, which takes *Bauer* as a complement. ModP itself is adjoined inside the matrix pronominal DP. Making minimal assumptions, we derive (37a) as (37b):

- (37) a. *du als Bauer*
 you as farmer
 #you as peasant

b. (Neutral) Capacity Reading Licensed DP-internally



With the above discussion in mind, note that the two nominals, (lower) NumP and ModP, are both of type $\langle e, t \rangle$. I assume that they combine by Predicate Modification. Let me also point out that *als*-nominals are special in that *als* also combines with a bare kind noun such as *Mann* ‘man’ in appropriate contexts, (38a). In fact, the presence of *ein* leads to awkwardness, (38b):

- (38) a. *Was würdest du als Mann dazu sagen?*
 what would you as man it.to say
 ‘What would you as a male say about this?’
 b. ? *Was würdest du als ‘n Mann dazu sagen?*
 what would you as a man it.to say
 ‘What would you as a male say about this?’

Since a kind noun is involved here, CAP cannot be at work. Furthermore, if REL were at work here, we would expect that the presence of *ein* is fully grammatical, contrary to fact. I assume for now that *als* is a general(ized) capacity operator that maps role and kind nouns alike into predicate nominals; that is, *als* is of type $\langle e, \langle e, t \rangle \rangle$. We discuss this in more detail in Chapter 7. To be clear, then, *als*-nominals involve adjunction of the overt nominal but simple DPs involve

complementation (sections 3.2 and 3.3 above). This syntactic difference has a subtle semantic correlate.¹⁸

As already briefly mentioned above, Rauh (2004: 85-6, 94) points out that *als*-nominals clearly presuppose several properties but only the one overtly stated after *als* is singled out to be relevant. For instance, *du als Linguist* ‘you as a linguist’ addresses a person in their capacity of being a linguist but it is presupposed that they are also a person and, perhaps, a professor, etc. In contrast, a simple DP like *du Linguist* ‘you linguist’ addresses, under pragmatically felicitous conditions, just a linguist. Unlike in the first case, other properties are not presupposed here but, if at all, might be (lexically) entailed (i.e., being a linguist entails being a person). In a sense, then, comparing these two cases, the presence of other properties is more “direct/obvious” in the presupposition relation than in the entailment relation. This difference is compatible with the two structures above, the obvious distinction being adjunction involving two head nouns and complementation involving just one head noun. We turn to the data from the clausal domain.

It is well-known that adjectives in indefinite DPs in the nominative exhibit a strong ending. This holds after both *ein* ‘a’ and the null plural indefinite article. There are two ways to analyze this: either the adjective is in the regular Specifier position and the strong ending follows from the special morpho-syntactic properties of the relevant indefinite articles (see Roehrs 2009a) or, alternatively, the adjective is deeply embedded in a complex Specifier and as such its ending cannot undergo Impoverishment in the first place (Chapters 2 and 3). Recalling that the combination “*vielleicht* + *ein* N” has two readings, I will propose that both options are instantiated deriving the different readings.

In more detail, I propose that the intensified comparative reading manifests the first syntactic option; that is, the adjective and the noun in (39a) are in their regular position (see again section 3.3). The modal particle *vielleicht* intensifies the figurative reading resulting in an interpretation close to “really like”. In contrast but in keeping with the above discussion, I propose that the emotive capacity reading embeds the adjective and noun in (39b) in a Specifier position. This structural claim is now fleshed out in (39c):

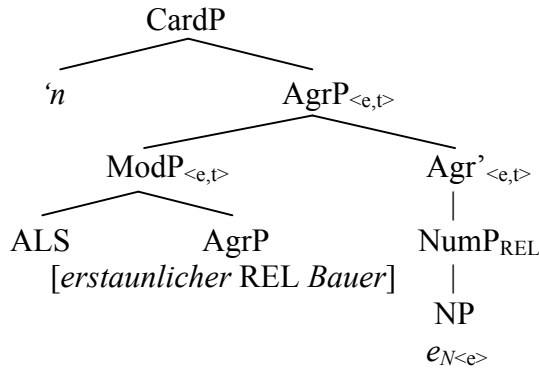
- (39) a. *Du bist vielleicht ‘n echter Bauer!*
 you are PRT a real peasant
 ‘You are really like a peasant!’
- b. *Du bist vielleicht ‘n erstaunlicher Bauer!*
 you are PRT an amazing farmer
 ‘You are really an amazing farmer!’

¹⁸ There are other differences. While both (ia-b) can appear in argument position in German, only (ia) can be used as a vocative:

- (i) a. *Du Bauer!*
 you peasant
 ‘You peasant!’
- b. * *Du als Bauer!*
 you as farmer/peasant

This presumably finds a pragmatic explanation.

c. Emotive Capacity Reading Licensed DP-externally



Recall that ALS is externally licensed, namely, by the modal particle *vielleicht*. Furthermore, *ein* is present due to REL and is uninflected due to the presence of the adjective-like Specifier. Finally, I assume that the emotive flavor originates with the modal particle.

Let us summarize the three differences between the capacity reading in the nominal vs. the clausal domain. First, the DP is neutral and the CP is emotive. This difference presumably follows from the need to be restrictive enough in the former case when one singles someone out in a certain way (section 2.2) and the presence of the modal particle in the latter case. Second, the indefinite determiner is not present in the DP but must be present in the CP. This difference derives from the fact that on the one hand, *als* is a general(ized) capacity operator that takes role and kind nouns as arguments and that on the other, ALS is in a Specifier position of the matrix nominal. Now, for Predicate Modification between ModP and Agr' to apply, the matrix nominal must contain REL, which in turn triggers *ein*.

Finally, note that the pronoun and the noun in *als*-nominals are only subject to semantic agreement. This can be seen in the example in (40a), where the pronoun agrees with the collective noun semantically but not morphologically. In contrast, the CP case is subject to morphological agreement, namely, agreement between the subject pronoun and the predicate nominal, (40b), as well as concord between the elements inside the nominal, (40c).¹⁹

- (40) a. {*ihr* /**du*} *als Mannschaft*
 you(PL) / you(SGL) as team
 ‘you as a team’
- b. *Ihr* *seid vielleicht* (*‘*n*) *Bauer*(n)!*
 you(PL) are PRT farmers
 ‘You are some farmers.’

¹⁹ Interestingly, elements such as *eine* and *ein paar* ‘a couple’ are also possible here favoring the comparative reading:

- (i) *Ihr seid vielleicht* (?)*eine* / ‘*n paar* *Bauern.*
 you are PRT a(PL) / a couple (of) peasants / %farmers
 ‘You are some peasants/some farmers!’

- c. * *Du* *bist vielleicht (ei)ne* *erstaunliche(r) Bauer!*
 you(SGL) are PRT an(FEM) amazing farmer(MASC)
 ‘You are really an amazing farmer.’

Again, I take it that this follows from the different structures involving *als* vs. *ALS*. We briefly return to this discussion in Chapters 7 and 8.

4. Conclusion

This chapter discussed the second consequence of the proposal laid out Chapter 4. We started with the observation probably standard by now that the DP and the CP are parallel in structure and interpretation. Making this our general heuristic methodology, we extended the discussion to pronominal DPs and copular CPs containing non-theta nouns. Establishing three basic readings (cf. den Dikken 2006), we provided a more detailed investigation of how role nouns and emotive nouns, inherent and coerced, fare with regard to emotiveness in the nominal and sentential domains.

In order to explain the commonalities and slight differences, we employed, with a few refinements, de Swart, Winter & Zwarts’ (2007) account of the clause and extended it to the DP. To explain the whole range of data, the explanation of the DP had to include some pragmatic considerations (Rauh 2004). The interaction between these two proposals also explained the absence of true minimal pairs of pronominal DPs and copular DPs involving bare predicate nouns. More importantly, we showed that *ein* is not responsible for the emotiveness property. Rather, this is due to REL in combination with a [+emotive] noun. It was argued that *ein* indicates the presence of structure on top of NP and the presence of REL. In other words, we can maintain that *ein* is semantically vacuous.

So far, we only discussed cases where we find morphological agreement between the pronoun and the predicate noun. Next we turn to cases of – what looks like – disagreement in number.

Chapter 7: *Ein* and Number

1. Introduction

The following discussion presents the third and final consequence of the proposals about *ein*. We will continue the investigation begun in Chapter 6. First though recall from that chapter that with bare role nouns, true minimal pairs between the DP and CP are not possible in singular contexts. Specifically, although a bare role noun such as *Bauer* is possible in both the DP and CP, it crucially has different readings: it is emotive in the DP (meaning ‘peasant’) and neutral in the CP (meaning ‘farmer’). In other words, bare nouns are fairly restricted with regard to (non-)emotiveness in the two domains. We proposed that factors involving both pragmatics (Grician maxims) and semantics (the operator CAP) explain these restrictions. When *ein* appears in front of the role noun, the facts fall differently.

We pointed out that *ein* cannot surface in pronominal DPs. Compare (1a) to (1b). To avoid certain issues discussed in Chapter 4, *ein* is provided again in its reduced, unstressable form ‘*n*’:

- (1) a. *du* *Schwein*
you(SGL) pig
‘you pig’
b. * *du* ‘*n* *Schwein*
you(SGL) a pig

However, *ein* is possible in predicative nominals in the CP. Specifically, if *ein* appears in these copular cases, the role noun may undergo an interpretative extension from its neutral/literal meaning in (2a) to an emotive/figurative reading in (2b).

- (2) a. *Du* *bist Bauer*.
you(SGL) are farmer
‘You are a farmer.’
b. *Du* *bist ‘n Bauer*.
you(SGL) are a peasant / %a farmer
‘You are a peasant/a farmer.’

We proposed that this effect is not due to the presence of *ein* itself. Rather, this extension in interpretatory possibilities is a function of the null operator REL, the presence of which is flagged by *ein*. We concluded again that *ein* is a semantically vacuous element.

This chapter will, for the most part, abstract away from the different readings. Below, we will focus on issues related to number (for general typological discussion, see Corbett 2000; for a survey of the formal semantics, see Link 1998). To start with some simple examples, consider plural contexts where nouns and pronouns of the same number can combine in both the DP and CP:

- (3) a. *ihr Schweine*
 you(PL) pigs
 ‘you pigs’
- b. *Ihr seid Ärzte.*
 you(PL) are doctors
 ‘You are doctors.’

Turning to singular nouns, it is also well-known that such nouns cannot combine with plural pronouns to form pronominal DPs. This holds independently of the presence of *ein*:

- (4) a. * *ihr Schwein*
 you(PL) pig
- b. * *ihr ‘n Schwein*
 you(PL) a pig

However, singular nouns are different in the CP. Surprisingly, a singular noun is possible in copular contexts, (5a). At face value, this presents a case of disagreement between a singular noun and a plural pronoun. Crucially though, when *ein* appears, restrictions in number do reveal themselves again, (5b):

- (5) a. *Ihr seid Arzt.*
 you(PL) are doctor
 ‘You are doctors.’
- b. ?* *Ihr seid ‘n Arzt.*
 you(PL) are a doctor

To sum up thus far, as seen in Chapter 6, bare nouns are restricted to non-emotiveness in the CP. In contrast, as just seen, they are unrestricted in number in the CP. The former restriction reveals itself in singular contexts, the latter in plural contexts.

Returning to the main focus, it is clear that the grammaticality status of (5a) vs. (5b) correlates with the absence vs. presence of *ein*. One might claim then that this difference is due to the morphology and/or semantics of *ein*. However, I proposed in Chapter 4 that *ein* itself is not specified for morphological number; that is, it has the specification [α PL morph]. Furthermore, I argued that *ein* has no semantics. If so, we cannot rule out (5b) by resorting to problems in morphological or semantic number induced by the presence of *ein*.

To anticipate the discussion, let us start with the observation that morphological number is actually not marked on nouns in German. Specifically, bare nouns such as *Arzt* in (5a) are unmarked for number. If preceded by *ein*, (5b), these nouns are singular. Let us label the former type of nouns as non-plural elements and the latter type as singular elements. To explain the difference in grammaticality in (5), we will propose that NumP is absent with non-plural nouns but present with singular nouns. With NumP present in the latter, REL is present too, which is flagged by *ein*. In other words, it is the absence vs. presence of NumP that explains the difference in grammaticality in (5).

As for the DP cases in (4), I will propose that NumP is always present mediating concord in number between all the elements in the DP. In other words, what may look like a non-plural noun in (4a) actually involves a singular noun. If so, the presence of NumP rules out (4a) due to a mismatch in number between a plural pronoun and a singular noun. I suggest that the reason why *ein* can never be present in pronominal DPs, be they plural as in (4b) or singular as in **du 'n Schwein* ‘you(SGL) a pig’, is that the null operator REL can be flagged not only by expletive *ein* but also by other, substantive elements (e.g., pronominal determiners). Assuming that both types of elements are merged in ArtP, only one of them can surface. If these considerations are on the right track, then we can maintain the claim that *ein* does not determine number, neither morphological nor semantic. As in the last chapter, we will suggest that *ein* indicates more structure on top of NP and flags a null operator.

The chapter is organized as follows. First, we present the data illustrating the restrictions on morphological and semantic number in more detail. In section 3, I lay out my proposal to capture these facts. Section 4 summarizes the main findings.

2. Data

Given the discussion in the last chapter, we will present the data of the DP with emotive nouns and the examples of the CP with role nouns. We start with pronominal DPs involving agreement in number. As already seen in the introduction, a non-plural noun can combine with a singular pronoun but a singular noun cannot, (6a). Turning to (6b), a plural noun can combine with a plural pronoun:

- (6) a. *du* {*Schwein* / **'n Schwein*}
 you(SGL) pig / a pig
 ‘you pig’
- b. *ihr* *Schweine*
 you(PL) pigs
 ‘you pigs’

As one would expect, the first case can only be singular in interpretation and the second case only plural. In other words, the interpretations in (6a) and (6b) are parallel to the morphology on the noun (for the discussion of ungrammatical cases such as **du 'n Schwein*, see section 3.1.3).

Turning to the CP, we find similar facts. Specifically, a non-plural as well as a singular noun can combine with a singular pronoun, (7a). Again, a plural noun can occur with a plural pronoun, (7b):¹

- (7) a. *Du* *bist* {*Arzt* / *'n Arzt*}
 you(SGL) are doctor / a doctor
 ‘You are a doctor.’

¹ In English, predicate nouns typically have an indefinite article in cases like (7a). Note that Zamparelli’s (2008) explanation that this is due to lack of morphological gender in that language is probably not the whole answer as Yiddish, which does have morphological gender, patterns with English (see Lockwood 1995: 112, also Harbert 2007: 148).

- b. *Ihr seid Ärzte.*
 you(PL) are doctors
 ‘You are doctors.’

Again, the semantics runs parallel to the morphology. Next, we illustrate the cases involving disagreement in number in more detail.

Starting with the DP, a plural noun cannot combine with a singular pronoun, (8a). Conversely, a singular and a non-plural noun cannot combine with a plural pronoun either, (8b):²

- (8) a. * *du Schweine*
 you(SGL) pigs
 b. * *ihr (‘n) Schwein*
 you(PL) a pig

So far, the facts are as one would expect. Now, while it may not be surprising that a plural noun cannot combine with a singular pronoun, (9a), it is unexpected that a bare noun can combine with a plural pronoun, (9b). Importantly, the interpretation here is plural (for similar facts in Dutch, see de Swart, Winter & Zwarts 2005: 451). As noted above, when *ein* is added, the example becomes ungrammatical, (9c):³

- (9) a. * *Du bist Ärzte.*
 you(SGL) are doctors
 b. *Ihr seid Arzt.*
 you(PL) are doctor
 ‘You are doctors.’
 c. ?* *Ihr seid ‘n Arzt.*
 you(PL) are a doctor

Interestingly, similar facts hold in capacity constructions involving *als* ‘as’.

Starting with non-copular clauses, a plural noun cannot combine with a singular pronoun, (10a), but a non-plural noun can with a plural pronoun, (10b). Again, the interpretation of the latter is plural (the datum is adapted from de Swart, Winter & Zwarts 2007: 206). Again, the addition of *ein* leads to ungrammaticality, (10c):

- (10) a. * *Du sprichst als Ärzte.*
 you speak as doctors

² In section 3.2, we discuss special cases such as *Sie Schwein* ‘you pig’, which are characterized by semantic agreement but morphological disagreement.

³ Note that the judgments of non-plural nominals in (9b) are somewhat “instable”. This dissolves if a “floating” quantifier is added (see Roehrs in prep. b). Furthermore, there seem to be some interesting cross-linguistic differences with these type of data. For example, the Romance languages are different in that they require agreement between the pronoun and the nominal (see Zamparelli 2008: 107 footnote 4; also Munn & Schmitt 2005: 839).

- b. *Ihr sprecht als Arzt.*
 you speak as doctor
 ‘You speak as doctors.’
- c. ?* *Ihr sprecht als ‘n Arzt.*
 you speak as a doctor

Furthermore, pronominal DPs containing *als* exhibit the same properties:

- (11) a. * *du als Ärzte*
 you as doctors
- b. *ihr als Arzt*
 you as doctor
 ‘you as doctors’
- c. ?* *ihr als ‘n Arzt*
 you as a doctor

To sum up, both non-copular CPs and pronominal DPs involving *als* show the same syntactic distributions and corresponding semantic interpretations as the simple copular constructions.

In view of these data, we may conclude that number is very restricted in simple DPs such that pronouns and nouns have to match in number. In contrast, simple copular clauses, non-copular clauses and pronominal DPs involving *als* are less constrained, both syntactically and semantically. Syntactically, singular pronouns can never combine with plural nouns and plural pronouns cannot combine with singular nouns.⁴ However, plural pronouns can, under certain conditions, occur with non-plural nouns. Semantically, plural nouns cannot be interpreted as singular and singular nouns cannot be understood as plural. However, non-plural nouns may lead to plural interpretation. Let us summarize these observations in the following charts. Table 1 shows the facts involving the DP. I mark the surprising facts by (!):

Table 1: Summary of the Judgments in DPs

	bare N	<i>ein</i> N	N-s
<i>du</i> (singular)	√	*	*
<i>ihr</i> (plural)	* [without <i>als</i>] √ (!) [with <i>als</i>]	*	√

⁴ The only potential exception that I am aware of comes from discontinuous noun phrases, where a plural noun is compatible with both a plural and a singular determiner:

- (i) *Hemden habe ich {keine / ?keines} getragen.*
 shirts(PL) have I none(PL/NEUT) worn
 ‘As for shirts, I have worn none.’

Following Ott & Nicolae (2010), I suggest in Roehrs (2011b) that this presumably has to do with frame-setting in topicalization and as such, this is a different phenomenon.

Table 2 shows the facts of the CP. Observe again that bare nouns are surprising as they are grammatical in basically all clausal contexts:

Table 2: Summary of the Judgments in CPs

	bare N	<i>ein</i> N	N-s
<i>du</i> (singular)	√	√	*
<i>ihr</i> (plural)	√ (!)	?*	√

Before moving on, let me point out that the syntactic distribution and semantic interpretation discussed in the clause above does not only hold with personal pronouns but also with regular DPs such as *die Männer* ‘the men’. To save space, this is not illustrated here. In the next section, we turn to an explanation of these syntactic and semantic facts.

3. Proposal

In this section, we account for the different morphological and semantic possibilities licensed in the different syntactic domains. Just as in Chapter 6, we will basically follow de Swart, Winter & Zwarts (2007) and extend their proposal to the DP explaining the differences between predicates in CPs and DPs.

The basic account is as follows. Starting with the syntax and simplifying somewhat for now, I assume again that all DPs, including pronominal DPs, consist of a head noun projecting an NP, a Number head projecting a NumP, and a (pronominal) determiner head projecting a DP, (12a). In keeping with the discussion in Chapter 6, the predicate nominal inside the DP always involves NumP. In contrast, in the CP, the predicate nominal may differ. I assume again that NumP is “optional” here. Specifically, the nominals following the copular auxiliary can be NP, NumP, or ArtP, (12b-d):

- (12) a. $DP_{\langle e \rangle} : [DP [NumP [NP]]]_{\langle e \rangle}$
- b. $CP_{\langle t \rangle} : [DP [NumP [NP]]]_{\langle e \rangle} Aux [NP]_{\langle e, t \rangle}$
- c. $CP_{\langle t \rangle} : [DP [NumP [NP]]]_{\langle e \rangle} Aux [NumP Num_{[+PL]} [NP]]_{\langle e, t \rangle}$
- d. $CP_{\langle t \rangle} : [DP [NumP [NP]]]_{\langle e \rangle} Aux [ArtP *ein* [NumP Num_{[-PL]} [NP]]]_{\langle e, t \rangle}$

These are my assumptions about the syntax. As for the semantics, let us recapitulate the basic analysis from Chapter 6.

For the clause, I follow again de Swart *et al.*’s (2007) discussion and assume that the predicate nominal must be of type $\langle e, t \rangle$ to combine with the subject DP (type $\langle e \rangle$), (12b-d). Assuming that the copular auxiliary is semantically vacuous, this means that NP, NumP, and ArtP must be of type $\langle e, t \rangle$. As already discussed above, de Swart *et al.* propose that role nouns combine with CAP, which is in NP, and that kind nouns, inherent or coerced, combine with REL, which is in NumP. The first option is shown in (12b) and the second in (12c-d) taking into account the two different number specifications. The different types of predicate nominals can

now combine with the subject DP to give a truth value (type $\langle t \rangle$). Note again that *ein* indicates the presence of a certain amount of structure on top of NP and the presence of an operator (REL).

As for the DP in (12a), I will argue that due to morphological concord in the nominal domain, NumP and as such REL are always present. As just discussed, combining the head noun and REL gives an element of type $\langle e, t \rangle$. Assuming again that determiners, including pronominal determiners, are of type $\langle \langle e, t \rangle, e \rangle$, the two can combine to yield an individual (type $\langle e \rangle$).

With these general points in place, let us be more specific about the individual cases from the previous section. First, we discuss simple DPs and CPs involving agreement and disagreement. Then, discussing some special cases involving the pronoun *Sie* ‘you(formal)’, we try to identify the parts of the structure where morphological and semantic numbers originate. In the final section, we turn to the more complex DPs and CPs involving *als* ‘as’.

3.1. Agreement in Simple Constructions

To get the discussion off the ground, consider (13). Recall from above that non-plural nouns are fine in all contexts. In contrast, singular nouns can only combine with singular pronouns and plural nouns only with plural pronouns. In other words, singular and plural nouns are in complementary distribution here. Compare (13a) to (13b):

- (13) a. *Du bist {Arzt / ‘n Arzt / *Ärzte}.*
 you(SGL) are doctor / a doctor / doctors
 ‘You are a doctor.’
- b. *Ihr seid {Arzt / ?*‘n Arzt / Ärzte}.*
 you(PL) are doctor / a doctor / doctors
 ‘You are doctors.’

To see whether this is a morphological, semantic restriction or both, let us consider *jeder* ‘each’ in this regard, which is a morphologically singular but semantically plural element. As might be expected, combining this element with a non-plural noun is fine. However, *jeder* can only occur with a singular, but not a plural, noun:

- (14) *Jeder (Mann hier) ist {Arzt / ‘n Arzt / *Ärzte}.*
 each man here is doctor / a doctor / doctors
 ‘Each (man here) is a doctor.’

Considering that *jeder* is semantically plural, the incompatibility with a plural noun is somewhat surprising. I will make the strongest claim and I propose that the number restrictions in (13) and (14) are morphological and semantic in nature. The lack of morphological agreement explains the ungrammaticality of the plural noun in (14). As for the semantics of the singular noun in (14), I suggest that the reason why *jeder* is compatible with such a noun has to do with the presence of a distributive operator. In what follows, we focus on morphological number but we will return to semantic number in section 3.2.

In keeping with the discussion above, I assume that in the CP, plural morphology indicates the presence of NumP and the presence of *ein* shows ArtP (containing NumP).

Furthermore, I propose that when NumP is present, an agreement relation must be established between the predicate nominal and the subject DP. In contrast, bare nouns do not project NumP – they are NPs. I propose that with NumP absent, they do not have to undergo an agreement relation and their distribution is much freer (see also den Dikken 2006: 210). As such, predicate nominals in the clause are NP, NumP, or ArtP depending on the presence of plural morphology or *ein*. This is what I mean by “optionality” of NumP.

DPs are different. As is well-known, they must exhibit concord in phi-features. We follow the literature making the standard assumption that number features originate in NumP (for details, see section 3.2). In Roehrs (2006b), I assume that the values on Num are morphological. Specifically, we suggest now that NumP mediates concord within DP with regard to morphological number. For concreteness, we will assume that the value of the Num head percolates up the nominal tree. As to the (lower) head noun, I will assume with Julien (2005a) and many others that it moves to Num where the head noun can check/value its number feature by adjunction. To be clear, NumP is always present in the DP.

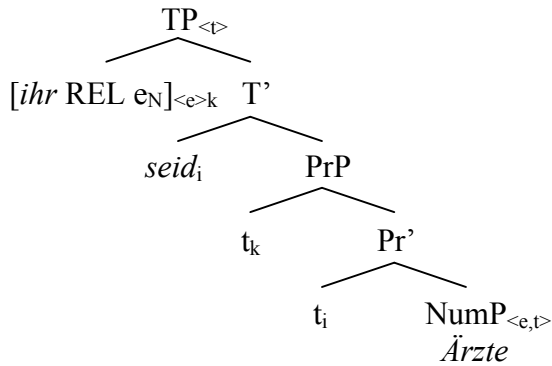
With these points about NumP in mind, we will see that there are two notions of disagreement. Given certain conditions, one can construct CPs where the relevant elements may involve not only true but also apparent disagreement. In contrast, with the exception of some special cases (see section 3.2), one can construct DPs where the relevant elements involve only true disagreement. Importantly, true disagreement leads to ungrammaticality but apparent disagreement does not. First, we discuss plural nouns, then non-plural nouns, and finally singular nouns.

3.1.1. Plural Nouns

Starting with the clausal cases, recall again that I follow Bowers (1993) in assuming that copular structures involve a Predication Phrase (PrP). The latter is embedded under a Tense Phrase (TP). I propose that the Predication head can take different elements as its complement. With plural morphology present on the nouns in (15a-b), I assume that Pr takes NumP as its complement. I provide the tree diagram for (15b) in (15c):

- (15) a. * *Du* *bist Ärzte.*
 you(SGL) are doctors
- b. *Ihr* *seid Ärzte.*
 you(PL) are doctors
 ‘You are doctors.’

c. Agreement in the CP

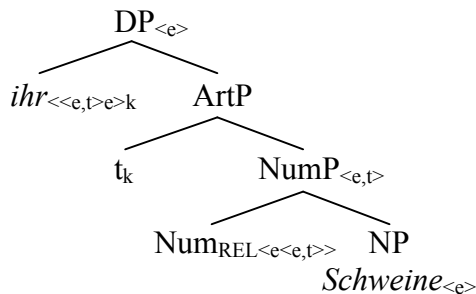


I assume that NumP has to check/value its number feature against the subject DP. As plural *Ärzte* can check/value its feature with plural *ihr* but not singular *du*, the difference in grammaticality in (15a-b) is accounted for (for the discussion of morphological case on predicate nominals, see Maling & Sprouse 1995). We turn to the nominal domain.

Recalling that NumP is always present here, it is easy to rule out (16a), where the number feature on NumP was not checked/valued. In contrast, (16b) is fine as the relevant elements successfully established an agreement relation in number. Assuming again that determiners originate in ArtP, the tree diagram for the latter case is given in (16c):

- (16) a. * *du* *Schweine*
 you(SGL) pigs
- b. *ihr* *Schweine*
 you(PL) pigs
 ‘you pigs’

c. Agreement in the DP



To sum up, the cases involving plural nouns are straightforward.

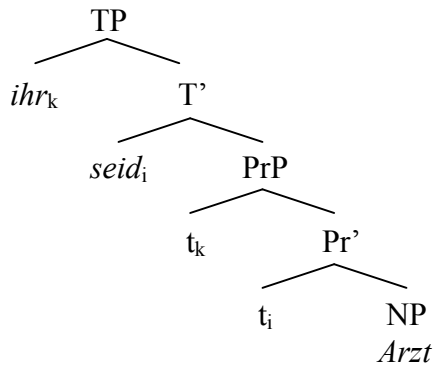
3.1.2. Non-plural Nouns

Above, we suggested that if no number-related elements are present, NumP is absent. This is the case for (17a-b). As a second option, then, I propose that the Predication head takes NP as its complement. We derive (17b) as (17c):

(17) a. *Du bist Arzt.*
 you(SGL) are doctor
 ‘You are a doctor.’

b. *Ihr seid Arzt.*
 you(PL) are doctor
 ‘You are doctors.’

c. *Apparent Agreement in the CP*



With NumP absent, the predicate nominal does not have to check/value its number feature. In other words, no agreement relation between predicate nominal and the subject DP is established and both singular and plural pronouns are grammatical here. This, then, is a case of apparent disagreement. In order to obtain a plural interpretation of the bare noun in (17b), I follow de Swart *et al.* (2007) in that NP may involve a distributivity operator. This set of assumptions also explains the grammaticality of *jeder ist (‘n’) Arzt* ‘everyone is a doctor’, where morphologically non-plural elements receive a plural interpretation.

This discussion makes an interesting prediction: if a predicate nominal does not involve NumP but just NP, then this nominal can semantically only combine with the subject DP (type <e>) if the noun combined with CAP first (yielding type <e,t>). This in turn should allow only a neutral/literal meaning of a role noun that can, at least potentially, undergo figurative extension. In keeping with what we saw in Chapter 6, we find the same interpretatory restriction in the disagreement cases discussed here (for more discussion of floating quantifiers in copular contexts, see Roehrs in prep. b):⁵

(18) *Wir sind jeder Bauer.*
 we are each farmer / #peasant
 ‘We (each) are farmers.’

Unlike the clausal domain, we proposed that DPs always contain NumP. As such, a singular pronoun is grammatical in singular contexts, (19a), but a plural pronoun is not, (19b). The ungrammaticality of the latter is due to a failure to establish the relevant agreement relation:

⁵ The floating quantifier is, most likely, not the overt spell-out of the distributivity operator as the former is not possible inside *als*-nominals: *wir (?jeder) als (*jeder) Bauer* ‘we (each) as a farmer’.

- (19) a. *du* *Schwein*
 you(SGL) pig
 ‘you pig’
- b. * *ihr* *Schwein*
 you(PL) pig

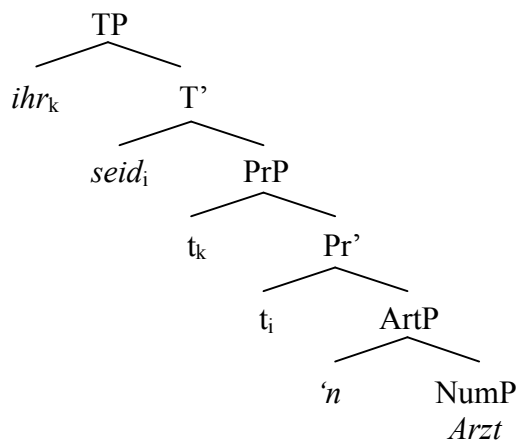
Note now that with NumP present in (19a-b), REL is present too and we would expect *ein* to occur. In the next section, we discuss singular nouns, where we also provide an explanation as to why *ein* is not possible in pronominal DPs.

3.1.3. Singular Nouns

In Chapter 6, we discussed in detail the proposal that for nouns to be predicates, kind nouns combine with REL directly and role nouns do so indirectly (via kind coercion). REL triggers the presence of *ein* in singular contexts. Consider (20a-b). We also proposed that *ein* may surface in ArtP (and not necessarily in DP). As a third option, then, I propose that the Predication head takes ArtP as its complement. Let us provide the tree diagram of (20b) in (20c):

- (20) a. *Du* *bist* ‘n *Arzt*.
 you(SGL) are a doctor
 ‘You are a doctor.’
- b. ?* *Ihr* *seid* ‘n *Arzt*.
 you(PL) are a doctor

c. True Disagreement in the CP



Note now that a singular predicate nominal can only check/value its number feature with a singular but not a plural pronoun. As such, the latter case presents an instance of true disagreement.

As for the DP, we return to the question left unanswered at the end of the last subsection, namely the question why *ein* cannot occur in pronominal DPs despite the fact that REL is present:

- (21) a. * *du* *'n Schwein*
 you(SGL) a pig
 'you pig'
- b. * *ihr* *'n Schwein*
 you(PL) a pig

Extending the concept of flagging from the last chapter, I would like to propose that the presence of REL is not only indicated by *ein* but also by other elements. That this is independently needed becomes clear when a predicate nominal is the complement of a definite article (e.g., *das (*'n) Schwein* 'the pig'). Now, assuming that determiners and *ein* originate in the same position (i.e., ArtP), only one such element can occur. This explains the ungrammaticality of (21a-b). As for the felicitous clausal case in (20a), the subject pronoun and *ein* are part of different nominals. As such, they do not compete for the same position and they can co-occur. Let us return to the main focus of this book summarizing the discussion so far and drawing some conclusions.

Starting with the DP, we proposed that NumP is always present and a relevant agreement relation has to be established. Importantly, although REL is always present in the DP, *ein* does not surface when a determiner occurs. Assuming that the presence of contentful elements precludes the occurrence of expletive ones, the failure of *ein* to appear finds a natural explanation if *ein* is semantically vacuous but the determiner is a more substantive element. If so, this also means that other elements can flag the presence of REL in singular contexts.

As for the CP, we proposed that the Predication head can take NP, NumP, or ArtP as its complement. Importantly, when NumP is present in the complement, an agreement relation with the subject DP has to be established. In keeping with Chapter 4, we will propose in the next section that morphological number is not due to *ein* but to the number specification on NumP. Rather, the role of *ein* is to flag the presence of REL in singular NumPs. More generally, these assumptions allowed us to account for the diverse agreement phenomena illustrated above while maintaining the claim that *ein* has no specifications for number.

3.2. *Morphological and Semantic Number*

Considerations related to number are notoriously complex and difficult. Making different assumptions may have far-reaching consequences. For convenience, I will employ my own system developed in Roehrs (2006b).⁶ My primary goal in this section is to show that elements other than *ein* are responsible for morphological and semantic number thus defending the claim that *ein* has nothing to do with number. I will illustrate the relevant issues with some special cases involving the pronoun *Sie* 'you(formal)', an element rarely discussed in the literature in this respect.

As illustrated in the previous section, both CPs and DPs may exhibit morphological disagreement in number. Extending that discussion, it is clear from the verbal agreement in (22a)

⁶ There are many other proposals. To name just a few: Borer (2005), Watanabe (2006), and Ott (2011b) (see also references cited in these works).

that *Sie* ‘you’ is morphologically plural. As is well-known, *Sie* is semantically ambiguous between singular and plural; that is, *Sie* can be used to address one or several people. It is interesting to note now that, when this pronoun occurs with a bare noun in a copular sentence, it can have both interpretations, (22a). As to the DP case in (22b), although both *Sie* and a bare noun co-occur, the example can only have a singular interpretation. This interpretative difference is indicated in the relevant translations (for other cases like (22b), see Roehrs 2006b):

- (22) a. *Sie sind Arzt.*
 you are(PL) doctor
 ‘You are a doctor.’
 ‘You are doctors.’
- b. *Sie Schwein*
 you pig
 ‘you pig’
 #‘you pigs’

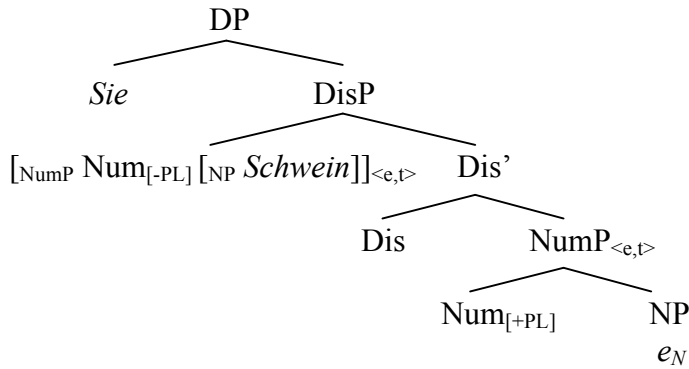
This difference in the semantics between (22a) and (22b) resembles the cases from the previous section. However, here both domains involve morphological disagreement. I will propose that semantic number is due to an interaction between NumP and the head noun. In keeping with the last section, I will suggest that the semantic difference follows from the “optional” presence of NumP in the clausal domain but its obligatory presence in the nominal domain. The felicitous case of morphological disagreement in (22b) will be accounted for by a structure involving two separate nominals.

Starting with the copular case in (22a), recall from above that if there is no number morphology on the noun, then there is no NumP in the predicate nominal. Consequently, there are no number features to check/value and there is no true disagreement. To derive the singular and plural interpretation of the predicate nominal, I assume that a distributivity operator is optionally present. If absent, we derive the singular interpretation; if present, we obtain the plural reading (for details on the internal syntax and semantics of *Sie*, see below). Note in passing that this distributivity operator is incompatible with subjects that have inherently singular semantics. As such, unlike *Sie, du* ‘you(SGL)’ combined with a non-plural noun (e.g., *du bist Arzt* ‘you are a doctor’) can only be singular in interpretation.

As for (22b), recall that DPs always contain NumP. At first glance, this then appears to be a case of true morphological disagreement between the plural pronoun and the singular nominal. In the last section, similar cases were ruled out by suggesting that the singular nominal cannot check/value its number feature with a plural pronominal. Now, to explain the unexpected grammaticality of this example, I suggested in Roehrs (2006b) that these types of DPs have a different structural analysis than the garden-variety DPs discussed above.

Specifically, it is proposed in that paper that this construction involves two nominals, a matrix nominal containing the pronoun and an embedded nominal containing the disagreeing predicate nominal. The latter is proposed to be embedded in a Specifier inside the matrix pronominal DP (see also Chapter 2). For lack of a better term, this position was labeled Specifier of a Disagreement Phrase (DisP). The tree diagram for (22b) is as follows:

(23) *Disagreement in the DP*



Following the literature in that NumP has a specification for morphological number, I proposed that both the matrix and the embedded nominal have a NumP where the value of the former is plural but the value of the latter is singular. In order to avoid a featural clash between the two nominals in (23), I will blame the lack of obligatory concord on the absence of a head that mediates the agreement in phi-feature between the two nominals (for the discussion of such cases, see Chapter 8). To be clear, then, both nominals in (23) form independent agreement domains and, consequently, there is no true morphological disagreement.

As for semantic number, recall that (22b) can only be singular in interpretation. To capture this, I assume that head nouns have a specification for semantic number and how the latter relates to the morphological number on NumP. Importantly, nouns come in various types differing in the proposed number specifications. Before we provide the relevant details for (22b), let us make some general remarks about our assumptions.

We begin by illustrating the relevant issues with an ordinary noun like *Schwein* ‘pig’. The relevant part of its lexical specification has two statements, (24a-b), where α and β have unspecified but coinciding values for morphological and semantic number. The lower part of the nominal structure is fleshed out in (24c) after the head noun *Schwein* has moved to adjoin to Num:

(24) *Schwein*

- a. [α PL morph; β PL sem]
- b. (where $\alpha = \beta$)
- c. [_{NumP} *Schwein*_{[α PL morph; β PL sem; $\alpha = \beta$]_k+Num_[α PL morph] [_{NP} *t_k*]]}

As is well-known, *Schwein* can have three manifestations: it can be a mass, a singular count, or a plural count noun. Let us assume here that the morphological feature [α PL morph] on NumP is optional. If it is absent, *Schwein* is interpreted as a mass noun. If [α PL morph] on NumP is present, it can have two values. Assuming again that the morphological values for number are matched by adjunction, (24c), [-PL] results in a singular count noun and [+PL] brings about a plural count noun. If there is no NumP at all (e.g., with role nouns), the number values on the head noun in (24a) do not get specified resulting in a number neutral element (cf. also Munn & Schmitt 2005: 827).⁷

⁷ One might suggest that nouns on their mass interpretation also lack NumP (cf. Borer 2005). Note, however, that these nouns can combine with adjectives. With AgrP high in the structure, NumP is present but the mass

It is important to point out that the two number values, morphological and semantic, can also diverge; for instance, pluralia tantum nouns are inherently specified as [+PL morph; -PL sem]. Finally, let us assume that *Sie* ‘you’ has a specification for morphological number but no fixed value for semantic number: [+PL morph; β PL sem].⁸ The semantic number of *Sie* is determined by the head noun in the complement structure of this pronoun mediated by NumP.

More generally, NumP is present in the noun phrase for morphological concord. Semantic number comes about in three ways: (i) it is inherently specified on the noun (pluralia tantum), (ii) it originates with the head noun if (24a) is specified via the morphological value of NumP and (24b), or (iii) it stems from the distributivity operator if there is no NumP in the structure (e.g., with bare role nouns in copular sentences). With these general remarks in mind, we return to (22b) derived as in (23).

Let us assume that the complement of *Sie* in (23) involves a null plurale tantum noun. Since both *Sie* and this type of noun are inherently specified for [+PL morph], they are morphologically compatible. However, a plurale tantum noun specifies [β PL sem] of the pronoun as [-PL sem] leading to singular semantics of *Sie*.⁹ As for the embedded nominal, NumP is specified as [-PL morph] and the ordinary noun *Schwein* comes out as a singular count element. To recapitulate, the matrix nominal combines a plural NumP with a plurale tantum head noun and the embedded nominal combines a singular NumP with an ordinary head noun. In other words, although there are two NumPs in (23) with different (morphological) specifications for number, both nominals are semantically singular. Let us consider now how the two nominals in (23) are semantically combined.

We assumed in Chapter 6 that null nouns are of the kind type. For them to function as predicates, they must combine with REL in NumP. Let us suppose now that the matrix and the embedded nominal in (23) are combined by Predicate Modification, which conjoins two elements of the same semantic type (i.e., $\langle e, t \rangle$). In order to avoid type mismatch, the embedded predicate nominal must be of the same type. With an (overt) kind noun present there, this means that the latter must also involve REL in NumP. Thus, we have justification for the assumption of two NumPs. Furthermore, assuming that Predicate Modification only combines two nominals with the same general semantics, we can also account for the fact that the semantically singular nominal in Spec,DisP is only compatible with a semantically singular matrix nominal (for more details, see Roehrs 2006b: 168). This explains the lack of plural reading in (22b).

To sum up, following the literature, we suggested that morphological number originates with NumP. Furthermore, we proposed that semantic number is the result of an interplay between NumP and the head noun where the latter may vary in its number specifications depending on the type of noun. Discussing cases involving the pronoun *Sie*, we explained the copular cases in the same fashion as in the previous section. To account for DPs with morphological disagreement, we proposed that a different structure is involved, with two morphologically independent nominals. This explains why these two NumPs do not involve true morphological disagreement despite the fact that they have contradictory specifications for

interpretation of the noun is not necessarily turned into a count interpretation. Thus, I continue to assume that the number feature on Num is optional.

⁸ The Dutch counterpart *u* ‘you(formal)’ is morphologically singular and semantically singular and plural. On current assumptions, its feature specifications would be [-PL morph; β PL sem].

⁹ To avoid confusion, this is different from the copular case discussed in the first part of this section. There, *Sie* contains an ordinary null noun in its complement. Mediated by NumP, this leads to plural semantics. This pronominal DP is combined with a non-plural noun via Pr. An assumed distributive operator accounts for the plural interpretation of the non-plural noun (but not of *Sie* itself).

number. Second, assuming that Predicate Modification only combines semantically similar elements, we can explain why both nominals are singular in interpretation.

If correct, this discussion leads to some interesting issues. I will not pursue these questions here. My main goal in this section was to show that elements other than *ein* determine morphological and semantic number.¹⁰ If this is tenable, then we can continue to claim that *ein* is not responsible for number, be it morphological or semantic.

Next, we consider constructions involving *als* ‘as’. While these instances have certain similarities to the disagreement cases above, they are different and more complex in a number of ways. I will not be able to offer a full-fledged account of all the facets of these constructions but I will try to point out some issues relevant for the present discussion.

3.3. Agreement in Complex Constructions Involving *als*

In this section, we begin by briefly discussing the syntax and semantics of constructions involving *als* ‘as’ showing how the *als*-nominal combines with the preceding part of the structure. Then we discuss the agreement facts with regard to number. Finally, we return to some semantic considerations discussing the realization operator *als* in more detail in order to pinpoint some consequences for the analysis.

Recall from Chapter 6 that *als* is a generalized capacity operator that combines with a noun to return an element of type $\langle e, t \rangle$. We labeled this combination the *als*-nominal and suggested that it is right-adjoined to its preceding structure. For current purposes, let us assume now that the *als*-nominal can combine with another element by Predicate Modification. As illustrated above, this operation combines two elements of type $\langle e, t \rangle$. As such, I assume that the *als*-nominal is right-adjoined to an element of type $\langle e, t \rangle$. Considering the pronominal DP in (25a), I assume that the *als*-nominal is adjoined to NumP (recall that *du* ‘you’ is assumed to have internal structure). As for the clausal case in (25b), I suggest that the *als*-nominal is adjoined to the VP:

- (25) a. *du als Arzt*
 you(SGL) as doctor
 ‘you as a doctor’
- b. *Du sprichst als Arzt.*
 you(SGL) speak as doctor
 ‘You speak as a doctors.’

To be clear, NumP and VP are elements of type $\langle e, t \rangle$. These are the basic assumptions about the syntax and semantics.

¹⁰ Let me mention just one issue. Note that with a kind noun present in the embedded nominal in (23), REL must be present to supply a predicate. The latter should trigger *ein*, contrary to fact:

(i) * *Sie* [_{NP} *n Schwein*] *e_N*
 you a pig

Note that *Sie* and *ein* are in different nominals in (i). To explain the ungrammaticality, there is more involved here than with cases like **du n Schwein* ‘you a pig’ (see section 3.1.3). Without going into too much detail, I suggest here that *ein* is deleted in the presence of the pronominal determiner. Note in this regard that the latter is retained as it is hierarchically higher and has more semantics than vacuous *ein*.

Turning to the agreement facts, I assume that agreement in morphological number is established independent of the presence of the verb. Consequently, I will treat the non-copular sentences and pronominal DPs involving *als* in the same way. Recall from section 3.1 that number morphology indicates the presence of NumP. Assuming that the predicate nominal inside the *als*-construction has to check its number feature with the pronominal element, this rules out (26a) but allows (26b).

- (26) a. * *du (sprichst) als Ärzte*
 you(SGL) speak as doctors
- b. *ihr (sprecht) als Ärzte*
 you(PL) speak as doctors
 ‘you (speak) as doctors’

In contrast, non-plural nouns do not project NumP. They involve NPs and do not enter into an agreement relation with the pronominal element. As such, both (27a) and (27b) are fine:

- (27) a. *du (sprichst) als Arzt*
 you(SGL) speak as doctor
 ‘you (speak) as a doctor’
- b. *ihr (sprecht) als Arzt*
 you(PL) speak as doctor
 ‘you (speak) as doctors’

I assume that the plural interpretation in (27b) follows from a distributivity operator just like in the copular cases. So far, the agreement facts are similar to what we have seen above.

Turning to singular nouns, we observe that the presence of *ein* leads to awkwardness in singular contexts, (28a). This is somewhat surprising and makes *als*-nominals different from the copular constructions. We return to this type of example momentarily. As expected, a singular *als*-nominal is ungrammatical with a plural pronominal, (28b):

- (28) a. ? *du (sprichst) als ‘n Arzt*
 you(SGL) speak as a doctor
 ‘you (speak) as a doctor’
- c. ?* *ihr (sprecht) als ‘n Arzt*
 you(PL) speak as a doctor

To sum up so far, the agreement facts are similar to the copular constructions discussed above. There is only one exception, namely the presence of *ein* in the *als*-nominal leads to a certain degree of awkwardness in singular contexts. In the last part of this section, I address this issue and try to pinpoint some consequences for the analysis.

Like with the copular cases above, there are indications that *als*-nominals do not have a uniform structure. Considering the ungrammaticality of the plural noun in (29a), NumP must be

present. However, observing the grammaticality of the non-plural noun in (29b), NumP must be absent:

- (29) a. * *du als Ärzte*
 you(SGL) as doctors
- b. *ihr als Arzt*
 you(PL) as doctor
 ‘you as doctors’

In fact, recall from Chapter 6 that in singular contexts, *als* even occurs with bare kind nouns. Compare (30a) to (30b):

- (30) a. *du als Mann*
 you(SGL) as man
 ‘you as a man’
- b. ? *du als ‘n Mann*
 you(SGL) as a man
 ‘you as a man’

Again, the preferred absence of *ein* makes *als*-nominals different from the copular cases. Given the morphological facts in (29) and the distributions in (30), it seems clear that the realization operator in *als*-nominals cannot simply be tied to REL or CAP.

Specifically, on the one hand, *als*-nominals cannot involve REL. If this were true, it would imply the general presence of NumP and thus *ein* in the singular cases, contrary to fact.¹¹ On the other, *als*-nominals cannot involve CAP. This can be gleaned from the fact that not only bare role nouns can be in the complement position of *als* but also regular kind nouns such as *Mann* ‘man’ provided they are restrictive enough in the relevant sense. In other words, *als*-nominals must involve something else. We already suggested above that *als* itself is the relevant operator. Let me sketch some of the issues of such an analysis.

Above, we saw that with role nouns, both CAP and REL are possible but that they are mutually exclusive – only one realization operator is needed to supply a predicate and the presence of a second would lead to type mismatch. Recall that with these types of nouns, CAP involved direct predication but that REL involved an indirect path to predication. In other words, CAP must be, at least in principle, “optional”. Let us now make the assumption that all realization operators are optional in type but not in number; that is, while there is a potential choice between different operators, the presence of one such operator is required to supply a predicate. This might lead us to expect that there are other realization operators. I propose that *als* is such an element. Similar to the other two elements, if *als* is present, both CAP and REL cannot be.

I would like to suggest that unlike CAP and REL, *als* takes all elements of type <e>, that is, role nouns or kind nouns alike, as arguments and returns predicate nominals (type <e,t>). In

¹¹ Suggesting that *ein* is, at least in German, deleted on the surface is not enough. This would imply the presence of a singular NumP and the (superficially) bare noun should not be number neutral, contrary to fact (cf. (29b)).

other words, *als* is a general(ized) capacity operator of type $\langle e, \langle e, t \rangle \rangle$.¹² With this much in place, let us make some further, tentative remarks; namely, plural nominals in capacity constructions such as *als Ärzte* ‘as doctors’ can also be of type $\langle e \rangle$. This in turn suggests that a plural noun under NumP does not, in all cases, imply an element of type $\langle e, t \rangle$. Recalling that realization operators are mutually exclusive, we can state that depending on which operator is present, the element under NumP has a different semantic type.

Returning to the singular cases, let us tentatively suggest then that in the constructions where *ein* is not present, REL is not at work. Specifically, with bare role nouns and in *als*-nominals, CAP and *als* are the relevant operators. However, if *ein* is present, we can suggest that this element “flags” the existence of REL in morphologically singular contexts. If these tentative remarks are on the right track, then we can continue to claim that *ein* is vacuous as it simply indicates the presence of a covert operator in these cases.

To sum up the entire section, the preceding discussion reveals an interesting syntax-semantics correlation: cases of morphological agreement are very restricted in their interpretations but instances of apparent morphological disagreement (copular cases and *als*-nominals) are fairly free. Given the proposed interaction between NumP and the head noun, this difference follows from the presence of NumP in the former cases but its absence in the latter. Importantly, the role of *ein* is only indirect. Its presence allows us to draw conclusions about the syntactic structure and the type of realization operator present in that structure.

4. Conclusion

This chapter provided the third and final consequence of the proposals involving *ein*. Continuing the investigation from the previous chapter, we provided a survey of the data and issues pertaining to morphological and semantic number in the nominal and clausal domains. We showed that the DP is more restricted in this regard than the CP. We proposed that this is accounted for by the obligatory presence of NumP in the DP (a reflex of the concord in phi-features) and its “optional” presence in the CP.

Specifically, we proposed above that morphological number resides in Num and semantic number is a result of an intricate interaction between NumP and the head noun. With current purposes in mind, we can conclude then that *ein* itself does not determine number, neither morphological nor semantic. Rather, we have seen that *ein* indicates the presence of a certain amount of structure on top of NP and the presence of an operator. We also showed that elements other than *ein* can flag the presence of REL precluding *ein* from occurring. Again, these facts find a natural explanation if *ein* is semantically vacuous; that is, *ein* is an element that can disappear without a loss in meaning.

More generally, to the extent that the discussion here proves tenable, it provides further support for de Swart, Winter & Zwarts’ (2007) and Rauh’s (2004) proposals and, more generally, also for the parallelism between the DP and CP.

¹² Note, however, that this cannot be the whole story as *als*-nominals can involve nouns modified by an adjective.

Chapter 8: Concluding Remarks

1. The Bigger Picture

Focusing on the noun phrase in German, one goal of this book was to provide a more comprehensive discussion of adjectival inflections and *ein* compared to what exists up to this point in time. Beside a survey of these important empirical sub-domains, the second goal was to find commonalities and differences between these two types of elements and to discuss certain theoretical issues that arise in these contexts. It is important to point out again that both goals go in partially different directions.

Specifically, a survey attempts to be fairly exhaustive but painting the big picture is an attempt to see what different domains, empirical or theoretic, have in common. As such, discussing issues to some comprehensive degree tends to move the focus away from traits shared by different domains. In this final chapter, I will try to make more headway toward the second goal; that is, toward comparing both adjectival inflections and *ein* more directly. In the second part of this chapter, we will discuss some more consequences of the current analysis and show avenues for future research. Before comparing adjectival inflections and *ein* in more detail, let us recall the general contents of the previous chapters.

Chapter 2 focused on adjectival inflections and briefly mentioned the special status of *ein*-words in this regard. In Chapter 3, some consequences of the analysis of adjectival inflections were discussed. Chapter 4 provided a survey of the different types of *ein*. Chapter 5 was concerned with possessive *ein*-words. Finally, *ein* was discussed with regard to emotiveness and number in Chapters 6 and 7, respectively. Contrasting these phenomena, we have observed that adjectival inflections and *ein* are similar in certain aspects but different in others. Let us return to the main hypotheses from the introduction.

1.1. Commonalities of Adjectival Inflections and *ein*

Starting with the similarities, we formulated the following three claims:

- (1) Adjectival inflections and *ein* are
 - a. expletive elements,
 - b. make certain nominal features visible, and
 - c. indicate different sizes of nominal structure with inflections performing this task in the higher layers of the DP and *ein* in the lower layers.

To illustrate and support these claims, let me briefly review one example for each of these hypotheses.

Chapters 2 and 3 argued that in German, the strong/weak alternation is not a reflex of (in-)definiteness, restrictiveness of interpretation of modifiers, or referentiality. To illustrate this for just one of these semantic concepts, recall again that both the strong and the weak endings can occur in both definiteness and indefiniteness contexts:

- (2) a. *(s)ein rotes Auto*
 (his-) a red(ST) car
 ‘his / a red car’
- b. *mit (s)einem roten Auto*
 with (his-) a red(WK) car
 ‘with his / a red car’

Note that if these different types of endings were to indicate (in-)definiteness, this would lead to contradictory conclusions. One might claim then that the different inflections are a reflex of the semantics of *ein*, given that possessive articles were proposed to consist of a possessive component and *ein*. However, it was argued above that *ein* is semantically vacuous too. Specifically, it is not a reflex of indefiniteness, a certain type of emotiveness, or number. Postponing the discussion of indefiniteness to section 2.1, let us focus here on the common belief that *ein* determines number.

Consider again (3a), which denotes a singularity, and (3b), which involves a plurality:

- (3) a. *Nur EIN Storch war auf der Wiese!*
 only one stork was in the meadow
 ‘Only one stork was in the meadow.’
- b. *Eine Störche waren da!*
 a(PL) storks were there
 ‘Wow! So many storks were there!’

Contrasting these two examples, we observe that *ein* can appear in very diverse morphological and semantic contexts. Now, with adjectival inflections as well as *ein* exhibiting different, partially contradictory semantics, we proposed that these elements are actually semantically vacuous. Given this suggestion, we expect that they can, under certain conditions, be left out without a change in meaning. We showed that this is indeed the case. Furthermore, this suggestion also allows us to avoid the conclusion that certain semantic features are redundantly present when these elements do co-occur. To account for the actual semantics, it was proposed that other elements bring about the relevant effects.

Turning to the second hypothesis, it is well-known that adjectival inflections make nominal features such as gender, number, and case visible. This can straightforwardly be seen when a regular noun phrase as in (4a) is split up as in (4b):

- (4) a. *ein lila(nes) Kleid*
 a purple(INFL) dress
 ‘a purple dress’
- b. *Kleid habe ich ein lila*(nes).*
 dress have I a purple-INFL
 ‘As for dresses, I have a purple one’

Here, the adjectival ending makes the features of the displaced noun visible. In fact, due to concord inside the noun phrase, adjectival inflections make features of the entire DP visible. Again, the same holds for *ein*:

- (5) a. *ein Kleid*
 a dress
 ‘a dress’
- b. *Kleid habe ich nur ein*(es).*
 dress have I only one-INFL
 ‘As for dresses, I have only one.’

As for the third claim, we proposed that adjectival inflections and *ein* indicate differences in nominal structures with regard to size. For instance, the strong/weak alternation supports the proposal that syntactic arguments are not only DPs, (6a), but also IntP, (6b). Part of the evidence for this proposal came from the different inflections on the element following *alle* ‘all’. Compare the weak ending on the adjective in (6a) to the strong ending on the determiner in (6b):

- (6) a. *alle netten Studenten*
 all(ST) nice(WK) students
 ‘all nice students’
- b. *alle diese netten Studenten*
 all(ST) these(ST) nice(WK) students
 ‘all these nice students’

As for *ein*, following de Swart, Winter & Zwarts (2007), we argued that predicate nominals without *ein* involve NPs, (7a), and those with *ein* are (at least) ArtPs, (7b):

- (7) a. *Er ist [NP Lehrer].*
 he is teacher
 ‘He is a teacher.’
- b. *Er ist [ArtP ein Lehrer].*
 he is a teacher
 ‘He is a teacher.’

Observe again that adjectival inflections indicate differences in structure in the higher layers of the noun phrase but *ein* shows distinctions in the lower projections. Finally, let us recall the observation that adjectival inflections and *ein* interact in interesting ways.

In Chapter 3, we pointed out that *ein* is possible in certain exclamative constructions, (8a), and in some *wh*-exclamatives, (8b). Now, while not all speakers of German allow *ein* to occur in these contexts, those who do must have a weak ending on the adjective:

- (8) a. % *Eine coolen Leute kamen zur Party!*
 a cool(WK) people came to.the party
 ‘Some cool people came to the party!’
- b. % *Was für eine tollen Ferien!*
 what for a(PL) great(WK) holidays
 ‘What great holidays!’

To be clear, the presence of *ein* triggers a weak ending on the adjective; that is, *ein* interacts with adjectival inflection. In fact, these weak inflections are consistent with our discussion of split NPs involving indefinite pronouns where we showed that *ein* cannot be inserted late. If so, then the adjectival inflections in (8) argue against the assumption of a null noun in (8a) and they raise issues for a Predicate Inversion analysis of (8b).

It is important to state that the presence of *ein* in (8) does not only interact with adjectival inflections but *ein* also seems to have semantic impact here. For instance, van Riemsdijk (2005: 167) points out that these – often called – emotive or affective constructions can express some relatively excessive property of the entities under discussion. Have we found then a counterexample to our first hypothesis, namely that *ein* makes no semantic contribution? In the next section, I will suggest again that *ein* itself does not have an influence on the interpretation. Rather, an operator will be held responsible, which is flagged by *ein*.

More generally, given these shared properties and the interwoven argumentation, I believe that adjectival inflections and *ein* deserved to be discussed in tandem. Importantly, these elements also differ in certain ways.

1.2. Differences Between Adjectival Inflections and *ein*

Starting with adjectival inflections, we put forth the following hypothesis:

- (9) Different types of adjectival inflections indicate nominal structures involving different degrees of embedding of adjectives in simple vs. complex DPs.

To illustrate this again, consider (10). The example in (10a) involves a simple DP where the adjective is in Spec,AgrP. In contrast, the example in (10b) is a case of morphological disagreement. We argued that it involves a different structure where the adjective and noun are in Spec,DisP and the head noun of the larger structure is a null element. Importantly, although the adjectives in both (10a) and (10b) are in Spec,AgrP, the one in (10b) is embedded more deeply thus accounting for the different type of inflection and some other properties:

- (10) a. *ihr [AgrP blöden [NP Schweine]]*
 you stupid(WK) pigs
 ‘you stupid pigs’
- b. *ihr [DisP [AgrP blöde [NP Bande]] [NP e_N]]*
 you stupid(ST) gang
 ‘you stupid gang’

Assuming this to be correct, the strong/weak alternation was employed throughout the book as a means to find plausible structures for related constructions.

As to *ein*-words, I proposed that they are composite forms consisting of semantically vacuous *ein* and another element. In fact, extending the discussion beyond *ein*-words, we formulated the following general claim:

- (11) *Ein* supports overt semantic operators and “flags” the presence of covert semantic operators.

To see this again, we argued above that the negative article, the possessive article, and the singularity numeral are composite forms. These complex elements involve a possessor, a negator, or a singularity operator that, if supported by *ein*, receives an overt manifestation, (12a). As for covert semantic operators, we proposed that *ein* indicates the presence of the realization operator REL, (12b). Notice also that the flagging of an operator and the indication of a certain amount of structure seems to be related here. Assuming that the realization operator REL is in NumP, *ein* indicates both REL and ArtP in singular contexts in (12b):

- (12) a. {keine / meine / EINE} Frau
 no / my / one woman
 ‘no / my / one woman’
- b. [ArtP *eine* [NumP REL<e,e,t> [NP Frau<e>]]]<e,t>
 a woman
 ‘a woman’

Furthermore, note already here that the cases in (12a) presumably also involve REL. In other words, *ein* supports not only an overt operator but also flags a covert one at the same time. In section 2.1, we will provide more cases involving flagging and discuss some of the related issues in more detail.

To sum up, although both adjectival inflections and *ein* are expletive elements, it was argued that they are not devoid of function. First, they make morpho-syntactic features visible. Second, both are reflexes of different structural sizes where the strong/weak alternation indicates the amount of structure in the higher part of the noun phrase and *ein* shows the amount of structure in the lower part. Third, unlike *ein*, adjectival inflections also indicate different degrees of embedding of adjectives. Fourth, unlike inflections, *ein* also makes operators visible.

More generally, we can conclude that although semantically vacuous, these two types of elements provide valuable clues about the structure of the German noun phrase. I would like to suggest that these elements facilitate the acquisition of abstract structure and covert elements in the language (see also section 2.4 below). Now, given the specific details of the view laid out here, this is, as far as I know, a novel claim. It goes without saying that it needs to be put to the test, something I cannot do here.

2. Some Final Consequences and Future Outlook

In this section, we consider some more consequences. Given the current state of the investigation, I will only briefly discuss the relevant issues. A full-blown account of all the relevant aspects must await another occasion. At the end of this section, I will make some remarks about the properties that all expletives, clausal or nominal, seem to share.

2.1. Support and Flagging

The previous chapters discussed cases where the indefinite article does not seem to have semantic import. In fact, we proposed in Chapter 4 that all *ein*-words contain a semantically vacuous feature bundle spelled out as *ein*. We suggested that this *ein* supports POSS, NEG, and the singularity element \emptyset_{EIN} resulting in surface forms like *mein* ‘my’, *kein* ‘no’, and *EIN* ‘one’. To name just one advantage of this composite analysis, we saw in Chapter 5 that German cannot have post-nominal possessive pronouns.

Besides the data in (8) above, there are some other well-known cases where *ein* does seem to make a semantic contribution, at least at first glance. We will discuss split-scope phenomena, review *ein* with role nouns, return to *was-für* constructions, and briefly discuss *ein* in mass nominals. For each of these cases, I will suggest that it is not *ein* that brings about the different interpretations. Rather, different covert operators are taken to be responsible and *ein* simply flags the presence of these null elements. One side-effect of this discussion is that we will arrive at two general ways to make operators visible: support and flagging. Let us first return to the common belief that *ein* indicates indefiniteness.

It is often claimed that the presence of *ein* leads to indefiniteness of the containing noun phrase where (13a) is non-specific in interpretation and (13b) is specific:

- (13) a. *Ich würde nur (ei)n Auto mit lila Punkten kaufen.*
I would only a car with purple dots buy
‘I would only buy a car with purple dots.’
- b. *Ich habe gestern (ei)n Auto mit lila Punkten gekauft.*
I have yesterday a car with purple dots bought
‘I bought a car with purple dots yesterday.’

However, above we provided evidence that *ein* is not only compatible with definiteness, (14a), but also seems to require a definite context in some cases, (14b):

- (14) a. *m+ein Buch*
POSS a book
‘my book’
- b. *das eine Buch*
the one book
‘the first book’

We argued that (14a) involves a possessive component supported by a semantically vacuous *ein* and that (14b) is of a different type, namely adjectival *eine*. Now, to account for the indefiniteness interpretation in (13), one could suggest that the absence of definite elements such as *dieser* ‘this’ leads to indefiniteness, perhaps as a default option. However, this is, most likely, not correct. There is evidence that indefiniteness is not a default option or some such phenomenon but rather that it involves an actual element. This evidence comes from split-scope phenomena.

In a recent paper, Zeijlstra (2011: 113) discusses cases such as the following:

- (15) *Du must keine Krawatte tragen.*
 you must no tie wear
 a. ‘It is not required that you wear a tie.’ ($\neg > \text{must} > \exists$)
 b. ‘There is no tie that you are required to wear.’ ($\neg > \exists > \text{must}$)
 c. ‘It is required that you don’t wear a tie.’ ($\text{must} > \neg > \exists$)

The most salient reading is paraphrased in (15a), where the negation has the widest scope and the existential operator has the lowest scope. In other words, the negative article *kein* ‘no’ is split into two parts and both elements have semantic import. Now, given that the different scope options are derived from the different positions of the existential operator in (15a-c), we have to conclude that this operator involves an actual element. In keeping with the claims made so far, I suggest that this existential operator is a null element (EXIST) and that it is responsible for indefiniteness. I will assume that the presence of this null operator is flagged by *ein*.

Second, recall from Chapter 6 that certain – what de Swart, Winter & Zwarts (2007) call – ‘capacity nouns’ can appear in predicative contexts without an article, (16a), but also with an article, (16b). When the article is present, another reading may become possible:

- (16) a. *Sie ist Schauspielerin.*
 she is actress
 ‘She is an actress (= by profession).’
 b. *Sie ist (ei)ne Schauspielerin.*
 she is an actress
 ‘She is an actress (= by behavior).’
 ‘She is an actress (= by profession).’

We argued that the extension of the neutral/literal to the emotive/figurative interpretation in (16b) stems from the application of REL to the role noun. We suggested that *ein* serves to flag the presence of REL. So far, so good. In a similar vein, it is well-known that on the surface, ordinary nominal predicates are very similar to indefinite arguments. Role nouns form a well-known exception in the singular: they can occur without *ein* in predicative contexts, as just illustrated, but require *ein* as syntactic arguments.¹ For these nouns to be part of a referential/argumental expression, more structure beyond NP must be projected (see section 2.3).

¹ If role nouns are modified by an adjective, they also take *ein* in predicative contexts. As discussed in Chapter 7, this presumably has to do with the fact that the noun combined with REL to be compatible with the adjective. With both elements of type <e,t>, the noun and adjective can combine by Predicate Modification.

Part of this structure is NumP which involves REL. The latter is flagged by *ein*. To be clear, it is not *ein* itself that brings about referential/argumental expressions involving role nouns.

Third, as briefly discussed in Chapter 3, special contexts such as *wh*-exclamatives license the presence of *(ei)n* with plural nouns, (17a). This is also possible with mass nouns, (17b). In each case, the article seems to be optional:

- (17) a. % *Was für ((ei)ne) Frauen!*
 what for a women
 ‘What (great) women!’
- b. % *Was für ((ei)n) Bier!*
 what for a beer
 ‘What a (great) beer!’

Space prevents me from discussing these cases in detail here. With a plural or mass noun occurring in (17), the presence of *ein* is unexpected here. I argued for cases like (17a) that there cannot be a null noun between the article and the overt noun. However, if van Riemsdijk (2005: 173) is right in claiming that the syntactic “optionality” of *ein* is a reflex of different interpretations, then we might claim again that *ein* flags the presence of a certain semantic operator. I will call this element TYPE.

Fourth, mass nouns can appear without an article, (18a), but also with an article, (18b-c). Interesting, the latter two cases have at least two different readings. Specifically, (18b) has a sortal reading and (18c) has a container reading:

- (18) a. *Pumpernickel ist Brot.*
 pumpernickel is bread
 ‘Pumpernickel is bread (= the substance).’
- b. *Pumpernickel ist (ei)n Brot.*
 pumpernickel is a bread
 ‘Pumpernickel is a bread (= certain kind of that substance).’
- c. *Ich möchte (ei)n Brot.*
 I would.like a bread
 ‘I would like a loaf of bread (= a certain quantity of that substance).’

Again, I cannot discuss these constructions in detail here. However, my intuition is that certain semantic operations will account for these data. Again, I suggest that *ein* flags the presence of these operators that bring about the different readings. To be concrete, I will simply label these elements as TYPE and QUANTITY.

To sum up, we have made the claim more general that *ein* indicates the presence of covert operators (cf. in this regard Crisma 1999: 122, Matushansky & Spector 2005: 245 and others). In particular, we have extended this claim to morphologically non-plural examples involving split-scope phenomena (EXIST), role nouns in predicate and argumental constructions (REL), mass nouns (TYPE, QUANTITY) and to data in the plural involving *wh*-exclamatives and other such constructions (TYPE).

Returning briefly to the composite forms from Chapter 4, recall that POSS, NEG, and \emptyset_{EIN} are supported by *ein*. Above, we suggested that these elements are also operators. If so, then we can propose that support is similar to flagging in that support also indicates the presence of an operator. It is different in that the operator itself becomes visible. We arrive then at two ways for *ein* to make operators visible. With this in mind, it should not come as a surprise that both of these options can co-occur. For instance, *ein* supports NEG in (19a) and \emptyset_{EIN} in (19b). At the same time, (reduced) *ein* flags the presence of TYPE in both (19a) and (19b) (the example in (19b) is adapted from Hole & Klumpp 2000: 238; for Dutch, see Barbiers 2008: 6).²

- (19) a. *keine so 'ne Frauen*
 no so a women
 ‘no such women’
- b. *EIN so 'n Kind*
 one so a child
 ‘one such child’

If the interpretation of these empirical observations is tenable, then we can state again that the traditional term indefinite article is a misnomer. There are some interesting issues worth taking note of.

We just suggested that all nominals containing *ein* also involve an operator. The picture of flagging is complicated in at least three ways. First, it seems that different elements can flag the same operator. For instance, *ein* flags REL in indefinite contexts where REL is in NumP in both predicative and argumental nominals (e.g., *ein Auto* ‘a car’). However, as already pointed out in Chapter 7, REL can also be flagged by a definite element when the context is definite (e.g., *das Auto* ‘the car’ or, for that matter, *Peters \emptyset Auto* ‘Peter’s car’).³

Second, as pointed out in section 1.2, one instance of *ein* can make two operators visible at the same time. To see this again, consider the example in (20a). For the kind noun *Student* ‘student’ to be a predicate and be modified by the adjective, it must combine with REL in NumP. REL triggers the presence of *ein*. Furthermore, the singularity operator must be supported by *ein*. Thus, (20a) has the more abstract representation in (20b):

- (20) a. *EIN netter Student*
 one nice student
 ‘one nice student’

² Hole & Klumpp (2000) propose that *son*, that is, *so 'n* in (19b), is an article that simultaneously expresses definite type reference and indefinite token reference. They wind up suggesting that German has actually three articles: the definite article, the indefinite article, and *son*. Note, however, that German allows the following sequences:

- (i) a. *so jemand*
 so somebody
 ‘somebody like that’
- b. *so etwas*
 so something
 ‘something like that’

Assuming that *so* in (i) is the same as in (19), we may conclude that *son* is not an article and that *jemand* ‘somebody’ and *etwas* ‘something’ are not in D but lower in the structure.

³ The reason why ** \emptyset Auto* is bad is that the null determiner is most deficient (note also the lack of phonological features) and cannot make REL visible.

b. \emptyset_{EIN} Adjective REL Noun

To be clear, *ein* flags the presence of REL and supports the singularity operator.

Third, Chapter 7 also discussed two operators that are not overtly flagged at all (CAP, distributivity operator). It is not clear to me if operators flagged by *ein* and/or those that are not have something in common. Ideally, we might ultimately like to claim that different operators are tied to certain positions only and that these positions correlate with the (non-)occurrence of *ein*. What is clear at this point though is that the presence of NumP can only be a necessary, but not sufficient, condition for the occurrence of *ein*.

2.2. Nominal Structure and Concord

In the previous chapters, a variety of syntactic phrases played a role. These phrases can be assembled into one hierarchical, abstract structure:

$$(21) \quad [D_{[+Spec]} [Card_{[-Spec]} [Agr [Art [Num [N]]]]]]$$

Let me point out just two things about this structure: I assumed that the noun moves to Num and articles are merged in Art. With minor differences, this is consistent with Julien (2005a) and Roehrs (2009a). Importantly, the structure in (21) received further application in this book. I take this to indicate that this structure shows good promise for future investigations. Let us turn to some issues related to agreement.

As is well-known, elements in the noun phrase are subject to morphological concord. For example, determiners, adjectives, and nouns in (21) agree in gender, number, and case. In the course of this book, we also discussed a number of more complex cases where a second nominal is combined to the matrix DP by way of an embedded complex Specifier or right adjunction. In the literature, these types of nominals have not received much attention. We now summarize them briefly focusing on agreement. We will see that all these constructions agree in semantic number but not necessarily in morphological number. The relevant structures will be illustrated here again but in a simplified way.

In the context of capacity readings, we discussed DPs that involve *als* ‘as’ and its null counterpart ALS. To recapitulate, the *als*-nominal in (22a) involves adjunction where *als* is the head of ModP and *Arzt* is an NP complement. I proposed that the adjoined nominal does not contain NumP and as such, the number mismatch with a plural pronoun is only apparent (the plural interpretation follows from the presence of a distributivity operator). In contrast, while the structure in (22b) also contains a ModP, this construction does exhibit concord. I suggested that this *als*-nominal must contain NumP and involves a Specifier in AgrP:

- (22) a. *ihr* [_{ModP} *als*_{Mod} *Arzt*]
 you(PL) as doctor
 ‘you as doctors’
- b. *ein* [_{ModP} *ALS*_{Mod} *Landwirt*] Agr *e_N*
 a farmer
 ‘some farmer’

Let us consider two more complex nominals.

Indefinite pronoun constructions come in different types (Roehrs 2008). The type relevant here is also complex in structure, (23a). As in the first two cases, it also involves a ModP. This modification phrase was argued to involve right adjunction. However, unlike the adjunction case above, this nominal exhibits concord, which implies the presence of NumP. Finally, we discussed a case of morphological disagreement but semantic agreement, (23b). We proposed that the disagreeing nominal is embedded in a complex Specifier in DisP. In order to restrict the interpretation with regard to semantic number, we argued for the presence of NumP:

- (23) a. *jemand* [_{ModP} \emptyset_{Mod} *anderer*]
 somebody different
 ‘somebody different’
- b. *Sie* [_{NumP} *Schwein*] *Dis* *e_N*
 you pig
 ‘you pig’

Let us summarize the properties of these different cases in table 1:

Table 1: Summary of the Constructions and Their Properties

Construction	Structure	Agreement b/w nominals	NumP	Head
<i>als</i> -capacity	adjunction	apparent morphological and semantic disagreement	no NumP (but distributivity OP)	<i>als</i> _{Mod}
ALS-capacity	Specifier	morphological and semantic agreement	NumP	ALS _{Mod}
Indefinite pronoun construction	adjunction	morphological and semantic agreement	NumP	\emptyset_{Mod}
DisP	Specifier	morphological disagreement but semantic agreement	NumP	-

It is interesting to note that all four constructions agree in semantic number, either mediated through NumP or the distributivity operator. Furthermore, morphological concord is either not an issue if NumP is absent in the embedding, or agreement in phi-features holds if NumP is present. The only true exception to the latter generalization is the last case, which involves DisP. Let us briefly speculate why this might be so.

It is clear that the position of the embedded nominal *per se* cannot account for these agreement patterns as both Specifiers and adjuncts may exhibit concord. Rather, it seems to be a property of the head of the embedded nominal that determines the agreement properties. In particular, ALS_{Mod} and \emptyset_{Mod} mediate concord. We also argued that *als*_{Mod} is an operator that may embed an NP complement, as in the case above, but also NumP, as in the case of plural nouns. Note now that unlike the first three cases, the nominal embedded in Spec,DisP does not contain such a head. Thus, while I cannot provide the details of the relevant mechanism here, I would like to suggest that all three Modifier heads mediate concord between the two nominals provided NumP is present. Due to the absence of such a head in the nominal inside Spec,DisP, the latter

does not have to undergo concord with the matrix nominal. Let me turn to the issue of number in more detail.

2.3. *Number Revisited*

As already mentioned in Chapter 7, issues related to number are notoriously difficult. In this section, I return to some of the relevant questions. While I will try to simplify the current system, I will finish this section with some questions for future research.

Recall that I made a differences between morphological and semantic number. I proposed that morphological number stems from NumP and semantic number from an interaction between NumP and the noun. Recall also that the morphological number feature on Num is optional:

$$(24) \quad \text{Num}_{([\alpha\text{PL morph}])} + \text{N}_{[\alpha\text{PL morph}; \beta\text{PL sem}; \alpha = \beta]}$$

These assumptions explained the different interpretations of ordinary nouns with regard to (non-)countability fleshing out (24) as (25a-c):⁴

- (25) a. $\text{Num}_{[+\text{PL morph}]} + \text{N}_{[+\text{PL morph}; +\text{PL sem}]}$ \rightarrow plural count noun
 b. $\text{Num}_{[-\text{PL morph}]} + \text{N}_{[-\text{PL morph}; -\text{PL sem}]}$ \rightarrow singular count noun
 c. $\text{Num} + \text{N}_{[\alpha\text{PL morph}; \beta\text{PL sem}]}$ \rightarrow mass noun

Running the risk of unnecessary repetition, let us point out again that *ein* does not determine number, neither morphological nor semantic. One of our conclusions was that *ein* is indeed semantically vacuous. Let me clarify in more detail what I mean by morphological and semantic number. The following discussion is more tentative but, I believe, no less interesting.

As briefly discussed in Chapter 7, morphological number involves semantically vacuous elements. In a singular context, it is manifested by *ein* (due to REL) and in the plural by an inflection on the noun. As for semantic number, I basically took it to be referential. However, I believe we can develop the notion of semantic number further. That this seems desirable becomes clear in copular clauses. For instance, the clause *er ist Arzt* ‘he is a physician’ allows *ein* to be optionally present. As dicussed in Chapter 6, both variants have very similar interpretations. Most importantly, in both cases, the predicate nominal makes no claim about singularity but rather states a property of the subject pronoun.

Let me tentatively suggest that when the number feature [$\beta\text{PL sem}$] on the noun is specified as [+] or [-] as in (25a-b) above, this simply indicates countability (more on this momentarily). This means that CAP has nothing to do with countability. Furthermore, we can suggest then that referential number does not come from the interaction between NumP and the noun but rather from the presence of higher functional heads such as CardP and/or DP. In fact, this may ultimately have to do with the person feature (Bernstein 2008, Longobardi 2008).

⁴ Note that an interpretation with regard to mass or countability is not, to the same degree, available for all nouns. For instance, role nouns such as *Arzt* ‘doctor’ do not make good mass nouns (presumably due to the fact that they involve human beings, which in ordinary circumstances, are characterized by spatial integrity). For the discussion of countability preferences, see Allan (1980).

Having discussed the different interpretations of nouns with regard to mass and countability, we return to the two different sub-types, that is, kind and role nouns.

In Chapter 7, we argued that *als*-nominals have their own realization operator (*als*) and REL and CAP are not present. In other words, REL and CAP are, at least in principle, optional. Starting with kind nouns, REL, if present, is housed in NumP. Adding these points, we expand (24) as follows:

$$(26) \quad {}^{(REL)}\text{Num}_{([\alpha\text{PL morph}])} + \text{Kind-N}_{[\alpha\text{PL morph}; \beta\text{PL sem}; \alpha = \beta]}$$

Let us try to simplify this analysis.

Note that $(\alpha = \beta)$ is only relevant for count but not mass nouns. Recall now that predication involves membership of an element in a set of ordinary/individual entities. In other words, for a noun to denote a set of entities and, thus, function as a predicate, it must be of the semantic type $\langle e, t \rangle$. As discussed in detail above, de Swart *et al.* (2007) propose that REL is an operator that takes elements of type $\langle e \rangle$ and returns elements of $\langle e, t \rangle$. In other words, REL creates sets of entities (i.e., predicates). Now, it seems clear that nouns under their mass interpretation do not denote ordinary/individual entities. As such, I suggest that REL has nothing to do with a mass interpretation. To be clear, then, both $(\alpha = \beta)$ and REL deal with count but not mass nouns. If this is on the right track, then we might be able to relate REL to $(\alpha = \beta)$. In fact, (26) seems to involve some redundancy.

Note that when the morphological number is specified as [+PL morph] or [-PL morph] as in (25a-b), REL seems to perform the work of $(\alpha = \beta)$; that is, both elements are “individuating” in nature (leading to countability). I take this to be the major work this realization operator does. Expressed again in set-theoretic terms, this type of operator creates a set of countable members. Interestingly, $(\alpha = \beta)$ contains an equal sign. Let us interpret this as an operator that relates morphological number to semantic concepts such as countability. If we now assume that $(\alpha = \beta)$ is not in NP but in NumP, then we can suggest that REL basically functions as an equality operator. Finally, recall that, on the one hand, $(\alpha = \beta)$, formerly REL, is dependent on $[\alpha\text{PL morph}]$ as it has nothing to do with a mass interpretation. On the other, $(\alpha = \beta)$ is optional as it does not occur in *als*-nominals. Let us update (26) as (27):

$$(27) \quad \text{Num}_{([\alpha\text{PL morph}; (\alpha = \beta)])} + \text{Kind-N}_{[\alpha\text{PL morph}; \beta\text{PL sem}]}$$

To be clear, there are two instances of optionality in (27). First, $[\alpha\text{PL morph}]$ is optional to account for the mass/count distinction. Second, $(\alpha = \beta)$ is optional to allow other realization operators to occur in the presence of morphological number (e.g., *als*). Note though that one realization operator must be present for the kind noun to function as a predicate.

Turning to role nouns, they are slightly different. They have two ways to become predicates: an indirect path involving REL (cf. kind nouns) and a direct path involving CAP. Recall that with certain role nouns, REL can bring about an additional emotive/figurative meaning. If REL equals $(\alpha = \beta)$, then CAP cannot be equated to $(\alpha = \beta)$. We also assumed with de Swart *et al.* (2007) that CAP is part of NP.⁵ Furthermore, CAP is optional in that it must be

⁵ Chapters 6 and 7 showed that the assumption of CAP has some explanatory force. Note that if we accept CAP and assume that it is in NP, then number in NumP cannot do the work of a realization operator; that is, number in NumP is just morphological in nature.

present in predicative contexts when the role noun is bare but absent when NumP is projected. The two respective structures are given in (28a) and (28b):

- (28) a. $^{(CAP)}\text{Role-N}_{[\alpha\text{PL morph}; \beta\text{PL sem}]}$
 b. $\text{Num}_{([\alpha\text{PL morph}; (\alpha = \beta)])} + \text{Role-N}_{[\alpha\text{PL morph}; \beta\text{PL sem}]}$

Note that (27) and (28b) are entirely parallel, a welcome result. Returning to *ein*, if what we have said is tenable, then we can claim that *ein* flags $(\alpha = \beta)$ in (27) and (28b) in morphologically singular contexts. There is an important alternative that needs to be addressed now.

Recalling that both CAP and $(\alpha = \beta)$ are optional but mutually exclusive, role nouns with NumP could alternatively have the representation in (29), where $(\alpha = \beta)$ was replaced by CAP:

- (29) $\text{Num}_{([\alpha\text{PL morph}])} + ^{CAP}\text{Role-N}_{[\alpha\text{PL morph}; \beta\text{PL sem}]}$

Just like (28b), (29) is a predicate. Unlike (28b), we seem to be losing the correlation between morphological number and countability in (29): on the one hand, $[\alpha\text{PL morph}]$ is present on Num and $[\alpha\text{PL morph}]$ on N agrees with the value on Num by adjunction; on the other, there is no equality operator and $[\beta\text{PL sem}]$ on N remains unspecified for countability. For reasons of learnability, I would like to keep the above correlation about morphological number and semantic countability.⁶

One way to retain (28b) but rule out (29) is to block CAP by assuming that if $[\alpha\text{PL morph}]$ on N is specified, $[\beta\text{PL sem}]$ on N must be specified too; that is, $(\alpha = \beta)$ must be present at the expense of CAP. In other words, either both values remain unspecified resulting in an element that is neutral with regard to morphological number and semantic countability (CAP is present), or both must be specified ($(\alpha = \beta)$ is present). Notice that this stipulation leads to further questions:

- (i) Is the feature $[\beta\text{PL sem}]$ indeed necessary?
- (ii) If not, is countability a side-effect of the application of realization operators in general?
- (iii) Recalling that pluralia tantum nouns and the pronoun *Sie* ‘you(formal)’ were the main motivation for $[\beta\text{PL sem}]$, how are they, if at all, featurally represented?

Let me point out just one interesting issue. Note that if one were to suggest that the answer is negative to (i) but affirmative to (ii), then we would wind up with bare role nouns being morphologically number-neutral (NumP is absent) but semantically countable (CAP supplies countability). Once again, we would give up the correlation between morphological number and countability.

I will not pursue these interesting but far-reaching questions further here but I am confident that independent of future findings, we will be able to maintain that *ein* does not determine number. Let us conclude this book with some general remarks about the properties that all vacuous elements seem to share.

⁶ Recall that number morphology implies an operator (e.g., *ein* $\rightarrow (\alpha = \beta)$). At the same time, the lack of morphological number does not imply the lack of an operator; that is, CAP can still be present but does not imply the presence of morphological number or countability.

2.4. Expletive Elements more Generally

In the introduction, we discussed *there* in existential constructions and articles with proper names. I followed the literature in assuming that these two elements are expletive elements. Chomsky (1995) pointed out that these types of elements seem to violate the Principle of Full Interpretation. He suggested that the associate noun phrase in existential constructions moves at LF to license the expletive. In other words, a substantive element moves to license a vacuous one. I suggested something similar for the second case. To motivate the movement of the proper name to the article, let us follow Chomsky claiming that all expletives are LF-affixes.

Turning to adjectival inflections and *ein*, this means that these elements also need to be licensed by a contentful element. For adjectives, I suggested in Chapter 2 that the adjective stem moves to provide a host for the inflection. As to *ein*, we can tentatively assume that the relevant operator moves to license *ein*. In other words, *ein* makes an operator visible but gets licensed by it at the same time. Recall also that one of the conclusions of this book was that adjectival inflections and *ein* make different abstract structures visible. Again, let us suggest that this is a general property of all expletives. In other words, I would like to claim that both *there* and the proprial article also indicate abstract structure.

Let us observe now that the expletive and the contentful element involve two positions. Since the expletive is an LF-affix, it must be licensed by movement at LF; that is, the movement is syntactic but covert. To be clear, then, the two positions of the expletive and licenser are syntactically related. Note that in each case, the expletive is the higher of the two elements. For instance, expletive *ein* is at least as high as ArtP but contentful REL is in NumP. As syntactic movement only proceeds upwards, we have the beginnings of an explanation as to why expletives must be in the higher position.⁷

To sum up these tentative remarks, we find two general traits of pleonastic elements: (i) all expletives need to be licensed by another contentful element, and (ii) all expletives and their licensers relate two abstract positions by movement where the higher one is always made visible. I would like to propose that these traits facilitate the acquisition of language. With this in mind, we can claim now that semantically vacuous elements are not an imperfection of language.

⁷ The reason why the contentful part is merged lower in the structure is presumably due to semantico-syntactic factors such as certain assumptions about extended projections (nouns including proper names; adjectives), predicate formation based on different semantic types of certain nouns (CAP vs. REL), and theta-role assignment (the associate in existential constructions). Leaving many details aside, proper names, adjectives, operators, and associate noun phrases are base-generated low in the structure.

References

- Abney, Steven. 1987. The English Noun Phrase in its Sentential Aspect. Doctoral Dissertation, MIT.
- Alexiadou, Artemis. 2004. On the development of possessive determiners: Consequences for DP structure. In Eric Fuß and Carola Trips (eds.) *Diachronic clues to synchronic grammar*, pp. 31-58. Amsterdam: John Benjamins.
- Alexiadou, Artemis. 2005. Possessors and (in)definiteness. *Lingua* 115: 787-819.
- Alexiadou, Artemis, Liliane Haegeman, and Melita Stavrou. 2007. *Noun Phrase in the Generative Perspective*. Berlin: Mouton de Gruyter.
- Alexiadou, Artemis, Gianina Iordăchioaia & Florian Schäfer. 2011. Scaling the variation in Romance and Germanic nominalizations. In Petra Sleeman & Harry Perridon (eds.) *The Noun Phrase in Romance and Germanic: Structure, variation, and change*, pp. 25-40. Amsterdam: John Benjamins.
- Allan, Keith. 1980. Nouns and Countability. *Language* 56 (3): 541-67.
- Anderson, Mona. 1983-84. Prenominal Genitive NPs. *The Linguistic Review* 3: 1-24.
- Barbiers, Sjef. 2005. Variation in the morphosyntax of *one*. *Journal of Comparative Germanic Linguistics* 8: 159-183.
- Barbiers, Sjef. 2008. Microvariation in syntactic doubling – an introduction. In Sjef Barbiers, Olaf Koenenman, Marika Lekakou & Margreet van der Ham (eds.) *Microvariation in Syntactic Doubling*. [Syntax and Semantics 36], pp. 1-34. United Kingdom: Emerald.
- Bennis, Hans, Norbert Corver & Marcel den Dikken. 1998. Predication in nominal phrases. *The Journal of Comparative Germanic Linguistics* 1: 85-117.
- Bernstein, Judy B. 1993. Topics in the Syntax of Nominal Structure across Romance. Doctoral Dissertation, The City University of New York.
- Bernstein, Judy B. 2008. English *th*-Forms. In Henrik Høeg Müller & Alex Klinge (eds.) *Essays on Nominal Determination. From morphology to discourse management*, pp. 213-32. Amsterdam: John Benjamins.
- Bhatt, Christa. 1990. *Die syntaktische Struktur der Nominalphrase im Deutschen*. [Studien zur deutschen Grammatik 38]. Tübingen: Gunter Narr Verlag.
- Bisle-Müller, Hansjörg. 1991. *Artikelwörter im Deutschen. Semantische und pragmatische Aspekte ihrer Verwendung*. Tübingen: Niemeyer.
- Boeckx, Cedric. 2002. On the co-occurrence of expletives and definite subjects in Germanic. In Werner Abraham and C. Jan-Wouter Zwart (eds.) *Issues in Formal German(ic) Typology*, pp. 45-64. Amsterdam: Benjamins.
- Borer, Hagit. 2005. *Structuring Sense*, vol I. Oxford: Oxford University Press.
- Börjars, Kersti. 1998. *Feature Distribution in Swedish Noun Phrases*. Publications of the Philological Society 32. Boston: Blackwell.
- Bošković, Željko. 2004. Be careful where you float your quantifiers. *Natural Language & Linguistic Theory* 22 (4): 681-742.
- Bosse, Solveig. 2009. Split DPs in (Northern) German as Derived Structures. *Interdisciplinary Journal for Germanic Linguistics and Semiotic Analysis* 14 (2): 251-287.
- Bowers, John. 1988. Extended X-Bar Theory, the ECP, and the Left Branch Condition. In *Proceedings of the West Coast Conference on Formal Linguistics* 7: 47-62. Stanford Linguistics Association, Stanford University.
- Bowers, John. 1993. The Syntax of Predication. *Linguistic Inquiry* 24 (4): 591-656.

- Cardinaletti, Anna & Giuliana Giusti. 2006. The syntax of quantified phrases and quantitative clitics. In Everaert, Martin and Henk van Riemsdijk (eds.) *The Blackwell Companion to Syntax*. (Vol V), pp. 23-93. Oxford: Blackwell.
- Chomsky, Noam. 1970. Remarks on nominalization. In R. Jacobson & P. Rosenbaum (eds.) *Readings in English Transformational Grammar*, pp. 184-221. Waltham, MA, Ginn & Co.
- Chomsky, Noam. 1986. *Knowledge of Language*. New York: Praeger.
- Chomsky, Noam. 1991. Some Notes on Economy of Derivation and Representation. [reprinted in Noam Chomsky. 1995. *The Minimalist Program*, pp. 129-166.]
- Chomsky, Noam. 1995. *Minimalist Program*. Cambridge: MIT Press.
- Chomsky, Noam. 2000. Minimalist Inquiries: The Framework. In Roger Martin, David Michaels & Juan Uriagereka (eds.) *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, pp. 89-155. Cambridge, Mass.: MIT Press.
- Cinque, Guglielmo. 1994. On the Evidence for Partial N-Movement in the Romance DP. In Guglielmo Cinque, Jan Koster, Jean-Yves Pollock, Luigi Rizzi & Raffaella Zanuttini (eds.) *Paths Towards Universal Grammar. Studies in Honor of Richard S. Kayne*, pp. 85-110. Georgetown University Press.
- Cinque, Guglielmo. 2010. *The Syntax of Adjectives. A Comparative Study*. Cambridge, MA: MIT Press.
- Corbett, Greville G. 2000. *Number*. Cambridge: Cambridge University Press.
- Corver, Norbert. 1991. Evidence for DegP. *Proceedings of NELS 21*: 33-47.
- Corver, Norbert. 1997. The Internal Structure of the Dutch Extended Adjectival Projection. *Natural Language and Linguistic Theory* 15: 289-368.
- Corver, Norbert. 2003. A Note on Micro-dimensions of Possession in Dutch and Related Languages. In Jan Koster and Henk van Riemsdijk (eds.) *Germania et alia. A linguistic Webschrift for Hans den Besten*. [available at: <http://odur.let.rug.nl/koster/DenBesten/contents.htm>]
- Corver, Norbert & Marjo van Koppen. 2010. Ellipsis in Dutch possessive noun phrases: a micro-comparative approach. *The Journal of Comparative Germanic Linguistics* 13(2): 99-140.
- Corver, Norbert & Marjo van Koppen. 2011. Micro-diversity in Dutch interrogative DPs. A case study on the (dis)continuous *wat voor 'n N*-construction. In Petra Sleeman & Harry Perridon (eds.) *The Noun Phrase in Romance and Germanic: Structure, variation, and change*, pp. 57-87. Amsterdam: John Benjamins.
- Crisma, Paola. 1999. Nominals without the article in the Germanic languages. *Rivista di Grammatica Generativa* 24: 105-125.
- Delfitto, Denis & Jan Schroten. 1991. Bare Plurals and the Number Affix in DP. *Probus* 3(2): 155-85.
- Delorme, Evelyne & Ray C. Dougherty. 1972. Appositive NP Constructions: *we, the men; we men; I, a man*; ETC. *Foundations of Language* 8: 2-29.
- Delsing, Lars-Olof. 1993. *The Internal Structure of Noun Phrases in the Scandinavian Languages. A Comparative Study*. Doctoral Dissertation, University of Lund.
- Delsing, Lars-Olof. 2003. Syntaktisk variation i skandinaviska nominalfraser. In Øystein Alexander Vangsnes, Anders Holmberg, and Lars-Olof Delsing (eds.) *Dialektsyntaktiska studier av den nordiska nominalfrasen*, pp. 11-64. Oslo: Novus.

- Demske, Ulrike. 2001. *Merkmale und Relationen: Diachrone Studien zur Nominalphrase des Deutschen*. Berlin and New York: Walter de Gruyter.
- Déprez, Viviane. 2005. Morphological number, semantic number and bare nouns. *Lingua* 115: 857-883.
- Diesing, Molly. 1992. *Indefinites*. Cambridge: MIT Press.
- Dikken, Marcel den. 1995. Copulas. Paper presented at GLOW 18, Tromsø. Unpublished manuscript, Vrije Universiteit Amsterdam/HIL.
- Dikken, Marcel den. 2006. *Relators and Linkers. The Syntax of Predication, Predicate Inversion, and Copulas*. Cambridge: MIT Press.
- Dikken, Marcel den & Pornsiri Singhapreecha. 2004. Complex Noun Phrases and Linkers. *Syntax* 7(1): 1-54.
- Duden. 1995. *Die Grammatik*. vol. 4. Dudenverlag.
- Duden. 2007. *Richtiges und gutes Deutsch*. vol. 9. Dudenverlag.
- Dürscheid, Christa. 2002. "Polemik satt und Wahlkampf pur" – Das postnominale Adjektiv im Deutschen. *Zeitschrift für Sprachwissenschaft* 21 (1): 57-81.
- Eichhoff, Jürgen. 1993. "Ich bin ein Berliner": A History and a Linguistic Clarification. *Monatshefte* 85 (1): 71-80.
- Emonds, Joseph E. 1987. The invisible Category Principle. *Linguistic Inquiry* 18: 613-632.
- Esau, Helmut. 1973. Form and Function of German Adjectival endings. *Folia Linguistica* 6 (1/2): 136-45.
- Fanselow, Gisbert. 1988. Aufspaltung von NPn und das Problem der "freien" Wortstellung. *Linguistische Berichte* 114: 91-113.
- Fanselow, Gisbert, and Damir Čavar. 2002. Distributed deletion. In *Theoretical Approaches to Universals*, ed. A. Alexiadou, 65–107. Amsterdam: John Benjamins.
- Felix, Sascha W. 1990. The Structure of functional categories. *Linguistische Berichte* 125: 46-71.
- Fintel, Kai von & Sabine Iatridou. 2007. Anatomy of a Modal Construction. *Linguistic Inquiry* 38 (3): 445-483.
- Fiva, Toril. 1985. NP-Internal Chains in Norwegian. *Nordic Journal of Linguistics* 8 (1): 25-47.
- Fodor, Janet Dean & Ivan A. Sag. 1982. Referential and Quantificational Indefinites. *Linguistics and Philosophy* 5: 335-398.
- Gallmann, Peter. 1996. Die Steuerung der Flexion in der DP. *Linguistische Berichte* 164: 283-314.
- Gallmann, Peter. 1998. Case Underspecification in Morphology, Syntax and the Lexicon. In Artemis Alexiadou & Chris Wilder (eds.) *Possessors, Predicates and Movement in the Determiner Phrase*, pp. 141-175. Amsterdam: John Benjamins Publishing Company.
- Gallmann, Peter. 2004. Feature Sharing in DPs. In Gereon Müller, Lutz Gunkel, and Gisela Zifonun (eds.) *Explorations in Nominal Inflection*. Berlin: Mouton de Gruyter. pp. 121-160.
- Gavruseva, Elena. 2000. On the syntax of possessor extraction. *Lingua* 110: 743-772.
- Giusti, Giuliana. 1997. The categorial status of determiners. In Liliane Haegeman (ed.) *The New Comparative Syntax*, pp. 95-123. London and New York: Longman.
- Giusti, Giuliana. 2002. The Functional Structure of Noun Phrases. A Bare Phrase Structure Approach. In Guglielmo Cinque (ed.) *Functional Structure in DP and IP: The Cartography of Syntactic Structures*. vol.1, pp. 54-90. Oxford: Oxford University Press.
- Grewendorf, Günther. 2002. *Minimalistische Syntax*. Tübingen and Basel: A. Francke Verlag.

- Griesbach, Heinz & Dora Schulz. 1965. *Grammatik der deutschen Sprache*. (3rd ed.) München: Max Hueber Verlag.
- Grimshaw, Jane. 1991. Extended Projections. Ms., Brandeis University.
- Haeberli, Eric. 2002. *Features, categories and the syntax of A-positions*. Dordrecht: Kluwer.
- Haider, Hubert. 1988. Die Structure der deutschen NP. *Zeitschrift für Sprachwissenschaft* 7 (1): 32-59.
- Haider, Hubert. 1993. *Deutsche Syntax – Generativ*. Tübingen: Narr.
- Haiman, John & Paola Benincà. 1992. The Rhaeto-Romance languages. London: Routledge.
- Halle, Morris & Alec Marantz. 1993. Distributed Morphology and the Pieces of Inflection. In Kenneth Hale & Samuel K. Keyser (eds.) *The View from Building 20. Essays in Honor of Sylvain Bromberger*, pp. 111-176. Cambridge: MIT Press.
- Halle, Morris & Alec Marantz. 2008. Clarifying “Blur”: Paradigms, defaults, and inflectional classes. In Asaf Bachrach & Andrew Nevins (eds) *Inflectional Identity*, pp. 55-72. Oxford: OUP.
- Hallman, Peter. 2004. NP-interpretation and the structure of predicates. *Language* 80(4): 707-47.
- Harbert, Wayne. 2007. *The Germanic Languages*. Cambridge: Cambridge University Press.
- Harley, Heidi. 2008. When is a Syncretism more than a Syncretism? Impoverishment, Metasyncretism, and Underspecification. In Daniel Harbour, David Adger, and Susana Béjar, (eds.) *Phi theory: Phi-features across Modules and Interfaces*, pp. 251-294. Oxford: OUP.
- Harley, Heidi & Elizabeth Ritter. 2002. Person and number in pronouns: A feature-geometric analysis. *Language* 78(3): 482-526.
- Haspelmath, Martin. 1999. Explaining article-possessor complementarity: economic motivation in noun phrase syntax. *Language* 75(2): 227-243.
- Hawkins, John. 1978. *Definiteness and indefiniteness: A study in reference and grammaticality prediction*. London: Croom Helm.
- Hazout, Ilan. 2004. The Syntax of Existential Constructions. *Linguistic Inquiry* 35(3): 393-430.
- Heck, Fabian, Gereon Müller & Jochen Trommer. 2008. A phase-based approach to Scandinavian definiteness marking. In Charles B. Chang and Hannah J. Haynie (eds.) *Proceedings of WCCFL 26*, pp. 226-233. Somerville, MA: Cascadia Proceedings Project.
- Heim, Irene & Angelika Kratzer. 1998. *Semantics in Generative Grammar*. Cambridge, Mass.: Blackwell.
- Helbig, Gerhard & Joachim Buscha. 2001. *Deutsche Grammatik. Ein Handbuch für den Ausländerunterricht*. Berlin und München: Langenscheidt.
- Higginbotham, James. 1987. Indefiniteness and Predication. In Eric J. Reuland & Alice G.B. ter Meulen (eds.) *The Representation of (In)definiteness*, pp. 43-70. Cambridge: MIT Press.
- Hoekstra, Teun. 1984. *Transitivity: Grammatical Relations in Government-Binding Theory*. Dordrecht: Foris.
- Hole, Daniel & Gerson Klumpp. 2000. Definite type and indefinite token: the article *son* in colloquial German. *Linguistische Berichte* 182: 231-244.
- Hoof, Hanneke van. 2006. Split Topicalization. In Martin Everaert & Henk van Riemsdijk (eds.) *The Blackwell companion to syntax*, Vol. IV, pp. 410-465. Oxford: Blackwell.
- Hurford, James R. 2003. The interaction between numerals and nouns. In Frans Plank (ed.) *Noun Phrase Structure in the Languages of Europe* [Empirical Approaches to Language Typology, EUROTYP 20-7], pp. 561-620. Berlin: Mouton de Gruyter.

- Jackendoff, Ray S. 1977. *X' Syntax: A Study of Phrase Structure*. Cambridge: MIT Press.
- Julien, Marit. 2002. Determiners and Word Order in Scandinavian DPs. *Studia Linguistica* 56: 264-315.
- Julien, Marit. 2005a. *Nominal Phrases from a Scandinavian Perspective*. Amsterdam: John Benjamins.
- Julien, Marit. 2005b. Possessor licensing, definiteness and case in Scandinavian. In Marcel den Dikken & Christina Tortora (eds.) *The Function of Function Words and Functional Categories*, pp. 217-49. Amsterdam: John Benjamins Publishing Company.
- Julien, Marit & Dorian Roehrs. 2012. Constructions off the Beaten Track: Revisiting the Inflections on Attributive Adjectives in German and Norwegian. Paper presented at *Adjectives in Germanic and Romance: Variation and Change* (University of Amsterdam).
- Kiss, T. 1995. *Merkmale und Repräsentationen. Eine Einführung in die deklarative Grammatikanalyse*. Opladen: Westdeutscher Verlag.
- Klima, Edward S. 1964. Negation in English. In Jerry Fodor and Jerrold Katz (eds.) *The structure of language: Readings in the philosophy of language*, pp. 246-323. Englewood Cliffs, NJ: Prentice Hall.
- Kratzer, Angelika. 1995. Stage-level and Individual-level Predicates. In Gregory N. Carlson & Francis Jeffry Pelletier (eds.) *The Generic Book*, pp. 125-175. Chicago: The University of Chicago Press.
- Krause, Cornelia. 1999. Two Notes on Prenominal Possessors in German. *MIT Working Papers in Linguistics* 33: 191-217.
- Kripke, Saul A. 1971. Identity and necessity. In Milton K. Munitz (ed.) *Identity and individuation*, pp. 135-164. New York: New York University Press.
- Kupferman, Lucien. 1991. Structure événementielle de l'alternance un/Ø devant les noms humains attributs. *Langages* 101: 52-75.
- Lasnik, Howard & Juan Uriagereka with Cedric Boeckx. 2005. *A course in minimalist syntax. Foundations and Prospects*. Malden, Mass.: Blackwell.
- Lawrenz, Birgit. 1993. Apposition. Begriffsbestimmung und syntaktischer Status. Tübingen: Gunter Narr Verlag.
- Leu, Thomas. 2008a. The Internal Syntax of Determiners. Doctoral Dissertation, New York University.
- Leu, Thomas. 2008b. *What for Internally*. *Syntax* 11(1): 1-25.
- Link, Godehard. 1998. Ten years of research on plurals – where do we stand? In Fritz Hamm & Erhard Hinrichs (eds.) *Plurality and quantification*. [Studies in Linguistics and Philosophy 69], pp. 19-54. Dordrecht: Kluwer.
- Löbel, Elisabeth. 1990a. D and Q als funktionale Kategorien in der Nominalphrase. *Linguistische Berichte* 127: 232-264.
- Löbel, Elisabeth. 1990b. Typologische Aspekte funktionaler Kategorien in der Nominalphrase. *Zeitschrift für Sprachwissenschaft* 9: 135-169.
- Löbel, Elisabeth. 1991. Apposition und das Problem der Kasuszuweisung und Adjazenzbedingung in der Nominalphrase des Deutschen. In Gisbert Fanselow & Sascha Felix (eds.) *Strukturen und Merkmale syntaktischer Kategorien*, pp. 1-32. Tübingen: Gunter Narr Verlag.
- Lockwood, W. B. 1995. *Lehrbuch der modernen jiddischen Sprache*. Hamburg: Helmut Buske Verlag.

- Lohrmann, Susanne. 2010. The Structure of the DP and its Reflex in Scandinavian. Ph.D. dissertation, University of Stuttgart.
- Lohrmann, Susanne. 2011. A unified structure for Scandinavian DPs. In Petra Sleeman & Harry Perridon (eds.) *The Noun Phrase in Romance and Germanic: Structure, variation, and change*, pp. 111-125. Amsterdam: John Benjamins.
- Longobardi, Giuseppe. 1994. Reference and Proper Names: A Theory of N-Movement in Syntax and Logical Form. *Linguistic Inquiry* 25 (4): 609-665.
- Longobardi, Giuseppe. 2008. Reference to individuals, person, and the variety of mapping parameters. In Henrik Høeg Müller & Alex Klinge (eds.) *Essays on Nominal Determination. From morphology to discourse management*, pp. 189-211. Amsterdam: John Benjamins.
- Maling, Joan & Rex A. Sprouse. 1995. Structural Case, specifier-head relations, and the case of predicate NPs. In Hubert Haider, Susan Olsen & Sten Vikner (eds.) *Studies in Comparative Germanic Syntax*, pp. 167-186. Dordrecht: Kluwer.
- Matushansky, Ora. 2002. A Beauty of a Construction. In Line Mikkelsen & Christopher Potts (eds.) *Proceedings of the 21st West Coast Conference on Formal Linguistics*, pp. 264-277. Somerville, MA: Cascadilla.
- Matushansky, Ora, and Benjamin Spector. 2005. Tinker, tailor, soldier, spy. In Emar Maier, Corien Bary & Janneke Huitink (eds.) *Proceedings of Sinn & Bedeutung* 9, pp. 241-255. Nijmegen: NCS.
- McGinnis, Martha. 2005. On markedness asymmetries in person and number. *Language* 81(3): 699-718.
- Milsark, Gary. 1974. Existential Sentences in English. Doctoral Dissertation, MIT.
- Müller, Gereon. 2002. Remarks on nominal inflection in German. In Ingrid Kaufmann & Barbara Stiebels (eds.) *More than Words. A Festschrift for Dieter Wunderlich*. Berlin: Akademie Verlag. pp. 113-145.
- Müller, Michael. 1986. Zur Verbindbarkeit von Determinantien und Quantoren. In Heinz Vater (ed.) *Zur Syntax der Determinantien*, pp. 33-55. Tübingen: Gunter Narr Verlag.
- Munn, Alan & Cristina Schmitt. 2005. Number and indefinites. *Lingua* 115: 821-855.
- Neeleman, Ad and Hans van de Koot. 2006. Syntactic Haplology. In Martin Everaert and Henk van Riemsdijk (eds.) *The Blackwell Companion to Syntax*, Vol IV, pp. 685-710. Oxford: Blackwell Publishers.
- Neeleman, Ad, Hans van de Koot & Jenny Doetjes. 2004. Degree expressions. *The Linguistic Review* 21: 1-66.
- Nevins, Andrew. 2011. Marked Targets versus Marked Triggers and Impoverishment of the Dual. *Linguistic Inquiry* 42 (3): 413-444.
- Olsen, Susan. 1989a. AGR(eement) in the German Noun Phrase. In Christa Bhatt, Elisabeth Löbel & Claudia Schmidt (eds.) *Syntactic Phrase Structure Phenomena in Noun Phrases and Sentences*, pp. 39-49. Amsterdam: Benjamins.
- Olsen, Susan. 1989b. Das Possessivum: Pronomen, Determinans oder Adjektiv? *Linguistische Berichte* 120: 133-153.
- Olsen, Susan. 1991a. AGR(eement) und Flexion in der deutschen Nominalphrase. In Gisbert Fanselow & Sascha Felix (eds.) *Strukturen und Merkmale syntaktischer Kategorien*, pp. 51-70. Tübingen: Gunter Narr Verlag.

- Olsen, Susan. 1991b. Die deutsche Nominalphrase as “Determinansphrase”. In Susan Olsen & Gisbert Fanselow (eds.) *DET, COMP und INFL. Zur Syntax funktionaler Kategorien und grammatischer Funktionen*, pp. 35-56. Tübingen: Niemeyer.
- Oomen, Ingelore. 1977. *Determination bei generischen, definiten und indefiniten Beschreibungen im Deutschen*. Tübingen: Niemeyer.
- Ott, Dennis. 2011a. Local Instability. The Syntax of Split Topics. Doctoral Dissertation, Harvard University.
- Ott, Dennis. 2011b. Diminutive-formation in German. *The Journal of Comparative Germanic Linguistics* 14 (1): 1-46.
- Ott, Dennis & Andreea Nicolae. 2010. The Syntax and Semantics of Genus-species Splits in German. Ms, Harvard University. [available at: <http://ling.auf.net/lingBuzz/001071>]
- Pafel, Jürgen. 1995. Kinds of Extraction from Noun Phrases. In Uli Lutz & Jürgen Pafel (eds.) *On Extraction and Extraposition in German*, pp. 145-177. Amsterdam: John Benjamins.
- Pafel, Jürgen. 2005. *Quantifier Scopepe in German*. [Linguistik Aktuell/Linguistic Today-Series 84]. Amsterdam: John Benjamins Publishing Company.
- Panagiotidis, Phoevos. 2002. *Pronouns, Clitics and Empty Nouns. ‘Pronominality’ and licensing in syntax*. Amsterdam: John Benjamins.
- Paul, Hermann, Peter Wiehl, and Siegfried Grosse. 1989. *Mittelhochdeutsche Grammatik*. (23rd ed.). Tübingen: Max Niemeyer Verlag.
- Perlmutter, David M. 1970. On the article in English. In Manfred Bierwisch & Karl Erich Heidolph (eds.) *Progress in Linguistics. A Collection of Papers*, pp. 233-248. The Hague: Mouton.
- Pollard, C. & I. A. Sag. 1994. *Head-Driven Phrase-Structure Grammar*. Chicago: The University of Chicago Press.
- Postal, Paul M. 1966. On the so-called pronouns in English, in F. Dinneen (ed.) *Nineteenth Monograph on Language and Linguistics*, Georgetown University Press, Washington, D.C., pp. 201-24.
- Rauh, Gisa. 2003. Warum wir Linguisten “euch Linguisten”, aber nicht “sie Linguisten” akzeptieren können. *Linguistische Berichte* 196: 389-424.
- Rauh, Gisa. 2004. Warum “Linguist” in “ich/du Linguist” kein Schimpfwort sein muß. *Linguistische Berichte* 197: 77-105.
- Reershemius, Gertrud. 1997. *Biographisches Erzählen auf Jiddisch. Grammatische und diskursanalytische Untersuchungen*. Tübingen: Niemeyer.
- Reis, Marga. 1977. *Präsuppositionen und Syntax*. Tübingen: Niemeyer.
- Riemsdijk, Henk van. 1989. Movement and Regeneration. In Paola Benincà (ed.) *Dialect Variation and the Theory of Grammar*, pp. 105-136. Dordrecht: Foris Publications.
- Riemsdijk, Henk van. 1998a. Head Movement and Adjacency. *Natural Language and Linguistic Theory* 16: 633-678.
- Riemsdijk, Henk van. 1998b. Categorical Feature Magnetism: The endocentricity and distribution of projections. *The Journal of Comparative Germanic Linguistics* 2: 1-48.
- Riemsdijk, Henk van. 2005. Silent nouns and the spurious indefinite article in Dutch. In Mila Vulchanova and Tor A. Åfarli (eds.) *Grammar & Beyond: Essays in honor of Lars Hellan*, pp. 163-178. Oslo: Novus Press.
- Roehrs, Dorian. 2005. Pronouns are Determiners After All. In Marcel den Dikken & Christina Tortora (eds.) *The Function of Function Words and Functional Categories*, pp. 251-285. Amsterdam: John Benjamins.

- Roehrs, Dorian. 2006a. The Morpho-Syntax of the Germanic Noun Phrase: Determiners MOVE into the Determiner Phrase. Doctoral Dissertation, Indiana University.
- Roehrs, Dorian. 2006b. Pronominal Noun Phrases, Number Specifications, and Null Nouns. In Jutta M. Hartmann & László Molnárfi (eds.) *Comparative Studies in Germanic Syntax: From Afrikaans to Zurich German*, pp. 143-180. Amsterdam: John Benjamins.
- Roehrs, Dorian. 2008. Something Inner- and Cross-linguistically Different. *The Journal of Comparative Germanic Linguistics* 11 (1): 1-42.
- Roehrs, Dorian. 2009a. *Demonstratives and definite articles as nominal auxiliaries*. Amsterdam: John Benjamins.
- Roehrs, Dorian. 2009b. Inflectional Parallelism with German Adjectives. *Interdisciplinary Journal for Germanic Linguistics and Semiotic Analysis* 14 (2): 289-326
- Roehrs, Dorian. 2010. Demonstrative-reinforcer Constructions. *The Journal of Comparative Germanic Linguistics* 13 (3): 225-268.
- Roehrs, Dorian. 2011a. Determiner Systems in Germanic: Definite Articles and Demonstratives. Ms., University of North Texas.
- Roehrs, Dorian. 2011b. Split NPs. Ms., University of North Texas (a preliminary version is available on LingBuzz).
- Roehrs, Dorian. 2011c. Poessessives as Extended Projections. Ms., University of North Texas (a preliminary version is available on LingBuzz).
- Roehrs, Dorian. 2011d. Possessives: Yiddish vs. Norwegian. Paper presented at the 26th Comparative Germanic Syntax Workshop (University of Amsterdam).
- Roehrs, Dorian. 2011e. Indefinite Demonstrative Structures in West Germanic. Paper presented at the 3rd annual DFW Metroplex Linguistics conference (University of North Texas).
- Roehrs, Dorian. (to appear). Complex Determiners: A Case Study of German *ein jeder*. *Interdisciplinary Journal for Germanic Linguistics and Semiotic Analysis*.
- Roehrs, Dorian. in preparation a. Toward Explaining the Head-Final Filter. Ms., University of North Texas (a preliminary version is available on LingBuzz).
- Roehrs, Dorian. in preparation b. Floating Quantifiers in Predicative Clauses. Ms., University of North Texas.
- Roehrs, Dorian & Marit Julien. 2012. Attributive Adjectives in German and Norwegian: Two Types of Weak Endings. Paper presented at the 27th *Comparative Germanic Syntax Workshop* (Yale University).
- Rubin, Edward J. 1996. The Transparent Syntax and Semantics of Modifiers. *Proceedings of the 15th WCCFL*, pp. 429-439.
- Sauerland, Uli. 1996. The Late Insertion of Germanic Inflection. Ms., MIT.
- Schlenker, Philippe. 1999. La flexion de l'adjectif en allemand: la morphologie de haut en bas. *Recherches Linguistiques de Vincennes* 28: 115-132.
[<http://rlv.revues.org/document1216.html>]
- Schoorlemmer, Erik. 2009. Agreement, Dominance and Doubling. The Morphosyntax of DP. Doctoral Dissertation, University of Leiden, the Netherlands [published by Utrecht: LOT].
- Schoorlemmer, Erik. (to appear). Definiteness marking in Germanic: morphological variations on the same syntactic theme. *The Journal of Comparative Germanic Linguistics*.
- Sigurðsson, Halldór Ármann. 2006. The Icelandic Noun Phrase: Central traits. *Arkiv för nordisk filologi* 121: 193-236.

- Sternefeld, Wolfgang. 2008a. *Syntax. Eine morphologisch motivierte generative Beschreibung des Deutschen*. Vol I. Tübingen: Stauffenberg.
- Sternefeld, Wolfgang. 2008b. *Syntax. Eine morphologisch motivierte generative Beschreibung des Deutschen*. Vol II. Tübingen: Stauffenberg.
- Stowell, Tim. 1989. Subjects, Specifiers, and X-Bar Theory. In Mark R. Baltin & Anthony S. Kroch (eds.) *Alternative Conceptions of Phrase Structure*, pp. 232-262. Chicago: The University of Chicago Press.
- Stowell, Tim. 1991. Determiners in NP and DP. In Katherine Leffel & Denis Bouchard (eds.) *Views on Phrase Structure*, pp. 37-56, Kluwer, Netherlands.
- Svenonius, Peter. 1993a. The Structural Location of the Attributive Adjective. In Erin Duncan, Donka Farkas & Philip Spaelti (eds.) *The Proceedings of the Twelfth WCCFL*, pp. 439-454. Stanford Linguistics Association.
- Svenonius, Peter. 1993b. Selection, Adjunction, and Concord in the DP. *Studia Linguistica* 47 (2), 198-220.
- Swart, Henriëtte de, Yoad Winter, and Joost Zwarts. 2005. Bare Predicate Nominals in Dutch. In Emar Maier, Corien Bary & Janneke Huitink (eds.) *Proceedings of Sinn & Bedeutung 9*, pp. 446-460. Nijmegen: NCS.
- Swart, Henriëtte de, Yoad Winter, and Joost Zwarts. 2007. Bare Nominals and Reference to Capacities. *Natural Language & Linguistic Theory* 25 (1): 195-222.
- Szabolsci, Anna. 1994. The Noun Phrase. In Ferenc Kiefer & Katalin É. Kiss (eds.) *Syntax and Semantics 27. The Syntactic Structure of Hungarian*, pp. 179-274, San Diego: Academic Press.
- Tappe, Hans-Thilo. 1989. A Note on Split Topicalization in German. In Christa Bhatt, Elisabeth Löbel & Claudia Schmidt (eds.) *Syntactic Phrase Structure Phenomena in Noun Phrases and Sentences*, pp. 159-179. Amsterdam: John Benjamins Publishing Company.
- Thráinsson, Höskuldur. 1994. Icelandic. In Ekkehard König and Johan van der Auwera (eds.) *The Germanic Languages*, pp. 142-89. New York: Routledge.
- Thráinsson, Höskuldur. 2007. *The Syntax of Icelandic*. Cambridge: Cambridge University Press.
- Vater, Heinz. 1982. Der „unbestimmte“ Artikel als Quantor. In Werner Welte (ed.) *Sprachtheorie und Angewandte Linguistik: Festschrift für Alfred Wollmann zum 60. Geburtstag*, pp. 67-74. Tübingen: Narr.
- Vater, Heinz. 1984. Determinantien und Quantoren im Deutschen. *Zeitschrift für Sprachwissenschaft* 3(1): 19-42.
- Vater, Heinz. 1985. Determinantien und Pronomina. In Angelika Redder (ed.) *Deutsche Grammatik II. Osnabrücker Beiträge zur Sprachtheorie* 30, pp. 107-126. Osnabrück: Universität Osnabrück.
- Vater, Heinz. 1991. Determination in the DP. In Susan Olsen & Gisbert Fanselow (eds.) *DET, COMP und INFL. Zur Syntax funktionaler Kategorien und grammatischer Funktionen*, pp. 15-34. Tübingen: Niemeyer.
- Vater, Heinz. 2000. "Pronominantien" – oder: Pronomina sind Determinantien. In Rolf Thieroff, Matthias Tamrat, Nanna Fuhrhop & Oliver Teuber (eds.) *Deutsche Grammatik in Theorie und Praxis*, pp. 185-99. Tübingen: Max Niemeyer Verlag.
- Vater, Heinz. 2002. The word class 'Article'. In D. Alan Cruse, Franz Hundsnurscher, Michael Job & Peter Rolf Lutzeier (eds.) *Lexikologie: Ein internationales Handbuch zur Natur und Struktur von Wörtern und Wortschätzen*, (Vol. 1), pp. 621-28. Berlin: de Gruyter.

- Velde, Freek van de. 2011. Anaphoric adjectives becoming determiners. In Petra Sleeman & Harry Perridon (eds.) *The Noun Phrase in Romance and Germanic: Structure, variation, and change*, pp. 241-256. Amsterdam: John Benjamins.
- Vergnaud, Jean-Roger & Maria Luisa Zubizarreta. 1992. The Definite Determiner and the Inalienable Constructions in French and English. *Linguistic Inquiry* 23(4): 595-652.
- Watanabe, Akira. 2006. Functional Projections of Nominals in Japanese: Syntax of Classifiers. *Natural Language and Linguistic Theory* 24(1): 241-306.
- Wegener, Heide. 1995. *Die Nominalflexion des Deutschen – verstanden als Lerngegenstand*. Tübingen: Niemeyer.
- Weiß, Helmut. 2008. The Possessor that Appears Twice. Variation, Structure and Function of Possessive Doubling in German. In Sjef Barbiers, Olaf Koenenman, Marika Lekakou & Margreet van der Ham (eds.) *Microvariation in Syntactic Doubling*, pp. 381-401. United Kingdom: Emerald.
- Weinreich, Uriel. 1999. *College Yiddish*. (6th ed.) New York City: YIVO Institute for Jewish Research.
- Wiese, Heike & Joan Maling. 2005. Beers, kaffi, and schnaps: Different grammatical options for Restaurant Talk coercions in three Germanic languages. *Journal of Germanic Linguistics* 17(1): 1-38.
- Wiese, Richard. 1996. *The Phonology of German*. Oxford: Oxford University Press.
- Williams, Edwin S. 1982. Another Argument that Passive is Transformational. *Linguistic Inquiry* 13(1): 160-3.
- Winter, Yoad. 2005. On some problems of (in)definiteness within flexible semantics. *Lingua* 115: 767-786.
- Wood, Johanna L. 2007. Demonstratives and possessives. In Elisabeth Stark, Elisabeth Leiss, and Werner Abraham (eds) *Nominal determination. Typology, context constraints, and historical emergence*, pp. 339-361. Amsterdam: John Benjamins.
- Zamparelli, Roberto. 2000. *Layers in the Determiner Phrase*. New York: Garland Publishing.
- Zamparelli, Roberto. 2005. Introduction: some questions about (in)definiteness. *Lingua* 115: 759-766.
- Zamparelli, Roberto. 2008. Bare predicate nominals in Romance languages. In Henrik Høeg Müller & Alex Klinge (eds.) *Essays on Nominal Determination. From morphology to discourse management*, pp. 101-130. Amsterdam: John Benjamins.
- Zeijlstra, Hedde. 2011. On the syntactically complex status of negative indefinites. *The Journal of Comparative Germanic Linguistics* 14 (2): 111-138.
- Zimmermann, Malte. 2011. On the functional architecture of DP and the feature content of pronominal quantifiers in Low German. *The Journal of Comparative Germanic Linguistics* 14 (3): 203-40.
- Zwicky, Arnold M. 1986. German adjective agreement in GPSG. *Linguistics* 24: 957-990.