"Semantically Vacuous Elements in German: Adjectival Inflections and the Article *ein*"

(provisional title)

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Table of Contents

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 topics some 25 years ago when I started working as a Teaching Assistant in the United States. I have been fascinated by these phenomena ever since. A couple of years ago, this interest was strongly piqued again 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 family is, 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. Beside the cases frequently discussed in the literature, here I also engage in the discussion of many non-canonical instances. In particular, I focus on various constructions involving *ein*-words and adjectival inflections.

   Thinking back, the chapter on *ein*-words was the first to be written for my dissertation. However, 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 modified or added. In the meantime, adjectival inflections have become a second major point of interest for me. Again, while the basic system was already laid out in Roehrs (2009a: Chapter 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 are 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.

   The material in this book was presented at many linguistic colloquia and conferences, too many to detail here. I thank the respective audiences for questions and comments, especially, Marcel den Dikken, David Fertig, Volker Gast, Hubert Haider, Tracy Hall, Björn Köhnlein, Tom Leu, Mark Louden, Joe Salmons, Chris Sapp, Erik Schoorlemmer, and Laura Smith. I would also like to express gratitude to Jochen Trommer and Bernd Wiese for helping me find some of their work. Furthermore, I am indebted to many reviewers whose comments over the years have helped me shape the ideas presented here. Parts of Chapter 5 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. The first version of this book was thoroughly revised during my Faculty Development Leave in Fall 2020, and many other changes were made after that.

   I dedicate this book to my late dad, who encouraged me to look for commonalities, to my mom, who emphasized I should write clearly, and to my brother, who reminded me to stop and smell the roses. *Danke, Siggi, Rosen und Keule!*

Denton, November 2023
Dorian Roehrs

Abbreviations

ACC   – accusative case
DAT   – dative case
FEM   – feminine gender
GEN   – genitive case
MASC – masculine gender
NEUT – neuter gender
NOM – nominative case
PL   – plural number
PRT   – particle
REFL – reflexivel particle
SGL   – singular number
ST   – strong adjectival ending
WK   – weak adjectival ending

Chapter 1: Introduction

1. Vacuous Elements – an Imperfection of Language?

In many languages, ordinary sentences contain nominative subjects. Nominative case is often taken to be structural; that is, it is assigned under certain syntactic conditions. This type of case has received a lot of attention in the linguistic literature. In the generative tradition, structural case – often spelled Case – is frequently represented by uninterpretable features. Chomsky (e.g., 2000: 119) pointed out that uninterpretable features may be an imperfection in the design of languages. Specifically, structural case features may receive no interpretation in either PF or LF. In terms of optimally efficient language design, it is surprising that these elements exist at all. It is usually proposed that feature checking (or valuation) motivates movement. This also applies to the movement of subjects. As the result of movement, features including structural case features are removed from the derivation (e.g., Chomsky 1995, 2000); that is, no uninterpretable features are left at the end of the derivation.

Besides these abstract features, there are also word-level elements that raise similar issues about the design of language – expletives. Although these elements do get an interpretation in PF (i.e., they have a phonetic realization), 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. In the second section, I discuss two other elements that have received less attention in this regard: German adjectival inflections and the indefinite article *ein* 'a'. In this book, I propose that the latter two elements also have no semantics at all; that is, they have neither semantics of their own nor do they make semantic features visible. I hypothesize that these elements are not an imperfection of language but provide overt clues about the presence of abstract linguistic elements.

1.1. The Clause

Sentence pairs such as (1a-b) have received much attention in the literature (Milsark 1974 and much subsequent work). Clauses like (1b) are usually referred to as *there*-existentials and are used in presentational contexts:

(1) a. A man is in the garden.

  b. There is a man in the garden.

Both sentences in (1) have very similar meanings: they are about a man being in the garden. 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 *three men*. With the classical Theta-Criterion (Chomsky 1981: 36) satisfied, *there* cannot be an argument or a predicate. If *there* makes no semantic contribution, then we

might expect that it can be left out without a (significant) loss in meaning.[1] 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.

The conclusion is that *there* is indeed an expletive (i.e., pleonastic) element.

There are many proposals that aim to explain *there*-existentials (for a brief survey of some of the relevant issues, see, e.g., Lasnik & Uriagereka with Boeckx 2005: 153-169). I briefly illustrate the basic account in Chomsky (1991 [reprinted in Chomsky 1995]), one of the first proposals of this construction in the Minimalist tradition. Note though the purpose of this book is not to discuss this construction in detail but rather to lay out some basic assumptions and to relate existential constructions to other, similar instances.

Chomsky (1995: 154-157) assumes the Principle of Full Interpretation, according to which all elements in a linguistic expression must have an interpretation in LF. Above, I showed that *there* is semantically vacuous; that is, it has no semantics. As a consequence, *there* can, by itself, not be interpreted in LF. To explain the grammaticality of *there*-constructions, Chomsky proposes that *there* is a LF-affix and that the overt noun phrase, the associate, undergoes movement to adjoin to *there* (also Chomsky & Lasnik (1993 [reprinted in Chomsky 1995: 65f]). As the expletive is licensed by adjunction of another element in LF, Full Interpretation is not violated. I assume that the proposal involving the licensing of the expletive by moving the associative is basically correct.

Clauses and noun phrases are usually held to be parallel in meaning and structure (e.g., Abney 1987, Chomsky 1970, Iordăchioaia 2020). This can most easily be seen in (3), which juxtaposes a verb and its arguments in (3a) with its derived nominal counterpart in (3b). 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*):

(3)   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 (4), NP is taken to be the nominal counterpart of VP. Furthermore, NumP is similar to AgrP, DP to TP, and PP to CP:[2]

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[1] Referencing work by Edwin Williams, Chomsky (1991 [reprinted in Chomsky 1995: 157]) points out that scopal elements in in constructions with *there* vs. without the expletive may have different readings (also Lasnik & Uriagereka with Boeckx 2005: 157).

[2] This alignment based on Grimshaw (1991) is not uncontroversial; for instance, other authors have proposed that DP is parallel to CP (e.g., Szabolcsi 1994). Note that constructions such as (3) are often discussed in this context. This book will not consider cases involving theta nouns as in (3b) in much detail. Rather, investigating many non-canonical constructions (i.e., structures more complex than simple DPs), we will come across cases where more structure is projected above the DP (and below the PP) in (4b). Below, this structural level is labeled Left Periphery Phrase (see Section 4.1.2). Furthermore, there is debate in German as to whether subject-initial root clauses involve

(4)   a.   CP   TP   AgrP   VP

       b.   PP   DP   NumP   NP

These and other observations have led to the general hypothesis that noun phrases are similar to clauses. Part of this work has been the establishment of the DP-Hypothesis (Abney 1987). This line of investigation has led to many empirical discoveries and theoretical innovations (for a survey, see Alexiadou *et al.* 2007). The current work espouses the DP-Hypothesis. While noun phrases in argument position are assumed to be at least DPs (Longobardi 1994, Stowell 1989), we see in the course of the discussion that noun phrases in non-argument position (e.g., nominal predicates) may be structures of smaller sizes.

       Before proceeding, I provide here details about some of the terminology used in this book. The terms noun phrase and nominal are used as general designations for structures involving a noun and possibly some modifiers or other dependents. Terms such as DP, NumP, or NP are used when the structure of the nominal (/noun phrase) is of particular interest. With this in place, I return to the main line of exposition. Given the existence of expletives in clauses and the assumed parallelism between clauses and noun phrases, it may not come as a surprise that expletive elements have also been proposed to occur in the nominal domain.

1.2. The Noun Phrase

Longobardi (1994) develops a theory of noun movement in (overt) syntax and LF to account for a number of similarities and differences between the Romance and Germanic languages. Longobardi (1994: 651) suggests that the following alternation can be related to the *there-*existentials discussed in the previous section. Similar to the (associative) noun phrases in (1), proper names may appear in different positions. Comparing (5a) to (5b), we observe that the proper name in (5b) follows a definite article. This determiner is often referred to as proprial article. Longobardi relates the distribution in (5a) to (5b) by proposing that the proper name in (5a) has undergone movement to D within the larger subject DP. This is illustrated in (5c) (more on this below):

(5)   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.'

       c.   [$_{DP}$ *Gianni*$_i$+D [$_{NP}$ t$_i$]]

CPs (e.g., Schwartz & Vikner 1996) or TPs (e.g., Zwart 1997 for Dutch, which extends to German). Given these complexities and controversies, I do not engage in the debate of the alignment in (4) here. Rather, I simply follow the alignment in (4) and assume that the DP is parallel to the TP (see also Chapters 6 and 7 below). For clauses, I assume that subject-initial structures are TPs and non-subject initial structures are CPs (Zwart 1997), but nothing important hinges on this choice.

Importantly, both DPs in (5a) and (5b) are interpreted as referential; that is, the definite article in (5b) does not make a semantic contribution (see also Lekakou & Szendrői 2012, Vergnaud & Zubizaretta 1992). In other words, the article is added in (5b) with no change in the meaning of the noun phrase as a whole. In fact, note that if the definite article in (5b) were to make a contribution, it would raise issues with regard to the redundancy of certain semantic components: singular definite articles typically presuppose the existence of a unique entity; however, proper names, in their referential use, already denote unique individuals by themselves. To avoid this issue, Longobardi (1994: 648-50, 655) proposes that the proprial article functions as an expletive element similar to *there* above.[3]

Longobardi proposes that (5a) 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, I assume with Longobardi (1994: 651 fn. 48) that this movement is overt in (5a) but covert in (5b). In the latter case, the proper name – in Chomsky's terms, the associate – licenses the expletive proprial article.

There is other distributional and morphological evidence that the proper name undergoes movement and that the corresponding 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 (6a) and (6b). If the proper name follows the possessive adjective, the definite article must appear. In this regard, observe the difference in grammaticality between (6b) and (6c):

(6) a. *Gianni mio ha finalmente telefonato.*   (Italian)
         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 (5), Longobardi proposes that the proper name moves from a lower position within the larger subject DP (6b) to the higher position D (6a). The example in (6c) is ungrammatical 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 substantive articles. Compare (7a) involving a proper name to (7b) containing a common noun, where the article is *en* in the first case but *el* in the second one (for more details, see Longobardi's work):

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[3] For different views of the proprial article, see Matushansky (2008) and Muñoz (2019).

(7) a.   *en Pere*   (Catalan)
         the Peter
         'Peter'

   b.   *el gos*
         the dog
         'the dog'

Given the difference in articles in (7), Longobardi presents a strong argument that articles come in several types with different semantics, expletive or contentful.

   To sum up, I take it as established that there are expletive elements in the clause as well as in the noun phrase. The assumption that certain lexical elements are semantically vacuous allows us to avoid issues such as contradictions (e.g., as regards deixis in the clause) and redundancies (e.g., as regards uniqueness in the noun phrase). Furthermore, the assumption that such elements are expletives explains why these elements can be left out without a significant change in meaning. Note that in each case, the expletive element is in a position higher than the substantive element. Schematically, this can be illustrated as follows:

(8)   α
         ┌───────────────────────┴───────┐
       EXPL   β
         │   ┌───────┴───────┐
         │   SUBST
         │   │
       there   associate
       prop. art.   proper name
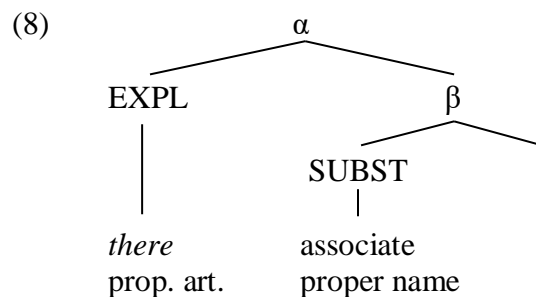
In order not to violate Full Interpretation, the pleonastic element must be licensed. In both cases, this licensing process involves movement of a lower substantive element to the higher expletive one.

   Two questions arise from the discussion above: (i) are there other semantically vacuous elements and (ii) why do these elements exist at all? The first question is discussed in detail for the German noun phrase in the following pages. I argue that adjectival inflections and the indefinite article *ein* 'a' are also semantically vacuous elements. The second question is much harder to answer and is only briefly addressed in this book. I suggest that expletives indicate the presence of abstract linguistic elements. In that sense, adjectival inflections and *ein* are not an imperfection of language.

   Note that this book is not intended to contribute to the theory of expletive elements *per se*. Rather, it tries to identify more elements that share some of the properties of the expletives that have been established in the literature. Having said that, I engage in a more detailed discussion of *there* vs. adjectival inflections and *ein* in the final section of this book (Chapter 8, Section 3.2). There I point out that both types of elements share a number of traits but that they also seem to exhibit some differences. Although I make some very brief remarks of what might explain some of those differences, I will leave a more detailed exploration for another time.

2.   German as the Language under Investigation

In this section, I explain why the focus of this book is on one language – German. To this end, I provide some brief cross-linguistic discussion of adjectival inflections and singular indefinite articles in German, Yiddish, and Norwegian. It is shown that these languages show a number of striking differences. This includes evidence for the presence of the indefinite articles in plural contexts. Unfortunately, many of these and other non-canonical data points have not received much attention in the theoretical literature. In this book, I add many data points to the discussion of German, the language I am most familiar with. However, it is beyond the scope of this book to discuss in detail these constructions in languages other than German and to provide a thorough cross-linguistic analysis of these languages.

2.1.   Some Cross-linguistic Differences

Before I discuss some cross-linguistic data, I start with some brief general remarks.

2.1.1. Canonical and Non-canonical Constructions

Focusing on German, this book may seem restricted in scope. However, it strives to be more comprehensive than previous accounts by discussing adjectival inflections and the indefinite article *ein* 'a' in very diverse structural contexts in that language. On the one hand, reference grammars (e.g., the German Duden) provide a fairly comprehensive survey of the relevant empirical domains. However, their goal is not to lay out a detailed theoretical analysis. On the other hand, theoretically oriented works often make insightful and elegant proposals of the canonical cases – simple DPs that involve the schematic structure "determiner + adjective(s) + noun", where the three elements agree in case, number, and gender (9a).[4] However, non-canonical instances like (9b) and (9c) are frequently relegated to footnotes or even completely left out (for specific references, see Chapters 2 and 5):[5]

(9) a.   *der groß-e Bär*   (German)
           the big-WK bear
           'the big bear'

     b.   *das Sternbild   [Groß-er Bär]*
           the constellation big-ST   bear
           'the constellation Great Bear'

     c.   *ihr   [jung-es   Gemüse]* e_N
           you(PL) young-ST.SGL vegetable
           'you young folks'

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[4] Simple DPs with prenominal Saxon Genitives (e.g., *Maries groß-er Bär* 'Mary's big-ST bear') are counted as canonical constructions despite the fact that the Saxon Genitive itself does not agree in features with the lower adjective and/or noun.

[5] A notable exception is Perlmutter's (1970) discussion of the indefinite article and singularity numeral in English.

This book puts the non-canonical constructions on center stage. Before moving on, I clarify some more terminology. To distinguish the different nominals in (9b-c), I use the terms matrix nominal and embedded nominal. Embedded nominals are marked in (9b-c) by brackets. They may consist of adjuncts (9b), specifiers (9c), and various complements. The structures without brackets are labeled matrix nominals. Note that each head noun projects its own nominal; that is, both *Sternbild* 'constellation' and *Bär* 'bear' in (9b) involve extended projections (Section 4.1.1).[6] Head nouns may also include null elements (9c).

As illustrated in the next subsection, languages, even closely related ones, differ in the empirical domains of adjectival inflections and indefinite articles. This becomes clear when we compare German, Yiddish, and Norwegian in canonical as well as non-canonical structures.

2.1.2. Cross-linguistic Differences with Adjectival Inflections
I start with a canonical construction where German, Yiddish, and Norwegian show the same inflectional patterns. In simple DPs, adjectives have weak inflections when they follow definite articles (the data in this subsection are taken from Roehrs 2015; note also that Norwegian involves a second, suffixal determiner; for discussion, see Julien 2005a among many others):

(10) a. *das groß-e Haus*   (German)
          the big-WK house
          'the big house'

      b. *dos groys-e hoyz*   (Yiddish)
          the big-WK house
          'the big house'

      c. *det stor-e hus-et*   (Norwegian)
          the big-WK house-DEF
          'the big house'

Differences emerge when adjectives are preceded by Saxon Genitives. Here, German patterns with Yiddish in exhibiting a strong ending on the adjective, but Norwegian has a weak inflection (Ø indicates an assumed null ending):

(11) a. *Peters groß-es Haus*   (German)
          Peter's big-ST house
          'Peter's big house'

      b. *Berls groys-Ø hoyz*   (Yiddish)
          Berl's big-ST   house
          'Berl's big house'

      c. *Pers stor-e hus*   (Norwegian)
          Per's big-WK house
          'Per's big house'

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[6] Notice that if a chapter designation is not provided, the section or footnote is part of the current chapter (i.e., the reference to Section 4.1.1 in the main text is shorthand for Chapter 1, Section 4.1.1).

Another distinction appears when adjectives follow distal demonstratives. In these cases, German patterns with Norwegian in showing a weak inflection on the adjective, but Yiddish has a strong ending (the stressed demonstrative in Norwegian, which is similar to the definite article in form, is capitalized):

(12) a.   *jenes groß-e Haus*   (German)
            that big-WK house
            'that big house'

      b.   *yents groys-Ø hoyz*   (Yiddish)
            that big-ST   house
            'that big house'

      c.   *DET stor-e hus-et*   (Norwegian)
            that big-WK house
            'that big house'

As to non-canonical constructions, suffice it to consider one structure. In (13), complex names are juxtaposed with their categorizing nominals. Again, the three languages do not pattern the same. Here, German and Yiddish contrast with Norwegian again:

(13) a.   *das Sternbild   Groß-er Bär*   (German)
            the constellation big-ST   bear
            'the constellation Great Bear'

      b.   *der zhurnal   Sovetish-Ø Heymland*   (Yiddish)
            the magazine Soviet-ST   homeland
            'the magazine Soviet Homeland'

      c.   *indianer-en Stor-e Bjørn*   (Norwegian)
            Indian-DEF big-WK bear
            'the Indian (called) Big Bear'

To sum up, it is clear that the three languages differ in their distribution of adjectival inflections in canonical and non-canonical constructions.

      Roehrs & Julien (2014) show that German and Norwegian differ quite generally. Documenting with nine sets of data (possessives involving proper names and pronominals, embedded and unembedded proper names, "dis-agreeing" pronominal DPs, appositives, definite adjectives, vocatives, and discontinuous noun phrases), they show that German consistently has strong endings but that Norwegian has weak endings. They propose that adjectival inflections in German are a function of lexical and structural factors (see Chapter 2) but that Norwegian is regulated by semantic ones (also Harbert 2007: 131; Lohrmann 2011; Schoorlemmer 2009, 2012, and others). Roehrs (2015) points out that Yiddish is similar to German but differs in the lexical elements that bring about the weak inflections on the adjectives.

2.1.3. Cross-linguistic Differences with Singular Indefinite Articles
Consider the three languages as regards the singular indefinite articles. In German, the indefinite article *ein* 'a' is part of the so-called *ein*-words. The latter comprise the indefinite article *ein* 'a', the (stressed) singularity numeral *EIN* 'one', the negative article *kein* 'no', and possessive articles like *mein* 'my', *dein* 'your', etc. Given certain similarities (Chapter 5), these words are taken to be related to one another and are usually discussed together. Comparing the three languages as regards these types of words, we make the initial observation that German, Yiddish, and Norwegian show the same basic patterns – *ein*-words precede their related head nouns (stressed singularity numerals that have the same spelling as their corresponding indefinite articles are distinguished by capitalization):

(14) a. *ein / EIN / kein / mein Bruder* (German)
     a / one / no / my brother
     'a/one/no/my brother'

   b. *a / eyn / keyn / mayn bruder* (Yiddish)
     a / one / no / my brother
     'a/one/no/my brother'

   c. *en / EN / ingen / min bror*   (Norwegian)
     a / one / no / my brother
     'a/one/no/my brother'

Considering (14a-c), we note that the singularity numeral, the negative article, and the possessive article are related to the indefinite article in German in that all these forms involve *ein*. This is less straightforward with Yiddish and Norwegian, where the possessive element, for instance, does not seem to relate to the indefinite article in a straightforward way. Besides this first indication that the three languages differ, Yiddish and Norwegian show other, syntactic distinctions.
   Yiddish is different from German and Norwegian in at least three aspects. Yiddish allows an inflected possessive pronoun to precede an indefinite article (15a), the negative article can co-occur with the numeral for 'one' (15b), and the – what looks like – inflected singularity numeral may precede an indefinite article (15c). The following data are taken from Lockwood (1995: 54, 66) and Weinreich (1999: 195, 205):

(15) a. *mayn-er a bruder*   (Yiddish)
     mine-INFL a brother
     'a brother of mine'

   b. *keyn eyn land*
     no one country
     'not a single country'

   c. *eyn-er a mentsh*
     one-INFL a person
     'a certain person'

I argue in Roehrs (2022) that the inflected possessive pronoun in (15a) is in a higher position than the possessive articles in Yiddish (14b), in German (14a), and in Norwegian (14c). This means that (15a) presents a non-canonical construction. Turning to (15b), *eyn* is syntactically optional. Semantically, it seems to intensify the negation. As for (15c) and similar to (15a), Yiddish most likely involves a structure different from the *ein*-words in the three languages illustrated in (14). Extending the discussion to *epes a khaver* '(something a =) some friend', it is proposed in the aforementioned paper that *eyner* and *epes* are in a higher position similar to the possessive pronoun in (15a).

Norwegian is also different from German and Yiddish in that it tolerates the indefinite article between two adjectives and between adjectives and nouns (data are from Julien 2002: 269):

(16) ? *eit stor-t eit styg-t   eit hus*   ([Nynorsk] Norwegian)
        a   big-ST an ugly-ST a   house
        'a big ugly house'

Julien (2002: 270) argues for Norwegian that these articles cannot be interpreted as adjectival agreement – note that each adjective has a strong inflection. She proposes that the lower instances of the articles are in lower head positions of the nominal structure (Julien's α) and that the adjectival inflections are part of complex specifiers that contain the adjectives (Section 4.1.3).

To conclude, this section has shown that adjectival inflections and indefinite articles are cross-linguistically similar but crucially not the same. This can be observed in both canonical and non-canonical constructions. This conclusion is strengthened when we look at indefinite articles occurring in plural contexts – again, languages do not pattern the same.

2.2.   The Indefinite Article in Plural Contexts

One of the proposals of this book is that the indefinite article *ein* 'a' is not a reflex of singular number. This is probably the most controversial claim of these pages. After some brief cross-linguistic remarks, I provide empirical evidence that shows that *ein* can indeed occur in various plural contexts in many German dialects, both in the north and in the south of central Europe. In my view, this shows beyond doubt that *ein* is not a reflex of singular number. In the second subsection, I discuss some of the linguistic properties of these non-singular instances.

2.2.1. Occurrence
The indefinite article in plural contexts is perhaps most prominently discussed by Bennis *et al.* (1998) for Dutch, where this element occurs in various contexts, in *wh*-exclamatives, non-*wh*-exclamatives, and *N-of-a-N* constructions ((17a,c) are taken from Bennis *et al.* 1998: 98, 101; (17b) is from van Riemsdijk 2005: 165):

(17)   a.   *Wat *(een) jongens!*   (Dutch)
              what a   boys
              'What boys!'

b. *Die auto heeft een deuken!*
that car has a dents
'That car has dents!'

c. *idioten van (een) mannen*
idiots of a men
'idiots of men'

This plural element is often referred to as spurious article.

It is perhaps less well known that it also occurs in other Germanic languages, specifically in the three languages discussed above. We see below that all three languages have indefinite articles in plural contexts in *wh*-constructions. While the occurrence of the article is restricted to that context in Yiddish, the other languages have more options but differ from each other; for instance, Swedish[7] has this article also in predicative contexts, German also in *so*-exclamatives, and southern dialects of German have plural *ein* also in non-exclamative argument positions. After some brief remarks about Yiddish and Swedish, I engage in a more detailed discussion of German.

Yiddish has indefinite articles in plural contexts in *wh*-constructions ((18a) is taken from Jacobs 2005: 188; (18b) is from Lockwood 1995: 55):[8]

(18) a. *vos far a bikher* (Yiddish)
what for a books
'what kind of books'

b. *voser a shprakhn*
what.for a languages
'what kind of languages'

c. *, vos iz dos far a verter.*
what is that for a words
'what kind of words are these'
(from Olsvanger's *Röyte pomerantsen*, p. 98)

In addition, this element has also been identified in Swedish. Delsing (1993: 33-35, 143f) points out that it occurs in *wh*-constructions (19a). Delsing states that in predicative contexts, the article is "nearly obligatory" (19b). Note that it can also surface between an adjective and a noun (19c):

(19) a. *Vad är ni för ena filurer?* (colloquial Swedish)
what are you for a slyboots
'What kind of slyboots are you?'

---

[7] Due to lack of data for Norwegian, I discuss closely related Swedish here. Delsing (1993: 33) mentions that the indefinite article is also possible in plural contexts in Norwegian dialects. Unfortunately, the referenced works in Delsing are currently not accessible to me.

[8] In Olsvanger's collection of stories, there is an example similar to (18c) that also shows the verb in the singular (p. 172). In German, the verb would have to be in the plural to yield a grammatical example.

b. *Pelle och Lisa är *(ena) idioter*
Pelle and Lisa are   a   idiots
'Pelle and Lisa are idiots.'

c. *Dänna   var   he   stor a husa.*   (Northern Swedish)
over.there were there big a houses
'There were big houses over there.'

Delsing points out that these are non-argumental articles.

It is less clear if this article occurs in German. While its existence is sometimes played down or even denied (e.g., Schoorlemmer 2009: 238 fn. 50), I argue that it is beyond doubt that *ein* occurs in plural contexts in this language as well. As far as I have been able to establish, there are three syntactic contexts where plural *ein* occurs with a following overt noun. Similar to Yiddish and Swedish, German has plural *ein* in the *wh*-construction (20a). Furthermore, German seems to have (20b) (cf. (17b) in Dutch above). The latter type of example might be related to (20c), at least in some dialects:[9]

(20) a. *Was für'ne / Was für eine Idioten!*   (German)
what for.a   / what for a   idiots
'What kind of idiots!'

b. *Eine Idioten!*
a   idiots
'Idiots!'

c. *So'ne / So eine Idioten!*
so.a   / so a   idiots
'Such idiots!'

Note that all these forms involve exclamative contexts (but see the examples from Southern German below).

There is no doubt that *'ne* in (20a) and (20c) stands for *eine*. In an online search, I identified 152 examples involving plural *ein*. These examples are collected in the Appendix (more on this momentarily). Of these 152 tokens, 21 involved the full form *eine*, 19 with *was für* and 2 with *so* (both examples below are taken from the Appendix):

(21) a. "*Was   für eine Idioten*" *sagte Liam*
 what for a   idiots   said Liam
'"Such idiots!" said Liam.'

---

[9] There is another context in which *ein* can appear in plural contexts:
(i)   *die einen, die anderen*
          the ones   the others
          'these, those'
However, this *ein* is of a different type – it is adjectival (see Chapter 5).

12

b.　　*Das Personal war sehr unfreundlich. Ich hatte noch nie　so eine Ferien.*
　　　the staff　　was very unfriendly　I　had　still never so a　holidays
　　　'The staff was very unfriendly. I have never had such a (bad) vacation.'

Indeed, *'ne* is a typical reduction of the indefinite article as can readily be seen in the nominative feminine: *eine Frau > 'ne Frau* 'a woman'. Note that *so'ne* can also be spelled as *sone* or *so ne*. I refer to it by using the first variant.

　　　The three cases in (20) above seem to occur with different frequencies as ascertained in an online search I performed in September 2020. While (20b) is hard to search for, (20c) seems to be the most common construction in (Northern) German. Overall, I identified over 150 examples through Google, on Twitter, and on Facebook. The numeric results are provided in Table 1. Note though that it would be easy to find more examples, especially for columns four and five of Table 1, where I restricted my search to certain nouns, numerals, or adjectives (again, all these hits are listed in the Appendix):[10]

Table 1: Numeric Results of Plural *ein* (September 20, 2020)

String Source	*was für (ei)ne*	*was für (ei)ne* Adj-*en*	*so (ei)ne*	*so (ei)ne* Adj-*en*
Google	19	12	4 (with the noun *Ferien* 'holidays')	23 (with the adjective *geil* 'awesome') and 10 (with s*üß* 'cute')
Twitter	28	4	3 (with the numeral *zwei* 'two' following)	23 (with the adjective *geil* 'awesome') and 21 (with *dumm* 'stupid')
Facebook	hard to search	hard to search	hard to search	5
Total: 152	47	16	7	82

In the Appendix, the examples are provided with the relevant strings in bold print for ease of identification (no glosses or translations are given there). Unless indicated otherwise, all examples below involving *ein* in plural contexts are authentic; that is, these data are taken from the Appendix. Besides these online searches, I also consulted some non-linguist friends from the county of Oberhavel (north of Berlin, Germany). All allowed (20c), one found (20b) to be fine, but most stated that (20a) was somewhat marked. The individual who allowed (20b) took it to be a short form of (20c).

　　　The occurrence of *ein* in plural contexts has already been established independently. Elmentaler & Rosenberg (2015: 389-394) document cases of plural *so'ne* '(so'a =) such' in *Norddeutscher Sprachatlas* (Northern German Language Atlas).[11] Below are two examples from

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[10] When searching for these types of examples, care must be taken; for instance, many cases involve false positives where a following plural noun actually forms the first part of a singular compound:

　　(i)　　*Was　für ne Männer Wg?*
　　　　　what for a　men　　living.community
　　　　　'What kind of a living community for men?'

[11] The existence of plural *ein* is particularly clear in the central and eastern parts of this area (in the western part, the plural form *so* as in *so Dinge* '(so =) such things' is more prevalent). Elmentaler & Rosenberg (2015: 383) also point out that the full form (*so eine Dinge*) is not possible. I disagree. As mentioned above, I found examples of this type.

Elmentaler & Rosenberg (2015: 392), who identified this element in both interviews and (dinner) table conversations:

(22) a. *so'ne Kurse*
     so a   courses
     'such courses'

    b. *so'ne komischen Löcher*
     so a   weird   holes
     'such weird holes'

These authors agree with Keller (2004: 6f) that *so'ne* fills a gap by forming an indefinite demonstrative. Note though that this idea cannot extend to the other constructions in (20) (which lack *so*). In my own search, I came across examples with clear geographical indications that these types of cases exist in Berlin, Hamburg, and Lübeck. In addition, linguistic features such as unshifted consonants (e.g., *wat* for *was* 'what') indicate the same geographical area.

    Besides northern dialects, this element also occurs in southern dialects like Swabian and Bavarian (Glaser 1993: 106). While its use and distribution are not the same across all subdialects, it is clear that plural *ein* does occur (23a). The latter is a Bavarian example taken from Glaser (1993: 109). Hubert Haider (p.c.) points out that these cases also exist in Southern Bavarian, for instance, in Carinthia, Austria (23b). Another southern example was identified during my online search (23c):[12]

(23) a. *Do̜ sàn õa Epfe drõ.*
     there are a   apples there.on
     'There are apples on it.'

    b. *Brauchts es ane Untatatzalan oda tans de Schalalan alaan aa?*
     need.AGR you a   saucers   or do.it the cups   alone too
     'Do you need saucers or will the cups by themselves do?'

    c. *Was für ne Vögel habts denn da aufgetrieben?*
     what for a   idiots have.you PRT   there found
     'What kind of idiots have you got there?'

Unlike in Northern German, the cases in (23a-b) involve non-exlcamative argument contexts.

In fact, if the indefinite element is stressed – as is fairly common in exclamative contexts, unreduced *eine* is certainly possible (and indeed required).

[12] Note that second-person plural *es* 'you' in (23b) derives from an old dual pronoun meaning 'you (two)' (Paul *et al*. 1989: 222). The *-s* on the verb *brauchen* 'need' is an agreement marker sharing features with *es*. I glossed the *-s* on the verb *haben* 'have' in (23c) as an encliticized *es*. I thank David Fertig and Mark Louden for discussion of these points. Notice also that more cases of Southern Bavarian can be found in *Kärntner Wörterbuch* (Carinthian dictionary) available at http://www.stelzel.at/kaernten-woerterbuach/wort-suachn. In fact, these types of examples have even found their way into the media (https://www.diepresse.com/443923/karntnerisch-fur-anfanger) and advertisements (https://pensionria.at/woerthersee-kaerntnerisch/). I thank Hubert Haider for providing these sources to me.

Before moving on, it is worth pointing out that the occurrence of this *ein* in Bavarian fits well with the Yiddish facts above. Notice in this respect that the plural indefinite article in Yiddish cannot be an innovation from Slavic (e.g., Polish or Russian) as these languages do not have articles to begin with. However, as is well known, Yiddish is historically related to southern dialects of German, specifically Bavarian (for some discussion, see Jacobs 2005: Chapter 2).

Indeed, diachronically, plural *ein* is not a recent development as it occurred already in older varieties of German with a specific indefinite interpretation (ENHG stands for Early New High German):[13]

(24)   a.   *eino   ziti*   (Old High German)
               one/a times
               '(certain) times'

        b.   *in einēn buachon*
               in one/a books
               'in (certain) books'
                  (both from Otfrid, Braune & Reiffenstein 2004: 234)

(25)   a.   *in einen zîten*   (Middle High German)
               in one/a times
               'during (certain) times'
                  (Der Nibelunge Nôt 1143:1, Paul *et al*. 1989: 388)

        b.   *einu   liute*
               one/a people
               '(certain) people'
                  (Himmelreich Jerusalem 14:12, Paul *et al*. 1989: 388)

(26)   *Dyt sijnt alle alsulge sachen vnd geschichte, as sich dese nyeste. xxxvj. Iair*   (ENHG)
     that are   all   such   things and history   as REFL these recent 36   years

     her enbynnen der Stat van Coelne oeurmitz   die. xv. geslechte eyne mit den
     here in   the city of Cologne by.means.of the 15 families a   with the

     Scheffen vnd den ghenen, die   mit   yn raide gesessen haint, ergangen haint.
     assessors and the those   who along in council sat   have happened have

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[13] The indefinite article began to evolve from the singularity numeral and indefinite pronoun *ein* in Old High German (Braune & Reiffenstein 2004: 234). Consequently, I gloss *ein* as 'one/a' in Old High German and Middle High German. Also, singular *ein* in the older varieties is often paraphrased using Modern German *irgendein, ein gewisser* (e.g., Braune & Reiffenstein 2004: 234). This could be rendered into English as 'a certain' in the singular and as 'certain' in the plural. Finally, I thank Chris Sapp for providing the example from Early New High German. He points out though that this sentence could also have a singular interpretation of *eyne* (i.e., '…with respect to the 15 families, one with the assessors and those who have sat on the council.'), but it seems unlikely that all of the assessors and city council members came from one particular family.

'Those are all such things and history, as has happened in the last 36 years here in the city of Cologne with respect to the 15 families, some with the assessors and those who have sat on the council.' (1360 Hauwe Neues Buch Cologne, 33)

If these data are indeed related, then plural *ein* has been in the language for a long time.

It seems clear that these cases occur in colloquial contexts, in contemporary speech and writing. This is even acknowledged in Duden, both the dictionary and the grammar. Without indication of the dialect, these works state that *so'ne* 'such' occurs in colloquial German ((27a) is taken from Duden 1989: 1414 and (27b) from Duden 1995: 276).

(27) a. *es gibt immer sone und solch-e*
it gives always so.a and such-PL
'There are all kinds.'

b. *Ich kann sone Leute nicht leiden.*
I can so.a people not stand
'I cannot stand such people.'

As regards writing, these constructions occur mostly in unedited texts like Twitter messages. However, they can also be found in edited contexts like ebooks such as *Hilfe ich bin'n Vampir* 'Help, I am a Vampire' (28a) or *Wolfskinder* 'Wolf Children' (28b):

(28) a. *So ne Mädchen gehn mir auf die Nerven.*
so a girls go me on the nerves
'Such girls get on my nerves.'
(https://www.bookrix.de/book.html?bookID=cronalein_1360707129.5978
798866#3276,468,12258)

b. *Smilla recherchiert und entdeckt, das schon so eine Frauen verschwanden.*
Smilla researches and discovers that already so a women disappeared
'Smilla did some research and discovered that such women already disappeared.'
(https://www.vorablesen.de/buecher/wolfskinder/rezensionen/duester-
a6154566-6616-445c-967e-966d6578811c)

Consider some linguistic properties of these instances involving plural *ein*.

2.2.2. Linguistic Properties
These strings are clearly in the plural: *ein* itself has a plural inflection, the following adjective has the typical weak ending, and the noun has a plural inflection along with the corresponding meaning. Compare (29a) to (29b):

(29) a. *Was für ein-e geil-en Bild-er*
what for a-ST awesome-WK picture-s
'Such awesome pictures!'

b. *dies-e   geil-en   Bild-er*
these-ST awesome-WK picture-s
'these awesome pictures'

Furthermore, verbs and pronouns agree with the plural noun phrase in number:

(30) a. *Was für eine Idioten wohn-en nur in Sachsen-Anhalt?*
what for a   idiots   live-PL   PRT in Sachsen-Anhalt
'What kind of idiots live in Sachsen-Anhalt?'

b. *was für eine Idioten, die   so Aufmerksamkeit woll-en*
what for a   idiots   who.PL so attention   want-PL
'what kind of idiots that want attention like this'

Note that these cases do not involve syntactically frozen (or fossilized) templates: they can involve several adjectives in a row (31a), coordinated adjectives (31b), and nominalized adjectives (31c):

(31) a. *Wieso gibt es so ne dummen, bescheuerten Leute die sowas   machen?? D:*
why   gives it so a stupid   dumb   people who so.something do
'Why are there such stupid, dumb people that do something like that?'

b. *es gibt halt so ne dummen und abgehobenen leute*
it gives PRT so a   stupid   and stuck-up   people
'There are indeed such stupid and stuck-up people.'

c. *ach so 'ne dummen gibt es öfter. xD*
oh   so a   stupid   gives it more.often
'Oh, there are often such stupid ones.'

Additionally, these types of cases may include numerals (32a-b) or other preceding elements such as *irgend* 'any' (32c):

(32) a. *drei so ne geilen   Mädels*
three so a   awesome girls
'three such awesome girls'

b. *Da   waren heute 2 so'ne dummen Weiber beim Zumba-Kurs, die*
there were today 2 so.a stupid   women at.the Zumba-course who
'Today, there were two such stupid women at the Zumba course who'

c. *Alter irgend so ne dummen Hunde haben direkt   neben mir n Böller gezündet*
man any   so a stupid   dogs   have directly next.to me a firecracker lit
'Man, some such stupid idiots lit a firecracker right next to me.'

17

Indeed, numerals can also follow *so'n*e:[14]

(33) a. *ach man wir sind schon so ne zwei wärmflaschen*
   oh boy we are PRT so a two warm.bottles
   'Oh boy, we are such two hot-water bottles.'

  b. *und so ne zwei Kämpfer die alles umpflügen,*
   and so a two fighters who all under.plough
   'and such two guys, who create such chaos'

Finally, as we might expect, *was-für* splits are also possible. Compare (34a) to (34b):

(34) a. *was für ne krassen Menschen albanische Wurzeln haben*
   what for a weird people Albanian roots have
   'what kind of weird people have Albanian roots'

  b. *was meine Unachtsamkeit für ne krassen Folgen hat*
   what my carelessness for a bad consequences has
   'what kind of bad consequences my carelessness has'

To be clear, these are not frozen (or fossilized) templates but productive constructions in German.

To sum up, I take it as established that *ein* occurs in plural contexts in German. Indeed, *ein* exhibits the hallmarks of a plural element: morphologically, *ein* itself has a typical plural ending; syntactically, it may be followed by an adjective with a weak plural ending; and semantically, it occurs within a noun phrase with plural meaning. As to its geographical distribution, exclamative cases like *so'ne Äpfel* 'such apples' are common in the northern dialects, and non-exclamative instances like *eine Äpfel* '(an) apples' occur in the southern dialects. Plural *ein* also appears in *wh*-constructions, but this seems less common.[15] While a more systematic investigation of the differences between the various dialects and constructions must be left for future research, I proceed on the assumption that all dialects of German have some evidence of plural *ein*. Most of the following discussion focuses on the constructions of the northern dialects. More generally, we may observe that the plural indefinite articles in Dutch, Yiddish, and Swedish are in good company.

To conclude the entire section, what this brief illustration of adjectival inflections and indefinite articles has made clear is that languages, even closely related ones like German, Yiddish, and Norwegian/Swedish, differ in these empirical domains. Consequently, they should

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[14] I have not found any examples involving numerals in *was-für* constructions. Note though that while (ia) sounds possible to my ears, (ib) is completely out:
 (i) a. *was für ne zwei Typen*
    what for a two guys
    'what kind of two guys'
   b. * *was für zwei (ei)ne Typen*
    what for two a guys
[15] While Duden (1995: 341f) discusses *was-für* constructions with special forms for the plural in Northern German, this work explicitly states that there is no *ein* in these cases. As is clear, these forms do occur, at least with some speakers.

not receive the same account. Analyses have been advanced for all these languages (e.g., Olsen 1991b, Vater 2002 for German; Roehrs 2015, 2022 for Yiddish; Julien 2005a, Delsing 1993 for Norwegian). However, many languages lack detailed analyses of some or many of the non-canonical constructions (again, with the notable exception of English, see Perlmutter 1970). More empirical and theoretical work is called for. Awaiting more comprehensive analyses of Yiddish and Norwegian, I focus on German, the language I know best, in the rest of this book and try to make headway for this language. Specifically, I focus on (colloquial) Standard German. Having said that, I make a few cross-linguistic remarks throughout the discussion (e.g., when another language exhibits a revealing difference).

As for empirical grounding of this study, most of the data involving adjectival inflections have been reported in previous work (e.g., in the well-known reference grammar Duden). They appear to be relatively straightforward and accepted. As already seen above, this statement is only partially true of *ein*. Furthermore, a distinction between the reduced, unstressed forms of the indefinite article (e.g., *ein > 'n* 'a') and the unreduced, stressed forms of *ein* (e.g., *ein > EIN* 'one') is often not made in the literature. However, such a distinction plays a crucial part in the classification and analysis of these elements below.[16]

3.   Basic Properties and Main Hypotheses

In this section, I discuss some of the characteristics of adjectival inflections and the indefinite article *ein* 'a'. On the basis of that, I formulate the main hypotheses of this book.

3.1.   Adjectival Inflections and the Article ein

Taking German as the main language under investigation, this monograph focuses on two elements: adjectival inflections and *ein* 'a'. While these elements have an overt realization and thus receive an interpretation in PF, I argue that they are semantically vacuous. Adjectival inflections are affixes and *ein* is, at least in some cases, a free morpheme. I suggest later that adjectival inflections are licensed by movement of the adjective stem and *ein* by that of certain operators. Some of these operators have an overt manifestation of their own and some do not.

First, I briefly illustrate why these elements are of interest. Similar to the cases in Section 1, the assumption that adjectival inflections and *ein* make semantic contributions raises some issues. In general terms, if adjectival inflections and *ein* had semantic import, that would lead to some contradictory conclusions. These issues disappear if we assume that these elements are semantically vacuous. This assumption is strengthened by the fact that while these elements have to be generally present for independent reasons, they can be left out in certain, well-defined contexts without a loss of meaning. Indeed, these elements can also co-occur without a change in interpretation. I illustrate these points in more detail below.

3.1.1. Basic Properties of Adjectival Inflections
Jacob Grimm (1870: 718-756) pointed out that adjectives can alternate as regards their inflections: in his (now widely-accepted) terminology, adjectives can exhibit strong or weak

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[16] For some phonetic discussion of indefinite (and definite) articles in spontaneous speech, see Wesener (1999). I think Laura Smith for pointing out this reference to me.

endings. The distribution of these endings is often referred to as the strong/weak alternation. Before turning to the distribution of these inflections, I start with some brief diachronic remarks.

It is generally assumed (for detailed discussion, see, e.g., Evans 2019, Lockwood 1968: 37-46, Pfaff 2020, Rehn 2019: chapters 2 and 3, and references cited therein) that Proto-Indo-European did not have a distinct category of adjectives but rather seemed to have a more general caterory of nominal elements (comprising adjectives and nouns). The strong inflections on adjectives are a continuation of the old nominal *o-/a*-stem inflections into Germanic, but these inflections also recruited several endings from the pronominal paradigms (e.g., demonstratives). Besides a set of strong adjective inflections, this yielded a difference between the nominal categories of noun and adjective. By contrast, weak inflections appear to be an innovation in Germanic. Specifically, a nominalizing suffix *-n-* was added that produced *n*-stem nominals and eventually adjectives with weak inflections (for a dissenting view, see Evans 2019: chapter 2). Finally and returning to the strong inflections, Evans (2019: 152-53) points out that regular sound changes in West Germanic led to a number of zero endings in the strong paradigm that, one the one hand, resulted in uninflected adjectives in predicative contexts but, on the other hand, were later replenished by the inflections of pronominals yielding uniformly inflected adjectives in attributive contexts in (Standard) German (but see also Rehn 2019: 135-39).[17]

Returning to the main focus of the discussion, Modern German, note first that noun phrases inflect for case, number, and gender.[18] While specifications for number and, to some degree, case can be inspected on suffixes to nouns, gender is usually expressed on other elements – by the inflections on determiners including articles and on adjectives. As mentioned above, adjectives can alternate between exhibiting strong or weak inflections. It is worth pointing out already here that strong inflections have more different forms than weak ones thus expressing more distinctions in case, number and gender (Chapter 2).

As for the distribution of these inflections, consider the canonical cases in (35). We can observe that the strong/weak alternation involves an adjective with a weak inflection if a preceding determiner has a strong inflection (35a), but it shows an adjective with a strong inflection if not (35b). This distribution is concisely described in the generalization in (36) (for statements along these lines, see Bierwisch 1967: 257, Eisenberg 1998: 171-73, Gallmann 1998: 144, G. Müller 2002a: 129, Pfaff 2017: 286, Rehn 2019: 58, Sauerland 1996: 34, Schoorlemmer 2009: 53, and many others):[19]

(35) a. *d-er gut-e Kaffee*
          the-ST good-WK coffee
          'the good coffee'

      b. *ein gut-er Kaffee*
          a   good-ST coffee
          'a good coffee'

---

[17] In the literature, there are other terms for these inflections: pronominal (i.e., diachronically related to third-person pronouns and pronominals) vs. nominal, determining vs. determined, and primary vs. secondary.
[18] For the most part, I do not consider person in this book.
[19] Katzir & Siloni (2014: 268) claim that this type of generalization holds for all Germanic languages. For the discussion of the Principle of Monoinflection, see Chapter 2.

(36)   *Weak After Strong*
        An adjective with a weak inflection is preceded by a determiner with a strong inflection.

Notice that adjectives with strong inflections are not explicitly mentioned in the generalization. However, since adjectives only alternate between showing strong or weak inflections, the generalization above implies that the strong inflections occur in all instances not mentioned in (36). Given this, the generalization is often more briefly referred to as Weak After Strong. Notice that when this name is used, the reader should keep in mind that weak and strong refer to inflections on elements of different lexical categories (adjective vs. determiner). This is important as we will see later that two co-occuring adjectives have the same ending (and the same applies to two determiners to the extent these elements can co-occur). Note also that although it is the inflection of the adjective that alternates (i.e., the adjective *gut-* 'good' in (35) above has either a weak or a strong inflection), I often refer to these cases simply as strong or weak adjectives. This is in contrast to verbs and nouns, which are lexically specified as strong or weak.

        Observe that the generalization in (36) is surface-oriented making reference to the notion of precedence. It works quite well for canonical cases such as (35) above. However, it fares less well with some other instances. There are two types of exceptions (see Chapter 3, Section 7 for fuller discussion). First, strong adjectives can be preceded by determiners with a strong inflection. This holds when an inflected demonstrative precedes an uninflected possessive article (37a). Second, weak adjectives can be preceded by determiners without strong inflections. This is the case with pronominal determiners (e.g., Höhn 2020, Pesetsky 1978, Postal 1966, Roehrs 2005), which do not have an inflection in the first and second person (37b):

(37)   a.   *dies-es mein groß-es   Glück*
                this-ST my   great-ST happiness
                'this great happiness of mine'

        b.   *ihr nett-en Studenten*
                you nice-WK students
                'you nice students'

It seems clear that a simple notion of precedence referring to inflections cannot capture all the distributions. Rather, it is argued in Chapters 2 and 3 that structural and lexical factors need to be taken into account. Note though that other explanations have also been put forward.

        It is sometimes suggested that this alternation correlates with (in-)definiteness. This kind of statement is usally made in the context of the Scandinavian languages and the older varieties of German, but occasionally it can also be found in the older literature on Modern German (e.g., Curme 1910, Lockwood 1968, Prokosch 1939; see Esau 1973 for critical discussion of these works). As I show in detail throughout this book, this is not accurate for Modern German (see also Harbert 2007: 131 and references cited below).

        To provide some brief illustration here, there are indeed many cases where a strong inflection occurs in an indefinite context (38a) and a weak ending in a definite environment (38b):

(38) a. *lauter dumm-e   Idioten*
          many stupid-ST idiots
          'many stupid idiots'

      b. *wir dumm-en   Idioten*
          we stupid-WK Idiots
          'us stupid idiots'

However, a weak inflection can also occur in an indefinite context, and a strong ending is possible in a definite environment as well. Consider (39a) and (39b):

(39) a. *mancher klug-e   Freund*
          some   smart-WK friend
          'many a smart friend'

      b. *Peters klug-er Freund*
          Peter's smart-ST friend
          'Peter's smart friend'

It is clear from the two paradigms in (38) and (39) that strong endings do not correlate with indefiniteness or weak endings with definiteness. Below, I demonstrate that this holds more generally. Faced with these contradictory patterns, I propose that adjectival inflections have neither semantics of their own nor do they make such features visible – they are not associated with (in-)definiteness. This is what I mean by stating that these elements are semantically vacuous.[20] If so, the expectation is that they can be left out without a change in meaning.

Adjectival inflections do not appear under certain, well-defined structural and lexical conditions in German. Structurally, adjectives must be inflected before the noun (40a-b), but they remain uninflected when they follow it (40c-d):

(40) a. *ein auf seine Frau stolz-er Mann*
          an of his   wife proud-ST man
          'a man proud of his wife'

      b. *der auf seine Frau stolz-e   Mann*
          the of his   wife proud-WK man
          'the man proud of his wife'

      c. *ein Mann, stolz auf seine Frau*
          a   man   proud of his wife
          'a man, proud of his wife'

---

[20] In the context of Icelandic, Pfaff (2017: 293) states that the "weak inflection – rather than expressing definiteness by itself – is a semantically vacuous reflection of definiteness marked elsewhere." Crucially, unlike in German, the weak inflection in Icelandic is dependent on the presence of definiteness in the DP. Pfaff (2017: 316) makes this dependency more formal by postulating an agreement relation between a definite D and an uninterpretable definiteness feature [uDEF] on the adjectival inflection. Adjectival inflections in German do not have such a feature – they do not reflect definiteness.

d.   *der Mann, stolz   auf seine Frau*
     the man   proud of   his   wife
     'the man, proud of his wife'

Comparing (40a) to (40c) and (40b) to (40d), there is no change in (in-)definiteness of the noun phrase, and yet adjectival inflections are present in (40a-b) but absent in (40c-d). This could be evidence that inflections make no semantic contribution. One objection might be that the adjectives in (40c-d) are not part of the noun phrase proper given that they belong to reduced relative clauses. While this may be a valid point, there is other evidence that adjectival inflections can be left out without a loss in meaning. Before I turn to these cases, note that the paradigm in (40) does indicate that structural conditions play a role in the occurrence of adjectival inflections – only prenominal adjectives have inflections.

Besides being sensitive to structure, adjectival inflections are also sensitive to lexical conditions. Among others, this applies to certain adjectives that can occur prenominally and as such, they are clearly part of the noun phrase. As we will see, the inflections on these adjectives can be absent. It will become clear though that the presence or absence of these inflections does not lead to a change in the semantics. First, with a few types of adjectives, the inflection must be absent. This holds for adjectives derived from geographical names (*-er* is an adjective-forming suffix):

(41)   a.   *ein Berlin-er(*-es)   Bier*
            a   Berlin-ADJ(-*ST) beer
            'a Berlin beer'

       b.   *das Berlin-er(*-e)   Bier*
            the Berlin-ADJ(-*WK) beer
            'the Berlin beer'

The same applies to adjectives like *prima* 'great', *sexy* 'sexy', *super* 'super', etc. (Duden 1995: 256-57).[21] Note that since adjectival inflections are absent, they cannot indicate or contribute to (in-)definiteness.

Second, there is a special set of color adjectives involving *lila* 'purple' and *rosa* 'pink' as well as *orange* 'orange' and *beige* 'beige' that show that adjectival endings can be optional. Note that the first two adjectives require *-n-* to be inserted (42a-b), but the second two adjectives do not (42c):[22]

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[21] A reviewer points out that these are loan words that may not be fully intergrated into the language yet. This also applies to the color adjectives in the next paragraph.
[22] Notice that the pronunciation of *orange(-s)* 'orange' in (42c) has some special properties. Without the inflection -*s*, -*ge* is pronounced as [ʃ] – the -*e* is silent triggering Final Devoicing of the consonant. However, when the inflection is added yielding -*ges*, this sound sequence is rendered as [ʒəs]. Observe that *das orange Kleid* 'the orange dress' is also possible. Here, however, the ending on *orange* (i.e., -*e*) is pronounced as schwa and can be interpreted as the regular weak ending. This interpretation is not possible with *lila* and *rosa*. The latter two end in -*a*, which is not pronounced as schwa.

(42) a. *ein lila(-n-es) Kleid*
         a   purple-n-ST dress
         'a purple dress'

      b. *das lila(-n-e)   Kleid*
         the purple-n-WK dress
         'the purple dress'

      c. *ein orange(-s) Kleid*
         an orange-ST dress
         'an orange dress'

To be clear, while inflections on prenominal adjectives are usually obligatory, there are some special cases where they must be absent or where they are optional. Importantly, note that in the latter case their presence or absence does not correlate with a change in the (in-)definite interpretation of the noun phrase as a whole. Besides the semantic property of (in-)definiteness, I demonstrate in Chapter 4 that adjectival inflections are also not a reflex of other semantic concepts such as (non-)restrictiveness of the interpretation of modifiers or referentiality. An account of the strong/weak alternation must involve something else. Consider the following.

   The following noun phrases in the (a)-examples are in the nominative and the ones in the (b)-examples are in the dative. In keeping with the facts above, the strong and weak endings occur both in indefinite and definite contexts:

(43) a. *ein rot-es Auto*
         a   red-ST car
         'a red car'

      b. *mit einem rot-en Auto*
         with a   red-WK car
         'with a red car'

(44) a. *sein rot-es Auto*
         his red-ST car
         'his red car'

      b. *mit   seinem rot-en Auto*
         with his   red-WK car
         'with his red car'

Again, it is unlikely that semantic concepts like (in-)definiteness can explain the strong/weak alternation. Rather, it seems more promising to find an explanation in the morpho-syntax. Considering the similarities between (43) and (44), I assume that possessive articles consist of a possessive component (*s-*) and *ein* (Chapter 5). If so, the types of adjectival endings seem to be a function of preceding *ein*, independently of the presence or absence of the possessive component. In other words, (43) and (44) are directly relatable. Given that, we might claim that the strong/weak alternation is a reflex of the semantics of *ein* behaving differently in the

nominative vs. dative case. However, like adjectival inflections, *ein* exhibits not only contradictory properties with regard to the semantics but also shows characteristics of having no meaning at all. These points can be made most straightforwardly as regards semantic number.[23]

3.1.2. Basic Properties of *ein*

As briefly mentioned in Section 2.2.1, the indefinite artricle *ein* emerged on the basis of the singularity numeral and indefinite pronoun *ein* in Old High German (e.g., Braune & Reiffenstein 2004: 234, Presslich 2000, Rehn 2019: 88-90). It is often claimed that *ein* in Modern German is semantically singular in meaning (e.g. Vater 2002). Specifically, (45a) makes mention of the fact that a girl was seen, and (45b) emphasizes the point that only one girl has a certain property, namely having been at a party (parentheses around *ei* yielding *n* indicate the reduced form of *ein*):

(45) a. *Ich habe gestern (ei)n Mädchen getroffen.*
    I have yesterday a girl met
    'I met a girl yesterday.'

  b. *Nur EIN Mädchen war auf der Party!*
    only one girl was at the party
    'Only one girl was at the party.'

Crucially, *ein* can also imply the existence of a second entity (46a). In these cases, the first clause often, but not always, occurs with the second one put in parentheses below. Independently of the second clause, *ein* preceded by a definite determiner yields a duality partitive; that is, it is presupposed that there is a second girl present (NB: this is different in the English counterpart).[24] In fact, *ein* can be part of a noun phrase denoting a more numerous plurality of entities. As already discussed in Section 2.2, *ein* can clearly occur in semantically plural contexts. To repeat, (46b) is a googled example from the Appendix, and (46c) is an example from the ebook *Hilfe ich bin'n Vampir* 'Help, I am a Vampire':

(46) a. *Das ein-e Mädchen blieb stehen (, das andere ging weg).*
    the one-WK girl remained standing, the other went away
    'One of the two girls stopped walking, the other went away.'

  b. *Was für ein-e geil-en Bilder wer hat die bloß gemacht*
    what for a-PL awesome-WK pictures who has those just made
    'Such awesome pictures! Just who took those?'

---

[23] Making the following points with regard to the (in-)definiteness of *ein* would take me too far afield here. I discuss the relation between adjectival inflections and *ein* as regards (in-)definiteness in detail in Chapter 5. I propose there that *ein* has nothing to do with (in-)definiteness, neither in the nominative nor in the dative. Thus, this semantic dimension cannot explain the distribution of adjectival inflections either.

[24] In English, *one* following a definite article often has an intensifying meaning close to 'only':
  (i) She was the (one) girl I did not recognize.

     c.   *So   n-e   Mädchen gehn mir auf die Nerven.*
            such a-PL girls   go   me on the nerves
            'Such girls get on my nerves.'
                  (https://www.bookrix.de/book.html?bookID=cronalein_1360707129.5978
                  798866#3276,468,12258)

As with adjectival endings, we are faced with a contradictory state of affairs: in this case, *ein* seems to imply not only singularity but also different pluralities. Again, I propose that *ein* has no semantics at all. If so, then the expectation is that *ein* can sometimes be left out without a change in meaning.

     To illustrate this point, consider nominals in predicate contexts. Note that *ein* is obligatory in (47a) but that it is optional for many speakers in (47b):[25]

(47)   a.   *Er ist ein Mann.*
            he is a   man
            'He is a man.'

      b.   *Er ist (ein) Lehrer.*
            he is   a   teacher
            'He is a teacher.'

It is clear that both of these predicate nominals denote a property; that is, *ein* does not make a semantic contribution with regard to singular number (or indefiniteness, for that matter). Following de Swart *et al*. (2007), I argue in Chapter 6 that the presence of *ein* is a function of the different types of nouns, a kind noun in (47a) vs. a role noun in (47b). Thus, similar to adjectival endings, I conclude that the presence or absence of *ein* makes no difference with regard to the semantics, here illustrated with semantic number. In fact, I 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. I propose that *ein* neither has semantics nor does it make such features visible – it is semantically vacuous. This also means that the strong/weak alternation of adjectives briefly illustrated in Section 3.1.1 cannot be explained by the semantics of *ein* either.

     If it is true that adjectival inflections and *ein* are semantically vacuous, then we may wonder what their function is; that is, why they exist at all. This question is particulary interesting in view of the fact that similar to the expletives in Section 1, these elements can also co-occur with elements that seem similar or related in some way.[26] In fact, here adjectival inflections and *ein* can co-occur yielding multiple instances of the same elements; consider (48a) and (48b). I assume for now (and argue in Chapter 5) that similar to possessives like *sein* 'his', the negative article *kein* 'no' consists of a negative element, NEG, and *ein* (where NEG is later spelled out as *k-*):

(48)   a.   *frisch-er heiß-er Kaffee*
            fresh-ST hot-ST coffee
            'fresh hot coffee'

---

[25] I comment on the optionality of *ein* with [-figurative] roles nouns as in (47b) further below.

[26] Recall that *there* can occur with a locative adverbial and that the (by form definite) proprial article occurs with a proper name.

b.   *k-ein   so'n Mann*
    NEG-a so a man
    'no such man'

Importantly, given the proposed pleonastic status of the adjectival inflections and *ein*, note that not only one but both of these elements seem to be redundant. Observe though that neither of the two adjectives in (48a) can occur with no ending at all. Similarly, neither *ein* nor *'n* in (48b) can be left out. 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 and their obligatory presence in (48a) and (48b) is due to a different, independent reason or reasons. Below, I propose that adjectival inflections make abstract morpho-syntactic features visible and that *ein* supports certain semantic operators.

To recapitulate, I have illustrated some cases where adjectival inflections and *ein* seem to lead to contradictory conclusions about their relation to the semantics: adjectival inflections, strong or weak, occur in both definite and indefinite contexts, and *ein* appears in singular and plural environments. At the same time, we have seen that these elements seem to have no semantics at all as they are absent in certain, well-defined contexts without loss of meaning: adjectival inflections cannot or do not have to occur with special sets of adjectives, and *ein* does not have to occur with a specific set of nouns in predicative contexts. Furthermore, I provided evidence that these elements can co-occur without any semantic import. I proposed 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 that receive no interpretation in LF – like *there* and the proprial article discussed above.

3.2.   Main Hypotheses and Relatedness of Adjectival Inflections and ein

In this section, I briefly summarize the general characteristics of adjectival inflections and *ein*, and I formulate the main hypotheses about these elements. On the basis of that, I provide further motivation why adjectival inflections and *ein* can be fruitfully discussed in tandem.

3.2.1. Main Hypotheses
Some of the main general properties of adjectival inflections and *ein* have already been touched upon; others will be introduced later on in the book. They can be summarized as follows. Specifically, while these elements (usually) have to occur for independent reasons, adjectival inflections and *ein* can each:

- co-occur
- appear in contradictory semantic contexts
- be left out in certain, well-defined contexts without loss of meaning

Furthermore, adjectival inflections are *not* a reflex of:

- (in-)definiteness
- (non-)restrictiveness of interpretation of modifiers

- referentiality

Finally, *ein* is *not* a reflex of:

- indefiniteness
- emotiveness
- singular number/countability

Given this, I formulate the two main claims that adjectival endings and *ein* have in common. While (49a) has already been mentioned above, I add (49b) now:

(49)   *Hypothesis 1*
       Adjectival inflections and *ein*:
       a.   are expletive elements and
       b.   indicate abstract structure in the noun phrase.

Hypothesis 1b is slightly different for adjectives and *ein*. This can be fleshed out in the two (a)-statements below. In addition, each of these two type of elements have another difference summarized in the (b)-statements:[27]

(50)   *Hypothesis 2*
       Adjectival inflections:
       a.   indicate abstract structure in the higher layers of the noun phrase (DP vs. LPP); they provide clues about structures involving various degrees of embedding of adjectives (simple vs. complex DPs), and
       b.   they make nominal features like case, number, and gender visible.

(51)   *Hypothesis 3*
       Ein:
       a.   indicates abstract structure in the lower layers of the noun phrase (NP vs. ArtP), and
       b.   it supports overt semantic operators (e.g., NEG *k-*) and flags the presence of covert semantic operators (e.g., REL).

Some remarks are in order here. The structural levels LPP and ArtP stand for Left Periphery Phrase and Article Phrase. The first is above the DP-layer, and the second is below the position of adjectives (AgrP; for detailed discussion of my structural assumptions, see Section 4). Furthermore, supporting has been discussed in the context of the well-known phenomenon of *do-*support in English (Chomsky 1957, Lasnik 2000). In the current discussion, supporting involves overt operators. More precicely, operators like negation (NEG) have a detectible manifestation when spelled out, and that element is supported by *ein* (i.e., *k-ein* 'no'). As to flagging, *ein*

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[27] Note though that the (b)-statements are also partially relatable: both adjectival inflections and *ein* make elements visible, morpho-syntactic features vs. operators (the latter in the context of flagging, cf. (51b)). On a different note, I argue in Chapter 5 that there are two basic types of *ein*: the so-called indefinite article characterized in Hypothesis 3 and adjectival *eine*, which is not related to the article: adjectival *eine* is different in that it has semantics and is argued to be in a different position.

indicates the presence of operators like REL, which is a realization operator in cases like *ein Mann* 'a man' (de Swart *et al.* 2007). However, here the operator itself has no detectable manifestation and remains invisible.[28]

Some of the claims in (49) to (51) are not entirely new; for instance, Hypothesis 1b as instantiated by adjectives in Hypothesis 2a has been established by Pfaff (2017) for Icelandic adjectives. Hypothesis 2b is related to Olsen (1991b: 40) and Rehn (2019: 122-26), who state that morphological features need to be made visible (cf. also Esau 1973, who takes the strong endings as case markers). Hypothesis 3b has, in part, been argued for by de Swart *et al.* (2007). In the course of the following discussion, I discuss this and other related work. Finally, I followed Chomsky in Section 1 in assuming that an expletive needs to be licensed by a substantive element (the associate) to avoid a violation of the Principle of Full Interpretation. This licensing can be seen as a semantic licensing condition and was instantiated above by moving the substantive element to the expletive (also Chapter 8). In contrast, the hypotheses above state that expletives indicate the presence of linguistic elements. This, in turn, can be interpreted as a syntactic licensing condition.

If this is on the right track, then there is a division of labor: syntactically, we may state that the expletive indicates the substantive element; semantically, we may say that the substantive element identifies the expletive:[29]

(52)   EXPL $\xrightarrow{\text{Indicate (syntax)}}$ SUBST
                   $\xleftarrow{\text{Identify (semantics)}}$
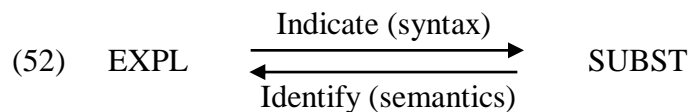
Considering (52), there is an interplay between the two elements in that each element licenses the other.

3.2.2. *Relatedness of Adjectival Inflections and* ein

It is reasonable to ask why adjectival inflections and the indefinite article *ein* 'a' should be discussed together in one volume. Adjectival inflections are bound inflectional morphemes, and the indefinite article is, at least in some cases, a free morpheme. Given their different status, it is expected that they exhibit differences. However, as seen in the previous section, they also show many similarities. To the extent that the hypotheses above prove tenable, both of these elements are expletives, they indicate structure, and they make linguistic elements visible. In addition, both elements involve functional items inside the nominal spine of the DP. What is special about them is that both adjectival inflections and *ein* can appear in multiple syntactic positions inside the DP, and they interact morphologically.

In the absence of evidence to the contrary, I assume that the strong and weak inflections appearing on different elements are the same (e.g., Milner & Milner 1972, also Chapter 2). Specifically, strong endings can appear on adjectives (53a). In addition, the same (strong) endings surface on predeterminers like *alle* 'all' and on determiners (53b):

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[28] In the typological literature, the term flagging has been proposed by Haspelmath (2019) for marking nominals with case markers and/or adpositions. Unlike in the main text, here flags (i.e., case markers, adpositions) involve role-identifiers that appear with *overt* nominals.

[29] These two conditions are reminiscent of the licensing of *pro* proposed by Rizzi (1986): *pro* is formally licensed by government, and the content of *pro* is recovered through rich agreement specification (for ellipsis involving *pro*, see also Lobeck 1995).

(53) a. *gut-e   Studenten*
          good-ST students
          'good students'

      b. *all-e dies-e gut-en   Studenten*
          all-ST these-ST good-WK students
          'all these good students'

It is argued in later parts of the book that adjectives, determiners, and predeterminers are in different syntactic positions (i.e., AgrP, DP, and LPP). Indeed, weak endings can also occur on different elements. Not only do they occur on adjectives as seen in (53b) and (54a), but they can also (optionally) occur on certain determiners in the genitive masculine/neuter (for more detailed discussion, see Chapter 3, Section 4):

(54) a. *der Verkauf heiß-en Kaffee-s*
          the sale   hot-WK coffee-GEN
          'the sale of hot coffee'

      b. *im   Sommer dies-en Jahr-es*
          in.the summer this-WK year-GEN
          'in the summer of this year'

This means that while more restricted, weak endings may also occur on elements in different positions (i.e., AgrP and DP). Given these distributions, I refer to these endings, including the ones on determiners and predeterminers, as adjectival inflections (rather than adjective endings).

    Similar to adjectival inflections, *ein* can appear in different syntactic positions. This can be shown with certain (complex) *ein*-words. As already briefly mentioned in Section 3.1.2, the negative article *kein* 'no' consists of *ein* and the negative element NEG (55a). Similarly, I argue in Chapter 5 that the singularity numeral *EIN* 'one' is made up of *ein* and the null element $\emptyset_{[-PL]}$ bringing about singularity (55b). Both *kein* and *EIN* can co-occur with a lower instance of *ein* provided *so* 'such' intervenes:

(55) a. *k-ein-e   so'n-e Frauen*
          NEG-a-ST so a-ST women
          'no such women'

      b. *EIN-E   so'n-e Frau*
          $\emptyset_{[-PL]}$+a-ST so a-ST woman
          'one such woman'

Recalling the string *kein so'n Mann* 'no such man' from above, note that all instances of *ein* have the same inflection or lack thereof. I argue in later chapters that *ein* along with its inflection may surface in the head positions of (at least) ArtP, CardP, and DP.

    To repeat, adjectival inflections and the indefinite article can each appear in various syntactic positions. This is different from other determiners, which only surface in the DP-layer,

and different from inflections on nouns, which only surface on the nouns themselves.[30] It is clear then that adjectival inflections and *ein* share similar syntactic properties.

Besides these similarities, adjectival inflections and *ein* interact directly as regards inflectional morphology. In the typical cases, the determiner has a strong ending, and the following adjective has a weak one (56a). However, as is well known, there are certain instances where *ein* has no ending, and the adjective exhibits the strong ending (56b). Importantly, when the adjective (and noun) is absent, *ein* has the strong ending (56c):

(56) a. *d-er gut-e   Student*
          the-ST good-WK student
          'the good student'

      b. *ein gut-er   Student*
          a   good-ST student
          'a good student'

      c. *ein-er*
          one-ST
          'one'

As discussed in detail in Chapter 2, there are three instances where *ein* does not have an inflection in (56b) – in the remaining cases, *ein* works like the definite article in (56a). These three instances have received an enormous amount of attention. Specifically, note that the presence of uninflected *ein* has a special impact on the ending of the adjective – it can be strong (56b) – but that *ein* itself can take the ending of the adjective if it occurs by itself (56c). In other words, inflections and *ein* may intersect directly: *ein* may regulate the distribution of the adjectival inflections, and adjectival inflections occur on *ein* if the adjective (and noun) is absent. Crucially, this alternation in (56b-c) is not possible with other determiners.[31]

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[30] It could be claimed that the dative plural ending *-n* on nouns (ia) can appear on other elements when the noun itself is elided (ib) (see Corver & van Koppen 2011 for discussion):
    (i)   a. *mit den zwei Männer-n*
               with the two men-DAT
               'with the two men'
           b. *mit den zwei-n*
               with the two-INFL
               'with those two'
However, this is not possible with the genitive masculine/neuter ending *-s* or other plural endings.

[31] Definite articles are different from *ein* – they always have an inflection when they are followed by an adjective and/or a noun (ia). However, they may get an additional ending when they are used pronominally (ib) (again, see Corver & van Koppen 2011 for discussion, also Roehrs 2013: 398-402):
    (i)   a. *mit d-en   gut-en Männer-n*
               with the-ST gut-WK men-DAT
               'with the good men'
           b. *mit   d-en-en*
               with the-ST-INFL
               'with those'
This additional ending *-en* is not a regular adjectival inflection. Furthermore, it is restricted to dative plural contexts as in (ib) and to genitive instances more generally (e.g., *d-er-en* 'the-ST-INFL' in the feminine and plural).

To sum up, discussing adjectival inflections and *ein* in one volume allows us to recognize and appreciate the above-mentioned similarities, the related differences, and the interactions of the two elements. The analysis of adjectival inflections in Chapter 2 will feature prominently in the discussion of the different types of *ein* in Chapter 5. In fact, the analysis of this interaction narrows down the options of plausible analyses of certain other phenomena and raises issues for specific types of accounts of those phenomena. In addition, the following detailed discussion of both of these elements side-by-side goes beyond the canonical cases providing a more comprehensive discussion needed for both of these elements. These points make it advantageous to discuss adjectival inflections and *ein* in tandem.

4.   Basic Assumptions

In this section, I briefly lay out my assumptions of the syntactic structure of canonical noun phrases (non-canonical constructions are discussed in later chapters in detail). Then I detail my assumptions about determiners, adjectives, and numerals/quantifiers. Finally, I summarize the main points of Distributed Morphology and Type Theory, approaches to the morphology and semantics that play an important part in the analysis to follow.

4.1.   Basic Assumptions about Structure

I start by discussing noun phrases as a whole. This is followed by specifying my assumptions about determiners, adjectives, and numerals/quantifiers.

4.1.1. DPs as a Whole
This book is written in the general generative tradition (e.g., Chomsky 1995, 2000). As mentioned above, I assume the DP-Hypothesis such that nominals in argument position are (at least) DPs but nominals in non-argument position may be of smaller size. Taking a cartographic approach, I assume that DPs like (57a) have the structure shown in (57b). Proceeding bottom-up, I assume that nouns project NPs and that morphological number is specified in NumP (Ritter 1991).[32] I claim here (and argue momentarily) that determiners originate in a lower Article Phrase (ArtP). Following Cinque (1994, 2010), I take adjectives to reside in the specifiers of a recursive AgrP. I follow Zamparelli (2000) in arguing that (weak) quantifiers are housed in Spec,CardP. Finally, I assume that determiners move from ArtP to the DP-level, with definite and indefinite articles moving to D but demonstratives moving to Spec,DP (for more detailed background discussion, see among many others Abney 1987, Alexiadou *et al.* 2007, Bernstein 2001a, Julien 2005a, Longobardi 2001, Roehrs 2020b):

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[32] In this work, I take a (traditional) projectionist view. In contrast, neo-constructionist models postulate that certain properties of lexical elements are determined by higher functional ones. For instance, Marantz (1997) proposed that lexical items such as nouns and adjectives are merged as acategorial or category-neutral roots that receive their lexical category during the derivation; that is, after they have merged with a category-defining head (for similar ideas, see Borer 2005, 2013). Below, I assume that ellipsis involves null noun. Since I am not entirely sure how null nouns (or *pro* as in Olsen 1987 and related work) are compatible with acategorial/category-neutral roots, I abstract away from this type of (new-constructionist) view here, with the qualification that the mass/count distinction of nouns is determined by the higher Num head (Chapter 7).

(57) a. *die zehn kleinen Autos*
          the ten small   cars
          'the ten small cars'

b.
```
                    DP
                   /  \
                      D'
                     /  \
                    D    CardP
                   die_i /    \
                       QP      Card'
                      zehn    /    \
                          Card      AgrP
                               /       \
                              AP        Agr'
                           kleinen     /    \
                                     Agr     ArtP
                                              \
                                              Art'
                                             /    \
                                           Art     NumP
                                           t_i    /    \
                                               Num'
                                              /    \
                                            Num     NP
                                           [+PL]   Autos
```
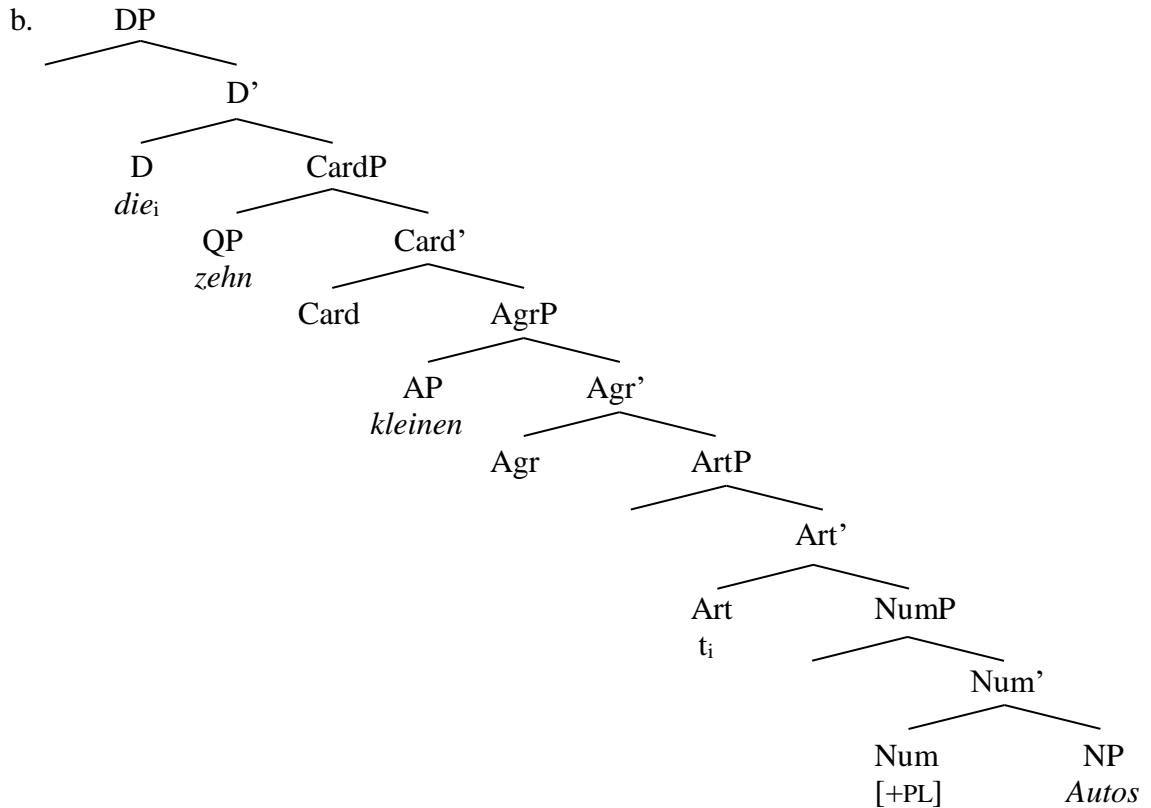
I assume with Julien (2005b) that nouns undergo partial N-raising to Num (not shown). Note also that with the noun at the bottom of the tree, the higher projections can be interpreted as the extended projection of the noun (Grimshaw 1991, van Riemsdijk 1998b). We see below that there are other types of extended projection; for instance, QP and AP in (57b) are more complex (and are fleshed out further below).

The structure in (57b) involves a simple DP – there are no other nominals embedded as specifiers, as adjuncts, or as complements. Furthermore, as mentioned above, case, number, and gender are concord features in the German noun phrase. I assume that gender comes from the noun and that (morphological) number originates in NumP. Case is determined DP-externally. With the exception of Saxon Genitives, all elements in simple DPs like (57b) exhibit concord in agreement features.[33] To repeat, I take simple DPs involving concord to be canonical constructions. Since the low position of determiners plays an important role in the analysis to be developed, I review some previous work on it.

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[33] It is not clear what the mechanism is that yields concord in agreement features (see, e.g., Sigurðsson 1989: 112-113 for an analysis based on feature percolation/spreading, Schoorlemmer 2009 for an Agree-based account, Norris 2014 for a proposal in terms of feature spreading and local feature copying, and Carnie 2021: 293 and Olsen 1991b: 38 for an idea involving selection; for insightful discussion of agreement in the clause, see Pesetsky & Torrego 2007). Note in this regard that the successive-cyclic movement of the determiner, as discussed below, could do double duty and mitigate concord. I leave this interesting option open here.

Cases of Double Definiteness have received much attention in the literature on the Scandinavian languages; for instance, Norwegian *den gamle mannen* 'the old man' involves a free-standing determiner (*den*) and a suffixal determiner on the noun (*-en*). Taraldsen (1990: 428) was one of the first to propose that the suffixal determiner originates in a D-type position below prenominal adjectives and that the free-standing determiner appears in a second D-type position above adjectives. Julien (2002, 2005a) elaborated on that providing arguments that the low determiner position is tied to the (definiteness) feature [SPECIFICITY] in certain Scandinavian languages (see also Schoorlemmer 2012). Roehrs (2002, 2009a) proposed that both of these determiner positions are related by movement accounting for the different interpretations of adjectives as regards (non-)restrictiveness (see also Chapter 4, Section 4). In order to explain the Definiteness Cycle in the history of English, Nykiel (2015) employed determiner movement from a low position as well. Borer (2005, chapter 4) derives the mass/count distinction of nouns by assuming the absence or presence of a Classifier Phrase (cf. NumP below) and movement of determiners from this low position to higher positions in the nominal structure (see also Rehn 2019: 172f).[34] Schoorlemmer (2009) utilized the two determiner locations in his analysis of concord of the noun phrase (see Chapter 2, Section 4.2). Heck *et al.* (2008) proposed that a definiteness feature moves from N to D when a prenominal adjective is present. Finally, separating the definiteness feature into different components, Roehrs (2015, 2019) provided evidence that the low position of some of these definiteness components explains adjective endings in the Scandinavian languages and certain interactions between demonstratives/possessives and suffixal determiners.[35]

Adopting a similar position, I assume that the determiner moves from ArtP to the DP-level in a successive-cyclic fashion. Leaving out the numeral in (57a) above and adding the adjective *rot* 'red', the derivation can be updated as follows:

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[34] Unlike the current account, which merges determiners, singular or plural, in ArtP, Borer (2005: 123) has to assume that given her assumption about plural morphology, singular and plural determiners are merged in different positions (singular determiners in ClP, but plural ones in the higher #P; cf. CardP below).
[35] In her analysis of constructions involving DP-internal degree Quantifier Raising (e.g., *an idiot of a doctor*, *too big (of) a house*), Matushanksy (2002: 272f) locates the indefinite and definite articles in a head position below the DP-level (presumably Card in the current analysis).

(58)

```
DP
└── D'
    ├── D
    │   die_i
    └── AgrP
        ├── AP
        │   kleinen
        └── Agr'
            ├── Agr
            │   die_i
            └── AgrP
                ├── AP
                │   roten
                └── Agr'
                    ├── Agr
                    │   die_i
                    └── ArtP
                        └── Art'
                            ├── Art
                            │   die_i
                            └── NumP
                                └── Num'
                                    ├── Num
                                    │   ├── Autos_k
                                    │   └── Num_{[+PL]}
                                    └── NP
                                        t_k
```
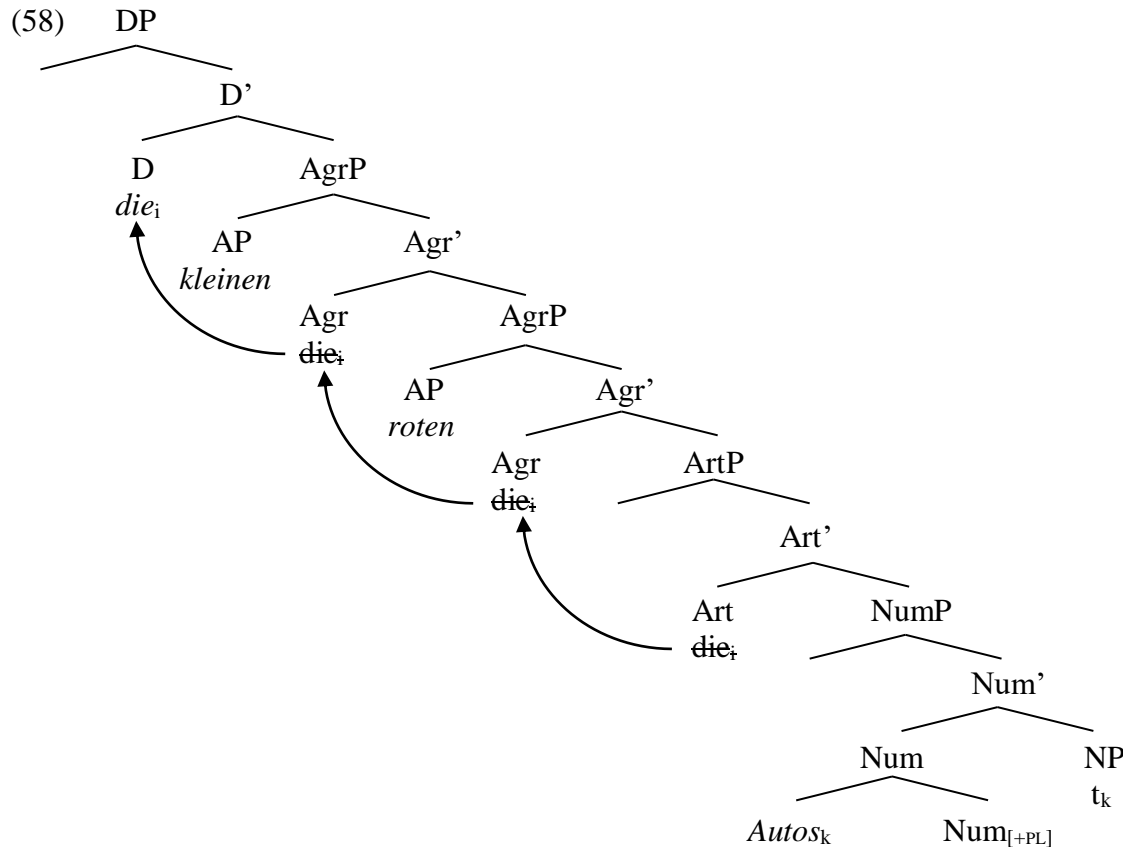
I assume that definite articles move to D by head adjunction as shown in a simplified way in (58) but that (phrasal) demonstrative move to Spec,DP by adjunction to phrasal projections.[36]

Unlike case, number, and gender, definiteness is not a concord feature. Rather, I assume that definite determiners like *der* 'the' have the feature [+DEF] as part of their structure (Section 4.1.2) and move to the DP-level to specify the definitenss feature on D such that [uDEF] becomes [+DEF]. The article *ein* 'a' is different. As a semantically vacuous element, it does not have a feature for definiteness. This means that when *ein* is present, D has no definiteness feature.[37] Given the lack of definiteness feature on *ein*, this element can surface in lower

---

[36] Head movement of the determiner in (58) is illustrated in a simplified way. Note that there are well-known problems with assuming that head movement is syntactic and proceeds by head adjunction. Among others, head adjunction constitutes a violation of the Extension Condition (Chomsky 1995). Solutions to these issues have been proposed; for instance, Borer (2005: 45f) argues for head-pairs where one element of this pair is merged above the other (but crucially not by head adjunction). The higher element of that pair can move up to the next phrasal level merging above the head of this phrase forming another head-pair – there is no violation of the Extension Condition (for related discussion, see also Matushansky 2006, who proposes that head movement consists of movement of a lower head to the specifier of a higher phrase followed by m-merger of this head with the head of the higher phrase; "excorporation" is possible if m-merger does not take place, see pages 91-93 of the above-mentioned work).

In what follows, I simply assume that heads raise by adjunction to the next higher head. The head noun raises to adjoin to Num, and both elements are spelled out as the appropriate singular or plural form of the noun. As for determiners, I assume that they also raise by adjunction to the next head. However, I assume that after adjunction, they excorporate and move to the next higher head (keeping in mind that there are other solutions, as just mentioned). Note that unlike the movement of the noun, the movement of determiners is not structure-building.

[37] This implies that there are two types of D, one with a feature for definiteness and one without it. Alternatively, we could postulate just one type of D and assume that its definiteness feature can but does not have to be

positions (cf. also Borer 2005: 144ff, Rehn 2019). Among others, this allows me to postulate structures smaller than DP, for instance, when nominals involving *ein* occur in predicative contexts without a modifier (e.g., *Er ist ein Mann.* 'He is a man.'; see Chapter 6).

There is overt distributional evidence that determiners originate in low positions in German (for detailed cross-linguistic discussion, see Roehrs 2009a and references cited therein). Sternefeld (2008: 255) reports work by Horst Simon, who observes that the negative article *kein* 'no' can be repeated in dialectal German (59a).[38] Sternefeld concludes that another position is needed for the second (low) instance. Above, I identified this position as Art. Furthermore, I noted above that colloquial German also tolerates two indefinite articles (59b-c):

(59) a.   *Ich hab k-ein blau-es k-ein   Kleid nicht.*   (dialectal German)
           I   have NEG-a blue-ST NEG-a dress not
           'I don't have a blue dress.'

      b.   *k-ein   so'n Kleid*
           NEG-a so a dress
           'no such dress'

      c.   *EIN   so'n Kleid*
           $\emptyset_{[\text{-PL}]}$+a so a dress
           'one such dress'

Observe that unlike the recurring indefinite articles in Norwegian (Section 2.1.2), in German *ein* can only be repeated if both instances of *ein* are part of another element, for instance, the negative article *kein* '(not a =) no' and the type operator *so'n* 'such a/of that kind' (see also Chapter 8). Given the works cited above and the empirical evidence just provided, I take it as established that determiners originate low in the structure.

With the structure of canonical DPs in place, I should point out that the current proposal follows a research tradition that provides morpho-syntactic subanalyses where words are separated into stems and inflections, each involving a position in the syntactic representation as explicated in greater detail in the next subsections:

(60) a.   *gut-er*
           good-ST
           'good'

---

checked/valued. Besides *ein*, which has no definiteness feature in the current account, predicative DPs raise this type of issue more generally. They are indefinite by form (e.g., *Er ist ein netter Mann.* 'He is a nice man.'), but not by meaning (they denote properties). This is different for indefinite argument DPs, which may assert the existence of an entity (e.g., *Ein netter Mann war da.* 'A nice man was there.'). However, given my analysis of *ein*, indefiniteness in argument DPs cannot come from *ein* itself (more on this later). Note that the current account is similar to Pfaff's (2017) analysis of the strong/weak alternation in Icelandic, where definite DPs have a definiteness feature, but indefinite DPs, predicative and argumental, do not.

[38] This dialect is not further specified by Sternefeld. An example where the negative article appears to be in a low position similar to (59a) is also provided by Haegeman & Lohndal (2010: 187) from West Flemish.

b.   *d-er*
        the-ST
        'the'

These subanalyses are part of a more general approach to morpho-syntax involving the segmentation of word and morpheme forms into smaller units (e.g., Anderson 1992; Fischer 2006; Gunkel *et al*. 2017: 1297-98; Leu 2015; G. Müller 2002a: 125; Olsen 1991b: 38; Pike 1963, 1965; Rehn 2019; Roehrs 2013; Stump 2001; B. Wiese 1999; Wiltschko 1998, Wunderlich 1997; but see also Janda & Joseph 1992). Furthermore, similar to Distributed Morphology, which is utilized here (see Section 4.2.1), the recent approach of nanosyntax also involves analyses at the submorphemic level (see Hachem 2015 and Starke 2009). However, the latter approach explicitly rejects Impoverishment rules (Arregi & Nevins 2012: 341), a type of operation essential for the account to be developed below. I return to some of these works in later parts of the book. With this in mind, I discuss determiners and related elements in the next subsection, and adjectives and similar items in the subsection after that.

4.1.2. Determiners, Articles, and Determiner-like Elements
In German, determiners are categorized into three groups: *der*-words, *ein*-words, and null articles. The first set includes *der* 'the', (stressed) *DER* 'that', *dieser* 'this', *jener* 'that', *jeder* 'every', *mancher* 'some', *solcher* 'such', *welcher* 'which', and *alle* 'all' in the plural (and occasionally with mass and abstract nouns; for more details on the use of these elements, see Zifonun *et al.* 1997: 1930ff). Second, as already stated above, *ein*-words are comprised of the indefinite article *ein* 'a' including its reduced form *'n*, the (stressed) singularity numeral *EIN* 'one', the negative article *kein* 'no', and possessive articles like *mein* 'my', *dein* 'you', etc. The third category involves null articles that occur with mass and plural nouns in indefinite contexts. They are indicated here by $\emptyset_D$.

 Articles are a specific subgroup of determiners. They comprise the definite article *der* 'the', all *ein*-words, and the null articles (I argue in detail in Chapter 5 that complex *ein*-words are composites consisting of the vacuous article *ein* and another, semantic component). Finally, possessives (including the possessive component of the possessive article) and predeterminers are labeled determiner-like elements here. I assume that all determiners originate in ArtP. This is different for determiner-like elements as explained further below.

 I argue in Chapter 2 that articles are heads consisting of a categorial feature [+D]. The indefinite null articles are illustrated in (61a), which includes a definiteness feature with a negative value. Unlike the null articles, overt articles have a feature bundle for case, number, and gender ([CNG]). Above, I proposed that *ein* is a semantically vacuous element. As such, it does not have a feature for definiteness (61b). By contrast, the definite article *der* 'the' has a feature for definiteness. However, unlike the null indefinite articles, the value for definiteness is positive (61c):[39]

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[39] I specify the contexts of vocabulary insertion for the determiners in Chapter 8, Section 2.2.5. Also, note that the existence of null articles is a fairly standard assumption (e.g., Carnie 2021: 271, Schoorlemmer 2009). Among others, it allows us to claim that all argument DPs have determiners. In the context of the current analysis, their existence also helps explain the distribution of the article *ein* vs. adjectival *eine* (Chapter 5, Section 5.2.4). Furthermore, assuming that the null articles have the feature [-DEF] has a number of advantages: (i) it makes $\emptyset_D$ parallel to *der* 'the' in terms of (in-)definiteness, (ii) it provides a straightforward solution to the distribution of articles with certain operators (Chapter 8, Section 2.2.5), and (iii) it makes *ein* the least specified determiner.

(61)   a.   *Indefinite Articles* Ø$_D$

$$
\begin{array}{c}
\text{Art} \\
| \\
\text{[+D; -DEF]}
\end{array}
$$

   b.   *Indefinite Article* ein

$$
\begin{array}{c}
\text{Art} \\
\diagup \quad \diagdown \\
\text{[+D]} \qquad \text{[CNG]}
\end{array}
$$

   c.   *Definite Article* der

$$
\begin{array}{c}
\text{Art} \\
\diagup \quad \diagdown \\
\text{[+D; +DEF]} \qquad \text{[CNG]}
\end{array}
$$
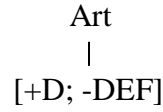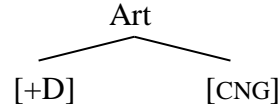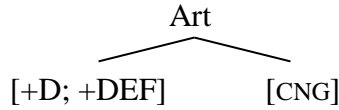
Abstracting away from the adjectival inflection, note already here that *ein* is the least specified article in German – it only has the categorial feature [+D].

   Demonstrative such as *dieser* 'this' are phrasal in structure (e.g., Bernstein 1997, 2001b; Brugè 1996, 2002; Giusti 1997, 2002; Rauth & Speyer 2021). For simplicity's sake, I assume that there are two terminal heads (62). Dem involves the features [+D; +DEF, +DEIX] and builds its own extended projection with an Inflectional Phrase (InflP) at the top (see Leu 2007, 2015; Roehrs 2010, 2013).[40] The features for case, number, and gender are in Infl. Dem moves to adjoin to Infl (not shown):

(62)   *Demonstrative*

$$
\begin{array}{c}
\text{InflP} \\
\diagup \qquad \diagdown \\
\text{[CNG]} \qquad \text{DemP} \\
\qquad\qquad | \\
\qquad\qquad \text{Dem} \\
\qquad \text{[+D; +DEF, +DEIX]}
\end{array}
$$
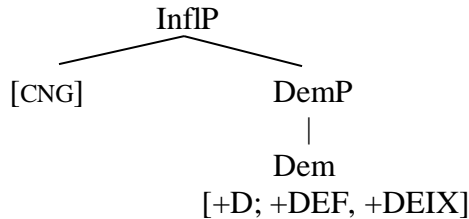
As will become clear in Chapter 3, Section 4, phrasal determiners have some special properties; for instance, they can optionally have a weak ending in genitive masculine/neuter contexts. Besides *dieser* 'this', this includes *jener* 'that', *jeder* 'every', *mancher* 'some', *solcher* 'such', *welcher* 'which', and *alle* 'all'. I assume that all these elements have a structure similar to (62).[41]

---

[40] The head Dem involving the features [+D; +DEF, +DEIX] could be analyzed as two heads, Art with the features [+D; +DEF] and a deictic head Deic with the feature [+DEIX] (for discussion, see the above-mentioned works). Since these finer distinctions do not play a role here, I continue employing the simpler analysis in the main text.

[41] The demonstrative *DER* 'that' seems to have an intermediate status. On the one hand, this element is expected to project a phrasal structure (similar to the demonstrative *dieser* 'this'); on the other hand, it behaves like the definite article *der* 'the' in not exhibiting the optionality of strong or weak inflection in the genitive masculine/neuter.

Possessives will not feature prominently in the following discussion. They involve complex structures that deserve more discussion than I can provide here (but see Roehrs 2013, 2020a). However, they need to be briefly addressed as they are mentioned in various contexts below. Focusing on prenominal possessives, there are different types: possessive articles (63a), Saxon Genitives consisting of a possessor and the possessive marker *-s* (63b), and *von*-possessives comprising a possessor and the possessive preposition *von* 'of' (63c) (see also Bhatt 1990: 223-24, Fortmann 1996, Haider 1992: 315):

(63) a.   *sein Auto*
            his car
            'his car'

      b.   *Peters Auto*
            Peter's car
            'Peter's car'

      c.   *von Peter das Auto*
            of   Peter the car
            'the car of Peter'

Following Roehrs (2020a), I assume that possessives involve multi-component constituents consisting of a possessive functor and a possessor. The possessive functor forms the head of a Possessive Phrase (PossP) taking the possessor as its complement. A functional phrase (XP) is at the top, where XP can vary between a nominal or prepositional extension of Poss (cf. Grimshaw 1991): it is nominal with *s-* and *-s* but prepositional with *von*:

(64)
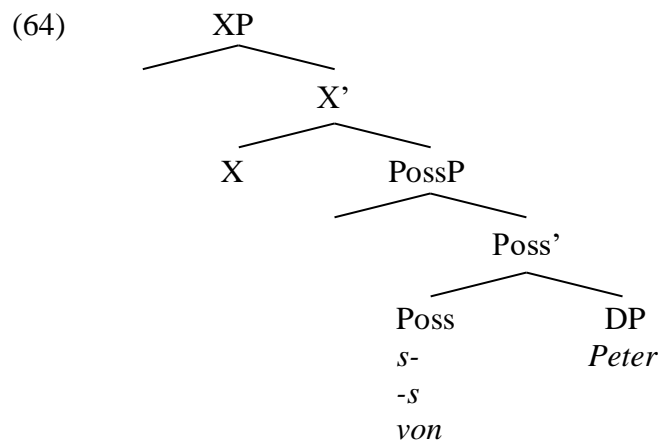
Note that similar to demonstratives, possessives involve extended projections.

All Poss heads, that is, the possessive component *s-*, the possessive marker *-s*, and the possessive preposition *von* 'of', move to X in (64). The possessor *Peter* undergoes movement to Spec,XP in the first two cases but stays in situ with *von*-possessives (for more details, see Roehrs 2020a: 123). This yields the correct surface strings for Saxon Genitives (*Peters*) and *von*-possessives (*von Peter*).

As to the possessive articles, consider briefly the periphrastic possessive construction *Peter sein Auto* '(Peter his =) Peter's car' (Fiva 1985), where a possessor is added to the left. This distribution is sometimes referred to as Possessor Doubling. If we assume with Grohmann & Haegeman (2003: 53) and Alexiadou *et al.* (2007: 611) that *Peter* can be replaced by a null argument (*pro*), then the periphrastic possessive construction in (65a) can be directly related to the simple possessive article in (65b):

(65) a. [XP *Peter s-]ein Auto*

     b. [XP *pro s-]ein Auto*

The possessive structure XP in (64) can surface in different positions inside the larger DP. I assume that XP is base-generated in Spec,NP, where it may receive a theta role (depending on the type of head noun). Recall that the head noun moves to Num. If XP stays in situ, postnominal possessives are derived; if XP moves higher, prenominal possessives come about. Focusing on the latter again and abstracting away from the movement of the article, the possessive component *s-* and its possessor (*Peter* or *pro*) move to Spec,DP (66a). The Saxon Genitive consisting of the possessive marker *-s* and its possessor also move to Spec,DP (66b) (see also Borer 2005: 40f, who argues that the possessive marker is part of the specifier, and not in D). Unlike those two cases, *von*-possessives move to Spec,LPP (Giusti & Iovino 2016).[42] This derives the data in (63a-c) above:

(66) a. [DP [XP *Peter/pro s-*]$_k$ *ein* [NumP *Auto*$_i$ [NP t_k t_i]]]

     b. [DP [XP *Peter*s]$_k$ $\emptyset_D$ [NumP *Auto*$_i$ [NP t_k t_i]]]

     c. [LPP [XP *von Peter*]$_k$ LPP [DP *das* [NumP *Auto*$_i$ [NP t_k t_i]]]]

Comparing (66a) to (66b), I follow Krause (1999) and Roehrs (2020a) in that the periphrastic possessives (including the possessive articles involving *pro*) and the Saxon Genitives have essentially the same structure.

While I cannot argue for these structures and derivations in more detail here (see references mentioned above), one immediate advantage is that all prenominal possessives in German have the same basic internal structure (XP) and that they all have the same basic derivation undergoing movement from a low position to a high position within the larger noun phrase. Indeed, each noun phrase involves a determiner in D: *ein* in (66a), $\emptyset_D$ in (66b), and the definite article in (66c).[43]

---

[42] Rather than LPP, we could postulate K(ase)P (see Pfaff 2017: 294 for discussion and references). However, I prefer the functionally neutral name of Left Periphery Phrase here.

[43] At this point, an issue arises. As is well known, possessors in prenominal position may spread their (in-)definiteness to the larger noun phrase (e.g., Alexiadou 2005, Roehrs 2022). If this definiteness spread is instantiated by Spec-head agreement between Spec,DP and D, then definite Saxon Genitives and null articles specified as [-DEF] are incompatible (cf. (66b)). In Footnote 39, I pointed out some advantages of assuming that null articles exist and that they have a negative feature for definiteness. Given these points, I proceed with the assumption of a negative feature for definiteness, but I offer two solutions to this issue in Chapter 8, Section 2.2.5 (once further discussion is in place).

Finally, predeterminers are intensifiers like *alle* 'all', *diese* 'these', and *ein* 'a' expressing additional exhaustiveness, deixis, and distributivity, respectively:

(67)   a.   *alle meine Freunde*
                all   my   friends
                'all my friends'

       b.   *diese meine Freunde*
                these my   friends
                'these friends of mine'

       c.   *ein jeder meiner Freunde*
                an every of.my friends
                'each of my friends'

Note that predeterminers form a subset of determiners. In other words, all predeterminers also do double duty as determiners (but not vice versa). I propose below that all these elements have the categorial feature [+D]. As determiners, they are base-generated in ArtP and move to DP. However, if ArtP already contains a determiner, a second determiner element can only be merged as a predeterminer provided it can supply an intensifying meaning compatible with the rest of the nominal. Given that there is only one determiner in the DP-layer, I assume that predeterminers are located in LPP illustrating here with *alle*:

(68)   [LPP *alle* [DP *meine Freunde*]]

As such, I assume that LPP can be occupied by prenominal *von*-possessives and predeterminers. To distinguish predeterminers and possessives from determiners, I often refer to the former set of elements as determiner-like elements.

4.1.3. Adjectives, Numerals, and Quantifiers
Elements in specifiers project their own phrases. Above, I illustrated this with demonstratives and possessives. Each of these elements project their own complex structure. In this subsection, I turn to adjectives and numerals/quantifiers. We see that AP and QP in (57b) above are also more complex.
        Starting with adjectives, I assume that they also involve extended projections (e.g., Corver 1991, 1997; Neeleman *et al*. 2004; Zamparelli 2000: Chapter 7). Minimally, the adjective projects an AP, and InflP is at the top (e.g., Corver 2006: 68, Leu 2015, Sapp & Roehrs 2016). The adjective stem is located in A and the inflection in Infl. Both combine by movement of the adjective to Spec,InflP (not shown; see Chapter 2, Section 2.4):

(69)

```
              InflP
             /    \
           Infl'
          /    \
      [CNG]     AP
               /  \
                    A'
                  /   \
                 A
                klein
```
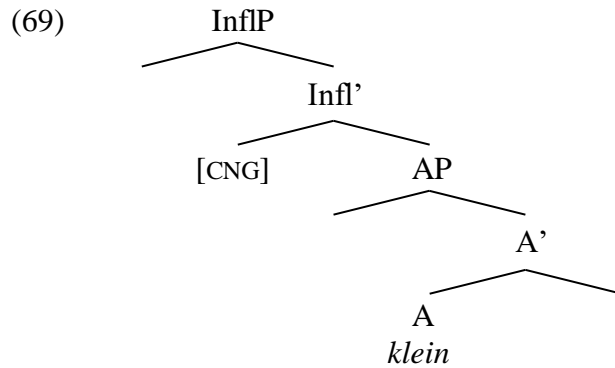
Finally, numerals (e.g., *zwei* 'two') and quantifiers (e.g., *viele* 'many') are assumed to have the same representation as (69), where Q is at the bottom projecting more structure. The internal makeup of the singularity numeral *EIN* 'one' is discussed in detail in Chapter 5.

These are the basic structural assumptions of the noun phrase that I take to be fairly uncontroversial. Against this backdrop, a number of other, non-canonical constructions involving adjectival inflections and/or *ein* are discussed in later sections. It will become clear that not all nominal constructions can have the same structure. More importantly, I argue that it is these types of different constructions that reveal the true nature of adjectival inflections and *ein*.[44]

4.2.   *Distributed Morphology and Type Theory*

Besides the syntactic assumptions in the previous section, I make use of Distributed Morphology and semantic Type Theoery to account for adjectival inflections and *ein*.

4.2.1. Distributed Morphology
I usually provide syntactic representations of the form in (57b) and (58), where vocabulary items are directly merged in the syntactic tree, that is, during the syntactic derivation. This is a convenient shortcut. While not relevant in many cases, I assume that such syntactic representations are actually built on terminal nodes containing morpho-syntactic features (rather than lexical elements). This is a basic tenet of Distributed Morphology (DM) (see, e.g., Arregi & Nevins 2012: 3-11; Embick & Noyer 2007; Halle 1997; Halle & Marantz 1993, 1994; Harley & Noyer 1999; Sauerland 1996), a realizational approach to morphology where the derivation of complex words is separate from the spelling out (or realization) of those words.

In DM, terminal nodes of a syntactic tree involve abstract features. These features can be manipulated in certain ways; for instance, features can be rearranged (Lowering) or deleted (Impoverishment). After Linearization, the resultant features are spelled out by overt vocabulary items. In other words, the insertion of these items occurs late in the derivation (after syntax) and depends on the specific morpho-syntactic features present on the terminal nodes. As just stated, these features may have undergone some changes.

Vocabulary Insertion is regulated by the Subset Principle. Provided that all features of the vocabulary item match those on the terminal node, the vocabulary item with the most specifications, that is, the most matching features, is inserted over less specified items. When a more specific vocabulary item cannot be inserted (i.e., at least one of its features does not match

---

[44] This idea has been echoed by other authors; for instance, Sigurðsson & Wood (2020: 22) state that the exceptional cases may throw light on the more general instances.

those on the terminal head), the vocabulary item with fewer or no features is inserted as the elsewhere case. In other words, vocabulary items may be underspecified as regards their morpho-synactic features. This allows competition between related items in certain contexts.

After insertion, vocabulary items can undergo Local Dislocation combining with other vocabulary items. Unlike Lowering (which operates on hierarchical structures), Local Dislocation involves linear adjacency. Note that while not all these operations are equally important in this book, they are assumed to occur in the general order below (see also Murphy 2018: 359). The operations whose orderings are not relevant here are enclosed in curly brackets:[45]

(70)   {Lowering, Impoverishment} >> Linearization >> Vocabulary Insertion >> Local Dislocation

It is clear that Impoverishment precedes Vocabulary Insertion, and we observe in Chapter 2 that this operation seems to have access to structural information. As such, Impoverishment has been ordered with Lowering. This is compatible with Arregi & Nevins (2012: 342), who order Impoverishment before Linearization and the latter before Vocabulary Insertion. Impoverishment plays an important part in the analysis to be developed.

To illustrate briefly, inflections are taken to be the overt spell-out of abstract feature bundles on terminal nodes in syntax.[46] These feature bundles can be manipulated in certain ways. Sauerland (1996) proposes for Norwegian (see Chapter 2 for German) that the weak inflections on adjectives are the result of the deletion of features in contexts where strong inflections occur otherwise. To see this, consider the inflectional paradigms of the strong and weak endings in Tables 2 and 3:

Table 2: Strong Adjective Inflections in Norwegian

	-neuter	+neuter
-plural	-Ø	-t
+plural	-e	-e

Table 3: Weak Adjective Inflections in Norwegian

	-neuter	+neuter
-plural	-e	-e
+plural	-e	-e

Sauerland establishes the generalization that the weak inflections (-*e*) form a proper subset of the strong inflections (-*e*, -*Ø*, -*t*). He observes that the weak endings occur in the same featural contexts as their homophonous strong endings (i.e., in [+plural] contexts) and, additionally, in other environments (i.e., [-plural]). Sauerland proposes that the weak inflections are the least marked endings from the set of strong endings. In other words, there is no difference between strong and weak inflection other than the degree of their specificity. He argues that the weak

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[45] (Late) Vocabulary Insertion usually concerns functional elements but not lexical ones. The latter are merged as terminal nodes and involve phonological features (Embick & Noyer 2007: 295).

[46] I assume that terminal nodes may contain feature bundles (rather than just individual features).

endings appear when the feature bundles of the strong inflections undergo the deletion of features. This feature deletion is instantiated by Impoverishment.

Sauerland formulates the following vocabulary insertion rules:

(71)   a.   [-plural, +neuter]   →   *-t*

        b.   [-plural, -neuter]   →   *-Ø*

        c.   []   →   *-e*

He proposes that Impoverishment deletes the gender feature in Norwegian. If the feature [neuter] is deleted, (71a) and (71b) can no longer be inserted. As a consequence, only (71c) can be inserted resulting in weak inflections on adjectives.

Note that the exact conditions as to when Impoverishment is triggered in Norwegian are not provided (but Sauerland states that those conditions are morpho-syntactic, at least in German). For some discussion of the contexts and conditions where Norwegian weak endings appear, see Julien (2005a); Katzir & Siloni (2014); Roehrs & Julien (2014); Schoorlemmer 2009, 2012, and many others (for the discussion of related Icelandic, see Pfaff 2017). The morpho-syntactic conditions postulated by Sauerland for German are reviewed and discussed in more detail in Chapter 2. With this brief illustration of DM in place, I return to the syntax for a moment.

I assume with Nunes (2001) that Move, more recently termed Internal Merge, is not a primitive operation but rather the output of Copy, Merge, Form Chain, and Copy Reduction. I assume that the first three operations apply to feature bundles which are later spelled out by the corresponding overt vocabulary items. We see later that the fourth operation, Copy Reduction, is sensitive to the overt form of vocabulary items (free vs. bound). As such, I assume that this operation applies after Vocabulary Insertion. This is compatible with Schoorlemmer (2012), who explains cases of Double Definiteness in Swedish DPs by ordering Copy Reduction after Local Dislocation.[47] For convenience and expository simplicity, especially when the underlying details of the derivation are not relevant, I indicate movement by indexed traces and provide the more familiar syntactic representations provided in Section 4.1.1.

4.2.2. Type Theory

This book is not about the semantics of the DP *per se* (or the semantics of the TP, for that matter). Nevertheless, I make some statements about the semantics involved. Rather than providing detailed denotations (see Roehrs 2009a), I use Type Theory to show that the relevant elements are semantically compatible with one another. The goal is to find plausible structures by narrowing down the analytical options.

To illustrate the main assumptions of Type Theory, consider the following three sentences:

(72)   a.   *Peter ist blond.*
             Peter is blond
             'Peter is blond.'

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[47] Nunes (2001) argues that Copy Reduction takes place before Linearization. For discussion in favor of the ordering Copy Reduction after Linearization, see Schoorlemmer (2012: 135-37).

b. *Er ist blond.*
    he is blond
    'He is blond.'

c. *Der Mann ist blond.*
    the man is blond
    'The man is blond.'

What all these sentences have in common is that somebody is blond. In fact, assuming that *er* 'he' and *der Mann* 'the man' are the same person as *Peter*, all these sentences are true if a certain man called Peter has the property of being blond.

I assume that the copular verb *sein* 'to be' is semantically vacuous (Coppock & Beaver 2015: 399, Heim & Kratzer 1998: 61-62). A sentence has a truth value of 1 if its proposition is true in a given context or 0 if it is false. Illustrating for (72a), if a certain Peter is indeed blond in the given context, then this statement has a truth value of 1; that is, it is true. Truth values are of type <t> (73a). It is usually assumed that individuals like *Peter* are entities. They are of type <e> (73b). Like *Peter*, *er* 'he' and *der Mann* 'the man' are definite expressions and can replace *Peter*. Thus, I assume that they are also of type <e>. Turning to (intersective) adjectives like *blond* 'blond', they involve predicates. Put simply, predication involves membership of an element in a certain set of ordinary/individual entities. Specifically, the adjective *blond* denotes a set of entities that are all blond. Predicates are of type <e,t> (73c) – they are functors combining with entities and return truth values. Finally, definite determiners like *der* 'the' are functors as well presupposing uniqueness. They combine with predicates yielding entities (73d):

(73) a. truth values (type <t>):   *Peter ist blond.*

      b. entities (type <e>):   *Peter, er, der Mann*

      c. predicates (type <e,t>):   *blond*

      d. determiners (type <<e,t>e>): *der*

Before commenting on *der Mann* 'the man' in (73b), note that Type Theory involves a combinatorial system whereby elements are related to one another, two at a time. There are two main operations. First, Functional Application combines a functor and an argument by plugging the latter into the former (74a). For instance, the predicate *blond* can be a functor, and it takes an entity, say *Peter*, as its argument yielding a truth value, schematically: $X_{<e,t>}(Y_{<e>}) = Z_{<t>}$. Second, Predicate Modification combines two predicates; that is, it forms an intersection of two sets of certain entities (74b). For example, predicates like *nett* 'nice' and *blond* 'blond' can be combined as in *der nette blonde Mann* 'the nice blond man' such that a certain man is a member of the set of nice entities and a member of the set of blond entities; that is, he has the properties of being both nice and blond:

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(74)   a.   Functional Application: functor(argument)

        b.   Predicate Modification: predicate & predicate

Returning to *der Mann* in (73b), I assumed above that this string is of type <e> and that the determiner *der* itself is of type <<e,t>e>. Given Functional Application, the noun *Mann* is often taken to be a predicate, just like the adjective *blond*. Note that here the predicate itself is the argument, and the determiner is the functor.

To illustrate the workings of Type Theory in a syntactic representation, consider the more complex nominal in (75a), derived as in (75b). Proceeding bottom-up and leaving out NumP and ArtP, *Mann* passes up its semantic type to NP. The predicate NP and the intersective adjective *blond* are both of the same type (<e,t>). They combine by Predicate Modification resulting in a complex element of the same type. Finally, the determiner *der* is a functor that takes the complex predicate in AgrP as its argument returning an entity (<e>):

(75)   a.   *der blonde Mann*
            the blond   man
            'the blond man'

        b.   DP$_{<e>}$
                            (Functional Application)
     der$_{<<e,t>e>}$ AgrP$_{<e,t>}$
                           (Predicate Modification)
       blonde$_{<e,t>}$ NP$_{<e,t>}$
                     Mann$_{<e,t>}$

These are the basic assumptions (as discussed in Heim & Kratzer 1998), and they are sufficient to account for most cases. In Chapter 6 and 7, I refine my assumptions about nouns and extend the discussion to pronominal determiners like *du* 'you'.

To sum up, this section gave an overview of my basic assumptions as regards the syntax, morphology, and semantics. More details are provided as they become relevant.

5.   Overview of the Chapters

This book pursues two goals. First, it seeks to provide an overview of certain synchronic data in the nominal domain in German. In particular, Chapters 2-7 discuss in detail adjectival inflections, *ein* along with its related 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. While touched on throughout the book, Chapter 8, the final chapter, focuses on these more general points. On the basis of the similarities and differences of adjectival inflections and *ein*, I engage there in a summary discussion of the main hypotheses stated in (49) through (51), point out further consequences, and indicate avenues for future research.

It is important to point out that both of these goals go in partially different directions. Specifically, an overview aims to be fairly exhaustive, but discussing the larger issues involved

is an attempt to see what different sub-domains, empirical or theoretic, have in common. As such, discussing issues to a comprehensive degree tends to move the focus away from traits shared by all the different domains. However, as already briefly illustrated above, the discussion of one phenomenon often forms the background for the analysis of another. It is on the basis of the shared properties and the interwoven argumentation that I proposed above that adjectival inflections and *ein* can and should be discussed in tandem.

The book is organized into two primary chapters (2, 5), four supporting chapters (3, 4, 6, 7), and a conclusion (8). Here is a brief overview:

Chapter 2 (*The Structural Nature of Adjectival Inflections*) This chapter investigates adjectival inflections in a wide range of nominal constructions. It is observed that weak inflections only occur in canonical constructions. These involve simple DPs of the form "determiner + adjective(s) + noun", where all these elements involve concord in agreement features. It is proposed that weak inflections are underlyingly fully specified feature bundles that undergo Impoverishment (Sauerland 1996). This feature deletion is triggered by determiners (Impoverishment Rule 1) or by a certain featural context (Impoverishment Rule 2). In contrast, feature bundles surface as strong endings if Impoverishment does not occur, either in canonical or non-canonical structures. As such, the strong inflections present the elsewhere case. The final section discusses three previous proposals in detail pointing out that none of these accounts can account for all the data.

Chapter 3 (*Variation and Secondary Mechanisms*) This chapter focuses on variation. Given the analysis in Chapter 2, a number of unexpected inflections are discussed. It is pointed out that these cases are very restricted in that they occur only in specific, well-defined contexts. It is argued that unexpected strong adjectives follow from the assumption that pronominal determiners do not trigger Impoverishment. In contrast, unexpected weak adjectives are accounted for by a phonetic rule, which is a reflex of Markedness Reduction. Unexpected weak inflections on determiners follow from the extension of Impoverishment Rule 2. Overall, it is proposed that adjectival inflections are due to several mechanisms. Finally, inflectional variation on certain adjectives and predeterminers is addressed, issues with the traditional generalizations Weak after Strong and the Principle of Monoinflection are discussed, and the strong/weak alternation of the dialect of Mannheim is analyzed.

Chapter 4 (*Consequences for Other Analyses*) This chapter discusses some other consequences of the first part of the book. Specifically, it is shown that weak adjectives in the context of plural *ein* raise issues for analyses involving Predicate Inversion (Bennis *et al.* 1998) and for accounts postulating the presence of certain null nouns (van Riemsdijk 2005). Furthermore, it is argued that the present analysis is not compatible with split topicalization constructions if simply analyzed as movement (van Riemskijk 1989) but only if analyzed as involving the separate base-generation of two nominals where one or both of these nominals undergo movement later (Fanselow 1988). Finally, it is suggested that non-restrictive adjectives must have the same basic structure as restrictive ones and that strong inflections are not "referential" in nature but serve to make nominal features like case, number, and gender visible.

Chapter 5 (Ein-*words and Adjectival* eine) This chapter investigates the different kinds of *ein*. It is argued that there are basically two main types: semantically vacuous *ein* and adjectival *eine*. The former can occur by itself as the indefinite article but also as part of the singularity numeral *EIN* 'one', possessive articles like *mein* 'my', etc., and the negative article *kein* 'no'. These four types of elements are labeled *ein*-words. It is proposed that *EIN*, *mein*, and *kein* are composite forms consisting of vacuous *ein* and another component. This derives the

morpho-syntactic similarities of these elements. The distinctions follow from the second component, which has different feature specifications from *ein* and occupies different positions in the syntactic representation. The second main type involves adjectival *eine*. This element is a lexically different element: it is an adjective that only appears in definite contexts and induces a duality presupposition. This adjectival element is proposed to be located in a high AgrP.

Chapter 6 (Ein *and Emotiveness*) This chapter presents the first consequence of the second major component of this book. Contrasting pronominal DPs and copular TPs, it is shown that singular contexts exhibit the most restrictions. Three different interpretations are distinguished. First, the ordinary reading is emotive in pronominal DPs but both neutral and emotive in copular TPs where TPs show *ein* in both neutral and emotive contexts. Second, the comparative reading is emotive in both DPs and TPs, where the latter involve *ein*. Finally, the capacity reading is neutral in DPs involving *als* 'as' and emotive in TPs involving *ein*. It is proposed that *ein* is not responsible for the emotiveness in the various interpretations. Rather, following Rauh (2004) and de Swart *et al*. (2007), I propose that the emotive readings are due to certain pragmatic restrictions and the realization operator REL. The presence of the latter is flagged by *ein*. More generally, this and the next chapter discuss the relatedness of noun phrases and clauses.

Chapter 7 (Ein *and Number*) This chapter presents a second consequence of Chapter 5. Comparing again the nominal and clausal domains, I discuss four different constructions: pronominal DPs, copular TPs, pronominals followed by *als*-nominals, and non-copular TPs involving *als*-nominals. I show that pronominal DPs are very restricted with regard to morphological and semantic number; that is, singular DPs are singular in interpretation, and plural DPs are plural in interpretation. This is different for the other three constructions. While nouns preceded by *ein* can only be singular in interpretation and nouns in the plural can only be plural in interpretation, bare nouns can be both singular and plural in interpretation and combine with singular or plural pronominals. I propose that pronominal DPs always project NumP but that predicate nominals in the other constructions may lack NumP, provided NumP is the highest phrase of the predicate nominal. It is proposed that number derives from an interaction between the noun and the Number head and that *ein* flags the presence of an operator.

Chapter 8 (*Concluding Remarks*) This chapter ties the previous parts together by discussing in more detail the hypotheses proposed for adjectival inflections and *ein*. Reviewing important empirical and theoretical points, it strengthens the conclusions that both adjectival inflections and *ein* are semantically vacuous elements and that both elements provide clues about the structure of the noun phrase. In addition, this chapter tentatively extends the discussion of adjectival inflections to another dialectal variant – Alemannic German, and it considers *ein* in a number of other semantic contexts. Suggestions are made as to how these extensions can be accommodated in the current system. Finally, this chapter addresses some further consequenes as regards concord in agreement features in non-canonical noun phrasas, and it considers the question of what all semantically vacuous elements may have in common.

Chapter 2: The Structural Nature of Adjectival Inflections

1.   Introduction

This chapter provides detailed evidence in support of Hypothesis 1, namely that adjectival inflections are semantically vacuous and indicate abstract structure. As regards the latter, the discussion supports Hypothesis 2a: adjectival inflections indicate structure in the higher layers of the noun phrase, and they provide clues about various degrees of embeddings of adjectives.

1.1.   The Strong/Weak Alternation of Adjectives

As briefly discussed in Chapter 1, adjectives can take strong or weak endings. Compare the following typical inflectional alternation on adjectives where the ending is strong when no determiner is present, and it is weak when there is a determiner. Below, I show these patterns in the nominative case using a singular masculine mass noun and a plural count noun (for a complete inventory of all the combinations of case, number, and gender, see Section 2.1.2):

(1)   a.   *frisch-er Kaffee*
            fresh-ST coffee
            'fresh coffee'

      b.   *d-er   frisch-e Kaffee*
            the-ST fresh-WK coffee
            'the fresh coffee'

(2)   a.   *nett-e Frauen*
            nice-ST women
            'nice women'

      b.   *di-e   nett-en Frauen*
            the-ST nice-WK women
            'the nice women'

These are the basic patterns. Recall that the phenomenon involving the two related forms of the adjective is labeled the strong/weak alternation.

These inflectional patterns have received a good amount of attention in the literature (e.g., Murphy 2018, Olsen 1991b, Schoorlemmer 2009; for a discussion of these works, see Section 5).[1] As pointed out in Chapter 1, it could be claimed that the strong and the weak endings correlate with an indefinite or definite interpretation of the noun phrase. In the (a)-examples above, the nominals with the strong adjectives are indefinite, but in the (b)-examples, the

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[1] Previous accounts of adjectival inflections in German have focused on the canonical cases, that is, the alternation of the adjective in simple noun phrases of the schematic type "determiner + adjective(s) + noun", where the three elements agree in case, number, and gender. It is not clear how these proposals can explain some of the non-canonical instances. In my view, considerations of elegance cannot be the sole or decisive measure to evaluate a proposal – the empirical coverage must be taken into account to evaluate the plausibility of an analysis.

nominals with the weak adjectives are definite. This is often referred to as the semantic distribution of adjectival inflections. At first glance then, these different inflections seem to be a reflex of the varying semantics of the noun phrase.

Demske (2001), Lohrmann (2010: 60-62), and Rehn (2019) show that this is indeed the case in the older Germanic languages including older varieties of German.[2] However, Harbert (2007: 130-137) points out that this is different for some of the contemporary languages (also Evans 2019, Gallmann 1996: 302f, Roehrs & Julien 2014, Schoorlemmer 2009: 53 fn. 55). In fact, he claims that diachronically, the two sets of endings developed from a semi-regular distribution toward regularization and functionalization (Harbert 2007: 131). This development occurred in different ways: in the Scandinavian languages, the alternation signals (in-)definiteness (e.g., Julien 2005a, Lohrmann 2011); in German, it developed into an economy principle such that the strong ending is limited to one per noun phrase (e.g., Esau 1973).

While I basically concur with Harbert, I argue that the German facts are more complicated (I briefly discuss Esau's proposal and the related traditional generalizations in Section 2.1.1). Before I turn to a detailed discussion of the strong/weak alternation in German, I provide more evidence that adjectival inflections in German do not correlate with (in-)definiteness. This lack of correlation can be shown on the basis of diachronic and synchronic considerations.

1.2. Adjectival Inflections and (In-)definiteness

Prenominal adjectives in the Germanic languages vary as regards a correlation between the different types of inflections and (in-)definiteness. As briefly discussed in Chapter 1, Section 2.1.2, German, Yiddish, and Norwegian exhibit a number of distinctions in this regard. Specifically, German clearly lacks such a correlation, and this point can be strengthened by a diachronic comparison between Modern German and Old High German (OHG). I provide two types of examples. First, adjectives behave differently in vocatives: in Modern German, adjectives are strong; in OHG, adjectives are weak:

(3) a. *Dumm-er Idiot!*   (Modern German)
         stupid-ST idiot
         'Stupid idiot!'

     b. *líob-o   man*   (OHG)
         dear-WK man
         'dear man'
                 (Demske 2001: 67)

Second, possessive elements also occur with adjectives showing different inflections. As above, Modern German exhibits strong adjectives but OHG weak ones:

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[2] Pfaff (2020) notes that weak adjectives occur indeed in definite contexts but that strong adjectives have nothing to do with indefiniteness. Evans (2019: 119-47) makes an even stronger claim such that weak adjectives only occur in the context of determiners. Note also that the claim about a semantic distribution in Modern German can be found in the older literature (e.g., Curme 1910, Lockwood 1968, Prokosch 1939). As Esau (1973) discusses in detail though, these authors have each different notions of (in-)definiteness.

(4)   a.   *mein lieb-er Sohn*   (Modern German)
             my   dear-ST son
             'my dear son'

    b.   *mîn liob-o   sun*   (OHG)
             my dear-WK son
             'my dear son'
                (Demske 2001: 67)

I know of no evidence that indicates that the definiteness involved in these vocatives and possessives is different in the two language varieties. As such, Modern German and OHG show different endings on adjectives in the same definite contexts. Recalling the cross-linguistic discussion from Chapter 1, Section 2.1.2, I conclude that adjectival endings do not uniformly indicate the definiteness of noun phrases across the different Germanic languages, synchronically (German vs. Norwegian) and diachronically (Modern German vs. OHG).[3] This lack of correlation in Modern German between inflection and interpretation can be made even more forcefully when we consider certain synchronic data of that language.

      I also briefly showed in Chapter 1, Section 3.1.1 that noun phrases involving indefinite articles or possessive articles take either a strong adjective or a weak adjective in (Modern) German. This depends on the morphological case the noun phrase appears in. Compare the nominals in the nominative in the (a)-examples to those in the dative in the (b)-examples, where the former have strong adjectives but the latter weak ones:

(5)   a.   *ein groß-es Auto*
             a   big-ST   car
             'a big car'

    b.   *mit ein-em groß-en Auto*
             with a-ST   big-WK car
             'with a big car'

(6)   a.   *mein groß-es Auto*
             my   big-ST car
             'my big car'

    b.   *mit mein-em groß-en Auto*
             with my-ST   big-WK car
             'with my big car'

As shown in (5) and (6), adjectives pattern the same after indefinite articles and possessive articles in German; that is, adjectives can take a strong or weak ending in both indefinite and

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[3] Demske (2001) claims that adjectival inflections changed from a semantic distribution to a morpho-syntactic one during ENHG. In contrast, Rehn (2019: 79-88) argues that this occurred between OHG and MHG (see also Evans 2019: 147-57). Observing an increase in the occurrence of the indefinite article *ein*, Rehn (2019: 88-90) proposes that the marking of indefiniteness by the article triggered the change in the way adjectival inflections are regulated in German.

definite contexts. I argue in detail in Chapter 5 that possessive articles in Modern German consist of a possessive component and vacuous *ein* (e.g., *m-ein* 'my'). This composite analysis of possessive articles directly relates the latter to *ein*. If so, it is *ein* that seems to be responsible for the regulation of the inflectional endings in (5) and (6). In fact, the distinguishing factor appears to be case. However, it is undisputed that the different morphological cases in (5) and (6) have no impact on the (in-)definiteness of those instances. Indeed, Saxon Genitives also involve strong and weak adjectives, similar to (6) above, but in different morphological cases (for detailed discussion, see Section 2.3).

There is more evidence that morphological case alone cannot explain the strong/weak alternation in this language. This can be exemplified with the same lexical item where the morphological case remains unchanged. For instance, the quantifying element *manch-* 'some' is indefinite. If it is inflectionless, the adjective is strong (7a); if it has a strong ending, the adjective is weak (7b). Similarly, the pronominal determiner *wir* 'we' is definite but can occur with both types of endings (8a-b). Note that % below marks a less preferred but certainly possible form (see Bhatt 1990: 154f; Darski 1979: 198; Duden 1995: 280, 2007: 39):[4]

(7)   a.   *manch nett-e Studenten*
                some nice-ST students
                'some nice students'

        b.   *manch-e nett-en   Studenten*
                some-ST nice-WK students
                'some nice students'

(8)   a.   *wir nett-en   Studenten*
                we nice-WK students
                'we nice students'

        b. % *wir nett-e   Studenten*
                we nice-ST students
                'we nice students'

As will become clear below, these are not isolated cases: they also apply to *solch-* 'such', *welch-* 'which', *mir* 'me(DAT)', *dir* 'you(DAT.SGL)', and *ihr* 'you(NOM.PL)'.

To summarize, it is, in my view, beyond doublt that at least in (Modern) German, different adjectival endings do not correlate with differences in definiteness. While I continue making this point in different ways in the course of the following discussion, I reiterate the proposal that adjectival inflections are semantically vacuous: they neither have semantics of their own nor do they make semantic features visible.

Returning briefly to the diachronic data, it was pointed out by Demske (2001: 82) that adjectives in OHG are weak after the possessive element but strong after the indefinite article. As illustrated above, this is different in Modern German, where adjectives pattern the same after the possessive element and the indefinite article. If so, this implies that the possessive element and the indefinite article were not related to each other in the older varieties of German as compared

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[4] The strong ending in (8b) becomes more acceptable if the overt noun is missing (Bhatt 1990: 179, Duden 2007: 39). Presumably, a strong ending is better able to license a null noun.

to Modern German. It seems clear that German underwent a number of changes in this regard during its diachronic development (for the discussion of some diachronic issues, see Chapter 5; also Alexiadou 2004, Demske 2001, Evans 2019, Rehn 2019, and Wood 2007).

1.3.   Outlook

The following discussion focuses on (Modern) German with a few cross-linguistic remarks if the phenomenon under discussion shows an interesting contrast between German and another language. Restricting the discussion to prenominal adjectives, I reach the conclusion that, at least in German, adjectival inflections are semantically vacuous (Hypothesis 1a) 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 (Hypothesis 2a). In fact, this alternation is argued to provide a good diagnostic of the structure, but not the semantics, of the nominal domain.

To anticipate the discussion, I propose that the derivation of the weak endings on adjectives must take a certain structure into account. I argue that adjectives are only weak if they occur in canonical DPs and undergo a certain reduction process. This process is argued to be feature deletion (Impoverishment) and is triggered by certain determiners (Impoverishment Rule 1) or in a specific feature context (Impoverishment Rule 2). The diverse distribution of the strong adjectives in other canonical DPs and non-canonical DPs more generally is explained by the fact that Impoverishment does not occur, either because there is no determiner, no relevant determiner, or because the determiner or the adjective is in a position that is different from that in canonical DPs. In a sense, the strong endings form the elsewhere case.

If this is on the right track, then a number of other cases involving canonical DPs appear to be exceptional. I argue in Chapter 3 that the inflectional patterns of adjectives (and determiners) in German are due to several mechanisms. It is important to point out though that the other mechanisms only occur in specific, well-defined contexts; that is, unlike Impoverishment Rule 1, they are restricted to certain combinations of case and gender, or case and number. Chapter 4 discusses some consequences of the current proposal for other analyses. I utilize adjectival inflections as a diagnostic of the structures put forth in those works.

This chapter is organized as follows. In Section 2, I provide the basic proposal deriving the canonical cases. I propose that the operation of Impoverishment explains these cases. Section 3 turns to the discussion of non-canonical DPs, and it is proposed that they involve different structures where Impoverishment does not apply. In Section 4, I address the inflections on determiners and determiner-like elements arguing that Impoverishment does not apply to these elements either. Section 5 discusses three previous proposals of the strong/weak alternation, and Section 6 concludes the chapter.

2.   Adjectival Inflections in Canonical DPs

The basic proposal is as follows. Adopting the framework of Distributed Morphology (Chapter 1, Section 4.2.1), I assume that adjectival inflections are the result of the spellout of the features for case, number, and gender on the terminal heads in the syntactic representation. I propose that the weak endings follow from the operation of Impoverishment. Arguing that this mechanism only occurs in canonical DPs, it is taken to reduce the fully specified feature bundles in the tree representation. These reduced feature bundles are then spelled out as the weak endings. Given

the diverse distribution of the strong endings, I propose that the occurrence of the latter instances is not subject to any specific conditions. Rather, the strong endings surface in the absence of Impoverishment as the fully specified (underlying) feature bundles. In the current account, the strong inflections involve the elsewhere case. Below, I develop this proposal in more detail.

This section is organized as follows. First I discuss adjectives in the context of *der*-words. This is followed by noun phrases involving *ein*-words, null articles, and Saxon Genitives. At the end of this section, I turn to adjectives in canonical DPs that contain extended-adjective constructions and numerals.

2.1. Weak Adjectives: Impoverishment

I start by repeating the basic alternation of adjectival inflections involving *der*-words, briefly reviewing some traditional generalizations that have been put forth to describe these patterns. This is followed by providing an inventory of the adjectival inflections and discussing a previous proposal. After these preliminaries, I lay the foundation of my own analysis of weak adjectives and spell out some of the details of my account.

2.1.1. Basic Alternation and Traditional Generalizations

Recall the basic alternation as regards adjectival inflections: if a determiner is not present, then adjectives surface with strong endings (9a). If a determiner is present, then the determiner has a strong ending, and the adjectives appear with weak inflections (9b):

(9) a. *frisch-e*(r) schwarz-e*(r) Kaffee*
    fresh-ST/*WK black-ST/*WK coffee
    'fresh black coffee'

  b. *d-er frisch-e(*r) schwarz-e(*r) Kaffee*
    the-ST hot-WK/*ST black-WK/*ST coffee
    'the fresh black coffee'

Note again that the definite article in (9b) has the same ending as the adjectives in (9a). In fact, following Milner & Milner (1972), Leu (2015) and many others have pointed out that the endings on determiners (D) are the same as the strong endings on adjectives (for detailed discussion, see the next subsection). Assuming a null article for (9a), I summarize this determiner-adjective interaction in the following schematic patterns (< stands for precede; * means multiple occurrences):

(10) a. $\emptyset_D <$ STRONG$_{ADJ*}$

  b. STRONG$_D <$ WEAK$_{ADJ*}$

Observe that this abstract distribution is instantiated by the canonical cases, simple noun phrases of the schematic type "determiner + adjective(s) + noun", where the three elements agree in case, number, and gender.

Different generalizations have been offered to describe the distribution in (10) in concise ways. They basically fall into two types. One type of generalization focuses on the inflectional

behavior of the adjectives. I provide one such statement in (11), which is often conveniently referred to as Weak After Strong (for similar statements, see Bierwisch 1967: 257, Eisenberg 1998: 171-73, Gallmann 1998: 144, G. Müller 2002a: 129, Pfaff 2017: 286, Rehn 2019: 58, Sauerland 1996: 34, Schoorlemmer 2009: 53, and many others):

(11)　*Weak After Strong*
　　　An adjective with a weak inflection is preceded by a determiner with a strong inflection.

Note that this particular formulation does not explicitly mention adjectives that are not preceded by (inflected) determiners. However, since prenominal adjectives are only subject to a two-way alternation, the distribution of strong adjectives can be inferred from (11).

　　　The other type of generalization is broader in that it focuses on inflections more generally, that is, on the inflections of both the adjective and the preceding determiner. It highlights the facts that the strong inflection occurs only once in the noun phrase and that it appears in first position. Roehrs (2009a: 135) provides the following formulation of the so-called Principle of Monoinflection (see also, e.g., Darski 1979, Esau 1973: 140, Helbig & Buscha 2001: 274-76, Murphy 2018: 344, Wegener 1995: 105, 153, cf. Nübling 2011: 178):[5]

(12)　*Principle of Monoinflection*
　　　The first inflected element within a noun phrase carries the strong and the second one the weak ending.

These are the two main types of traditional generalizations for adjectival inflections in German. Unlike the semantic distribution, they describe a morpho-syntactic pattern. Both types seek to capture the fact that some combinations of the strong and weak endings do not occur; for instance, both exclude patterns where a weak determiner in *-e* or *-en* can be followed by a strong adjective in *-er*, *-es,* or *-em* (e.g., **d-en gut-em* Noun* 'the-WK good-ST Noun').

　　　While the more general statement in (12) should, in my view, be preferred, both generalizations face two types of exceptions. As briefly mentioned in Chapter 1, Section 3.1.1, these issues have to do (i) with weak elements occurring without the presence of strong elements, and (ii) with strong elements surfacing despite the presence of other strong elements. To my mind, these issues are the result of stating the generalizations in terms of surface precedence and the inflections involved (rather than in terms of the structure and the lexical and featural triggers involved, as made more precise below). The relevant problematic cases are addressed in detail in the course of the following discussion and are summarized in Chapter 3, Section 7. Having said that, the generalizations above are good approximations of the canonical facts in German and provide a useful heuristic of the investigation.

　　　The generalization that I will work towards is the following:

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[5] There is a variant of this generalization that includes the inflection of the head noun. Evans (2019: 58) provides the following statement of the so-called "Once-per-DP" Principle: In the maximal projection of a noun (i.e., in a DP), the strong ending occurs on at most one lexical type (determiner, adjective, or noun). Evans (2019: chapter 3) proposes that the order of strong endings occurring before weak endings is derived from c-command. However, this leads to some issues. One problem is the very relevance of the head noun in the calculation of the adjectival inflections (see Footnote 40).

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(13)   *Strong/Weak Alternation in German*
        Disregarding a few (mostly) lexical exceptions, both adjectives and determiners have strong or weak inflections. Weak inflections only occur in canonical DPs, either
            (a) in the context of certain lexical items (e.g., definite articles), or
            (b) in certain featural contexts (e.g., genitive masculine/neuter), or
            (c) in a combination of (a) and (b) (e.g., null articles and stacked adjectives in dative masculine/neuter).
        Strong inflections occur in all other environments.

Returning to the data in (9), it is important to point out that the grammaticality judgments of these instances are very sharp. I propose that the morphological mechanism of Impoverishment explains these data. I closely follow the discussion of Roehrs & Julien (2014), who base their proposal on Sauerland (1996). Before I turn to my analysis, I provide an inventory of the relevant elements, and I briefly review Sauerland (1996).

2.1.2. Inventory of Determiners and Adjectival Inflections
In this subsection, I discuss the inventory of determiners and adjectival inflections. This allows me to formulate specific vocabulary insertion rules. Starting with determiners, they can be categorized into three groups: *der*-words, *ein*-words, and null articles:

(14)   a.   *der*-words:
                der 'the', (stressed) *DER* 'that', *dieser* 'this', *jener* 'that', *jeder* 'every', *mancher* 'some', *solcher* 'such', *welcher* 'which', and *alle* 'all'[6]
        b.   *ein*-words:
                ein 'a', (stressed) *EIN* 'one', *kein* 'no', and possessive articles like *mein* 'my', *dein* 'you', etc.
        c.   null articles:
                $\emptyset_D$

The stem forms of the definite article *der* 'the' may vary between *de-*, *da-*, and *di-* depending on case and gender. Furthermore, the form *die* is pronounced [di] as the article or [di:] as the distal demonstrative; that is, this form has no inflection. I dedicate a separate section to these and related points in Chapter 3, Section 3. Given that, I illustrate the *der*-words with the proximal demonstrative *dieser* 'this' setting off its endings by a hyphen (I discuss *ein*-words and null articles in Sections 2.2 and 2.3). The arrangement of case, number, and gender features in Table 1 follows Bierwisch (1967). This alignment allows me to state syncretisms based on natural classes (more on this below). I also follow Bierwisch (1967: 250) and others in assuming that the schwa before a consonantal inflection is due to schwa-epenthesis (R. Wiese 1996a: 109f, 243). This is not indicated separately below:

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[6] These are the most frequent *der*-words (usually provided in reference works).

Table 1: Determiner Inflections

	Masculine	Neuter	Feminine	Plural
Nominative	dies-er	dies-es	dies-e	dies-e
Accusative	dies-en	dies-es	dies-e	dies-e
Dative	dies-em	dies-em	dies-er	dies-en
Genitive	dies-es	dies-es	dies-er	dies-er

As already noted above, the endings on the determiners are the same as the strong endings on the adjectives. This is exemplified with the adjective *gut-* 'good' in Table 2. Comparing Tables 1 and 2, there are only two instances (in the genitive masculine/neuter) where the endings on the determiners are different from the endings on the adjectives (*-es* vs. *-en*):

Table 2: Strong Adjective Inflections

	Masculine	Neuter	Feminine	Plural
Nominative	gut-er	gut-es	gut-e	gut-e
Accusative	gut-en	gut-es	gut-e	gut-e
Dative	gut-em	gut-em	gut-er	gut-en
Genitive	gut-en	gut-en	gut-er	gut-er

Studying Tables 1 and 2 further, we also notice that in many instances, masculine and neuter pattern together and feminine and plural do too. The weak inflections are provided in Table 3:

Table 3: Weak Adjective Inflections

	Masculine	Neuter	Feminine	Plural
Nominative	gut-e	gut-e	gut-e	gut-en
Accusative	gut-en	gut-e	gut-e	gut-en
Dative	gut-en	gut-en	gut-en	gut-en
Genitive	gut-en	gut-en	gut-en	gut-en

In view of Table 2 and Table 3, German is traditionally taken to have an inventory of five strong and two weak endings (Duden 1995). The latter (*-e*, *-en*) form a proper subset of the former (*-e*, *-en*, *-er*, *-es*, *-em*). Considering all three tables, we notice that the nominative is the same as the accusative, with one well-known exception (e.g., Blevins 1995: 145f, Eisenberg 1998: 173f): the masculine accusative has its own, different form (*-en*), something I return to below. Given the overall similarity of the inflections on determiners and adjectives, I treat them the same and refer to them as adjectival endings.

To reiterate, strong endings have more different forms than weak ones. In fact, comparing the tables above, they express more distinctions in case, number and gender. One of the main insights of Sauerland (1996) is that strong endings involve more features than weak ones. As such, there is no real difference between the traditional strong and weak endings (although I retain this distinction in name for expository purposes). The vocabulary insertion rules formulated in Section 2.1.5 reflect this. Indeed, taking the number of features as the relevant metrics, we will see that the (less specified) weak endings form a proper subset of the (more

specified) strong endings.[7] Sauerland (1996) proposes to derive the weak inflections from the strong endings by a deletion process. Consider his proposal in more detail.

2.1.3. Sauerland (1996)

Adopting the general framework of Distributed Morphology (see Chapter 1, Section 4.2.1), Sauerland (1996) proposes to derive the basic alternation illustrated in Section 2.1.1 by a feature deletion process called Impoverishment (focusing here on German only, I make some minor adjustments to the presentation of his account). He assumes that inflections involve fully specified, abstract feature bundles underlyingly. The feature bundles make up the terminal nodes of the syntactic representation. If these feature bundles are reduced by Impoverishment, they are spelled out as weak endings; if not, they surface as strong endings. Impoverishment is triggered morpho-syntactically: the inflectional feature bundle of the adjective undergoes feature deletion if the preceding determiner has a strong inflection. Sauerland combines Impoverishment and Feature Hierarchy in his account.

In more detail, the weak endings occur, unsurprisingly, in all featural contexts. Sauerland observes though that like in Norwegian, in German they surface in the same featural contexts as their homophonous strong endings; for instance, *-e* is not only the corresponding weak inflection of strong *-er* in the nominative masculine but also of strong *-e* in the nominative feminine (see Tables 2 and 3 above). Similar considerations hold for the other weak inflection; for instance, *-en* is not only the corresponding weak inflection of strong *-em* in the dative masculine but also of strong *-en* in the accusative masculine. In other words, the two weak endings *-e* and *-en* also occur as strong endings. Now, since they occur in more contexts (weak and strong), *-e* and *-en* are taken to be the least marked strong endings. This means that there are actually no weak endings *per se* – only (strong) inflections that differ in their specificity.

As regards *-e* and *-en* themselves, they are also clearly distinguished as regards their indiviudal specificity. Considering the relevant feature combinations, strong *-e* can appear as weak *-e* (e.g., in the nominative feminine), and strong *-en* can surface as weak *-en* (e.g., in the dative plural). However, while strong *-e* is changed to weak *-en* (e.g., in the nominative plural), strong *-en* is never altered to weak *-e*. Sauerland concludes that this indicates that *-e* is more specified than *-en*.

In order to account for the strong/weak alternation, Sauerland adopts the Hierarchy of Case features from Harris (1994):

(15)   Case
          ⟋   ⟍
    direct   oblique
       | |
  accusative   genitive
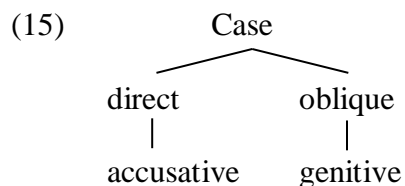
Evidence in German that the direct cases (i.e., nominative and accusative) pattern together in opposition to the oblique cases (i.e., dative and genitive) comes from the weak inflections in the neuter and feminine where *-e* occurs in the direct cases but *-en* in the oblique ones (see Table 3).

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[7] Rather than an account based on feature specificity as developed below, G. Müller (2002a) provides an optimality-theoretic proposal (also Gallmann 2004). In order to formulate simpler constraints, Müller analyzes noun phrases as NPs although DPs (e.g., *dieser* 'this') exist in the account. Furthermore, and also unlike the current account, Müller's proposal is that inflections have no independent status as morphemes in the lexicon.

Sauerland formulates the following seven vocabulary insertion rules:

(16) a.   [+plural, +oblique, -genitive]   →   *-en*
     b.   [+masc, +direct, -accusative]   →   *-er*
     c.   [-fem, +oblique, -genitive]   →   *-em*
     d.   [-fem]   →   *-es*
     e.   [+oblique]   →   *-er*
     f.   [+direct]   →   *-e*
     g.   []   →   *-en*

He proposes that feature deletion widens the distribution of *-e* in (16f) and *-en* in (16g). In his account, there are three types of deletion rules yielding a total of six:

(17)   a. Impoverishment rule applying to inflections on determiners and adjectives:
             (i) Delete Agr with [+masc, +direct, +accusative]

         b. Impoverishment rule applying to inflections on adjectives:
             (ii) Delete Agr with [-fem, +oblique]

         c. Impoverishment rules applying to adjectives in weak positions:
             (iii) Delete [Gender]
             (iv) Delete [accusative]
             (v) Delete [oblique]
             (vi) Delete [Case] in the environment of [+plural]

After briefly commenting on the role of the various deletion rules, I discuss some shortcomings and point out how the analysis to be developed below deals with these issues.

     As mentioned above, accusative masculine *-en* is special with both determiners and adjectives: it is the only instance where strong and weak inflections differ in the nominative and accusative cases. This exception is captured by formulating the deletion rule in (17a). As a consequence, only (16g) can apply.[8] Similarly, adjectives in the genitive masculine/neuter are exceptional in that their ending is *-en* (rather than *-es* as compared to the determiners). This follows from the deletion rule in (17b) such that only (16g) can apply.

     Finally, the set of rules in (17c) accounts for the (traditional) weak inflections. The weak positions of adjectives are defined by adjectives occurring after determiners with strong inflections (no further details are provided). Adopting other Feature Hierarchies, Sauerland assumes that features with a capital letter subsume all instances of that category. This means that the deletion of Gender removes masculine, neuter, and feminine features and that the deletion of Case removes direct (which includes nominative and accusative) and oblique (which consists of dative and genitive) cases. After the deletion of the features in (17c) from the syntactic representation, the vocabulary items in (16a-e) can no longer be inserted. Rather, only the rules in (16f), restricted now to singular contexts (due to (vi) in (17c)), and in (16g) can apply.

     The system works, and I think it is basically on the right track. However, there are also some issues. Pointing out these shortcomings is not meant to be a criticism of Sauerland's

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[8] Schoorlemmer (2009: 235) formulates an Impoverishment rule to account for the weak ending *-en* (on adjectives) in the accusative masculine.

proposal. Rather, the following points are intended to be understood as issues that any proposal that works on a similar set of assumptions needs to address. There are three general and three technical issues.

Starting with the general points, there are three types of deletion rules (feature deletion for both determiners and adjectives (17a), feature deletion for adjectives only (17b), and feature deletion to bring about weak inflections (17c)). In the system to be developed below, the effect of (17a) does not follow from an Impoverishment rule but rather from the way the vocabulary insertion rule for accusative masculine *-en* is stated: Impoverishment deletes a feature, but that feature is not part of the vocabulary insertion rule for this *-en*. The effects of (17b) and (17c) do involve Impoverishment rules (but in modified form): the effect of (17b) is capured by Impoverishment Rule 2 and that of (17c) by Impoverishment Rule 1.

Second, there are six deletion rules in total. Below, only two Impoverishment rules are proposed. In fact, it is suggested that the application of (17b) is more general: Impoverishment Rule 2 also accounts for the weak inflections on certain determiners in genitive masculine/neuter contexts (Chapter 3, Section 4). Third, since the weak inflections on adjectives depend on the strong inflections of determiners, the latter must be inserted first. It is left unspecified by Sauerland why this must be so (and cannot be the other way around). Below, no such ordering is crucial. It is proposed that it is not the inflection of the determiner but rather its stem (specifically, its categorial feature [+D] present in the syntax) that triggers Impoverishment.

Turning to some technical questions, it is not clear (except by stipulation) why (16d) must be ordered before both (16e) and (16f) – all these vocabulary insertion rules are equally specified (note that if (16e) were ordered before (16d), this would yield the incorrect forms *der* 'the' or *guter* 'good' in genitive masculine/neuter contexts; if (16f) were ordered before (16d), this would result in the incorrect forms *die* 'the' or *gute* 'good' in nominative/accusative neuter contexts).[9] Second, as far as I can tell, the deletion rule (iv) in (17c) is not needed. Finally, if Agr, presumably the head in the syntactic representation that involves the inflection, is deleted by (17a) or (17b), it is not clear where or how the default ending *-en* will be attached.

The following proposal draws heavily on the insights of Sauerland (1996) but tries to avoid the general and technical issues raised above. In addition, it aims at spelling out in detail the morpho-syntactic (and lexical) conditions the strong/weak alternation is subject to.

2.1.4. Basic Proposal

I propose that determiners, *der*-words and *ein*-words, form triggers for Impovishment. I assume that Impoverishment operates in a local fashion. More precisely, I propose that the feature bundles that are to be realized as the overt inflections on the adjective undergo Impoverishment inside the phrase that hosts them (i.e., AgrP). This means that the trigger for Impoverishment, the determiner, and its target, the inflection on the adjective, must be in a local relation at some point in the derivation. With the determiners surfacing in the DP-level, this implies that determiners must have originated in a lower position.

In Chapter 1, Section 4.1.1, I argued that there are two determiner positions in the noun phrase, ArtP and DP, and that both are connected by movement (e.g., see again Borer 2005; Julien 2002, 2005a; Nykiel 2015; Rehn 2019; Roehrs 2009a, 2015, 2019; Schoorlemmer 2009, 2012; Taraldsen 1990). I provided some distributional evidence for a lower position of

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[9] Halle & Marantz (1994: 281) assume "a reasonable feature hierarchy that treats Case features as more specific than gender features". If so, then both (16e) and (16f) should indeed be ordered before (16d) yielding incorrect forms as discussed in the main text.

determiners. Adopting the following structure and derivation, I reiterate the proposal that the determiner moves from ArtP to DP in a successive-cyclic fashion. This is illustrated below with an article (for the DP structure with a demonstrative undergoing movement, see Section 2.4):

(18)   a.   *d-er   frisch-e schwarz-e Kaffee*
             the-ST hot-WK black-WK coffee
             'the fresh black coffee'

    b.
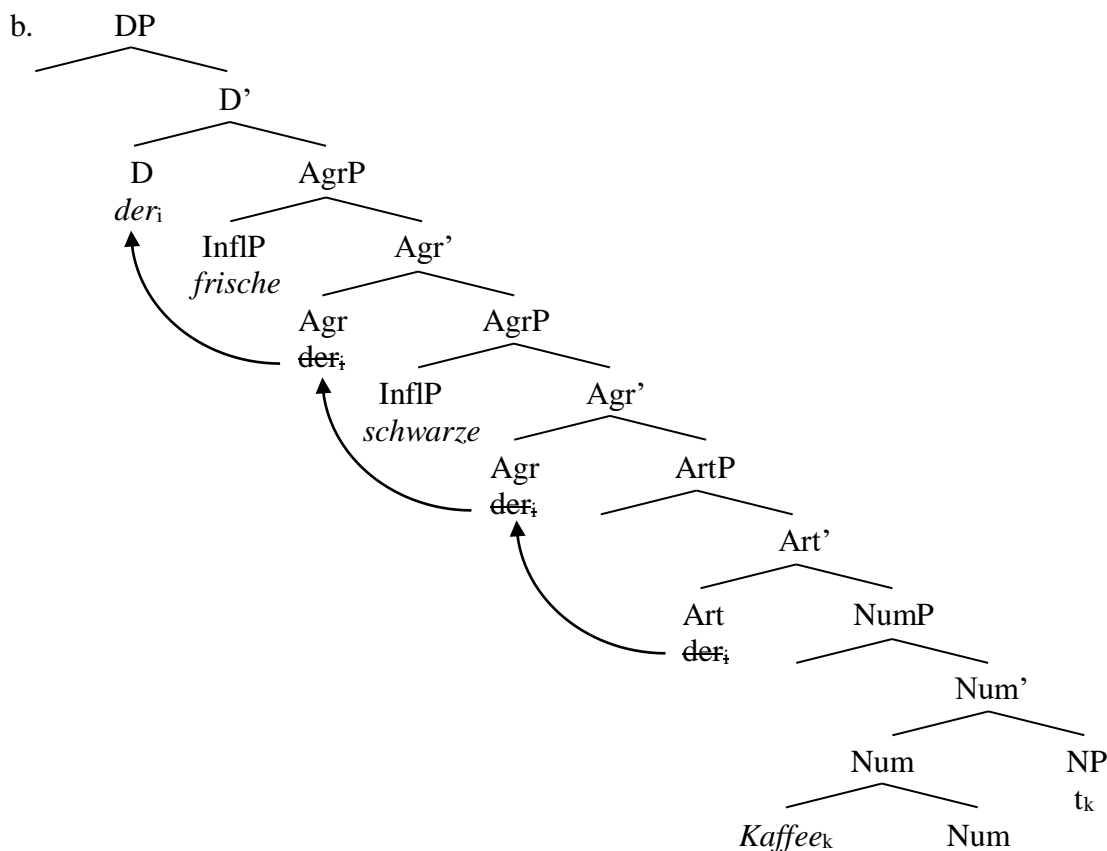
Recall also that definite determiners have the feature [+DEF] and move to the DP-level to specify the definiteness feature on D. In contrast, *ein* is semantically vacuous and does not have a feature for definiteness. Consequently, it can surface in different positions (i.e., Art, Card, or D). This, in turn, makes it possible to claim that *ein* supports overt operators or flags the presence of covert operators (Chapter 5). To be clear, I assume that *ein* remains in ArtP unless it has to move up for a reason.

  I propose that determiners move via adjunction to the DP-level. Articles (Art) are heads, and they move by head adjunction to D; demonstratives (Dem) are phrases, and they move by phrasal adjunction to Spec,DP.[10] I assume that all elements including structural elements are fully specified for case, number, and gender yielding concord. Impoverishment involves the deletion of a certain feature (to be made more precise below). Assuming that determiners are triggers for Impovishment, I illustrate this feature reduction by [+I(mpoverishment)] for now. I

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[10] Recall from Chapter 1, Section 4.1.2 that demonstratives involve complex structures with InflP at the top. To avoid confusion, I use Dem in the tree representation in (19b) below.

propose that adjunction by the determiner reduces the feature bundle of the element adjoined to. Assuming Percolation within the same phrase, this feature reduction spreads from the head to the phrase in case of an article (19a), or from the phrase to the head in case of a demonstrative (19b).[11] Finally, assuming Spec-head agreement and Percolation, [+I] spreads to InflP in Spec,AgrP and to its head Infl. The latter contains the feature bundle for case, number, and gender ([CNG]) and will be spelled out as the ending on the adjective stem in AP in (19a-b). The relevant portion of the tree, which includes the adjoined determiner, is given for these two scenarios below:

(19) a. *Adjunction of Article*

$$
\begin{array}{c}
AgrP_{[+I]} \\
InflP_{[+I]} \quad\quad Agr'_{[+I]} \\
[CNG]_{[+I]} \quad AP \quad Agr_{[+I]} \quad \dots t_k \dots \\
Art_k \quad\quad Agr_{[+I]}
\end{array}
$$
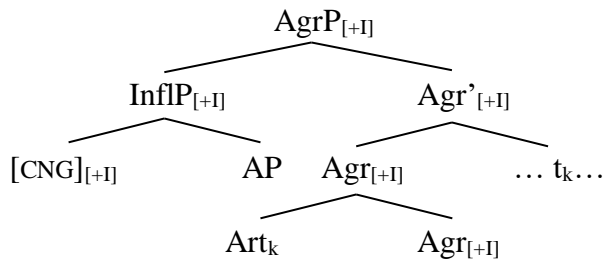
b. *Adjunction of Demonstrative*

$$
\begin{array}{c}
AgrP_{[+I]} \\
Dem_k \quad\quad AgrP_{[+I]} \\
InflP_{[+I]} \quad\quad Agr'_{[+I]} \\
[CNG]_{[+I]} \quad AP \quad Agr_{[+I]} \quad\quad \dots t_k \dots
\end{array}
$$
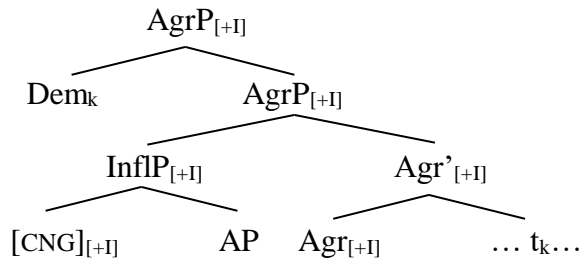
Note that the reduction due to adjunction, Percolation within the same phrase, and Spec-head agreement are all local relations. Given a recursive AgrP in (18b) above and successive-cyclic movement of the determiner from ArtP to DP, this analysis provides an immediate explanation of why either all adjectives are strong or all are weak. Next, I flesh out this basic proposal. The following discussion is based on Roehrs & Julien's (2014) analysis of German with one modification (Footnote 15). In the course of the discussion, I add many details to that proposal. As mentioned above, Roehrs & Julien (2014) was heavily influenced by Sauerland (1996).

2.1.5. The Proposal in More Detail: Vocabulary Insertion Rules
Following Bierwisch (1967) and others, I argue that case, number, and gender are not primitive features. Rather, I assume that case involves a two-category system and can be represented by the features [O(blique)] and [S(tructural)].[12] Each of these features can have a negative or a positive value (i.e., [-, +]) yielding the following decomposition:

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[11] Olsen (1991b) assumes Percolation from the phrase to the head; Norris (2014: 136f) points out that Percolation from the head to the phrase immediately follows from Bare Phrase Structure (Chomsky 1995).

[12] The feature [S(tructural)] was chosen over [D(irect)] to avoid confusion. Below, I propose that the feature [S] is deleted by Impoverishment, which is triggered by the presence of the categorial feature of determiners [+D]. This

(20) a. nominative: [-O, -S]
      b. accusative: [-O, +S]
      c. dative: [+O, -S]
      d. genitive: [+O, +S]

Similarly, gender consists of the features [F(eminine)] and [N(euter)] and can be broken down as in (21a-c). Plural is the neutralization of gender (21d), something Sternefeld (2008: 80) refers to as the "fourth gender":

(21) a. masculine: [-F, -N]
      b. neuter: [-F, +N]
      c. feminine: [+F, -N]
      d. plural: [+F, +N]

Unlike plural, all singular forms involve at least one negative value for [F] or [N].

Roehrs & Julien (2014: 250 fn. 5) provide motivation for the system above. Most importantly, following Harbert's (2007: 468) Case Hierarchy, they assume that nominative is the least and genitive the most oblique case. Based on Steinmetz (2001), they assume that masculine is the default gender in German, and following Sternefeld (2008: 80), they take plural to be the neutralization of gender. Note that taking the masculine gender and the nominative case as the least marked categories – they each have two negative values in their feature decompositions – is consonant with Bierwisch's (1967: 253) statement that there is more syncretism within marked categories (observe that with the strong inflections, genitive has the fewest different forms in Table 4; conversely, masculine has the most different forms).[13]

Before moving on, I point out that the decomposition of gender and number in (21) allows us to state certain well-known syncretisms that we find in the masculine/neuter vs. in the feminine/plural, that is, in the opposition [-F] vs. [+F]: (i) strong adjectival inflections in the nominative/accusative (C = consonant): *-eC* vs. *-e*, (ii) strong adjectival inflections in the dative: *-em* vs. *-er/-en*, (iii) strong adjectival inflections in the genitive: *-es* vs. *-er*, (iv) third-person pronouns in the nominative/accusative (abstracting away from *ihn* 'him'): *er/es* 'he/it' vs. *sie* 'she, her; they, them', (v) *ein*-words in the nominative/accusative (abstracting away from *einen* 'a'): uninflected *ein* vs. inflected *eine*, (vi) definite article stems in the nominative/accusative: *de-/da-* 'the' vs. *di-* 'the', (vii) possessive articles consisting of bound and free morphemes: *sein* '(POSS+*ein* =) his, its' vs. *ihr* 'her, their' (Chapter 5, Section 4.1.2), and perhaps less widely known (viii) pronominal DPs in the dative masculine/neuter prefer strong adjectives vs. pronominal DPs in the dative feminine and nominative plural prefer weak adjectives (Chapter 3, Section 5).

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choice allows me to clearly distinguish between the feature that undergoes deletion and the one that involves the trigger of that deletion.

[13] There are many different systems to decompose case, number, and gender – too many to review here in detail. For other, partially similar decompositions, see Bierwisch (1967: 246ff), Evans (2019: 51), Gallmann (2004: 124f), G. Müller (2002a: 119), Trommer (2005), B. Wiese (1996, 1999), Wunderlich (1997: 48f), and many others. Blevins (1995) captures syncretism as part of Feature Hierarchy, with primary (e.g., feminine vs. non-feminine) and subsidiary (e.g., masculine vs. neuter) features. This hierarchy as well as Feature Geometry more generally will not play a role here (for brief remarks as regards DM, see Arregi & Nevins 2012: 204f, Harley & Noyer 1999: 6).

As to case, syncretism is much less prevalent here. As should be clear from the discussion of syncretism in gender and number above, there is syncretism in the nominative/accusative vs. the oblique cases. In other words, while nominative and accusative have the same forms in the neuter, feminine, and plural, the oblique cases dative and genitive have different forms, but also different forms from each other (except in the feminine in some paradigms). There are also very few instances of syncretism between the structural and oblique cases. The forms of the first and second person plural of the personal pronoun are the same in the accusative and dative cases (*uns* 'us', *euch* 'you'). Note though that the latter are the exception, rather than the rule. This may have to do with the fact that these items are non-third person elements.

In order to state the syncretisms above and to reduce the number of vocabulary insertion rules, I utilize value variables (α, β), whereby α or β in a vocabulary insertion rule is compatible with a positive or negative value in the syntactic representation (note that the variable does not get specified for such values – it is a compatibility feature). To give an example, [αO] in a vocabulary insertion rule is compatible with a negative value in the syntactic representation. This captures the syncretism of nominative and accusative case (cf. (20a-b) above). Similarly, I employ a category variable (γ), which ranges over [F] or [N]; that is, over either of these two features (but not both at the same time). To illustrate, [-γ] in a vocabulary insertion rule is compatible with either [-F] or [-N] in the syntactic represenation. This means that [-γ] corresponds to singular (as opposed to plural, which has a positive value for both [F] and [N]; for the discussion of the explicit use of disjunctions, see G. Müller 2002a: 120 fn. 14).[14]

Following Sauerland (1996), I propose that the two weak endings have the same feature specifications as certain strong endings (cf. also Gallmann 2004: 140). I assume that these instances are related and have the same vocabulary insertion rules (see below). For convenience, these related instances are respectively marked by round and curly brackets in Table 4. Using the feature decomposition above, all strong and weak inflections can be analyzed as follows (for convenience, I added the traditional labels as subscripts after the featural decomposition):

Table 4: Strong and Weak Inflections in German

STRONG	$[-F, -N]_M$	$[-F, +N]_N$	$[+F, -N]_F$	$[+F, +N]_{PL}$	WEAK	$[-\gamma]_{SGL}$	$[+F, +N]_{PL}$
$[-O, -S]_{NOM}$	-er	-es	(-e)	-e			
$[-O, +S]_{ACC}$	-en	-es	(-e)	-e	[-O]	(-e)	
$[+O, -S]_{DAT}$	-em	-em	-er	{-en}			
$[+O, +S]_{GEN}$	-es	-es	-er	-er	[+O]	{-en}	

Comparing Table 4 to Table 3 from above, we notice that the accusative masculine ending *-en* is missing from the weak endings here. The special status of this ending follows from the way the

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strong ending for masculine accusative is stated in (22c).[15] Assuming that features can be underspecified, the rules for vocabulary insertion of the endings can be stated as follows:[16]

(22)   Strong (except for feminine *-e* and plural *-en*):
    a.   [+F, -N, +O, αS]   →   *-er*
              [+F, +N, -O, αS]   →   *-e*

    b.   [αF, αN, αO, αS]   →   *-er*

    c.   [-F, -N, -O]   →   *-en*
              [-F, +O, -S]   →   *-em*

    d.   [-F, αO, βS]   →   *-es*

(23)   Weak (including strong feminine *-e* and plural *-en*):
    a.   [-γ, -O]   →   *-e*

    b.   []   →   *-en*

Comparing (22) to (23), note first that the (unambiguously) strong endings are stated in more specific terms than the weak endings. In other words, weak endings are underspecified to a greater degree. This means that there is no real difference between (22) and (23). This is confirmed by the fact that some of the strong endings share the same vocabulary insertion rules as the weak inflections in (23). This was one of Sauerland's (1996) main insights. Second, I assume that a vocabulary item involving the same number of features with a variable is less specific than a corresponding vocabulary item without such a variable. Accordingly, I have listed the vocabulary items with descending degrees of specificity in (22) and (23). Note that equally specified items differ from one another (in both (22a) and (22c), the two respective items vary in the feature [O]). Finally, as is often stated, note that the two paradigms, strong and weak, in Table 4 are simply generalizations. They have been replaced by the vocabulary insertion rules

---

[15] In Roehrs & Julien (2014), the exceptional accusative masculine form *-en* contained the specification [+S]. Removing this feature from the vocabulary entry as in (22c) still allows me to specify this ending disambiguously (as nominative masculine *-er* is more specific). In fact, this is now the only strong ending without a specification for [S]. This will become significant during the discussion of Impoverishment.

[16] In his critique of some previous – what he calls – constructive analyses (Bierwisch 1967, Blevins 1995, B. Wiese 1999, and Wunderlich 1997), G. Müller (2002b) points out that all these types of accounts have rules that show different contexts for the insertion of (some of) the same strong inflections, for instance, *-er* in (22a) and (22b). This leads to systematic as well as accidental syncretism. According to G. Müller (2002a, 2002b), destructive type of analyses involving rules that ban the insertion of certain inflections fare better.

    This criticism seems valid and can also be leveled against the current proposal. However, I think such multiple vocabulary insertion rules for one and the same inflectional form(s) cannot completely be avoided (also Sauerland 1996: 24). Considering that certain endings occur in other, unrelated domains as well (e.g., plural inflections on nouns: *-e*, *-en*, *-er*, *-s*; personal endings on verbs: *-e*, *-en*), it is not clear how these inflections can be related yielding just one rule of vocabulary insertion (or ban) for each inflection. Note in this regard that unspecified *-en* in (23b) could potentially do multiple duty as a plural inflection for nouns and verbs.

    An advantage of the current proposal is that unlike some of the previous analyses, here the weak inflections are explicitly discussed; in fact, they are integrated with the strong inflections (Sauerland 1996), and there is no inherent difference between these types of inflections (for the discussion of quite different types of analyses of weak inflections, see the end of Section 5.3).

above; that is, paradigms are an epiphenomenon without independent status. Before moving on, I comment on the relationship between the vocabulary insertion rules and the terminal nodes in the syntactic representation.

Starting with the weak inflections, note that the weak ending *-e* never occurs in the plural. Thus, it distinguishes number as it only occurs in the singular. However, it does not distinguish individual cases or genders. This is particularly clear in the current account where *-e* is specified [-γ, -O]. The weak ending *-en* is not specified for any CNG features. In the current account, it is the elsewhere case. What both of these inflections have in common is that they do not distinguish case and gender. In contrast, the strong endings are specified for more features. Note first that strong endings are more specific in their occurrence (e.g., *-em* only occurs in the dative masculine/neuter; *-s* only in the masculine/neuter). This is reflected by the contexts in which their vocabulary insertion rules apply; for instance, the inflection *-em* is specified as [-F, +O, -S]. Compared to weak inflections, strong inflections distinguish case, number, and gender better.

The feature specifications on terminal nodes are different. If present, they always involve specifications for the four features [F, N, O, S]. In other words, all features are present in the abstract representation, but only a subset of those features are specified in the vocabulary insertion rules – the latter involve underspecification allowing competition between the various vocabulary insertion rules. Note again that these are basic tenets of DM.

2.1.6. The Proposal in More Detail: Structural Position of Inflections

In DM, vocabulary items are inserted late. Matching the maximum number of features on the terminal head, the availability of a more specific vocabulary item precludes the insertion of a less specific one. With the system laid out above in mind, the abstract feature bundle in Infl ([CNG]) of the larger adjective structure can now be restated (for convenience, I continue referring to the feature bundle as CNG if the decomposition is not relevant). Taking dative masculine as an example, the terminal head Infl is specified as in (24). Note that [-F, +O, -S] in (22c) is the most specific, matching vocabulary item. It is inserted and spelled out as the strong ending *-em* on *klein-* 'small' resulting in the form after the arrow:

(24)

```
                InflP
               /    \
                    Infl'
                   /    \
  [-F, -N, +O, -S]      AP
                       /   \
                           A'
                          /  \
                         A
                       klein        →      klein-em
```
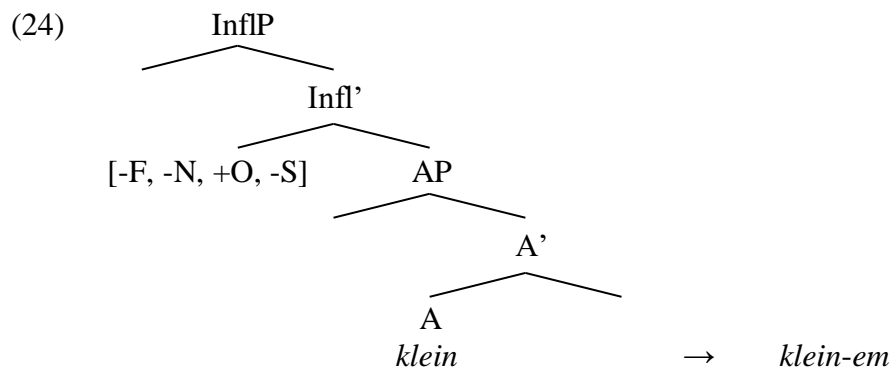
The structure above is a convenient shorthand for a more detailed derivation. After movement of the adjective stem *klein* to Spec,InflP, Linearization, and Vocabulary Insertion, we obtain the string in (25). Following Murphy (2018), I assume that the adjectival suffix undergoes Local Dislocation combining with the adjective stem to yield the spell-out form after the arrow (see also Section 5.3):

(25)

klein   -em   →   kleinem

Unless this more detailed derivation is of signifance, I usually illustrate the analysis by a syntactic representation as in (24). As briefly discussed in Chapter 1, Section 4.1.2, determiners also have internal structure. Since they are proposed to be the trigger of Impoverishment, I discuss their inner makeup in more detail now.

Again illustrating with the dative masculine, the four most common types of determiners (i.e., the indefinite null articles, the indefinite article *ein*, the definite article, and the demonstrative) have the following internal structure. The terminal head Art where the indefinite null articles later surface has a categorial feature [+D(eterminer)] and a negative feature for definiteness. As null elements, they have no features for case, number, and gender that are later spelled out as inflections (26a). The indefinite article *ein* only has the categorial feature [+D] and features for case, number, and gender. Given these different types of features (category vs. CNG), I assume that these make up two individual feature bundles. These two separate bundles undergo feature union yielding Art as in (26b).[17] Like the indefinite null articles, the definite article has a definiteness feature, but it is specified as positive (26c):

(26)   a.   *Indefinite Null Articles*

Art
|
[+D; -DEF]   → $\emptyset_D$

       b.   *Indefinite Overt Article*

Art$_{[+D][-F, -N, +O, -S]}$

[+D]   [-F, -N, +O, -S]   →   *ein-em*

       c.   *Definite Article*

Art$_{[+D; +DEF][-F, -N, +O, -S]}$

[+D; +DEF]   [-F, -N, +O, -S]   →   *d-em*

---

[17] There is evidence that inflections are generated with their determiner heads. As mentioned in Chapter 1 and discussed in more detail in Chapter 8, Section 2.2.2, there are cases where *ein* occurs in two positions. Crucially, *ein* in the lower position has the same, varying inflection as related *kein* 'no'. Compare (ia) to (ib):

(i)   a.   *k-ein-e   so'n-e Leute*
           NEG-a-ST so.a-ST people
           'no such people'
      b.   *mit   k-ein-en so'n-en Leuten*
           with NEG-a-ST so.a-ST people
           'with no such people'

This clearly shows that inflected *ein* has a bipartite structure. As indefinite articles are usually assumed to be heads, this is captured in the main text by two separate feature bundles under Art.

The spell-out forms are as follows: [+D; -DEF] is realized as $\emptyset_D$, [+D] as *ein-*, and [+D; +DEF] as *d-*. As for the inflection, only [-F, +O, -S] matches the CNG bundle yielding *-em*. Taken together, this spells out the forms of the determiners provided after the arrow.

Unlike the first three elements, the demonstrative is phrasal. I assume there are two terminal heads (27). Dem involves the features [+D; +DEF, +DEIX] and projects its own extended projection with InflP at the top (see Leu 2007, 2015; Roehrs 2010, 2013). The features for case, number, and gender are in Infl. Dem moves to adjoin to Infl (not shown). Given feature union and Percolation, all features spread to InflP:

(27)   *Demonstrative*

$$\text{InflP}_{[+D; +DEF, +DEIX][-F, -N, +O, -S]}$$

    [-F, -N, +O, -S]   DemP
                               |
                              Dem
                        [+D; +DEF, +DEIX]   →   *dies-em*
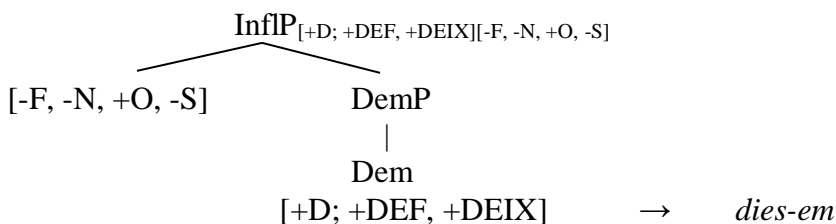
The features [+D; +DEF, +DEIX] and [-F, -N, +O, -S] are spelled out as *dies-* and *-em*, respectively, yielding the form after the arrow.

Besides the demonstrative *dieser* 'this', other phrasal *der*-words have this general structure: (stressed) *DER* 'that', *jener* 'that', *jeder* 'every', *mancher* 'some', *solcher* 'such', *welcher* 'which', and *alle* 'all' (see also Chapter 3, Section 4). While I cannot specify (and motivate) all the relevant features of these individual words, I assume that all these elements have the categorial feature [+D]. Furthermore, like *dieser* 'this', the demonstratives *DER* 'that' and *jener* 'that' involve the features [+DEF, +DEIX]. The quantifiers *jeder* 'every' and *alle* 'all' and the (presuppositional) interrogative *welcher* 'which' have the feature [+DEF] but lack the deixis feature. In contrast, *mancher* 'some' and *solcher* 'such' lack the definiteness feature but have the feature [+DEIX] in their feature makeup.[18]

Note that all determiners have the categorial feature [+D]. I propose that this is the trigger for Impoverishment. In addition, some determiners have features for definiteness and/or deixis, which also play a role in the account below. The indefinite article *ein* is different – it has no features for definiteness and deixis. Considering the features of the various determiner stems, *ein* is the least specified element. In Chapter 5, I propose in more detail that *ein* is a semantically vacuous element.

2.1.7. The Proposal in More Detail: Impoverishment

Impoverishment involves a rule deleting a specific feature. Note that in the current context, Impoverishment cannot be stated in terms of the features [F] or [N] as these features are still

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[18] The presence of the deixis feature is most straightforward with *solch* 'such'. For simplicity, I also assume this for *manch* 'some' (although this element may turn out to have a different positively valued (relevant) feature it its makeup). These positively valued features play a role later in the discussion (Section 2.2.1). On a different note, recall that *mancher* 'some', *solcher* 'such', and *welcher* 'which' can also occur without an inflection (i.e., *manch*, *solch*, *welch*). Given the lack of inflection, I assume that they have a different structure and analysis than in (27). Observe in this regard that they cannot occur directly before nouns but rather require *ein* and/or an adjective to be present: *manch *(ein/guter) Student* 'some (good) student'. Given this dependency, I assume that they are not determiners but modificational elements, which do not involve the categorial feature [+D].

relevant for the weak ending (23a). Furthermore, it cannot be stated in terms of the feature [O] as that feature is also mentioned in (23a). I propose that Impoverishment deletes the feature [S] if a determiner adjoins to a head or a phrase in the nominal structure:

(28)   *Impoverishment Rule 1:*

         [$_\delta$ Determiner [$_\delta$ [~~S~~]]], where δ = X, XP

Note that this is a language-specific rule that applies to German only (for the discussion of Impoverishment in Yiddish, see Roehrs 2015). Furthermore, recall the partial ordering of {Lowering, Impoverishment} >> Vocabulary Insertion from Chapter 1, Section 4.2.1. First, as observed by Sauerland (1996), Impoverishment widens the distribution of the least specified (i.e., weak) inflections. This is consistent with the ordering of Impoverishment preceding Vocabulary Insertion. Second, Impoverishment Rule 1 involves the structural relation of adjunction. Recalling that Lowering also has access to structural relations and precedes Vocabulary Insertion, this also fits with the claim that Impoverishment precedes Vocabulary Insertion. In other words, current assumptions are in agreement with the general layout of DM provided earlier.[19]

To illustrate the workings of Impoverishment Rule 1, I begin by discussing the determiners, the triggers of Impoverishment, and how they relate to the rest of the nominal structure. With (28) in place, the property [+I(mpoverishment)] from Section 2.1.4 can now be restated. I propose that the categorial feature [+D] triggers Impoverishment.[20] Recall that the definite article moves to adjoin to Agr. Leaving out the positive/negative values of the CNG features, the general constellation is as in (29). Impoverishment Rule 1 deletes [S], marked by strikethrough, from Agr, the adjunction site. In fact, due to Percolation and Spec-head agreement, this feature is deleted from the feature bundles on all elements except the terminal head Art of the determiner itself. The relevant portion of the nominal structure is as follows (for the indefinite articles *ein* and $\emptyset_D$, see Sections 2.2 and 2.3):

---

[19] Notice that Impoverishment Rule 1 and Rule 2 (see below) bear some resemblance to Arregi & Nevins' (2012) syntagmatic neutralization rules, Impoverishment rules that involve two distinct nodes where a rule affecting one node makes reference to the (external) morpho-syntactic environment of a second node. Note though that both nodes in their system are inside the same M-word (defined as a X^0 that is not immediately dominated by another X^0). While the Impoverishment rules in the main text also apply in a local context, they do not occur inside M-words. If it turns out that the context of application of Impoverishment only involves M-words, then there are several options to update the proposal above; for instance, we could assume that all determiners and adjectives are heads and that determiners move by head adjunction and excorporation to D.

[20] Note that the categorial feature [+D] is on the stem of the determiner (rather than on the inflection). In other words, the current account of the strong/weak alternation is independent of the presence of adjectival inflections on determiners.

(29)   *Impoverishment by Definite Article*

$$AgrP_{[F, N, O, \text{S}]}$$

InflP$_{[F, N, O, \text{S}]}$ Agr'$_{[F, N, O, \text{S}]}$

[F, N, O, S̶]   AP   Agr$_{[F, N, O, \text{S}]}$ … t$_k$ …

Art$_{[+D; +DEF][F, N, O, S]k}$ Agr$_{[F, N, O, \text{S}]}$

[+D; +DEF]   [F, N, O, S]
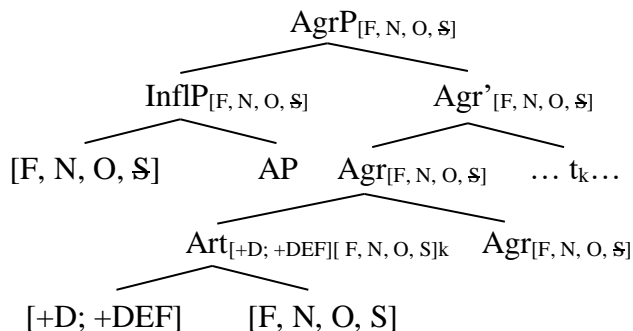
Operations in DM occur after syntax. Given the successive-cyclic movement of the determiner from ArtP to DP, there are several copies of this element in the nominal structure. Each of these copies triggers Impoverishment deleting the feature [S]. This explains why multiple adjectives in a noun phrase undergo Impoverishment (provided there is a determiner). Note also that after Impoverishment and Copy Reduction, there is still (at least) one fully specified feature bundle in the structure – it is on the terminal head Art later to be spelled out as the appropriate form of the determiner. Surfacing in the DP-level, this element is accessible to DP-external operations (e.g., case checking/valuing).

The updated analysis of the demonstrative is similar, but this element undergoes adjunction to AgrP triggering Impoverishment (the demonstrative structure in (27) above is simplified here for reasons of space):

(30)   *Impoverishment by Demonstrative*

$$AgrP_{[F, N, O, \text{S}]}$$

Dem$_{[+D; +DEIX][F, N, O, S]k}$ AgrP$_{[F, N, O, \text{S}]}$

[+D; +DEIX]   [F, N, O, S]   InflP$_{[F, N, O, \text{S}]}$ Agr'$_{[F, N, O, \text{S}]}$

[F, N, O, S̶]   AP   Agr$_{[F, N, O, \text{S}]}$ … t$_k$ …
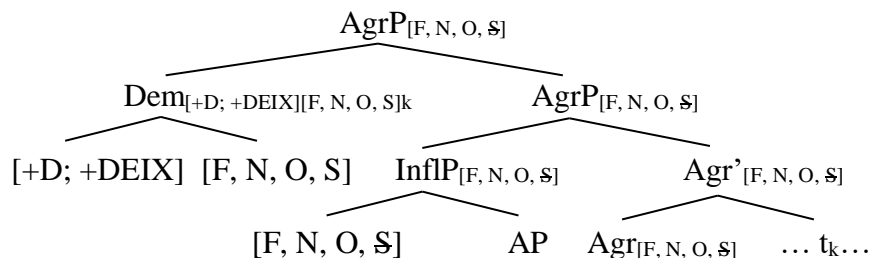
Finally, I turn to the discussion of the inflection on the adjective, the target of Impoverishment.

If Impoverishment applies, and the feature [S] is deleted in the nominal structure, then this impacts the inflection on the adjective with visible effect – InflP in (29) and (30) undergoes feature deletion. For instance, the removal of the feature [S] yields (31) in the dative masculine. With [S] absent, only [] in (23b) above is a match here spelling out the weak ending *-en*:

(31)

```
          InflP
         /    \
        /    Infl'
       /    /    \
[-F, -N, +O]     AP
             /     \
            /      A'
           /     /   \
          /     A
              klein      →      klein-en
```
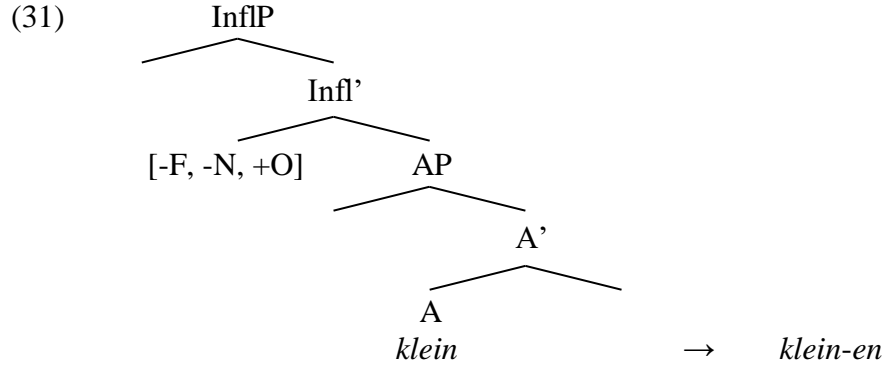
I discuss the inflections on the determiners themselves in Section 4. Before moving on, note again that all strong endings in (22) have the feature [S], except for one: -*en*. In other words, the accusative masculine ending is left untouched by Impoverishment and surfaces as the so-called exceptional case in strong and weak contexts alike. In the current account, this inflection is not exceptional: the vocabulary entries in (23) lack the feature [S] as well.

The above discussion explains the weak inflections in canonical constructions. With this in place, I turn to the discussion of strong adjectives in canonical structures. In the next section, I address adjectives in the context of *ein*-words. In Section 2.3, I discuss adjectives following null articles and Saxon Gentitives. Section 2.4 is dedicated to the discussion of extended-adjective constructions. It is shown that these cases also follow from the system developed above. In the course of the discussion, I refine the current proposal further.

2.2.   Strong or Weak Adjectives in Canonical DPs: Ein-*words*

In this section, I provide my analysis of strong adjectives after certain *ein*-words, and I discuss the inflectional behavior of the *ein*-words themselves.

2.2.1. Adjectives after *ein*-words: Strong Inflections
In this subsection, I consider canonical DPs that involve adjectives preceded by *ein*-words. Recall that *ein*-words consist of the indefinite article *ein* 'a', the singularity numeral *EIN* 'one', the negative article *kein* 'no', and possessive articles like *mein* 'my', *dein* 'your', etc. As is well known, these elements occur with strong adjectives in three instances: in the nominative masculine and in the nominative/accusative neuter. This is exemplified in the neuter with an indefinite article and a possessive article in (32a). In all the other instances, the adjective must be weak as shown with the dative in (32b):

(32)   a.   *(m-)ein groß-es Auto*
                (my) a big-ST   car
                'a / my big car'

         b.   *mit   (m-)einem groß-en Auto*
                with (my) a   big-WK car
                'with a / my big car'

71

This inflectional distribution is often referred to as mixed paradigm. Considering (32), it is clear that the presence of possessive *m-* does not make a difference for the inflection on the adjective. In view of the strong ending in (32a), I need to say something about the determiners that in some instances, do not trigger Impoverishment but in others, do.

Note first that it is not possible to propose that (32a) involves no concord in features, and consequently, there is a strong ending on the adjective. This is so as uninflected *ein* is restricted to specific featural combinations, and the following adjective has a regular strong ending. In other words, the agreement features need to be present underlyingly so that the correct forms of the article and the adjectival inflection can be inserted. More generally, this means that concord is not a sufficient condition for the occurrence of weak endings (see also Section 3). In order to explain the distribution in (32), I do not modify the general system laid out above but derive these patterns by a certain property of the relevant *ein*-words themselves. I focus on *ein* and later briefly comment on possessive articles, the negative article *kein* 'no', and the singularity numeral *EIN* 'one'.

Some scholars claim that uninflected *ein* is, in a sense, invariable: for some reason, it does not have an ending in the three above-mentioned cases (Demske 2001: 33, Eisenberg 1999: 233, Olsen 1991b: 47 fn. 14). Consequently, the following adjective must be strong to spell out the relevant features for case, number, and gender. These authors seem to suggest that there are two types of lexical items: uninflected *ein* is a determiner, and inflected *einer* is a pronoun (more on this in the next subsection). Other authors propose a timing mechanism to explain the three exceptional instances of *ein*. For instance, Roehrs (2009a: chapter 4) suggests that certain cases of *ein* move to the DP-level later in the derivation. As a consequence, they do not trigger Impoverishment on the adjective, and the ending on *ein* itself is not licensed. In order to avoid such late syntactic movement, I make a different proposal here.

I break down the behavior of *ein* into two issues: (i) *ein* itself has no inflection, and (ii) the following adjective is strong (i.e., *ein* does not trigger Impoverishment). At first glance, these points seem to be related (e.g., Murphy 2018 and references cited therein). Indeed, they have given rise to the traditional generalizations discussed in Section 2.1.1: Weak After Strong and the Principle of Monoinflection. Note though that we have already indicated that these generalizations do not cover all the facts (e.g., *wir nett-en Studenten* 'we nice-WK students'; for a more detailed discussion, see Chapter 3, Section 7). Second, generalizations are descriptions of the facts, not explanations.

Starting with the second issue (i.e., the strong inflection on the adjective after *ein*), I proposed in the previous section that the categorial feature [+D] of the determiner is the trigger for Impoverishment. To explain the special properties of *ein*, I propose that determiners may be triggers for Impoverishment under certain conditions only. In order to establish a natural group, I propose that four (not three) instances of *ein* are special. Besides the three traditional cases (i.e., nominative masculine and nominative/accusative neuter), I add accusative masculine to the group.[21] In the system laid out above, nominative/accusative masculine and

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[21] There are two points that deserve mentioning here. First, grouping the accusative masculine of *ein* with the (traditional) three exceptions means that *-en* on the adjective is a strong (rather than weak) ending, an interpretation that is possible given that *-en* is both a strong and weak ending in this feature combination. Indeed, I formulated a vocabulary insertion rule in (22c) above that captures this identity directly. Second, Paul *et al.* (1989: 234) provide the following forms of *ein* in the nominative/accusative singular in MHG:

(i)		MASC	NEUT	FEM	
	NOM	ein	ein	ein	(MHG)
	ACC	ein-en	ein	ein(e)	

nominative/accusative neuter are the least marked items in terms of the features [O] and [F]: both have a negative value in these four instances (recall from Section 2.1.5 that I take negative values to represent less marked instances).

I propose that [+D] is only a trigger for Impoverishment in the context of positively valued [O], [F], [DEF], or [DEIX]. Note now that the terminal heads that are later to be spelled out as the four relevant instances of *ein* have [+D] but lack [DEF], [DEIX], and have no positive value on [O] and [F]. Consequently, these cases of *ein* will not trigger Impoverishment. This is illustrated with *ein* in the nominative masculine:

(33)   *No Impoverishment by* ein

```
                        AgrP[-F, -N, -O, -S]
                   ┌──────────────┴──────────────┐
            InflP[-F, -N, -O, -S]            Agr'[-F, -N, -O, -S]
          ┌────────┴────────┐           ┌────────┴────────┐
   [-F, -N, -O, -S]        AP    Agr[-F, -N, -O, -S]  … t_k …
                     ┌──────────┴──────────┐
              Art[+D][-F, -N, -O, -S]k    Agr[-F, -N, -O, -S]
            ┌────────┴────────┐
         [+D]          [-F, -N, -O, -S]
```
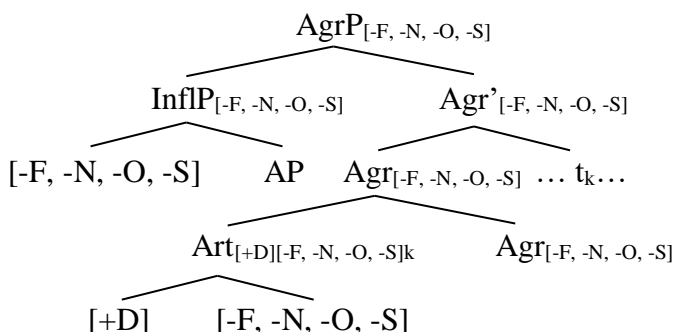
To be clear, like the other determiners, the four instances of *ein* undergo movement up the syntactic representation by way of adjunction. Unlike the other determiners, they do not trigger Impoverishment given the feature specification under Art. In keeping with the tradition, I usually refer to the special cases as the three (not four) instances of *ein*.

2.2.2. Adjectives After *ein*-words: Uninflected *ein*
Turning to the first issue (i.e., *ein* may have no inflection), note that the endings on *ein* do appear in elliptical contexts when no noun or adjective is present. Compare (34a-b) to (34c):[22]

(34)   a.   *Das ist ein-(*er) Wagen.*
                this is a-*ST   car
                'This is a car.'

It appears as if over time, the feminine form of *ein* has taken on *-e*, possibly to mark feminine gender more consistently (cf. *dies-e Lamp-e* 'this lamp'). This change may have led to the formation of a natural group containing the four other instances of *ein* in (i), as suggested in the main text.

[22] Observe that ellipsis is irrelevant for Impoverishment; that is, the ellipsis of a noun in a regular DP does not impact the strong/weak alternation on the adjective itself:

      (i)   *der gut-e*
                            the good-WK
                            'the good one'

Also, recall from Chapter 1, Footnote 31 that *der*-words used pronominally are different from *ein* in (34c) in that they have two inflections in certain feature combinations, the usual strong inflection and an additional *-en* (e.g., *d-en-en* 'the-ST-INFL in the dative plural). This means that the additional strong inflection on *ein* in (34c) has its own explanation.

b.   *Das ist ein-(*er) gut-er.*
       this is a-*ST   good-ST
       'This is a good one.'

c.   *Das ist ein-*(er).*
       this is   one-ST
       'This is one.'

With Panagiotidis (2002, 2003) and others, I assume that (34b-c) involve null nouns (cf. also *pro* as in Kester 1996a,b; Lobeck 1995; Olsen 1987; Rehn 2019: 209-12). This makes these two nominals structurally parallel to (34a), which involves an overt noun.

    Inflected *einer* as in (34c) can be followed by overt elements provided these elements are outside the noun phrase that contains *ein* and the (null) matrix noun. Such elements include genitive DPs, PPs, and relative clauses:

(35)   a.   *ein-er mein-er Freunde*
              one-ST my-GEN friends
              'one of my friends'

       b.   *ein-er von mein-en Freunden*
              one-ST of   my-DAT friends
              'one of my friends'

       c.   *ein-er, den ich gesehen habe*
              one-ST that I   seen   have
              'one that I have seen'

I summarize the complete set of *ein*-words in Table 5, where the inflections in brackets indicate the forms occurring in the absence of the relevant overt material (e.g., adjectives and nouns in the matrix nominals). Given the restrictions on the occurrence of *ein* in the plural (Chapter 1, Section 2.2), I illustrate this with the possessive article *mein-* 'my':[23]

Table 5: Endings on *ein*-words

	Masculine	Neuter	Feminine	Plural
Nominative	mein-[er]	mein-[es]	mein-e	mein-e
Accusative	mein-en	mein-[es]	mein-e	mein-e
Dative	mein-em	mein-em	mein-er	mein-en
Genitive	mein-es	mein-es	mein-er	mein-er

Abstracting away from the brackets for a moment, the inflections in Table 5 are the same as those on the *der*-words discussed earlier. However, the inflection on *ein* in the three special instances is a function of the presence or absence of following overt material such as an adjective and/or a noun. Given the large overlap of forms, it is, in my view, undesirable to state two types

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[23] The two neuter forms of *meines* are often realized without a schwa as *meins* (the same goes for the other *ein*-word forms in these instances: *eins* 'a', *EINS* 'one', and *keins* 'no').

of vocabulary items, one involving *ein* as a determiner and one with *einer* as a pronominal form. Rather, since the presence of the inflection depends on overt material, I propose that the alternation between uninflected and inflected *ein* is brought about by certain vocabulary insertion rules. These are late operations that occur after lexical elements such as adjectives and nouns have been inserted.

Inspired by Höhn's (2020: 13ff) analysis of the third-person gap in pronominal DPs (e.g., **they linguists*), I provide a – what he calls – PF-analysis, an account of uninflected *ein* that occurs after syntax. I propose that the different forms of *ein* present another case of contextually conditioned allomorphy. Höhn states that the relevant overt material must be linearly adjacent and in the same spell-out domain. As to the latter, I assume that the DP as a whole involves an independent domain – a phase in Chomsky (2000 and subsequent work). Rather than formulating three separate, exceptional instances of *ein* in the nominative masculine and nominative/accusative neuter, I use the feature system from Section 2.1.5 and propose the following vocabulary insertion rules.

The insertion rules are provided in (36): (36a-c) state the vocabulary entries for *ein* and (36d-e) for its adjectival inflections (note that (36d) shows the entry for the nominative masculine inflection *-er*, and (36e) stands for the remaining vocabulary entries of the endings from Section 2.1.5). As mentioned several times before, instances in the accusative masculine are exceptional in the nominal system in German. As such, I single out this feature combination as the most specific one (36a). In order to make sure that this element is inserted in the right feature combination, the context of the application of the rule is specified by the relevant features after the forward slash sign. Note also that (36a) only spells out the stem feature – the CNG features are spelled out by the vocabulary insertion rules for the adjectival inflections. In contrast, (36b) spells out the stem feature and the CNG features by one element. This explains the lack of inflection on *ein* in these cases. Furthermore, (36b) is sensitive to the presence of overt material, the following adjective and/or noun, at the right edge of the same phase. This adheres to Höhn's condition of linear adjacency. Given the relevance of word order, this is consistent with the assumption from Chapter 1 that Vocabulary Insertion follows Linearization. Notice that taken together, (36a) and (36b) form the four special cases of *ein*. Finally, the vocabulary entry in (36c) presents the elsewhere case for *ein* (the closing square bracket followed by Φ in (36b) indicates the right edge of the DP phase, more on this momentarily):[24]

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[24] The setup in (36a-c) is inspired by Blevins' (1995: 146) treatment of weak adjectives in German where the form *kleinen* 'small' is both the most and least specific, and *kleine* is inbetween (also Evans 2019: 56). Note that in an earlier version of this work, I formulated (36a) as [+D][-F, -N, -O, +S] → *einen*, where the latter spells out both the categorial feature and the CNG features by one element. Observe though that *einen* would now be an unanalyzed form; that is, the ending *-en* would no longer be a regular adjectival inflection. It is worth pointing out that the specification of a feature context after the forward slash sign as in (36a) will find wider application with inflected third-person pronouns (see next subsection), inflected definite articles (see Chapter 3, Section 3), and first and second-person pronouns, which do not have CNG features as part of their structure (Chapter 3, Section 5). Finally, note again that (36b) involves two separate feature bundles spelled out as one morpheme. This has to do with the earlier observation that articles, despite being heads, have internal structure consisting of stems and inflections. In some cases, these individual bundles are spelled out as one morpheme (36b); in others, they are realized as two morphemes where (36a,c) and (36d-e) are later combined by Local Dislocation (for sample derivations, see the main text below). That two feature bundles are spelled out by one morpheme is independently needed for (uninflected) third-person pronouns in the genitive (see next subsection).

(36) a. [+D] $\rightarrow$ *ein-* / [-F, -N, -O, +S]
      b. [+D][-F, -O] $\rightarrow$ *ein* / __ word]$_\Phi$
      c. [+D] $\rightarrow$ *ein-*
      d. [+F, -N, +O, αS] $\rightarrow$ *-er*
      e. etc.

Some more comments are in order.

I assume that a rule with specifications for the categorial feature [+D] and the CNG features is more specific than a rule with either the categorial feature [+D] or the CNG features alone; that is, (36a-b) are more specific than (36c-e). Note again that (36a) is more specific in its feature specification than (36b): [-F, -N, -O, +S] vs. [-F, -O]. This means that (36a) applies first, provided its feature context matches that of the noun phrase. In conjunction with (36e), this brings about the inflected form *einen*. If (36a) does not apply, (36b) may, again provided its features and context match the syntactic representation. Specifically, (36b) spells out uninflected *ein* in the context of a following overt word inside the phase Φ. However, if both (36a) and (36b) do not apply, (36c) does. In conjunction with (36d) or (36e), this brings about the remaining inflected forms of *ein* including the ones in elliptical contexts. Note that this also concerns the three exceptional instances where *ein* surfaces with a strong inflection in elliptical contexts. Finally, observe that the insertion rules in (36a-c) involve three related vocabulary items and that there is no inherent difference as regards determiner vs. pronominal forms. Next, I provide more details as regards the morpho-syntax involved.

After movement of *ein* to the DP-level, the simplified structure of the noun phrase can be represented as below:

(37)

```
                    DP
                     |
                    D'
              _____|_____
             D            ArtP
          ___|___       ___|___
        Art_k     D   Art'
       __|__          __|_____
   [+D]  [F, N, O, S] t_k      NumP
                              ___|___
                                    Num'
                               _____|_____
                              Num           NP
                           ____|____         t_i
                          N_i      Num
```
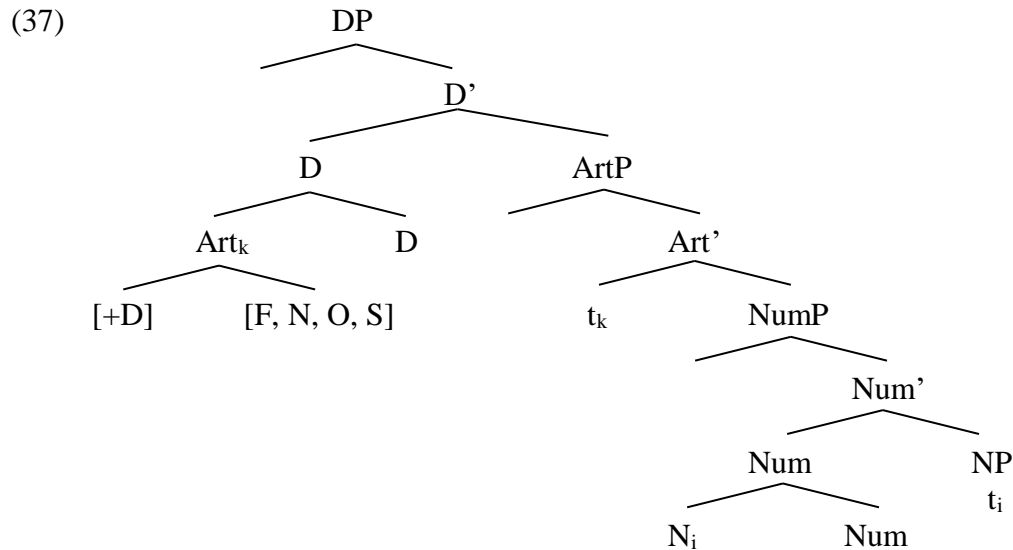
Like Höhn (2020), I assume that lexical elements like adjective and nouns are inserted before functional elements like determiners and inflections. This is consistant with Embick & Noyer's (2007: 295) assumption that lexical elements are merged as terminal nodes that involve phonological features. This early presence in the derivation is presumably needed independently as nouns have inherent grammatical gender, which determines the form of the inflected determiner (e.g., *der*MASC vs. *das*NEUT vs. *die*FEM). In other words, after Linearization and

Vocabulary Insertion of lexical elements like, for instance, *Wagen* 'car' or a null noun, strings such as in (38) below come about. To finalize the derivation, I highlight the interaction of the rules in (36) with the presence of overt material, specifically, the noun. I use examples in the nominative and dative masculine for illustration.

First, when the features later to be spelled out as *ein* are in the nominative masculine and appear in the context of an overt noun, insertion rule (36b) applies yielding the spellout form after the arrow in (38a). Specifically, (36b) spells out the adjacent feature bundles for category and case, number, and gender as one element. Second, when the same features occur with a null noun, insertion rules (36c) and (36d) apply bringing about the spellout in (38b). In contrast to the first instance, here both feature bundles of the article are realized separately, and the inflection undergoes Local Dislocation onto the determiner stem. Third, similar assumptions hold for the dative masculine. Here, (36c) and (36e) apply. The presence of a relevant overt element makes no difference in this feature combination (38c):

(38) a.

[+D]   [-F, -N, -O, -S]   *Wagen*   →   *ein Wagen*

  b.

[+D]   [-F, -N, -O, -S]   e$_N$ →   *einer*

  c.

[+D]   [-F, -N, +O, -S]   *Wagen*/e$_N$ →   *einem* (*Wagen*)

To be clear, the vocabulary insertion rules only supply the phonetic form of *ein* and that of the inflection – the abstract features have been present during the entire syntactic derivation. Furthermore, unlike adjectives and nouns as in (36b), elements outside the DP (genitive DPs, PPs, or relative clauses) are not part of the DP phase, delinated above by Φ, and do not have an impact on the calculation of the right edge. This means that (36b) does not apply. Hence, genitive DPs, PPs, and relative clauses occur with inflected *ein* if an adjective and/or noun is absent in the matrix DP. Before turning to the other *ein*-words, I briefly discuss two extensions of the insertion rules in (36a-b).

2.2.3. Adjectives after *ein*-words: Some Extensions
First, note that these insertion rules may also be relevant to another, very recent development in German. Vogel (2006) observes that the reduced form of the indefinite article *'n* is replaced in the nominative masculine and nominative/accusative neuter by *nen*. This is particularly clear in chat contexts (notice that the example below makes it clear that *nen* is not an accusative form):

(39)   *das waere   nen gut-er   preis*
        that would.be a   good-ST price
        'That would be a good price.'

Vogel proposes that speakers might take *'n* to be too short filling it with more phonetic material. With an added initial *n* and schwa, this makes *nen* more similar to other reduced forms of the article.

Notice that the new form *nen* occurs in the featural context of (36b), that is, in the masculine/neuter in the nominative/accusative. Thus, as an alterntive to Vogel's explanation, we could suggest that the featural context of the insertion rule (36a) has become less specific yielding the context in (36b): [+D] → *(ei)n-* / [-F, -O]. Furthermore, Vogel also states that unreduced *einen* is sometimes replaced by reduced *ein* (rather than *nen*) in the accusative masculine. This is the case in Mannheim German, for instance. I argue in detail in Chapter 3, Section 8 that in this dialect, (36a) has been deleted. What seems to be clear then is that the featural contexts of (36a-b) – masculine/neuter in the nominative/accusative – are special. I take this as confirmation that these four instances of *ein* form a natural group, in Standard German and in other varieties. We see in the next paragraphs that the forms of third person pronouns are also delineated by this feature combination.

The second extension of the analysis of *ein* involves pronominal determiners (for fuller discussion, see Chapter 3, Section 5). As is well known, third-person personal pronouns have the same inflections as definite determiners. Consider Table 6. As mentioned in Section 2.1.5 above, there is syncretism in the nominative and accusative such that masculine and neuter pattern together and feminine and plural pattern together: *e-/ih-* 'he, him; it' vs. *sie* 'she, her; they, them'. Note that like with determiners (and adjectives), the accusative masculine form (*ihn*) is exceptional. Also, all dative forms start in *ih-*, and there is an additional ending (*-en*) on the dative plural pronoun *ihnen* (which I abstract away from here). Finally, notice that unlike the other forms, the genitive pronouns do not have regular inflections:

Table 6: Third-Person Personal Pronouns in German

Gen/num	Masc	Neut	Fem	PL
Nom	e-r	e-s	sie	sie
Acc	ih-n	e-s	sie	sie
Dat	ih-m	ih-m	ih-r	ih-n-en
Gen	seiner	seiner	ihrer	ihrer

There are some interesting parallels to the distribution of *ein*.

Recall that the three exceptional cases of *ein* involve nominative masculine and nominative/accusative neuter, where *ein* does not have an inflection if an adjective and/or noun follows. The corresponding third-person personal pronouns are also special: these three cases are the only ones that start in *e-*, and as is well known, none of the third-person personal pronouns can be followed by an adjective and/or noun (e.g., *er (*Idiot)* 'he (*idiot)'; Höhn 2020). In other words, both uninflected *ein* and the stem *e-* occur in exactly the same contexts, and both are sensitive to the overt material that follows them (although in quite different ways).

Similar to the vocabulary insertion rules of *ein*, I propose that the exceptional accusative masculine form *ihn* 'him' is singled out as the most specific element (40a). Note that it only spells out the stem form (but not the CNG features; see also Gunkel *et al*. 2017: 1297-98). In order to make sure that this form (and others like it) is inserted in the right feature combinations, an indication to that effect is provided after the forward slash sign. The genitive pronouns are the second most specified elements (40b-c). Unlike *ihn* 'him' (and the other forms), they spell out the stem features and the CNG features by one element. This explains their irregular inflections. The pronouns starting in *e-* are the third most specified forms (40d). Note now that [-F, -O] is the same feature combination as that of uninflected *ein*. As to the remaining rules, (40e) provides the

78

insertion rule for the feminine/plural form in the nominative/accusative, and (40f) involves the elsewhere case. Observe that all vocabulary insertion rules specify that there cannot be an overt word in the right edge of the DP adoptiong an idea from Höhn (2020: 16). Finally, (40g) and (40h) specify the vocabulary insertion rules for the adjectival inflections (see (22) and (23) above; recall that the schwa in the insertion rules in (40g-h) is due to epenthesis, not applying here):[25]

(40) a.   [+D; -AUTH, -PART]   →   *ih-*   / __]$_\Phi$ [-F, -N, -O, +S]

       b.   [+D; -AUTH, -PART][-F, +O, +S] →   *seiner* / __]$_\Phi$
       c.   [+D; -AUTH, -PART][+O, +S]   →   *ihrer*   / __]$_\Phi$

       d.   [+D; -AUTH, -PART]   →   *e-*   / __]$_\Phi$ [-F, -O]
       e.   [+D; -AUTH, -PART]   →   *sie-*   / __]$_\Phi$ [-O]

       f.   [+D; -AUTH, -PART]   →   *ih-*   / __]$_\Phi$

       g.   [+F, -N, +O, αS]   →   *-r*
       h.   etc.

Note that the extension of the discussion of *ein* to third-person pronouns highlights several points. First, one morpheme can spell out two feature bundles at the same time (40b-c).[26] Second, the exceptional accusative masculine form is part of the four special cases (masculine/neuter in the nominative/accusative). In order to capture this, the set-up of the vocabulary insertion rules in (36) and (40) is basically the same: (40a) corresponds to (36a), (40d) relates to (36b), and (40f) is the elsewhere case just like (36c). Finally, I comment on the other types of *ein*-words.

      Recall that all *ein*-words behave the same as regards their inflection (also Chapter 5). It would be undesirable though to formulate the same type of vocabulary insertion rules in (36a-c) for possessive articles, the negative article, and the singularity numeral, respectively. Rather, the composite analysis of these *ein*-words (consisting of *ein* and another component) allows us to use the vocabulary items in (36a-c) here as well. While I provide a more detailed discussion in Chapter 5, I point out briefly here that possessive elements undergo some late interaction with *ein* (i.e., after the insertion of *ein*). Note in this regard that possessive articles fall into two groups: elements that are phonetically similar to *ein*, and those that are not. Decomposing *mein* 'my', *dein* 'your(SGL)', and *sein* 'his' into *ein* and a possessive component, the latter surface as in (41a). The second type of the possessive articles involves free forms as in (41b):

(41) a.   *m-*, *d-*,   *s-*
           my, your(SGL), his

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[25] In Chapter 3, Section 5, I propose in detail that personal pronouns do not involve features for definiteness and deixis but rather for author and participant (for a full list of the vocabulary insertion rules for personal pronouns, see Chapter 3, Section 5.3.2).

[26] For another advantage of *ein* spelling out two feature bundles, see Chapter 8, Section 2.1, where I briefly discuss Rehn's (2019) analysis of adjectival inflections in Alemannic German.

b.   *ihr,   unser, euer*
      her/their/your(FORMAL), our,   your(PL)

Recall also that *ein* is proposed to be a semantically vacuous element. After Vocabulary Insertion, the elements in (41a) combine with *ein*; that is, the possessive components are supported by *ein*. The same holds for the negative article *kein* '(NEG+a =) no' and the singularity numeral *EIN* '($\emptyset_{[-PL]}$+a =) one'. As for (41b), I assume that these forms suppress the pronunciation of *ein* (for more details, see Chapter 5). In the next section, I turn to another set of cases where strong or weak adjectives are possible. The latter are often mentioned, but a detailed account is usually not provided.

2.3.   Strong or Weak Adjectives in Canonical DPs: Null Articles and Saxon Genitives

I briefly argued in Chapter 1, Section 4.1.2 that prenominal possessives are in Spec,DP. This means that possessives can structurally occur with articles. In the previous section, this is what I assumed for possessive articles where the possessive component (e.g., *m-*) is in Spec,DP and *ein* is in D yielding *mein* 'my'. Similarly, I suggested in Chapter 1 that Saxon Genitives are also in Spec,DP. Unlike possessive articles, they do not occur with an overt determiner, and I assumed that Saxon Genitives are followed by null articles.

There are several advantages of this idea: on the one hand, all possessives occur with articles; on the other hand, we can capture the fact that adjectives after Saxon Genitives behave in the same way as adjectives that are not preceded by an (overt) determiner or determiner-like element. This is illustrated with the nominative in (42a) and with the dative in (42b):

(42)   a.   *(Marias) kalt-es Bier*
              Mary's   cold-ST beer
              '(Mary's) cold beer'

        b.   *mit (Marias) kalt-em Bier*
              with Mary's   cold-ST beer
              'with (Mary's) cold beer'

On my assumptions, both (42a) and (42b) involve null articles. We can observe that like in the previous section, the presence of the possessive does not have an impact on the inflection of the adjective. However, unlike above, the adjective here is also strong in the dative. As such, Saxon Genitives are in stark contrast to possessive articles such as *mein* 'my' (and the other *ein*-words). Note also that *wessen* 'whose' and *dessen* 'his' behave like Saxon Genitives as seen in the dative:

(43)   a.   *mit (wessen) kalt-em Bier*
              with whose   cold-ST beer
              'with (whose) cold beer'

        b.   *mit (dessen) kalt-em Bier*
              with his   cold-ST beer
              'with (his) cold beer'

80

This means that *wessen* 'whose' is morpho-syntactically related to Saxon Genitives and *dessen* 'his' (but not to possessive articles). Note that this might be relatable to the proposal that unlike possessive articles, Saxon Genitives and *dessen* do not involve composite forms, which consist of a possessive component and the article *ein*. Be that as it may, given the different inflections on the following adjectives, Saxon Genitives and possessive articles must have a different analysis. Interestingly, the inflectional behavior of adjectives in the genitive is revealing here.

As mentioned in Section 2.1.2, (overtly) unpreceded adjectives have strong inflections, with the exception of two instances: in genitive masculine/neuter contexts, these adjective are weak. Note that the noun has an inflection in these very contexts. Compare (44a) to (44b). Once again, the presence of a Saxon Genitive does not make a difference:

(44)   a.   *   *statt*   *kalt-es Bier-es*
               instead.of   cold-ST bier-GEN
               'instead of cold beer'

      b.   *statt*   *(Marias) kalt-en   Bier-es*
               instead.of Mary's   cold-WK bier-GEN
               'instead of Mary's cold beer'

Recall that the inflections on the determiners themselves do not undergo Impoverishment (i.e., they are strong). This means that the ending *-es* on, for instance, the determiners *des* 'the' or *eines* 'a' in the genitive masculine/neuter, is directly related to the underlying features. Now, if the endings on the determiners and those on the adjectives are indeed the same, then *-en* on the adjectives in the genitive masculine/neuter must be the result of Impoverishment.[27]

On the current analysis, a weak adjective in these contexts could imply the presence of a determiner triggering Impoverishment. One could suggest that this determiner is an(other) null article $\emptyset_D$ with the feature specification [+D][-F, +O, +S] yielding $\emptyset$-*es*. Following Roehrs (2009a), another timing mechanism could be suggested. Specifically, it could be claimed that the null article in the genitive masculine/neuter moves to the DP-level in the regular fashion triggering Impoverishment (the remaining instances of the null article would move later in the derivation). Since null articles cannot support overt suffixes, a repair mechanism could be formulated. It could be suggested that the lower copy of the null article combines with the head noun by partial N-raising, and the higher copy of the null article is deleted under Recoverability of Deletion:

(45)   [DP ~~$\emptyset$-es~~ [AgrP *kalten* [ArtP *Bier*k-$\emptyset$-*es* [NP *t*k]]]

Considering that nouns are usually not inflected for case in German, this derivation would explain the weak ending of the adjective and the presence of a suffix on the noun. However, I would like to avoid a timing mechanism involving late syntactic movement.

Note that null articles cannot be triggers of Impoverishment in the current analysis. Like the other determiners, null articles have the categorial feature [+D] and, additionally, they have

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[27] Historically, adjectives had the strong ending *-es*. According to Demske (2001: 84), the weak ending *-en* started to spread in the 15th century, and according to Sahel (2021: 29), this change was basically completed during the 18th century.

the feature [-DEF]. Unlike the other determiners, they do not have feature bundles for CNG. While the absence of CNG features avoids the issue of stranded affixes – after all, null elements cannot provide overt hosts for affixes, there are no features like definiteness or deixis such that [+D] involves a trigger for Impoverishment.

I propose that Impoverishment in the current cases occurs independently of the presence of determiners. I formulate a second Impoverishment rule that has to do with the features on the terminal head Agr and its projections; that is, it operates in a certain featural context. This rule says: When InflP is a daughter of AgrP, delete [S] on InflP in genitive masculine/neuter contexts:

(46)   *Impoverishment Rule 2:*

$$AgrP$$

InflP   Agr'
[-F, αN, +O, +S̶]   [-F, αN, +O, +S]
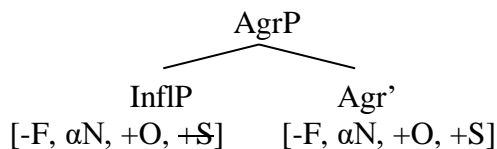
Notice that the feature specification above excludes [+D]; that is, this rule applies independently of the presence of a determiner. In fact, it is the specific featural contexts and the structural relation of motherhood between AgrP and InflP that trigger the rule. Observe also that the same feature (i.e., [S]) is deleted here as in Impoverishment Rule 1.[28]

To illustrate the application of this rule, note first that the null article moves to adjoin to Agr but does not trigger Impoverishment. Rather, the features on Agr percolate to AgrP and induce Impoverishment on InflP by the rule in (46). This reduced feature set on InflP percolates to Infl:

(47)   AgrP[-F, αN, +O, +S]

            InflP[-F, αN,+O, +S̶]   Agr'[-F, αN, +O, +S]

    [-F, αN, +O, +S̶]   AP Agr[-F, αN, +O, +S]   … t_k …

                    Art_k   Agr[-F, αN, +O, +S]
                    [+D; -DEF]
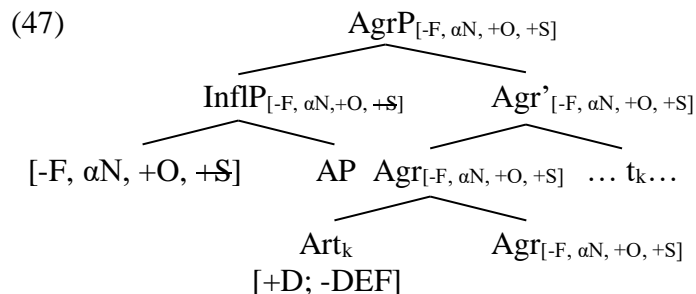
There are only three vocabulary items in (22) and (23) that do not involve [S]: two have a negative specification for [O], and one is the elsewhere case in (23b). The latter is the only vocabulary item that matches [-F, αN, +O] in Infl yielding the desired ending *-en* on the adjective.

Null articles are in complementary distribution with other determiners. If a null article is present, there will be no (additional) Impoverishment triggered by another determiner. Conversely, if an overt determiner is present, then there is an overlap in the application of the

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[28] In Chapter 3, Section 4, we see that this rule is more general applying to elements not only in AgrP but also to elements in other phrases. Note also that this rule has the looks of a dissimilation operation where one of two identical features (here [S]) is deleted (cf. Arregi & Nevins' 2012: 213 Participant Dissimilation). Interestingly, Impoverishment Rule 1 also deletes [S]. Assuming that the two Impoverishment rules are on the right track, it is currently not clear to me why [S] has this special status in German.

two Impoverishment rules. Given that feature deletion occurs postsyntactically, if Rule 1 applies first, Rule 2 does not (as [S] has already been removed); if Rule 2 applies first, Rule 1 still applies to the structural elements in AgrP (without visible effect), but not to the adjective in Spec,AgrP (where the feature [S] has already been removed by Rule 2). In either scenario, only the least specified element -*en* can be inserted under Infl.

Impoverishment Rule 2 is stated independently of the suffix on the noun. Two remarks are in order here. First, there are nouns that do not take the genitive suffix -*es*; for instance, *des Faschismus(*-es)* 'of fascism' (see also Olsen 1991b: 41). Furthermore, there is a second type of genitive suffix on singular nouns: -*en*. It is sometimes claimed (e.g., Rehn 2019: 116) that weak adjectival inflections also occur on nouns, specifically on so-called weak masculine nouns. Note that -*en* occurs in all instances on these nouns except in the nominative singular – just like with adjectives in the masculine singular. However, there are some important differences. These endings on the nouns are optional in the accusative/dative singular, at least for some speakers (note that Eisenberg 1998: 153 claims that this optionality holds more generally; Gallmann 1996: 289, 1998: 143 points out some interesting restrictions on this optionality). In contrast, weak endings on adjectives are not optional at all. I conclude that these two cases should not be collapsed (although they are diachronically related, Chapter 1, Section 3.1.1); that is, adjectival endings appear on determiners and adjectives (but not on nouns). Note that the Impoverishment rule in (46) is independent of these types of considerations.

As to the second remark, note that although the genitive suffix -*es* does not play a role in current account of the strong/weak alternation, this does not mean that this suffix is synchronically not relevant. The so-called Genitive Rule states that a noun phrase in the genitive must contain at least one element that is sufficiently specific as regards case (i.e., it must contain -*es* in the masculine/neuter or -*er* in the feminine/plural). In conjunction with the analysis above, this explains the ungrammaticality of the following data where both weak and strong adjectives are ungrammatical with nouns that have -*en* as their genitive suffix (data from Gunkel *et al.* 2017: 1308):

(48) a. * *der Geruch gebraten-en Ochse-n*
           the smell   fried-WK   ox.meat-GEN
           'the smell of roast ox'

      b. * *der Geruch gebraten-es Ochse-n*
           the smell   fried--ST   ox.meat-GEN
           'the smell of roast ox'

Specifically, the weak adjective in (48a) is ungrammatical as the Genitive Rule is violated (for more discussion of the Genitive Rule, see Chapter 3, Section 4); the strong adjective in (48b) is ungrammatical as Impoverishment Rule 2 should have applied in this context.

Before moving on, note that there are some special, rare cases where adjectives appear to have a strong inflection in genitive masculine/neuter contexts ((49a) is from Gunkel *et al.* 2017: 1308, (49b) is from Durrell 2002: 126):

(49) a. *der Inhalt folgend-es Paragraph-en*
           the content following-ST paragraph-GEN
           'the content of the following paragraph'

b. *das Gesuch obig-es Adressant-en*
   the request above-ST sender-GEN
   'the request of the above sender'

It is sometimes claimed that the weak ending *-en* on the noun licenses the strong ending *-es* on the adjective (Durrell 2002: 126). However, there are several points worth making here. Gunkel *et al.* (2017: 1307) observe that such cases often involve adjectives that are similar to determiners (in their words "Pronomina"). Notice now that both head nouns in (49) are singular count nouns that seem to occur without articles. Interestingly, both *folgend-* 'following' and *obig-* 'above(-mentionted)' are definite in interpretation. As such, these elements might be special types of adjectives, sometimes called definite adjectives or adjectival determiners (see Roehrs 2009a: 167f, van de Velde 2011; also Chapter 5, Section 5.2.5). Additionally, Gunkel *et al.* (2017: 1308) point out that cases like (49b) often sound archaic. This might imply that such instances are not regulated by the contemporary grammar.

 To summarize, I have documented that the presence of possessives, be they determiner-like elements like *m(ein)* or Saxon Genitives like *Marias*, does not have an impact on the inflection of a following adjective. Furthermore, I have discussed three (or rather four) instances where adjectives preceded by *ein* have a strong ending (the remaining instances are weak) and two instances where adjectives without (overt) determiners are weak (the remaining instances are strong). The first set of cases was explained by exempting four *ein*-words from triggering Impoverishment; the second was accounted for by formulating another Impoverishment rule triggered by a certain featural context.

 Overall, I conclude that adjectival inflections are regulated by *der*-words, *ein*, and a certain featural context. If so, then I also have an account of why the possessives themselves cannot have an influence on the adjectival inflections – possessive elements such as *m(ein)* 'my' and *Marias* 'Mary's' are not determiners themselves, but they co-occur with such elements, *ein* in the case of *m-* and $\emptyset_D$ in the case of *Marias*. As stated in Chapter 1, possessives are determiner-like elements: they are like definite determiners in that they (may) occur before adjectives and bring about definiteness; they are unlike determiners in that some of them (i.e., Saxon Genitives) may also occur after the head noun. This explains why possessives in German do not regulate adjectival inflections (neither in prenominal nor postnominal position).

2.4. *Adjectives in Extended-Adjective Constructions and After Numerals*

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 deletion. Consider the extended-adjective constructions in (50), 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:

(50) a. *ein* [*auf seinen Sohn sehr stolz-er*] *Vater*
    an of his son very proud-ST father
    'a father very proud of his son'

b.   *der* [*auf seinen Sohn sehr stolz-e*]   *Vater*
       the   of his   son   very proud-WK father
       'the father very proud of his son'

As discussed in Chapter 1, Section 4.1.3, I follow, among many others, Corver (1991, 1997) in assuming that adjectives have an extended projection, similar to verbs and nouns (Grimshaw 1991, van Riemsdijk 1998b). In particular, I 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. Given that the adjective appears to be so deeply embedded in the structure, it is important to make explicit how the analysis above deals with this type of data.

      I proposed in Chapter 1, Section 4.1.3 that adjectives and their inflections are base-generated in separate positions (e.g., Corver 2006: 68, Leu 2015): while the adjective stem forms the bottom part of the extended projection, the inflection closes this structure off. Moving top-down, I reiterate the claim here that the inflection projects InflP. The head Infl involves the abstract feature bundle eventually spelled out as a strong or weak ending. Furthermore, I assume that there is a functional phrase (FP), which can form the landing site for the argument of the adjective. Finally, DegP is on top of AP. The basic structure is provided in (51a). Now, with the PP-argument moved to Spec,FP, I propose that FP moves to Spec,InflP. This is illustrated in a simplified fashion for the relevant part in (50b) as in (51b):

(51)   a.   [$_{InflP}$ Infl [$_{FP}$ F [$_{DegP}$ Deg [$_{AP}$ Adj]]]]

      b.
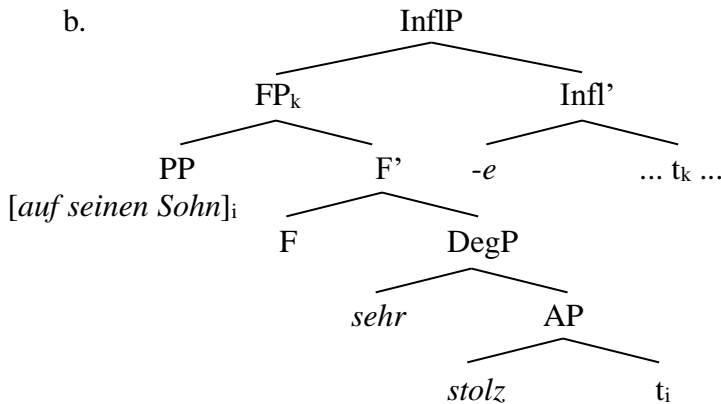
After Linearization (and Vocabulary Insertion – recall that the tree representation in (51) contains the vocabulary items for expository convenience), we obtain the abbreviated string in (52). The inflection undergoes Local Dislocation onto the adjective yielding *stolze* 'proud':

(52)

   …   *stolz*   *-e*   →   *stolze*

      This derivation has a number of advantages. First, Impoverishment can occur in a local fashion – the inflection is in Infl and InflP itself is in Spec,AgrP just like in the cases discussed

above. Second, the argument of the adjective has moved to the left. As such, the inflected adjective is, on the surface, adjacent to the head noun, a restriction that has been widely noted and is traditionally called Head-Final Filter (e.g., Williams 1982). If this is on the right track, then I can also account for some other cases.

Based on work by van Riemsdijk (1998a: 673), Roehrs (2006a: 222) discusses some instances 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 inflection alternates:

(53)   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'

As in the examples above, the question arises how the deeply embedded inflection can undergo Impoverishment on current assumptions. Furthermore, it is not clear how the inflection can occur on an element that is not the head of the AP in the first place.

I propose that the discussion above can shed some light on these issues. Consider in more detail the portion in (53b) that is marked by square brackets. The structure of this portion is illustrated in (54) below. I assume that the adjectival head cannot move out of the comparative structure, call it CompP. Abstracting away from the internal structure of CompP, the latter moves to Spec,InflP:

(54)   InflP
           $CompP_k$ Infl'
       so schnell wie möglich
                    -e   ... t_k ...
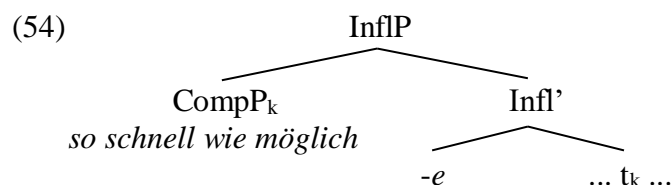
After Linearization (and Vocabulary Insertion), we obtain (55). With *möglich* 'possible' an adjective (at least by form), this provides an appropriate overt host for the inflection, and the latter can undergo Local Dislocation onto the adjective :

(55)
        ... *möglich* *-e*   →   *mögliche*
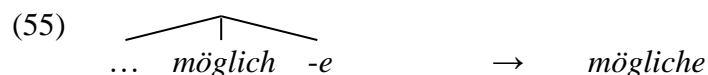
This, then, allows Impoverishment not only to occur in a local fashion, just like above, but also explains the unexpected position of the adjectival inflection.[29] I return to adjectives as extended projections in the context of non-restrictive adjectives in Chapter 4, Section 4.

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[29] Another advantage of separating the inflection from the adjective stem is that it can account for the difference in German between attributive adjectives, which have an inflection, and predicative ones, which do not:
    (i)   *Das Haus ist klein.*
         the house is small
         'The house is small.'

Above, I discussed adjectives that appear to be deeply embedded inside the specifier of AgrP. Next I turn to adjectives that are separated from the determiner by a numeral. In other words, the determiner and the adjective do not seem to be in a local relation either. Nevertheless, the adjective shows a weak ending:

(56)　　*dies-e　　zehn klein-en　Autos*
　　　　　these-ST ten　 small-WK cars
　　　　　'these ten small cars'

Assuming successive-cyclic movement of determiners from ArtP to DP, I suggested above that (phrasal) demonstratives adjoin to AgrP on their way to Spec,DP. This is now illustrated in more detail with (57) below:

(57)　DP
　　　　／＼
　diese　 D'
　　　　　／＼
　　　　 D　CardP
　　　diese_i　／＼
　　　　　 CardP
　　　　　／＼
　　 InflP_Q　Card'
　　 zehn　／＼
　　　　 Card　AgrP
　　　 diese_i　／＼
　　　　　 AgrP
　　　　　／＼
　　　 InflP　Agr'
　　 kleinen　／＼
　　　　　 Agr　ArtP
　　　　 diese_i　／＼
　　　　　 Art'
　　　　　／＼
　　　　 Art　NumP
　　　　　　 Autos
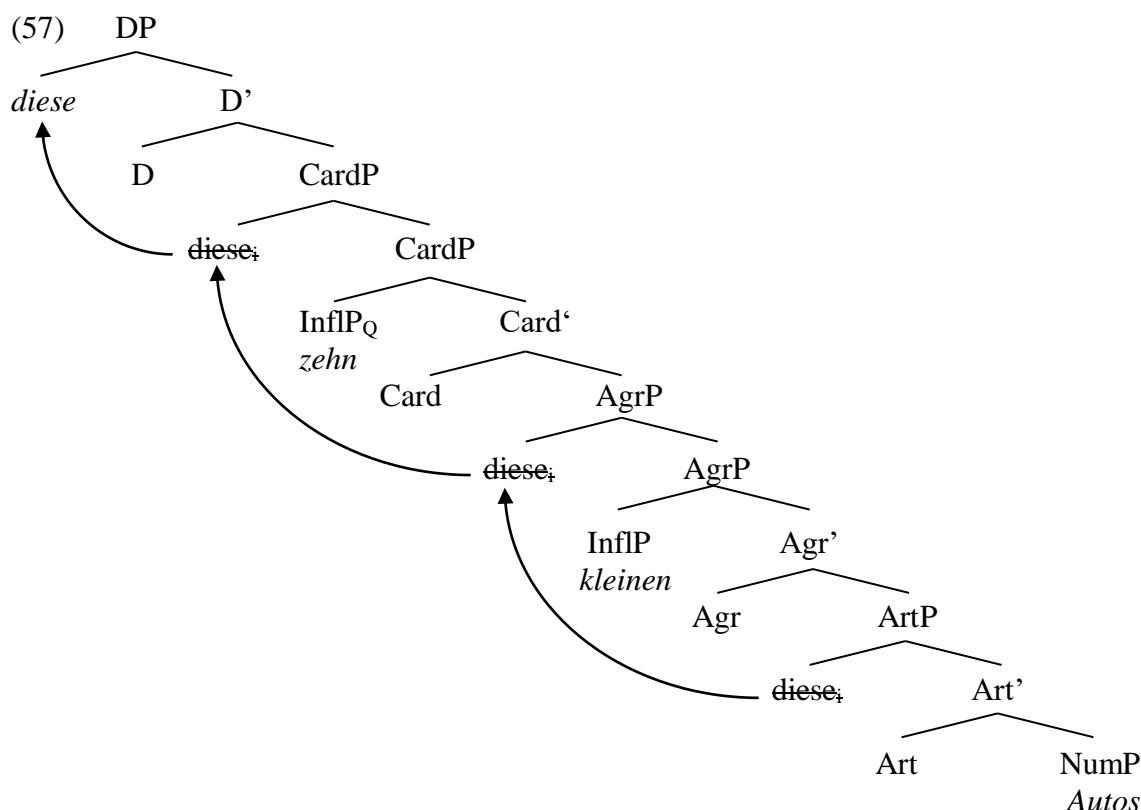
This adjunction to AgrP provides the local context for the application of Impoverishment (see again Section 2.1.6). Consequently, the adjective surfaces with a weak ending.

　　　To sum up, this section discussed adjectives in the context of canonical noun phrases. It was proposed that determiners, or more precisely their categorial feature [+D], trigger Impoverishment Rule 1 such that fully specified feature bundles on terminal heads undergo feature deletion and are realized as less specified (weak) inflections. Impoverishment rule 2 works in a similar way except that it is triggered by genitive masculine/neuter contexts in AgrP. Making certain assumptions, all Impoverishment rules apply in local relations. Strong adjectives occur when Impoverishment does not apply (e.g., features for definiteness or deixis are absent).

This can be captured by assuming that InflP is present in the former cases but not in the latter.

In other words, these inflections spell out underlyingly fully specified features and present the elsewhere case. Next, I turn to the discussion of non-canonical structures to see how adjectival inflections fare in these contexts.

3.   Adjectival Inflections in Non-canonical DPs

In the previous section, I focused on the simple (canonical) cases of the schematic form "determiner + adjective(s) + noun", where all these types of elements agree in case, number, and gender. In addition, I also discussed Saxon Genitive constructions, extended-adjective constructions, and adjectives after numerals. I proposed that these cases involve regular DPs, with adjectives in Spec,ArgP and the determiner in the DP-level. These are the contexts where weak adjective occur. In this section, I contrast those noun phrases with non-canonical constructions. The latter are argued to involve structures different from regular DPs and different from one another. Some independent evidence is provided for the individual structures (for more detailed discussion, see the original sources as indicated below).

    If weak adjectives occur in regular, simple DPs only, as proposed in the previous section, there are two distinct options for analyzing DPs containing strong adjectives and relevant determiners: it could be claimed that either the determiners are in positions where they cannot have an impact on the adjectives or that the adjectives themselves are outside the determiners' regular domain of influence.[30] Note that in each of these scenarios, the structural relation between the determiners and the adjectives differs from that in regular DPs. The following discussion features both options and provides evidence for Hypothesis 2a (i.e., inflections indicate abstract structure). For expository clarity, the non-canonical position of either the determiner or the adjective is marked by square brackets around the relevant element in the tree diagrams. Note finally that with the exception of indefinite pronoun constructions (Section 3.2), noun-adjective exclamatives (Section 3.3), and vocatives (Section 3.9), all noun phrases involve definite determiners, where weak endings on the adjectives are expected. As we will see though, this is not borne out. Again, adjectival inflections in German cannot be a reflex of the definiteness of the containing noun phrase (cf. Hypothesis 1a).

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

I begin with a canonical noun phrase (58a) and compare it to a noun phrase where a name-like nominal such as *Großer Bär* 'Great Bear' is to the right of another nominal (58b). It is clear that the former must involve a weak but the latter a strong ending on the adjective:

(58)   a.   *der groß-e(*r) Bär*
            the big-WK/*ST bear
            'the big bear'

        b.   *das Sternbild   Groß-e*(r) Bär*
            the constellation big-ST/*WK bear
            'the constellation Great Bear'

---

[30] As a third option, we could suggest that both the determiners and the adjectives are in non-canonical positions. To keep things simple, I do not consider this possibility.

Note that close appositions like (58b) contain two nominals where one nominal is a categorizing count noun, and the other is a proper name or a uniquely referring noun phrase. Typically, they involve one intonation unit (e.g., Lekakou & Szendrői 2007, Löbel 1991).

Turning first to (58a), the relevant part of the structure of this regular DP is repeated in simplified form below:

(59)   *Regular DP-Structure (Simplified)*

```
              DP
             /  \
                D'
               /  \
              D    AgrP
            der_i  /  \
              InflP   Agr'
              große  /  \
                   Agr    ArtP
                   der̶_i̶  /  \
                        Art'
                        /  \
                      Art    NP
                      der̶_i̶  Bär
```
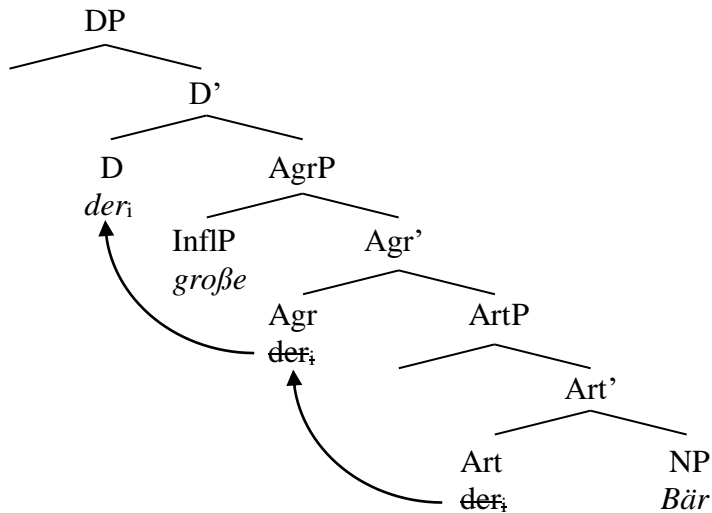
As discussed in Section 2, I take this to be the structural constellation where weak adjectives come about. With the adjective strong in (58b), something else must be assumed to explain this example.

In certain northern dialects of German, proper names can take an optional proprial article as in *(die) Anna* 'Anne' (Nübling *et al* 2015: 123ff). As noted by Löbel (1991), this optional article is not possible in close appositions (60a), and the name has to follow the noun it delimits. Compare (60a) to (60b):[31]

(60)   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

Relating the close appositive in (60a) to (58b), I propose a structure different from that of canonical DPs, namely the name-like element is adjoined to the NP of the DP. Abstracting away from movements internal to the matrix DP, this can schematically be represented as follows (for a symmetric structure, see also Lekakou & Szendrői 2012; cf. Löbel 1991: 13):

---

[31] The second example improves significantly if there is a long pause after *Bruder* 'brother' (see the discussion of loose appositions in Section 3.4).

(61)   *Close Appositions*

```
                    DP
              _____|_____
             D            NP
            das        ___|___
                     NP        [Großer Bär]
                     |
                     N
                  Sternbild
```
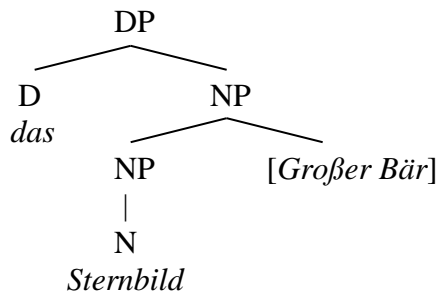
It is clear that the determiner did not adjoin to the phrase containing the adjective. Consequently, Impoverishment does not apply, and this accounts for the strong adjective.

3.2.   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 exhibits a weak adjective (62a), and the other shows a strong adjective (62b-c):

(62)   a.   *jeder   ander-e(%r)*
              every(one) different-WK/%ST
              'everyone different'

        b.   *wer   ander-e*(r)*
              someone different-ST/*WK
              'someone different'

        c.   *jemand   ander-e*(r)*
              someone different-ST/*WK
              'someone different'

It is argued in that paper that although both types involve concord between the pronominal element and the adjective, they involve different structures. As also briefly mentioned in the context of uninflected *ein* (Section 2.2.1), this means that concord can only be a necessary, but not sufficient, condition on the occurrence of weak adjectives.

Turning to the individual structures, I point out first 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:

(63)   a.   *jeder   ander-e   Mann*
              every(one) different-WK Mann
              'every different man'

b. * *wer   ander-e(r)   Mann*
   someone different-ST/WK Mann

c. * *jemand ander-e(r)   Mann*
   someone different-ST/WK Mann

I follow the aforementioned paper in that the first case involves a regular DP-structure with the option of overtly realizing the head noun but that the second and third example involve a completely different structure. Roehrs (2008) argues that the adjectives here are part of a Modifier Phrase (ModP, see Rubin 1996), which is right-adjoined to an Indefinite Pronoun Restrictor Phrase (IPRP). The structure can be illustrated as follows (e stands for a null element; see also Leu 2005):[32]

(64)   *Indefinite Pronoun Construction*
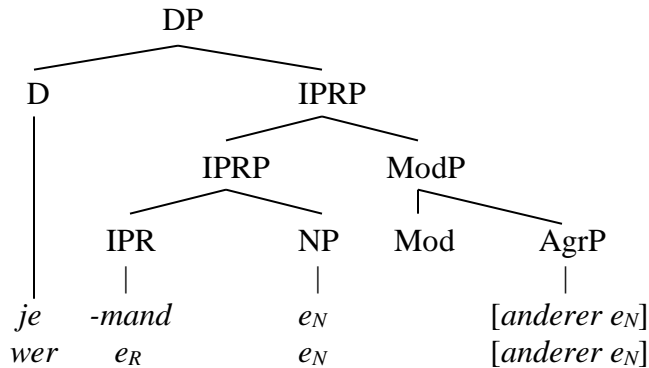
Some brief remarks about the structure are in order here. Note that I put the quantifying, determiner-like element under D. In conjunction with DP, IPRP accounts for the complex internal structure of indefinite pronouns (e.g., *je-mand* 'somebody'). Finally, the presence of ModP is motivated by the corresponding constructions in some of the Romance languages. For instance, French makes use of *de* 'of' in indefinite pronoun constructions (*quelque chose*$_{MASC}$ *de grand*$_{MASC}$ 'something big'), and this element seems to mediate concord between the two nominals (cf. *une bonne chose*$_{FEM}$ *de faite*$_{FEM}$ '(a good thing of done =) at least, that is done'; for details, see Roehrs 2008: 21-23). Returning to the discussion of the strong adjectives, note that there is no relevant determiner that can trigger Impoverishment, and a strong ending appears on the adjective.

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[32] Given the indefiniteness of the construction, one objection might be that a strong ending is expected here. Importantly though, this construction also exhibits a strong ending in the dative (for detailed discussion, see Chapter 3, Section 2.2):

(i)   *mit {jemand / %wem} ander-em*
   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 ander-en Mann* 'with a different-WK man'). As the latter are usually used to exemplify the inflectional alternation in indefinite contexts, indefinite pronoun constructions deserve being mentioned in the current context – they show that not all indefinite constructions behave the same as regards inflections on adjectives. Again, it is clear that structure must be taken into account.

3.3. Regular DP vs. Mid Right-Adjunction: Noun-Adjective Exclamatives

Certain exclamatives license the absence of a determiner directly before the noun and even tolerate the absence of a determiner before an inflected, following adjective (65a) (see Dürscheid 2002: 70). Interestingly, a definite, but not indefinite, determiner can precede the adjective. Compare (65b) to (65c):

(65) a. *Schwein, schwarz-e*(s)!*
          pig   black-ST/*WK
          'Stupid bastard!'

      b. *Schwein, das schwarz-e!*
          pig   the black-WK
          'Stupid bastard!'

      c. * *Schwein, ein schwarz-es!*
          pig   a   black-ST

Like the indefinite pronoun construction in the last section, these cases also involve concord in agreement features. Unlike the indefinite pronoun construction, the inflected adjective follows a noun here.

It is clear that both (65a) and (65b) have similar, but not identical, referential properties. This becomes clear when different determiner elements are inserted. For instance, adding *du* 'you(SGL)' before *Schwein* 'pig' yields a better result in (66) than (67). Conversely, adding *das* 'the' gives a better result in (67) than (66). No determiner is possible in (65c) as can be verified in (68):

(66) a. *Du   Schwein, schwarz-es!*
          you(SGL) pig   black-ST
          'You stupid bastard!'

      b. ?? *Das Schwein, schwarz-es!*
          the pig   black-ST
          'The stupid bastard!'

(67) a. ?? *Du   Schwein, das schwarz-e!*
          you(SGL) pig   the black-WK
          'You stupid bastard!'

      b. *Das Schwein, das schwarz-e!*
          the pig   the black-WK
          'The stupid bastard!'

(68) a. * *Du   Schwein, ein schwarz-es!*
         you(SGL) pig   a   black-ST

      b. * *Das Schwein, ein schwarz-es!*
         the pig   a   black-ST

With a pronominal determiner possible in (66a) and a definite article in (67b), I conclude that the structures in (65a-b), which lack a determiner in initial position, also involve definite expressions. This fits well with the common assumption that vocatives of the type *dummer Idiot* 'stupid idiot' involve definite contexts too (Section 3.9).

     Returning to the above data, we can observe that the adjective in (65a) is strong in a definite context. Importantly, considering the ungrammaticality of (65c) and the definite reference of (65a), it seems implausible that an indefinite determiner, including a null article, is or was present in (65a). Given that the adjective occurs in postnominal position, I suggest that (65a) consists of two nominals. The matrix nominal involves (at least) NumP, where the noun *Schwein* 'pig' has undergone raising to Num. It is possible that there is more structure on top of NumP (cf. the structure of vocatives in Section 3.9). As to the following adjective *schwarz* 'black', I suggest that it is part of a second nominal. Given concord in agreement features between the noun *Schwein* and the inflected adjective *schwarzes*, I argue that the adjective is followed by a null noun, which is coreferential with the overt noun in the matrix nominal. The adjective and the null noun make up their own nominal, and I assume that the latter is adjoined to the NP of the matrix nominal. Like in the indefinite pronoun construction, the adjunction is mediated by ModP:

(69)   *Noun-Adjective Exclamatives*
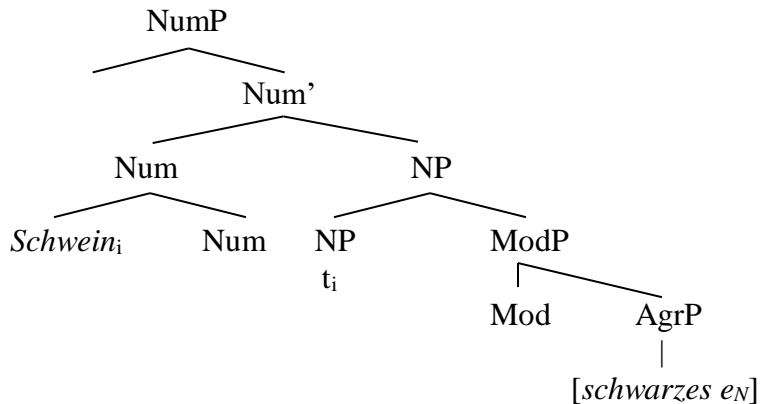
Note that there is no determiner present in these cases. Consequently, Impoverishment is not triggered, and a strong ending surfaces on the adjective. Next, I turn to a third type of adjunction.

3.4.   *Regular DP vs. High Right-Adjunction: Loose Appositions*

A typical case of a – what is sometimes called – loose apposition is given in (70a) below. Like in the two types of adjunction cases from Sections 3.1 and 3.2-3, the adjective can only be strong. This is in contrast to the loose apposition in (70b), which involves a definite determier:

(70) a. *Wir, begeistert-e(*n)   Linguisten, fordern mehr Unterstützung.*
          we   enthusiastic-ST/*WK linguists   demand more support
          'We, enthusiastic linguists, demand more support.'

      b. *Wir, die begeistert-e*(n)   Linguisten, wollten mehr Unterstützung.*
          we   the enthusiastic-WK/*ST linguists   wanted more support
          'We, the enthusiastic linguists, wanted more support.'

There are other differences as regards the two types of cases in the previous sections. First, the nominal following *wir* in (70a) is not a name-like element (unlike the close apposition in (58b)), and second, this nominal involves an overt head noun after the adjective (unlike the indefinite pronoun construction in (62c) and unlike the exclamative in (65a)). Third, these constructions have a distinctive intonation contour, which includes pauses before and after the appositive. Fourth, a genitive complement to the first head noun can only precede this type of apposition:

(71) a. *die Professoren unserer Uni, sehr nett-e   Leute*
          the professors   of.our   univ, very nice-ST people
          'the professors of our university, very nice people'

      b. * *die Professoren, sehr nett-e   Leute,   unserer Uni*
           the professors,   very nice-ST people, of.our   univ

In order to capture the difference in (71a-b), I propose that this is another case of right-adjunction. Unlike the two other types of instances, I suggest that this adjunction is higher in the structure, namely to the DP-level (cf. Delorme & Dougherty 1972). (70a) and (71a) are derived in simplified form as follows:

(72) *Loose Appositives*
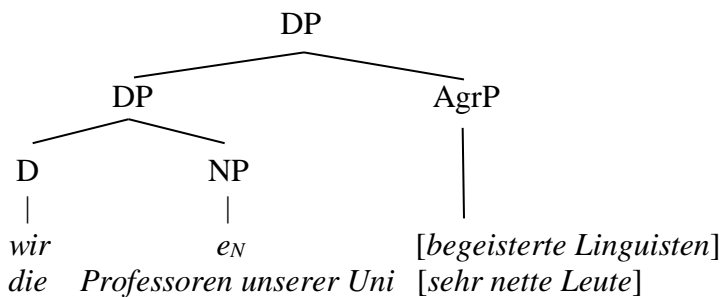
As in the cases above, a determiner did not adjoin to the phrase containing the adjective. With Impoverishment not applying, a strong adjective surfaces. Note that the pronominal determiner *wir* 'we' in (72) is taken to have a null noun as part of its complement. In the next section, I consider cases where this type of determiner co-occurs with an overt noun.

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

Postal (1966) argues that pronouns are determiners (also Pesetsky 1978; for more recent discussion, see Roehrs 2005, and the extensive work by Höhn, e.g., Höhn 2020). A typical case of these pronominal DPs is given in (73a). What is interesting about this case is that both types of endings are, with some differences in preference, possible on the adjective. Compare (73a) to (73b). Furthermore, Roehrs (2006b) discusses some pronominal DPs where plural pronouns combine with singular head nouns despite the fact that they do not agree in morphological number (73c). Importantly, though, only strong adjectives are possible here (Darski 1979: 202, Gunkel *et al*. 2017: 1308):

(73)   a.   *ihr   dumm-en Idioten*
              you(PL) stupid-WK idiots
              'you stupid idiots'

        b. % *ihr   dumm-e   Idioten*
              you(PL) stupid-ST idiots
              'you stupid idiots'

        c.   *ihr   jung-e*(s)   Gemüse*
              you(PL) young-ST.SGL/*WK vegetable
              'you young folks'

Unlike the loose appositives in the last section, none of the cases above involve comma intonation. In addition, pronominal DPs and loose appositives involve a difference in interpretation. While the adjective in the pronominal DP may receive a restrictive interpretation (*wir kleinen Studenten* 'we short students' vs. *ihr großen Studenten* 'you tall students'), this is not the case with appositional structures, where the adjective and noun provide additional information, which does not delimit the set denoted by *wir* (e.g., *wir, begeisterte Studenten* 'we, enthusiastic students'). Before moving on, note also that the unmarked example in (73a) runs counter to the traditional generalizations Weak After Strong and the Principle of Monoinflection.
        It is pointed out in Roehrs (2006b) that semantic agreement in number must hold between all the elements in (73a-c). For instance, like the pronominal determiner *ihr* 'you(PL)', both the count noun *Idioten* 'idiots' and the mass noun *Gemüse* '(vegetable =) folks' imply several individuals. This is similar to regular determiners such as *diese* 'these' – they also require semantic agreement with the head noun. However, unlike pronominal determiners, regular determiners are more restrictive: they do not tolerate morphological dis-agreement at all (e.g., *ihr blödes Pack* '[intended:] you(PL) stupid gang' vs. *diese Pack '[intended:] these gang').
        Without a special intonation contour, agreeing nominals (e.g., *dumme(n) Idioten* 'stupid idiots' as in (73a-b)) or dis-agreeing nominals (e.g., *junges Gemüse* 'young [vegetable =] folks' as in (73c)) cannot be iterated in pronominal DPs, and both of these nominals cannot interact with one another. In other words, there can be only one overt noun and related adjective in the pronominal DP:

(74) a.   *ihr   Idioten*
           you(PL) idiots
           'you idiots'

      b. * *ihr   Idioten jung-es   (Gemüse)*
           you(PL) idiots   young-ST.SGL vegetable

      c. * *ihr   jung-es   (Gemüse) Idioten*
           you(PL) young-ST.SGL vegetable idiots

(75) a.   *ihr   Gemüse*
           you(PL) vegetable
           'you (young) folks'

      b. * *ihr   Gemüse dumm-en   (Idioten)*
           you(PL) vegetable stupid-WK.PL idiots

      c. * *ihr   dumm-en   (Idioten) Gemüse*
           you(PL) stupid-WK.PL idiots   vegetable

In order to capture these facts, Roehrs (2006b) proposes that the pronominal determiner can optionally select either AgrP resulting in the (regular) agreeing cases or a – what he calls for lack of a better name – Dis-agreement Phrase (DisP) bringing about the dis-agreeing cases.[33]

      I assume that pronononal DPs with an agreeing adjective and noun involve a regular DP where the pronominal determiner surfaces in the DP-layer, the adjective is in Spec,AgrP, and the noun is in NP (I abstract away from NumP here):

(76) *Transitive Pronouns (Regular DP - simplified)*

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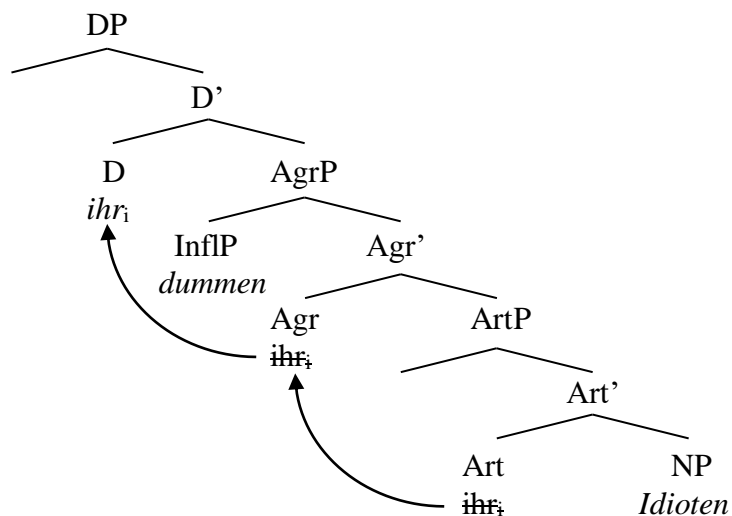
[33] With adjunction less constrained (e.g., Pysz 2006: 66f), above-mentioned restrictions are best stated in terms of selection.

In Chapter 3, Section 5, I discuss the inflections on adjectives in pronominal DPs like (73a-b) in great detail. As for cases like (73c), pronominal DPs with a morphologically dis-agreeing nominal have a different structure where the entire dis-agreeing element is assumed to be in Spec,DisP:[34]

(77)   *Intransitive Pronouns (Dis-agreement)*

```
                DP
              /    \
                    D'
                  /    \
                D       DisP
              ihr_i    /    \
                [AgrP junges Gemüse]  Dis'
                           /    \
                         Dis      ArtP
                         ihr_i    /    \
                                      Art'
                                    /    \
                                 Art      NP
                                 ihr_i    e_N
```
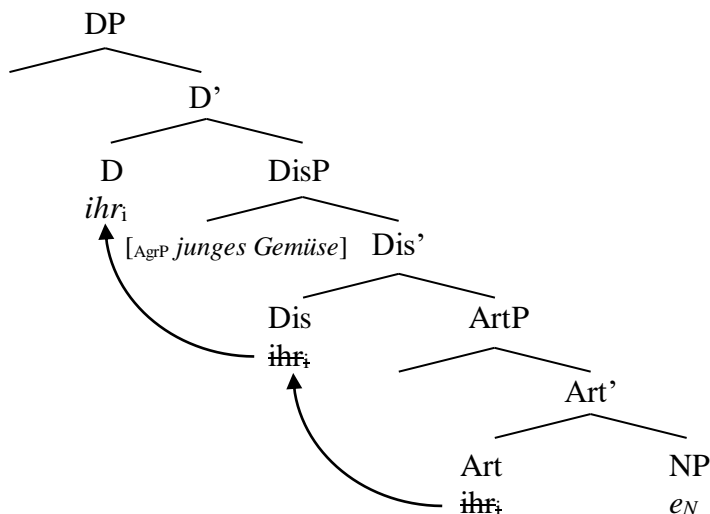
Note now that there is a clear difference between the agreeing DP in (73a) and the dis-agreeing case in (73c). In the former, the adjective and its projected InflP reside in Spec,AgrP (76); in the latter, the adjective also projects InflP, the noun involves NP, and both make up AgrP. However, this AgrP is located in Spec,DisP (77). To be clear, unlike (76), the adjective in (77) is more deeply embedded (cf. InflP vs. AgrP, which contains InflP). Presumably, the adjective in the latter establishes its own agreement relation with the overt noun inside the embedded AgrP and is morphologically independent of the larger DP. Given this complex specifier, it is clear that Impoverishment cannot apply resulting in a strong adjective. More generally, this section showed that adjectival inflections provide clues about various degrees of embeddings of adjectives (Hypothesis 2a).

3.6.   Regular DP vs. Separate Base-generation: Split Topicalizations

Fanselow (1988) and van Riemsdijk (1989) discuss discontinuous noun phrases, often referred to as split topicalizations (also Ott 2011a). Putting it in simple terms, the lower part of a noun phrase occurs in a higher position of the clause, and the higher part of the same noun phrase is in a lower position. This type of construction has a number of interesting properties. As pointed out by Bhatt (1990: 249f) and Fanselow & Ćavar (2002), some speakers allow the split of a definite

---

[34] Note that both pronouns in (76) and (77) take complements, overt material in (76) but a null noun in (77). As such, I use the terms transitive and intransitive as regards the overtness and covertness of the following material. For more justification of the structure in (77), see Chapter 6, where it is pointed out that a (number-neutral) bare noun like *Bauer* 'peasant' must be singular in interpretation in dis-agreement cases such as *Sie Bauer* 'you peasant' (where *Sie* 'you' is morphological plural and could, at least in principle, be plural in interpretation). I argue in more detail there that the nominal *Bauer* is in the specifier of DisP.

noun phrase. Now, an adjective in a non-split noun phrase has a weak ending (78a); it has a strong inflection though if it occurs in the higher position separated from the determiner (78b):

(78) a. *Ich habe immer nur diese bunt-e*(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. *Bunt-e(*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 split topicalizations are base-generated separately in the VP, and one of them undergoes movement. This can be illustrated for (78b) in (79). For concreteness, I put adverbial elements as adjuncts to a Perfect Phrase (PerfP), where the auxiliary *haben* 'to have' originates (for more detailed discussion of split topicalization, see Chapter 4, Section 3):

(79)
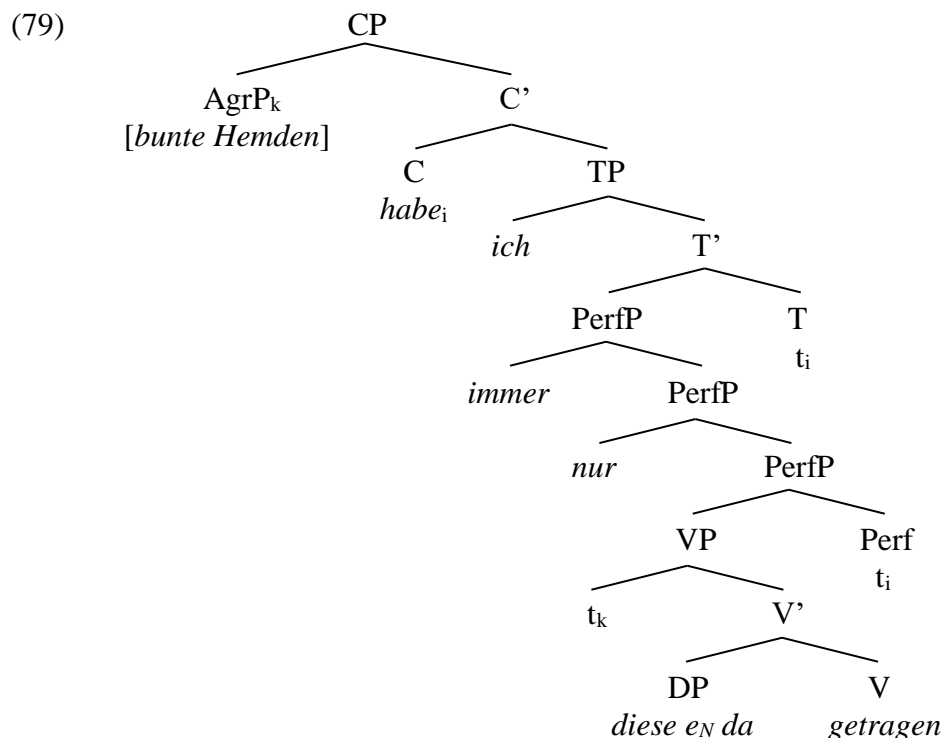
Some independent evidence for this analysis comes from the fact that the discontinuous noun phrase can have two mismatching determiners (recall that *'n* is the reduced form of the indefinite article *ein*):

(80) *'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 demonstrative in (78b) did not adjoin to the AgrP that contains the adjective. Impoverishment does not apply yielding a strong ending on the adjective.

3.7.   Regular DP vs. Nominal Compound: Complex Compound Modifiers

As illustrated before, adjectives in canonical DPs undergo the strong/weak alternation (81a). This is also possible with phrasal proper names like *die Deutsche Bank* 'the German Bank' (81b). Interestingly, these proper names can form complex modifiers of nominal compounds (Lieber 1988, R. Wiese 1996b). Crucially, here adjectives have to appear with strong endings (81c):

(81)   a.   *mit   dem deutsch-en   Chef*
                  with the   German-WK boss
                  'with the German boss'

        b.   *mit   der Deutsch-en Bank*
                  with the German-WK Bank
                  'with the German Bank'

        c.   *mit   dem* [*Deutsch-e(*n)   Bank*]-*Chef*
                  with the   German-ST/*WK Bank-boss
                  'with the German Bank-boss'

This complex nominal can be represented as follows:

(82)   *Complex Compound Modifier*

```
              DP
          ┌────┴────┐
          D         NP
         dem         │
                     N
                 ┌───┴───┐
          [Deutsche Bank]    N
                          Chef
```
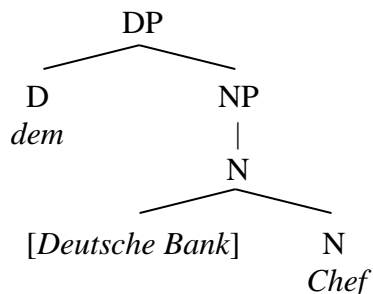
As in the cases above, the determiner did not adjoined to the structure containing the adjective. With Impoverishment not applying, a strong adjective appears.

So far, I have discussed a number of cases, where the adjectives are outside the determiners' domain of influence. Next, I turn to a case where the determiner itself is in a position where it cannot bring about a weak adjective.

3.8.   Regular DP vs. Outside of DP Proper: Intensifiers

Roehrs (2009a: Chapter 4) discusses some cases where determiners and determiner-like elements may co-occur (also Wood 2007; Chapter 1, Section 4.1.2). First, consider (83a), where the

demonstrative occurs with a weak adjective. In contrast, the possessive article occurs with a strong adjective (83b). The demonstrative and the possessive article can be combined as in (83c). Here, the adjective must be strong (Duden 1995: 286, Gunkel *et al.* 2017: 1308):

(83)   a.   *dieses groß-e(*s)   Glück*
            this   great-WK/*ST happiness
            'this great happiness'

        b.   *mein groß-e*(s)   Glück*
            my   great-ST/*WK happiness
            'my great happiness'

        c.   *dieses mein groß-e*(s)   Glück*
            this   my   great-ST/*WK happiness
            'this my great happiness'

In other words, morphologically, the presence of the demonstrative does not play a role for the inflection on the adjective in (83c). This is surprising given that it does have an impact in (83a). Also, note that the strong adjective in (83c) is preceded by the strongly inflected determiner element *dieses* 'this' in violation of the traditional generalizations about adjectival inflections. Furthermore, syntactically, it is well known that the demonstrative can only occur to the left of the possessive (cf. **mein dieses große(s) Glück* 'my this great happiness'), and semantically, this element seems to function as an intensifier for deixis (Wood 2007).

        To account for this different behavior in the morphology, syntax, and semantics, it is proposed in Roehrs (2009a) that the demonstrative is merged in a phrase above the DP-level. Here, I label this projection Left Periphery Phrase (LPP) (see Giusti & Iovino 2016):

(84)   *Intensifiers*

```
                    LPP
                   /    \
          [dieses]        DP
                         /    \
                      mein     AgrP
                              /    \
                          großes    NP
                                   Glück
```
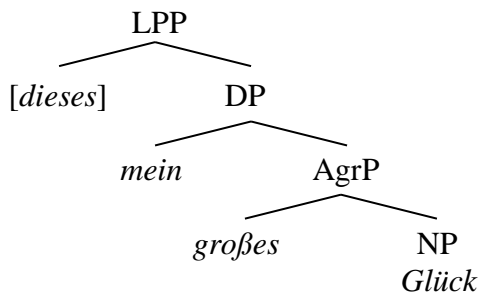
As the intensifying demonstrative is base-generated above the DP-level, it did not adjoin to the phrase containing the adjective. Impoverishment does not apply, and as a result, the adjective exhibits a strong ending. Finally, I turn to complex structures that do not involve determiners.

3.9.   Regular DP vs. Vocatives: No Determiners

Vocatives are structures that occur in non-argument position. As illustrated below, these cases exhibit strong adjectives as well:

(85) a. *Blöd-e*(s) Schwein!*
stupid-ST/*WK pig
'Stupid idiot!'

b. *Dumm-e*(r) Idiot!*
stupid-ST/*WK idiot
'Stupid idiot!'

It can be pointed out that vocatives involve the presupposition that the individual addressed is present in the situational context. As such, vocatives are usually taken to be definite constructions (see also the exclamatives in Section 3.3). Following other work, Julien (2016: 86) proposes that this definiteness follows from the presence of a second-person feature on a Vocative head. This Voc head selects a DP with an empty D head (except for an agreeing second-person feature). Given the presence of VocP, this means that vocatives as in (85) involve non-canonical structures:

(86) *No Determiners*
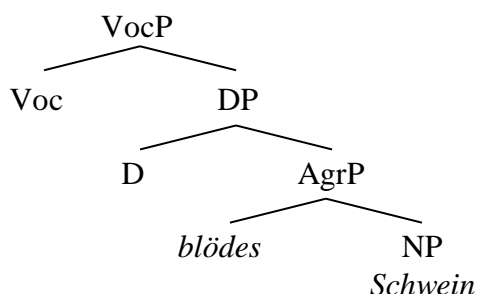
As a determiner is absent, this accounts for the strong adjectives. Finally, note that these data confirm once again that strong adjectives are not tied to indefiniteness.

To sum up, I discussed one context in Section 2 where weak adjectives occur (regular, simple DP); in this section, I examined nine contexts where strong adjectives surface: the adjective may be part of different types of adjunction, it may be deeply embedded inside a specifier, the determiner and adjective are in their typical positions but both occur separately in a discontinuous noun phrase, the adjective may be part of a complex nominal compound, the determiner may be outside of the DP proper, and a determiner may be absent altogether. In all relevant cases, the adjective or the determiner was in a position different from that of a regular (continuous) DP. Some independent evidence was provided for the assumption of different structures. What all these nine types of constructions have in common is that Impoverishment cannot apply as a determiner does not adjoin to the phrase (immediately) containing the adjective. As a consequence, the inflectional feature bundle of the adjective does not undergo Impoverishment, remains unaltered, and is spelled out as a strong inflection.

Thus far, I have focused on the discussion of the inflections on adjectives. As we have seen though, determiners also have strong inflections, and the same goes for (non-possessive) determiner-like elements – intensifiers like *diese* 'this' and *alle* 'all'. In the next section, I turn to the explanation of the strong inflections on these elements.

4. Adjectival Inflections on Determiners and Determiner-like Elements

First, consider (87a) and (87b), where both *diese* 'these' and *alle* 'all' are followed by a weak adjective:

(87) a. *dies-e   klein-en Autos*
          these-ST small-WK cars
          'these small cars'

      b. *all-e klein-en Autos*
          all-ST small-WK cars
          'all small cars'

I proposed in Section 2 that determiners move to the DP-level triggering Impoverishment on adjectives. As to the determiners themselves, recall that the strong endings on the determiners are identical to those on the 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 can undergo Impoverishment (for such cases involving Impoverishment Rule 2, see Chapter 3, Section 4), then the latter mechanism cannot have occurred on either *diese* 'these' or *alle* 'all' in (87). I propose that Impoverishment does not apply to the inflections on determiners as the determiners themselves are not adjoined to by a(nother) determiner – after all, there is only one determiner in each of the nominal structures in (87). As the feature bundles for case, number, and gender are not reduced, this yields strong endings on the determiners (for the significance of this discussion in the context of the Scandinavian languages, see Katzir & Siloni 2014: 278).

   In Section 3.8, we saw that determiners can co-occur with determiner-like intensifiers (88a). Importantly, *dieses* 'this' itself has a strong ending, but the possessive article is uninflected (for independent reasons, see again Section 2.2.2). However, there are also distributions where both determiner(-like) elements exhibit a strong ending at the same time (88b). Comparing (88a) to (88b), note also that the adjective is strong in the former but weak in the latter case:

(88) a. *dies-es mein groß-es Glück*
          this-ST my   great-ST happiness
          'this my great happiness'

      b. *all-e dies-e(*n)   klein-en Autos*
          all-ST these-ST/*WK small-WK cars
          'all these small cars'

Importantly, the inflections on the determiner-like elements are not frozen. As can be seen in instances involving the dative case, they change just like those on the determiners themselves:

(89) a.   *in dies-em mein-em groß-en Glück*
           in this-ST my-ST   great-WK happiness
           'in this my great happiness'

      b.   *mit all-en dies-en klein-en Autos*
           with all-ST these-ST small-WK cars
           'with all these small cars'

Given this alternation, it is rather implausible to suggest that determiner-like elements and determiners form compounds. Note in this regard that Bhatt (1990: 217-218) claims that *alle*, *diese*, and *meine* (see (90b) below) are heads that form a complex adjunction structure (see also Chapter 3, Section 6). In my view, a different analysis is called for. The structural account of the strong/weak alternation offered in this chapter extends to these cases without a problem.

  Recall that I proposed in Section 3.8 that *dieses* in (88a) is a type of intensifier and is taken to be base-generated in LPP; that is, it is higher up in the structure. This means that this element was neither adjoined to by another determiner, nor did it adjoin to another element – again, it originated in LPP. Consequently, it neither underwent nor triggered Impoverishment. I assume that *alle* in (88b) is also base-generated in LPP. With Impoverishment not applying, this yields strong inflections on the determiner-like elements and on the determiners. Briefly returning to the adjectives in (88), *mein* 'my' in (88a) does not trigger Impoverishment on the adjective as discussed in Section 2.2.1. This results in a strong ending. As to (88b), *diese* 'these' does trigger Impoverishment bringing about a weak ending on the adjective.

  It is worth pointing out that these are not isolated cases. An example similar to (88a) can be provided in the plural (90a), and both *alle* and *diese* can precede a possessive article in the same nominal (90b) (Bhatt 1990: 217f, Vater 1991: 28f). Again, in each case, the determiner and determiner-like element have a strong ending:

(90) a.   *dies-e   mein-e(*n) nett-en Freunde*
           these-ST my-ST/*WK nice-WK friends
           'these my nice friends.'

      b.   *all-e dies-e(*n)   mein-e(*n) Freunde*
           all-ST these-ST/*WK my-ST/*WK friends
           'all these friends of mine'

I suggest that *diese* in (90a) is also base-generated in LPP and that there is a second LPP in (90b) accommodating *alle*. Note again that none of the determiners or determiner-like elements were adjoined to by another determiner. This explains why these elements do not have weak endings. Again, this is in line with the assumption that one determiner originates in ArtP and moves to the DP-level but that the second (or third) element that has the appearance of a determiner is in effect an intensifier, a determiner-like element base-generated higher in the structure (LPP). As stated in Chapter 1, Section 4.1.2, determiner(-like) elements can be merged in the LPP provided they can function as intensifiers and are semantically compatible with the following determiner in the DP. More generally, this means that a sequence of two or three determiner(-like) elements with strong endings indicates more structure on top of the DP proper; that is, adjectival inflections are indicators of abstract structure (Hypothesis 2a).

To sum up the current proposal, I provided diachronic and synchronic evidence that adjectival inflections in (Modern) German cannot be a reflex of (in-)definiteness. I proposed that these inflections are semantically vacuous (Hypothesis 1a). Furthermore, having shown that concord is only a necessary (but not sufficient) condition for the appearance of weak adjectives, I pointed out that these adjectives are only possible in regular, simple DPs, where the determiners adjoin to the phrases containing the adjectives. By contrast, strong inflections occur in very diverse contexts and do not seem to be subject to any special conditions. As such, they involve the elsewhere case. Indeed, we saw distributions where the highest element or elements exhibit a strong inflection at the top of the structure although adjectives with weak inflections surface in the lower part of the structure. I argued that Impoverishment occurs locally and in a bottom-up fashion – it affects all adjectives but none of the determiners or determiner-like elements.

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,DisP containing Spec,AgrP) and a certain amount of structure (DP vs. LPP on top of DP). The strong adjectives in the latter two types of contexts (Spec,DisP and LPP) provide evidence for Hypothesis 2a – more abstract structure is involved. Another result of the discussion is that the traditional terms weak and strong inflections have no significance other than different degrees of feature specificity. The weak endings form a subset of the strong endings in the sense of having the fewest features in their specifications. Finally, to highlight some of the points of the previous sections and to compare the current analysis to other work, I discuss three earlier proposals.

5.   A Brief Critique of some Previous Proposals

Abney (1987) stimulated much important research on the noun phrase. However, many of the discussions of German have concentrated on the structure of the DP (e.g. Felix 1990; Haider 1988; Löbel 1990a,b; Vater 1991) and relatively fewer contributions have been devoted to the explanation of morpho-syntactic phenomena such as the distribution of adjectival inflections. It is perhaps telling that three monographs on the DP, Bhatt (1990), Demske (2001), and Wegener (1995), discuss only three different types of analyses at length (they all discuss Olsen 1991b). In this section, I review three proposals in more detail. I start off by examining Olsen's seminal work (1989a, 1989b, 1991a, 1991b), and then I turn to two more recent accounts: Schoorlemmer (2009) and Murphy (2018).[35] Note that all these analyses discuss only the canonical cases but not the non-canonical structures, and it is often not clear how the latter can be accommodated in these accounts. As laid out above, I argue, however, that it is the non-canonical structures that reveal the true nature of adjectival inflections in German.

5.1.   Olsen (1989a, 1989b, 1991a, 1991b)

In a series of papers (1989a, 1989b, 1991a, 1991b), Olsen discusses inflection within the German DP (I refer only to her last paper as that contains the main relevant insights). Assuming Abney's (1987) DP-Hypothesis, Olsen proposes that phi-features are located under D. These features involve person, case, number, and gender. Abbreviated as AGR, they need to be made visible.

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[35] For the discussion of other proposals, see some earlier remarks in this chapter but also Katzir & Siloni (2014) and Roehrs (2006a: 175-191).

Olsen assumes that agreement within the DP is brought about by D selecting NP as its complement and by Percolation of superscripts from NP down the tree. Here are the relevant definitions (my translations):[36]

(91)   a.   *Principle of Morphological Realization*
            Grammatical features are rendered phonetically 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 (92a) is derived as in (92b):

(92)   a.   *da-s kalt-e   Wetter*
            the-ST cold-WK weather
            'the cold weather'

        b.

```
                    DP
                   /  \
              Dⁱ        NPⁱ
             das       /   \
                    APⁱ     Nⁱ
                     |     Wetter
                    Aⁱ
                   kalte
```

AGR is made visible under D by the definite determiner *das* 'the', 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 grammatical features, Olsen follows Emonds' (1987: 615) Invisible Category Principle:

(93)   *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 ... are all alternatively realized in a phrasal sister of B.

To briefly illustrate with a construction in English, the Invisible Category Principle is taken to restrict the realization of the comparative to just one overt maker:

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[36] 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.

(94) a.   [_{DEG} more] brightØ

      b.   [_{DEG} Ø] bright-er

As regards adjectival inflections, this principle allows the realization of AGR on a sister node, the adjective in (95b), and it rules out two strong endings in (95c):

(95) a.   *da-s   kalt-eØ Wetter*
              the-ST cold-WK weather
              'the cold weather'

      b.   [_D Ø] *kalt-es Wetter*
                    cold-ST weather
              'cold weather'

      c. *   *da-s   kalt-es Wetter*
              the-ST cold-ST weather
              'the cold weather'

The weak ending in (95a) 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, if D is empty (95b); that is, the strong inflection can appear on the adjective (but not the noun, which cannot realize AGR). 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 (1991b: 47 fn. 14, 53) points out that *ein* 'a' is part of a group of simple determiner stems ("schlichte Determinans-Stämme") that in the case of *ein*, have no inflection in the nominative masculine and in the nominative/accusative neuter.

      This is the first detailed proposal of the strong/weak alternation in German within the framework of the DP-Hypothesis. While this is an elegant account, it is not without problems. 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 (95) exemplifies a tendency for economical realization of features or an avoidance of redundancy, it raises questions about strong endings that appear on stacked adjectives: *frisch-es kalt-es Wasser* 'fresh-ST cold-ST water'.

      Finally, note that instances such as *dies-en Jahr-es* 'of this-WK year-GEN' and non-canonical structures such as *dies-es mein groß-es Glück* 'this-ST my great-ST happiness' raise issues. The first case involves a determiner with a weak inflection, which is unexpected in Olsen's system. The second instance consists of two determiner elements where the leftmost element exhibits a strong ending, but the lower adjective also shows a strong inflection. Again, this is surprising under Olsen's assumptions (for other problems, see Wegener 1995: 159-63, Bhatt 1990: 44).

5.2.   Schoorlemmer (2009)

Schoorlemmer proposes 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.[37]

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 (definiteness) is particularly clear in the Scandinavian languages and the latter (case) in German. Given that probes must c-command their goals, he suggests that adjectives are higher than nouns, which are specified for gender and number, but that adjectives 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.

Adjectives can also function as restrictive modifiers; that is, they participate in delimiting 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 4, Section 4). This leads Schoorlemmer to the following C-command Paradox:

(96)   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.

The movement of the determiner is triggered by the presence of an adjective. Adopting the general framework of Heim & Kratzer (1998) (see Chapter 1, Section 4.2.2), consider the simplified structure in (97). Note now that the adjective (here assumed to be of type $<<e,t>,<e,t>>$) cannot combine with the lower DP (type $<e>$). 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:

---

[37] Given the complexity of the system, I cannot do full justice to all the details of Schoorlemmer's proposal. In what follows, I 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 the basic parts of the proposal.

(97)

```
                    DP_<e>
                  /       \
      det_<<e,t>,e>k        DP
                          /      \
              AP_<<e,t>,<e,t>>    DP_<e>
                   |            /       \
                   A    det_<<e,t>,e>k   NP_<e,t>
                                           |
                                           N
```
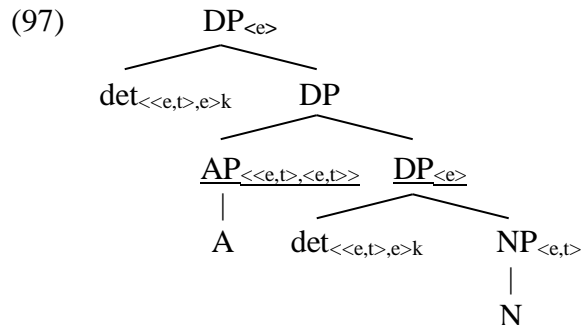
At PF, the lower copy of the determiner is deleted; at LF, the lower copy of the determiner and its projection are deleted (Schoorlemmer 2009: 27). This is indicated by crossing out the relevant elements in (98):

(98)

```
                    DP_<e>
                  /       \
      det_<<e,t>,e>k        DP
                          /      \
              AP_<<e,t>,<e,t>>    ~~DP~~_<e>
                   |            /       \
                   A    ~~det~~_<<e,t>,e>k   NP_<e,t>
                                           |
                                           N
```
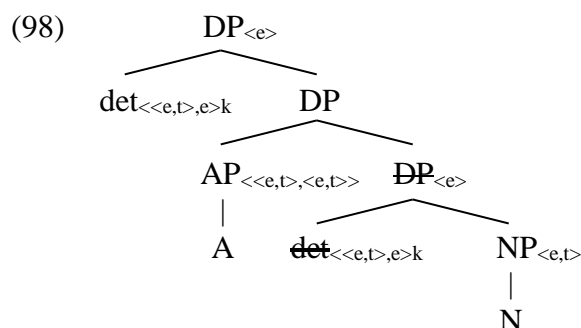
Observe that this leaves only one, the higher copy of the determiner at PF. This gives the right surface order. As for LF, with the lower copy of the determiner and its projection deleted, the adjective can now combine with NP semantically. This yields an element of type <e,t>, which in turn can combine with the (higher) 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 (98), the adjective does not dominate any of the nodes of the noun. I 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, suppose that *guter Wein* 'good wine' is a subject and that the DP-external case-assigner is T. Assuming a null article ($\emptyset_D$), the DP in (99a) is assembled as in (99b). 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] (I comment on the strikethrough of [-phi] in (99) further below):

(99) a.   *gut-er   Wein*
          good-ST wine
          'good wine'

b.   DP
     ├── Ø_Dk
     └── DP
         ├── AP
         │   └── *gut[-phi]*
         └── DP
             ├── Ø_Dk
             └── NP
                 └── *Wein[+phi]*
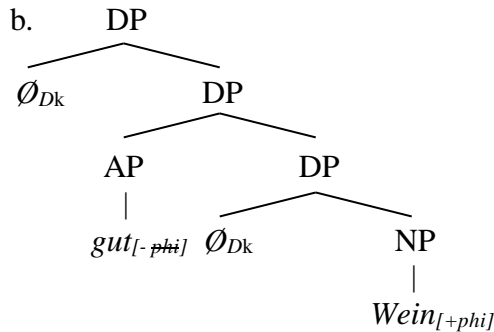
As a consequence, the probe looks further down the structure and finds the noun. Since the noun does have the relevant interpretable features, both T and the noun enter into an Agree relation, and they share their features. Now, since T had entered into an agreement relation with the adjective before, 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 (99). To be clear, indirect agreement and feature sharing explain the strong endings (for more details, see Schoorlemmer 2009: 145f).

        Turning to the weak endings, Schoorlemmer assumes that unlike null articles (Schoorlemmer 2009: 156), overt articles are probes – just like case-assigners; that is, overt articles 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:

(100) a.   *der gut-e   Wein*
           the good-ST wine
           'the good wine'

b.   DP
     ├── *der[-phi]k*
     └── DP
         ├── AP
         │   └── *gut[-phi]*
         └── DP
             ├── *der[-phi]k*
             └── NP
                 └── *Wein[+phi]*
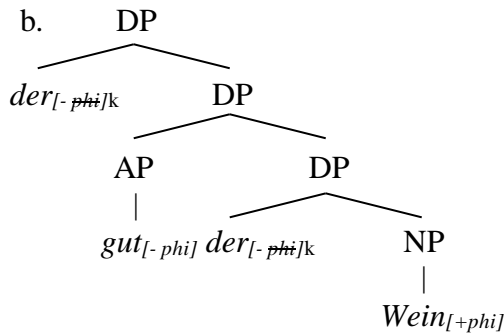
At this point, the DP is merged in the clause and T probes down the tree to find a goal. The closest goal is the determiner of the noun phrase. With its features already specified by the noun,

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 a weak inflection 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. It presents a new and interesting view on the strong/weak alternation. To account for all the basic data in German, Schoorlemmer (2009: 201ff) has to make some other assumptions with regard to certain features. I do not review these finer points here. Rather, I 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, in Schoorlemmer's account, the determiner is also merged in a low position and undergoes subsequent movement to the left periphery. Note though that there are some very general differences between Schoorlemmer's and the current proposal.

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 Sections 3 and 4, the strong endings occur in more diverse contexts than the weak ones. I interpreted the strong inflections as the elsewhere case. For Schoorlemmer, the presence of a mediating head is an essential ingredient to explain the strong adjectives. This raises the question as to what the mediating head in the non-canonical constructions, say vocatives in German, is.[38] In fact, some of the complex noun phrases, discussed in Section 3, involve more feature sharing relations than there seem to be mediating heads (e.g., *das Sternbild Groß-er Bär* 'the constellation Great-ST Bear'). Again, it is not clear how strong adjectives in the different sub-structures of these nominals can be explained. In my view, these cases can be straightforwardly handled if we assume that the strong inflections involve the elsewhere case. After these general remarks, I point out some more specific issues with Schoorlemmer's account.

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 2012). 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 appears that Schoorlemmer's system works best for the Scandinavian languages but is less straightforward for German. For instance, the mixed paradigm involving *ein*-words in German is left for future research, and the cross-linguistic differences observed in canonical noun phrases involving possessives and demonstratives in Chapter 1, Section 2.1.2 do not follow from this uniform account.

5.3. Murphy (2018)

Murphy (2018) discusses the emergence of the strong ending on *ein*-words in elliptical contexts (101) and relates that to the strong/weak alternation of adjectives (strikethrough marks ellipsis here):

(101) a.   *ein (gut-es) Buch*
                a   good-ST book
                'a good book'

---

[38] If the Voc head discussed in Section 3.9 is taken to be the relevant mediating head here, then this head is presumably absent in the Scandinavian languages, which have weak adjectives in vocatives.

b. *ein-es* ~~*Buch*~~
    a-ST   book
    'one'

Rather than claiming that a strong ending licenses NP-ellipsis, here the strong ending is proposed to be a by-product of NP-ellipsis. Specifically, the latter creates a stranded affix that undergoes Local Dislocation onto a non-canonical element, the *ein*-word. Murphy assumes the structure in (102).[39] In his account, inflections and their hosts do not form constituents; that is, inflections are generated separately from their hosts. With determiners in Spec,DP and adjectives in A, strong endings are taken to be located in D and weak inflections in *φ*.

(102) [[DET] D [*φ* [A [*n* [N]]]]]
                    | |
                   ST WK

In other words, inflections are part of the extended projection line of nouns (for similar ideas, see Evans 2019: 76, Rehn 2019: 194, Wiltschko 1998). Murphy formulates a requirement that (basically) all adjectives must have an inflection in prenomial position. In order to combine the ending with the adjective or determiner, he follows assumptions from Distributed Morphology (see Chapter 1, Section 4.2.1). Specifically, he makes the suggestion that if (downward) Lowering is not possible, (leftward) Local Dislocation takes place (note that Local Dislocation is conceived of here as "leaning" to the left, Murphy 2018: 346). I illustrate the proposal by way of discussing four derivations involving *ein*-words.

I begin by discussing the most common case, where a determiner with a strong inflection precedes an adjective with a weak ending. The weak ending under *φ* combines with the adjective by Lowering, marked by a downward pointing arrow below. With the weak ending originating under *φ*, the strong ending in D cannot undergo Lowering. Consequently, it combines with *ein* by Local Dislocation. This is indicated by an upward pointing arrow (despite the fact that this mechanism operates on linear adjacency). I illustrate this with an example in the dative neuter (103a) providing its corresponding underlying structure in (103b):

(103) a. *ein-em gut-en   Buch*
           a-ST   good-WK book
           'a good book'

---

[39] Note that the adjective can also be above *φ*. This allows Murphy to derive *ein gutes* ~~*Buch*~~ 'a good one', where the head noun *Buch* 'book' is elided. Note in this regard that *φ* may induce ellipsis of its complement, either *n*P or AP (where in the order of *φ* preceding A as in (102), the adjective is elided as well). Furthermore, this order accounts for some special inflectional features of adjectives like *lila* 'purple' (see Chapter 3, Section 3).

b.

```
                DP
            /        \
         ein          D'
           ↖       /      \
            \     D        φP
             \   -em     /    \
                        φ      AP
                       -en   /    \
                          ↘ A      nP
                            gut   /    \
                                 n      NP
                                        Buch
```
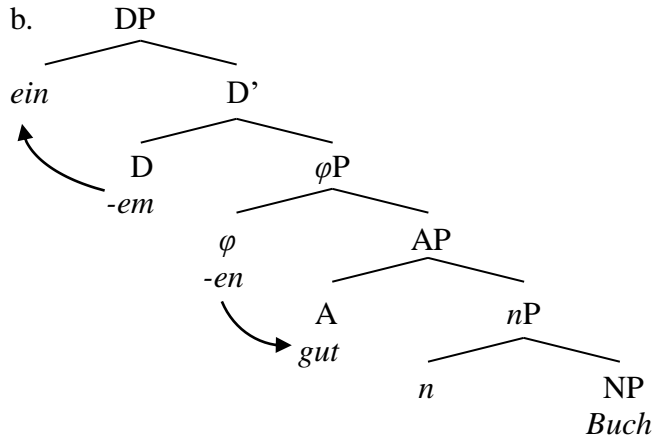
To account for the idiosyncracy of the three special cases of *ein*-words, it is stipulated that the strong ending is in *φ*, rather than in D (Murphy 2018: 356). Recalling that Lowering precedes Local Dislocation, the strong ending is displaced onto the adjective deriving (104a) as in (104b):

(104) a.   *ein gut-es   Buch*
             a   good-ST book
             'a good book'

b.

```
                DP
            /        \
         ein          D'
                   /      \
                  D        φP
                         /    \
                        φ      AP
                       -es   /    \
                          ↘ A      nP
                            gut   /    \
                                 n      NP
                                        Buch
```
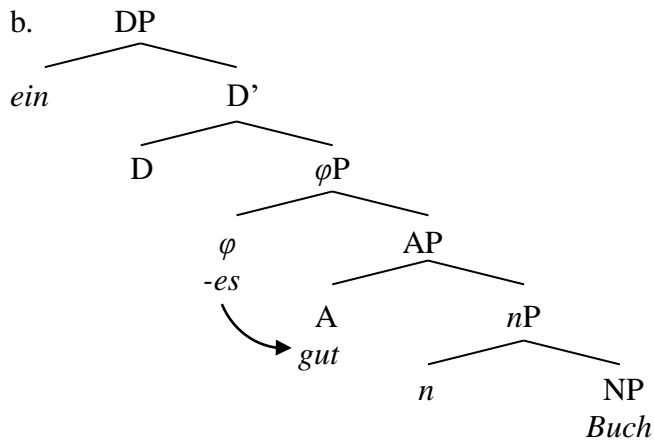
Removing the adjective from the noun phrase yields (105a). As just seen, the strong ending undergoes Lowering but this time onto *n* (105b). The result is spelled out as null (marked by parentheses below):

(105) a.   *ein Buch*
             a   book
             'a book'

b.

```
        DP
       /  \
     ein   D'
          /  \
         D    φP
             /  \
            φ    nP
          (-es)  / \
            ↳   n   NP
                    Buch
```
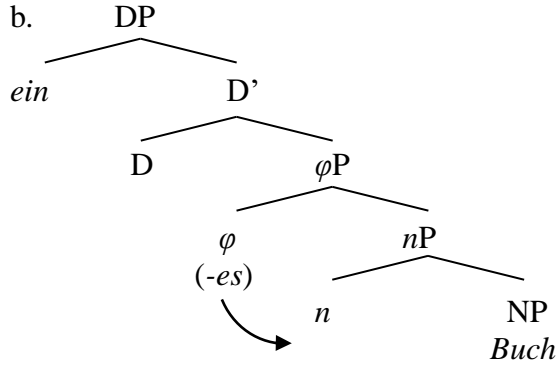
Finally and most importantly, I turn to ellipsis (without an adjective; but see also Footnote 39). With *n*P undergoing ellipsis, the strong ending cannot undergo Lowering. Rather, Local Dislocation applies as a kind of repair mechanism, and the strong ending surfaces on *ein* (the arch below sets off the elided material):

(106) a. *ein-es*
          one-ST
          'one'

b.

```
        DP
       /  \
     ein   D'
      ↑   /  \
         D    φP
             /  \
            φ    nP
           -es   / \
                n   NP
                    Buch
```
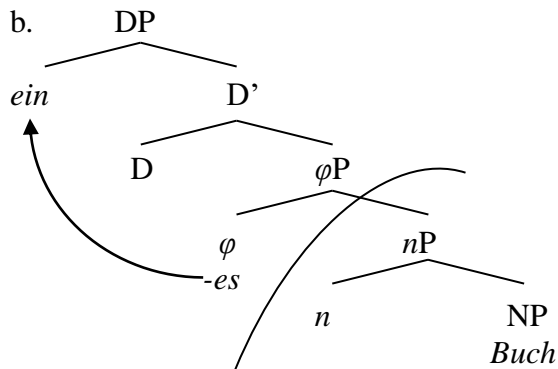
This is a novel proposal accounting for the emergence of the strong ending on *ein*. As such, it is a welcome contribution.[40] Note though that not all aspects of the proposal are entirely straightforward.

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[40] There are other proposals seeking to explain the emergence of the strong inflection on *ein*. In order to account for the difference between inflected *eines* 'one' and uninflected *ein* as in *ein Buch* 'a book', Evans (2019: chapter 3) basically proposes that strong inflections can be inserted as a last resort in Agr to value uninterpretable features of D. If the noun is absent, the inflection is inserted yielding *eines*; if the noun is present, the noun itself can value the uninterpretable features of D bringing about *ein Buch*. Note that if it is indeed crucial to check for the presence of a noun first, then it is not entirely clear how to rule out cases such as **ein gute Buch* 'a good-WK book'. We could suggest, as Evans does, that the presence of the adjective is relevant here but note that the adjective itself has no interpretable features. Additional assumptions have to be made.

Siding with Murphy (2018), it is, in my view, better to state the dependency between the determiner and the adjective locally (rather than by c-command) and to disregard the morpho-syntactic features of the noun in the calculation of the strong/weak alternation of adjectives. Furthermore, it is essential for Evans that determiners (with their inflections) are inserted before the inflections on the adjectives can be finalized (note that for Evans, all attributive adjectives come with weak inflections, strong inflections can be added to them, and phonological rules yield the final, strong forms). This stipulated timing raises the question about the (usually assumed) decomposition

To obtain the correct surface forms, a number of adjustments have to take place. In particular, there are three instances for an inflectional suffix to be spelled out as null: (i) as seen above, if a strong ending combines with *n* by Lowering, it is spelled out as null yielding *ein Buch* 'a book', (ii) if both D and *φ* have an inflection but there is no adjective present in elliptical contexts, the weak ending in *φ* is spelled out as null bringing about *mein-em* 'mine' (p. 358), and (iii) if Spec,DP is empty, the strong ending in D appears on the adjective, and the weak ending in *φ* is spelled out as null resulting in *heißer Kaffee* 'hot coffee' (p. 362).[41]

Note that Murphy's proposal is not compatible with the current analysis as all his determiners including *ein*-words are in Spec,DP, and adjectives are in head positions. More importantly for current purposes, there are not many details provided as to what regulates the strong/weak alternation. While the Principle of Monoinflection is mentioned, it is not clear what derives (rather than stipulates) the fact that the strong ending must precede the weak one(s). From Murphy's mechanism of partial copying, it is clear though that weak endings are taken as impoverished features that involve a subset of the features that spell out the strong endings. To be fair, while Murphy's goal was not to provide those types of details, such information along with vocabulary insertion rules would be desirable.

It is also worth pointing out that there are two ways for adjectival endings to come about in Murphy's account: besides originating in D or *φ*, strong and weak endings can also be the result of copying (accounting for multiple inflected adjectives). Furthermore, note that the stipulation to capture the idiosyncrasy of the three special *ein*-words (i.e., the strong ending is exceptionally located in *φ*) may involve a non-local relation when the adjective intervenes (i.e., when A is above *φ*, which is the required ordering to generate *ein gutes ~~Buch~~* 'a good one'). This means that selection cannot be invoked here. Moreover, the three cases of *ein* do not seem to have anything in common (unlike in the current account where they share features with a fourth instance of *ein*).

Finally, I turn to two empirical issues that arise with non-canonical structures. First, split topicalizations are analyzed as either NP-ellipsis or NP-movement. However, it is not clear how to account for the two strong endings in (107a). As plural forms, these types of *ein*-words do not involve a strong ending in *φ* (but only in D). It is clear that a second D must be present in the higher nominal. However, this is unexpected on NP-ellipsis or NP-movement. Second, pronominal DPs like (107b) present another challenge: although D is present here, the strong inflection is absent. It appears as if the latter is, for some reason, not spelled out. Note that this strong ending did not combine with *n* by Lowering as the adjective and *φ* are present:

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of the determiners into stems and strong inflections. In my view, it is important to flesh out the internal structure of the determiners along with their vocabulary insertion rules.

[41] The difference between the weak inflection being spelled out as null in (ii) and (iii) is that in (ii), the weak ending undergoes – what Murphy calls – Morphological Ellipsis, and that in (iii), the weak ending is contextually spelled out as null (as Spec,DP is empty). In my view, allowing these adjustments opens the door for other issues. Assuming the structural option with A above *φ* (Footnote 39), it is not clear how to rule out the following ungrammatical example in the dative (where the strong ending is in D):

(i) *   *ein gut-em   Buch*
         a   good-ST book

With Lowering taking precedence, the strong ending (in D) combines with the adjective. Given that the weak ending in *φ* can, at least in principle, be spelled out as null, it is not clear to me how to rule this case out without stipulation. In my view, these issues are avoided if adjectives and inflections do not form individual heads in the extended projection line of the noun (but rather inflections are part of the structures of the determiners and adjectives themselves, as assumed here).

(107) a.   *Nett-e Leute   waren kein-e da.*
               nice-ST people were   no-ST there
               'As for nice people, there were none there.'

       b.   *wir nett-en Studenten*
               we nice-WK students
               'we nice students'

To sum up, the three proposals reviewed in this section discuss the canonical patterns with different degrees of success and explanatory force. All accounts have an explanation of the strong inflections, but the status of the weak endings is less clear: this type of ending is taken to be the "unmarked" inflection (Olsen), the default inflection (Schoorlemmer), or it is base-generated or due to a certain type of partial copying (Murphy).[42] Recall in this regard that there are actually two weak endings, *-e* and *-en*, and that their distributions do not relate to natural groups. In my view, it is important to account for the distribution of the weak inflections as well. In the current account, the strong and weak inflections have the same status, the difference being that the (traditional) weak inflections are less specified than the (unambiguous) strong endings.

More importantly, none of these proposals address the non-canonical cases, and as pointed out above, it is not clear how some of these instances can be accounted for by those analyses. As such, while these proposals are quite elegant, their empirical coverage is somewhat limited. As mentioned above, in my view, empirical coverage should be taken into account when evaluating the plausibility of a proposal. Indeed, one of the main claims of this book is that these non-canonical cases reveal the true nature of adjectival endings in German. While this may turn out to be wrong, all analyses should eventually discuss these non-canonical structures to explore the consequences of those proposals for the linguistic analyses involved.

6.   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, I isolated one structure, the simple (canonical) 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. Impoverishment is triggered by determiners, which move across the specifier positions containing the adjectives.

I also investigated nine 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, I suggested that in these different structures, the relevant feature bundles remain unreduced and are spelled out as the strong endings. In that sense, the strong endings are the elsewhere case. This explains their diverse occurrences. 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.

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[42] G. Müller (2002a: 129) makes an explicit distinction between markers of case (strong inflection) and agreement (weak inflection).

In this chapter, I showed that adjectival inflections in German do not correlate with (in-)definiteness. I proposed that these inflections are semantically vacuous (Hypothesis 1a). I argued that the strong/weak alternation is a reflex of different structures (Hypothesis 2a): on the one hand, weak endings can only occur in Spec,AgrP; on the other hand, strong inflections can be in Spec,AgrP, in DP, and in other, non-canonical positions (e.g., LPP, Spec,DisP, etc.). If this is on the right track, then we can utilize the strong/weak alternation as a diagnostic of the structures of other nominals. With this in mind, I turn to some consequences of the analysis above for the current account in Chapter 3 and to some consequences for other proposals in Chapter 4. The discussion of these consequences will reveal other properties of adjectival inflections.

Chapter 3: Variation and Secondary Mechanisms

1.   Introduction

This chapter and the next continue the discussion of adjectival inflections begun in the previous chapter. While the current chapter focuses on consequences for and extensions of the present proposal, the next chapter discusses implications for other analyses. In more detail, this chapter addresses data involving variation and how this variation can be accounted for in the current system. I examine two types: (i) variation within colloquial Standard German and (ii) variation as regards different regional dialects with special focus on Mannheim German. I provide a brief overview of the relevant cases before I engage in a more detailed discussion.[1]

The first type of variation involves both canonical and non-canonical constructions. In canonical DPs, strong, weak, or no inflections are possible on adjectives and determiners. This variation can only occur in certain structures. Strong or weak inflections are possible on the second adjective of two stacked modifiers when a determiner is missing, on adjectives in pronominal DPs, and on certain *der*-words. Strong or no inflections occur on certain other *der*-words (e.g., *d-er* vs. *die* both meaning 'the/that').

Importantly, this type of variation only surfaces in specific, well-defined featural contexts in these structures; that is, this variation within colloquial Standard German is restricted to certain combinations of "case + gender" or "case + number". I argue that there is another mechanism besides Impoverishment: a phonetic rule. Furthermore, the application of Impoverishment Rule 2 is extended, a phonological constraint (avoidance of a hiatus) is held to explain certain unexpected determiner forms, and Impoverishment is proposed not to be triggered by pronominal determiners. In addition, I address the optional inflections on certain adjectives (e.g., *lila* 'purple'), and I discuss the absence of inflections on some other adjectives (e.g., *prima* 'great').

There is also variation within colloquial Standard German in non-canonical structures. In this respect, I discuss the inflectional options on the predeterminer *all-* 'all', where in the plural, the ending can be present or absent in all four morphological cases. These constructions, their restricted variation, and their analyses are briefly summarized in Table 1 (INFL indicates where the variation occurs):

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[1] It is not an easy task to explain variation, especially optionality, in a formal system. Thus, while certain parts of the discussion below are admittedly somewhat tentative, I discuss new data and offer novel (and I hope, interesting) generalizations and proposals.

Table 1: Restricted Variation in Colloquial Standard German

Construction	Ending	Restrictions	Analysis
adj + adj-INFL + noun	weak (unexpected)	only in dative masc/neut (in sgl)	phonetic rule
det-INFL + noun	weak (unexpected)	only in genitive masc/neut (in sgl); certain *der*-words	Impoverishment Rule 2
det-INFL + noun	absent	only in nom/acc in fem/pl; *die* 'the/that/those'	deletion of inflection (avoid hiatus)
det + adj-INFL + noun	(optional/) absent	lexically restricted to a few adjectives (e.g., *lila* 'purlple')	(optional) deletion of inflection
pron + adj-INFL + noun	strong (unexpected)	(expected) weak endings only occur in dat sgl and nom pl	ST: pron. det.; WK: phonetic rule, analogy
predet-INFL noun	optional	*all-* 'all'	Deletion of inflection in LPP

As part of the discussion of the absence of inflections on *die* 'the/that/those', I also address the different stem forms of the definite article and the almost homophonous distal demonstrative (i.e., *de-r*, *da-s*, *di-*), and I relate the distal and proximal demonstratives to the definite article.

Studying Table 1, we note that some variation is found in the oblique cases in masculine and neuter contexts and that other variation occurs in the structural cases in the feminine and plural. Indeed, the workings of the phonetic rule and Impoverishment Rule 2 are restricted to certain constructions and specific featural combinations making them different from Impoverishment Rule 1. Consequently, I conclude below that Impoverishment Rule 1 is the primary mechanism and that the other two are secondary ones. Based on the discussion of this variation, I review the traditional generalizations of the strong/weak alternation.

The second type of variation concerns regional varieties, here focusing on one dialect – Mannheim German (for some brief remarks on Alemannic German, see Chapter 8, Section 2.1). This variation can be captured in the current system: while it involves Impoverishment Rule 1 as formulated in Chapter 2, some of the vocabulary insertion rules provided there are deleted here or have a different featural context of application and, as a consequence, are reordered. These adjustments to the vocabulary insertion rules account for the inflectional distribution in this dialect.

More generally, I propose in this chapter that adjectival inflections in German do not receive a homogenous account but rather are the result of (at least) three different mechanisms, one primary (Impoverishment Rule 1) and two secondary ones (phonetic rule, Impoverishment Rule 2). Furthermore, this chapter provides more evidence that adjectival inflections do not mark (in-)definiteness; that is, they are semantically vacuous elements (Hypothesis 1a).

The chapter is organized as follows. First, I turn to instances involving different inflections on two unpreceded adjectives. Section 3 is dedicated to the inflectional properties of certain adjectives and certain *der*-words, and to the stem forms of the definite article and the demonstratives. In Section 4, I take up the variation of inflections on certain other *der*-words. Section 5 discusses the variation in pronominal DPs. In Section 6, I address the presence or absence of the strong inflection on the predeterminer *all-* 'all'. Section 7 returns to the discussion of the traditional generalizations Weak After Strong and the Principle of Monoinflection. In Section 8, I provide a comparison between Standard German and the German dialect of

Mannheim, and Section 9 closes the chapter with a summary of the main inflectional patterns in colloquial Standard German and their respective analyses.

2.   Canonical DPs with Unexpected Weak Adjectives: Phonetic Rule

I start the investigation with the variation that has seen the most interest in the theoretical literature. As such, I begin by discussing noun phrases that lack an overt determiner but involve two adjectives in a row where the first adjective exhibits a strong ending, but the second shows a weak one. This inflectional alternation concerns nasal sounds, and I provide a phonetic rule suggesting that this involves phonetic markedness reduction. In the second subsection, this discussion is extended to indefinite pronoun constructions.

2.1.   Two Adjectives Without a Determiner

In the previous chapter, we saw examples where two co-occurring adjectives have the same ending, with either both endings being strong (1a) or both endings being weak (1b):

(1)   a.   *frisch-er schwarz-er Kaffee*
                fresh-ST black-ST   coffee
                'fresh black coffee'

        b.   *d-er   frisch-e schwarz-e Kaffee*
                the-ST hot-WK black-WK coffee
                'the fresh black coffee'

Recall that *der* 'the' in (1b) involves [+DEF], a context where [+D] triggers Impoverishment. With the determiner moving from ArtP to DP in a successive-cyclic fashion, the CNG features of the two adjectives undergo Impoverishment and are spelled out as weak. As for (1a), Impoverishment does not occur, and the underlying features are spelled out as the strong endings.

   There is one much-discussed exception to the pattern in (1a) above: in the dative masculine (and neuter), there is the option of the second adjective exhibiting a weak ending. Comparing (2a-b), we observe that (2a) exhibits the expected pattern but that (2b) shows two adjectives in a row that have different endings. This is in stark contrast to all the other patterns I discussed above. As is clear from (2c-d), patterns with a weak ending on the first adjective are not possible (also Nübling 2011, Sahel 2021), independently of whether the second adjective is strong or weak. I call the inflectional option of *-em* vs. *-en* nasal alternation. Note also that contrasting the examples involving the different nasal inflections yields less sharp grammaticality judgments (% indicates variation with speakers; see Table 4 below):[2]

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[2] Nübling (2011: 182) states that the coexistence of the parallel and non-parallel adjective strings has a long history, possibly several hundred years. Note that this co-occurrence seems to have existed already in ENHG (see Ebert *et al*. 1993: 201-02). However, it is hard to tell when this phenomenon started as there is some independent variation with adjectives in the earlier stages of German (e.g., Peter 2013, Sahel 2021). Sahel (2021) observes that (2b) is the only non-parallel string that continues occurring after the 18th century.

   Also, Nübling (2011: 183) finds in her corpus study that the parallel string occurs slightly more often (57%) and that all classes of adjectives have this variation (albeit adjectives in coordinations much less so; more on

(2) a. % *mit   frisch-em schwarz-em Kaffee*
           with fresh-ST black-ST   coffee
           'with fresh black coffee'

     b. % *mit   frisch-em schwarz-en Kaffee*
           with fresh-ST black-WK   coffee
           'with fresh black coffee'

     c. *? *mit   frisch-en schwarz-em Kaffee*
           with fresh-WK black-ST   coffee

     d. *? *mit   frisch-en schwarz-en Kaffee*
           with fresh-WK black-WK   coffee

Sternefeld (2004: 290) points out that (2b) is also possible with a Saxon Genitive:

(3) a.   *Johanns gut-em   alt-em Wein*
           Johann's good-ST old-ST wine
           'Johann's good old wine'

     b.   *Johanns gut-em   alt-en Wein*
           Johann's good-ST old-WK wine
           'Johann's good old wine'

As in the canonical cases (e.g., *d-em frisch-en Kaffee* 'the-ST fresh-WK coffee'), the strong ending precedes the weak one yielding a left-to-right asymmetry in (2b) and (3b). Notice also that the weak ending in (2b) and similar instances below cannot mark definiteness.

   Duden (2007: 38) claims that the weak adjective occurs especially when the second adjective and noun form a whole concept ("Gesamtbegriff"). Nübling (2011) suggests that the weak adjective strengthens the tendency to mark the left bracket in the noun phrase (cf. the sentence bracket in German). However, Sahel (2021: 9-14) argues convincingly that there is no semantic or functional difference between the two variants. Having said that, these patterns do have a number of peculiar properties. First, as just mentioned, the grammaticality judgments are less sharp than in the cases discussed in the previous chapter. Second, these inflectional distributions are restricted to the two instances above (i.e., dative masculine/neuter). For instance, a weak ending on a second adjective is not possible in the feminine gender:

(4) a.   *mit gut-er   rot-er Sauce*
           with good-ST red-ST sauce
           'with good red sauce'

---

this in Footnote 5). Interestingly, there is a slight correlation such that adjective classes that occur closer to the noun (in the nominal extended projection) tend to be inflected weak more often than those further away (p. 187), provided they are preceded by a (strong) adjective. The corpus studies by Peter (2013) and Sahel (2021) offer partially different results, but both Peter and Sahel point out that non-parallel strings seem to be on the increase.

b. *   *mit gut-er rot-en Sauce*
            with good-ST red-WK sauce

Third, as noted in Roehrs (2009b), different authors have reported different possibilities for (2a-b). I refer to this inter-speaker variation as dialects. Considering the two inflectional options in Table 2 (column 1), Gallmann (1996: 296, 2004: 156), Schlenker (1999: 119), and Demske (2001: 53) describe dialect 1 where a strong or a weak ending is equally possible on the second adjective. G. Müller (2002a: 139) discusses dialect 2 where the strong ending on the second adjective is preferred. Finally, Schlenker (1999) reports that some speakers have dialect 3 where the weak ending on the second adjective is strongly preferred. Dialect 4 does not exist. In other words, all speakers have at least one of the two inflectional distributions in their language:

Table 2: Different Dialects for the Dative Masculine/Neuter

String	Dialect 1	Dialect 2	Dialect 3	Dialect 4
Adj+*em* Adj+*em*	√	√	??	-
Adj+*em* Adj+*en*	√	?	√	-

The weak ending *-en* cannot be the result of Impoverishment. Recall that Impoverishment is a local process that occurs within a phrase (AgrP). Non-local effects are brought about by determiner movement (Impoverishment Rule 1) or a specific featural context (Impoverishment Rule 2). Both options affect all adjectives in the same way. In the cases discussed here, the weak ending occurs only on the second adjective and seems to be parasitic on the presence of the first adjective. I return to this statement in Section 2.2.

An account of this alternation should answer the questions as to why this is only possible with adjectives ending in *-em* but not, for instance, with adjectives in *-es* instead or with adjectives in *-em* and *-es*. In this regard, Sahel (2021: 19f) points out that *-m* and *-n* have the most similarities as compared to all other strong/weak inflectional pairs (e.g., *-er* vs. *-en* as in (4a-b)). In order to explain the above properties, I proposed in Roehrs (2009b) that the alternation in (2a-b) and (3a-b) follows from a phonetic rule, according to which the inflection on the second adjective is changed from *-m* to *-n* (+ indicates a morpheme boundary; # signifies a word boundary):

(5)   *Rule (preliminary version):*

       m   ->   n   / […]ᴀ […]ᴀ +____#

This rule turns a labial sound into its coronal (/alveolar) counterpart; that is, the place of articulation of this inflection is altered. Note in this regard that R. Wiese (1996a: 165) states that "alveolar is taken to be the default place of articulation for consonants". Utilizing this, R. Wiese formulates rules where coronal is the default value (p. 219). In a similar vein, de Lacy (2006: 35-42) argues that coronal is a less marked place of articularion than labial or dorsal. Specifically, *-n* is considered the unmarked nasal sound as compared to *-m*. I suggest that the rule above is a reflex of markedness reduction, where a more marked sound is changed into a less marked sound

(e.g., de Lacy 2006: 23, 75f). For similar explanations of the data in (2a-b), see also Evans (2019: 78f) and Sahel (2021).[3]

Returning to Table 2, the application of the rule is optional in dialect 1, "costly" in dialect 2, and obligatory in dialect 3.[4] Thus, this rule explains the unexpected weak adjectives in canonical DPs of dialects 1 and 3. Given this rule, non-nasal inflections are immediately excluded explaining why this pattern is so restricted in occurrence. The left-to-right asymmetry follows from the way the rule above is stated – only the second adjectives may undergo the phonetic change.[5]

There are two possible alternatives: First, the left-to-right asymmetry might also have to do with easier parsing because a disambiguating, strong ending occurs first in the nominal string. Matthias Schlesewsky (p.c.) points out to me that this claim about more effective processing is in agreement with work by John Hawkins. In particular, Hawkins (1994: 404-5; 2004: 49, 92-3) explains the left-to-right asymmetry seen with the examples above by general processing advantages (for an early intuition in this regard, see Esau 1973: 139). As a second alternative, we could follow G. Müller (2002a: 140) claiming that this asymmetry has to do with analogy with the canonical pattern *d-em nett-en Mann* 'the-ST nice-WK man'.

The cases in the next subsection present a challenge to both of these alternatives. Indeed, what often goes unmentioned is that this nasal alternation is more general; for instance, it can also be found with indefinite pronoun constructions (and pronominal DPs, see Section 5). In my view, these are related phenomena that should be discussed in the same context and receive the same account (note that all other authors only discuss the contrast in (2), with the qualification

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[3] In an earlier version of this work, I took this rule to involve phonetic simplification, presumably a reflex of ease of articulation. Joe Salmons (p.c.) pointed out to me that there are issues with such an idea (see Salmons 2021: 39-41, also references cited therein). He and Tracy Hall suggested to me that reduction in markedness might be more appropriate. In this vein, note that Gallmann (2004: 156) formulates a phonological markedness constraint in his optimality-theoretic proposal that bans German words that end in schwa + /m/ (cf. also Gunkel *et al.* 2017: 1308).

Indeed, *-m* and *-n* are diachronically and dialectally related. Braune & Reiffenstein (2004: 120-22) point out for OHG that diachronically *-m* changes to *-n* in suffixal endings (if *n* changes, it tends to change to *l*). Paul *et al.* (1989: 146) show for MHG that final *-m* also changes to *-n*, except with strong adjectival endings. In certain dialects, though, specifically in Middle Franconian, adjectival *-em(e)* is changed to *-en* in dative masculine/neuter contexts (Paul *et al.* 1989: 211-12). ENHG also shows the relatedness of these two elements with certain nouns changing their final sound (e.g., *besem > besen* 'broom'), but there is also general variation with articles, pronominal elements, and adjectives (Ebert *et al.* 1993: 140, 192-93). With this in mind, we might expect that these two sounds are also dialectically related. This is borne out in that contemporary Southern Hessian dialects retain *Besem* for *Besen* 'broom' (Schirmunski 2010: 433). In my view, this diachronic and dialectal relatedness of *-m* and *-n* strengthens the postulation of the nasal alternation as a phenomenon relevant here (also Peter 2013, Sahel 2021: foontoe 6). I thank Tracy Hall, Joe Salmons, and Laura Smith for help with this section including providing references.

[4] The grammaticality judgments in Table 2 are taken from the original sources. It is not clear to me if the degree of the markedness/ungrammaticality of the respective bad patterns in dialect 2 or 3 is the same. If the relevant case in dialect 2 were marked more than "?", we could suggest that the rule in (5) simply does not apply in that dialect at all.

[5] Besides Nübling (2011), Peter (2013: 194) points out that parallel inflections are much more frequent in coordinations, which includes two adjectives separated by a comma. Specifically, parallel inflections occur 39% in non-coordinations vs. 79% in coordinations. Björn Köhnlein (p.c.) makes an interesting observation in this regard. In non-coordinated noun phrases, main phrasal stress usually goes to the head noun, but there is a secondary stress on the initial element (this is probably determined rhythmically). In the current cases, the initial element is the first adjective. This means that the second adjective has the lowest degree of prominence, which might facilitate the reduction from *-m* to *-n*. In contrast, if there is a pause between the two adjectives as in coordinations, then the second adjective is not in a weak prosodic position but tends to have its own stress. In that case, the retention of *-m* may be more likely.

that Sternefeld 2004 also discusses (3)). Unlike the two alternatives, the phonetic rule above is able to capture following cases too once it is slightly modified.

2.2. *Indefinite Pronoun Constructions Revisited*

In Chapter 2, Section 3.2, I discussed indefinite pronoun constructions. To extend this discussion, consider cases involving the pronoun *etwas* 'something' and a following adjective. In either the nominative/accusative (6a-b) or the dative (6c-d), there is no variation – only a strong adjective is possible:

(6) a.   *etwas   ander-es*
           something different-ST
           'something different'

     b. * *etwas   ander-e*
           something different-WK

     c.   *mit etwas   ander-em*
           with something different-ST
           'with something different'

     d. ?* *mit etwas   ander-en*
           with something different-WK

It was proposed in the previous chapter that the nominative string *jemand anderer* 'somebody different' is analyzed as in (7). I now add (6a) to the analysis (recall that IPRP stands for Indefinite Pronoun Restrictor Phrase; for the internal makeup of indefinite pronouns, see also Footnote 7):

(7)   *Indefinite Pronoun Construction*

```
                    DP
           ┌─────────┴─────────┐
           D                  IPRP
           │           ┌───────┴───────┐
           │         IPRP              Mo
           │      ┌────┴────┐      ┌────┴────┐
           │    IPR        NP     Mod       AgrP
           │     │          │                │
          je   -mand       eN            [anderer eN]
          et   -was        eN            [anderes eN]
```
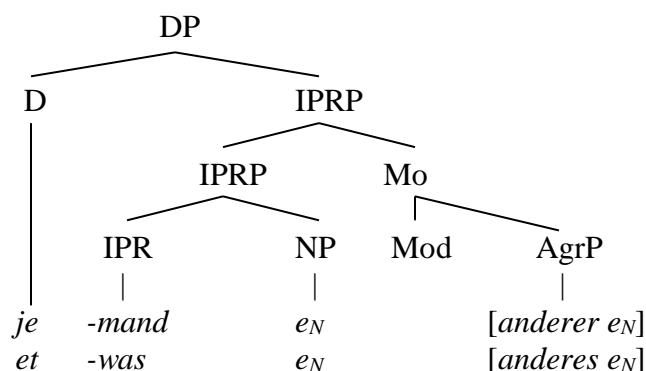
Given right adjunction to the pronoun, the adjective is only expected to have a strong ending. However, Duden (2007: 491) points out that there is variation of the following adjective in the

dative, and the same goes for pronouns like *jemand* 'somebody' and *niemand* 'nobody'.[6] I start by discussing the pronoun *jemand* in more detail. This is followed by addressing the inflections on the adjective.

Although *jemand* 'somebody' is the first element in the noun phrase, this pronoun shows the nasal alternation (8a-b). In addition, it can also occur without an ending (8c):

(8) a. *mit jemand-em*
         with somebody-ST
         'with somebody'

     b. *mit jemand-en*
         with somebody-WK
         'with somebody'

     c. *mit jemand*
         with somebody
         'with somebody'

The same options can be found with *niemand* 'nobody'. It is clear that this inflectional alternation is not due to the phonetic rule proposed above. On the one hand, this element occurs in first position; on the other hand, it is not an adjective: syntactically, *jemand* can appear in argument position; morphologically, it can have a strong, a weak, or no ending at all. Rather, Roehrs (2009b) argues that *jemand* belongs to three different morphological paradigms. Besides the older declensions that are similar to those of strong nouns and determiners, there seems to be a third paradigm in the progress of developing. In the latter case, *jemand* has features of a weak noun where the ending *-en* is generalized throughout the non-nominative cases. The three paradigms are summarized in Table 3:[7]

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[6] There is also variation with indefinite pronouns in the accusative (e.g., *jemanden* vs. *jemand*), but the following adjective always ends in the expected inflection *-en*. Furthermore, as far as I know, there is no variation with the dative pronoun *ihm* 'him'; in other words, this pronoun cannot appear as *ihn* in dative contexts. In addition, this element is not part of the discussion of inflections on adjectives as third-person pronominal elements cannot be followed by adjectives (Section 5.1). Given these remarks, the cases mentioned in this footnote are not relevant to the discussion of the nasal alternation.

[7] Note that Duden (2007: 491) claims that dative pronouns in *-en* are not part of the standard language. It is clear though that such pronouns occur in the colloquial standard language. Notice also that the different inflections in Table 3 presumably indicate different internal makeups of the pronoun. For instance, *jemand* may involve a determiner component (ia), but it may also involve a determiner component with an indefinite pronoun restrictor where the latter has features of a weak noun (ib) or strong noun (ic):

(i) a. [$_D$ *jemand*]-*em*
     b. [$_D$ *je*] + [$_{IPR}$ *mand*]-*en*
     c. [$_D$ *je*] + [$_{IPR}$ *mand*]

The analyses in (ib-c) indicate how I interpret the terms 'weak noun' and 'strong noun' in Table 3 – the latter are grammaticalized nouns under IPR in (7).

Table 3: Different Paradigms of the Indefinite Pronoun *jemand*

	Strong Noun	Determiner	Weak Noun
Nominative	jemand	jemand (/w-er)	jemand
Accusative	jemand	jemand-en	jemand-en
Dative	jemand	jemand-em	jemand-en
Genitive	jemand-s	jemand-(e)s	jemand-en

Adding an adjective after the pronoun retains the variation on the pronoun itself. In addition, the adjective also alternates between a strong and weak ending yielding six different options. Below, I provide my own grammaticality judgments:

(9)   a. (?) *mit jemand-em ander-em*
           with somebody-ST different-ST
           'with somebody different'

       b.   *mit jemand-em ander-en*
           with somebody-ST different-WK
           'with somebody different'

(10)   a. (?) *mit jemand-en ander-em*
           with somebody-WK different-ST
           'with somebody different'

       b. (?) *mit jemand-en ander-en*
           with somebody-WK different-WK
           'with somebody different'

(11)   a.   *mit jemand ander-em*
           with somebody different-ST
           'with somebody different'

       b. (?) *mit jemand ander-en*
           with somebody different-WK
           'with somebody different'

All these patterns occur naturally but with different frequencies. Below are the results of an informal *google*-search involving three dative prepositions: *mit* 'with', *von* 'from', and *bei* 'at' (note that the numbers are too large to check the individual examples for relevance). While these numbers are, admittedly, not precise, the tendencies are clear. Whereas all patterns above occur, a weak adjective is more frequent with a pronoun involving an inflection, be it *-em* or *-en*. In contrast, a strong adjective is more frequent with a pronoun involving no inflection. Notice also that the latter is the most frequent pattern overall (more on these points below). Finally, it is worth pointing out that the positive pronoun, set off by a forward slash sign in Table 4, is more frequent than its negative counterpart:

Table 4: Numeric Results of Indefinite Pronoun Constructions in the Dative (October 7, 2020)

Preposition and Pronoun	*anderem*	*anderen*
mit jemandem/niemandem	35K/425	95K/5K
von jemandem/niemandem	8K/711	63K/50K
bei jemandem/niemandem	3K/9	10K/347
mit jemanden/niemanden	9K/238	75K/3K
von jemanden/niemanden	7K/350	32K/16K
bei jemanden/niemanden	1K/109	14K/503
mit jemand/niemand	755K/129K	408K/69K
von jemand/niemand	762K/195K	362K/19K
bei jemand/niemand	141K/19K	108K/816

Importantly, the adjectives exhibit the nasal alternation independently of whether the pronoun has a strong, a weak, or no inflection. For the cases discussed in Section 2.1, this means that the second adjective in -*en* should not be taken to be parasitic on a preceding adjective ending in -*em* (for such an idea, see Murphy's 2018 proposal of partial copying). Rather, the weak adjective depends on a preceding element more generally. Furthermore, indefinite pronoun constructions have a structure different from canonical DPs. This suggests that the nasal alternation is independent of a specific structure. If these cases are indeed related by the nasal alternation, then no strong morpho-syntactic claims should be made on the basis of the data in Section 2.1. Note in this regard that Schlenker (1999) argues for top-down derivations and Sternefeld (2004: 288-90) for recursive DP-levels.

As seen above, the word preceding the (lower) adjective may not only be an adjective but also a pronoun. What these elements have in common is that they are nominal in nature. I modify the phonetic rule above slightly (the feature [+N] stands for nominal):

(12)   *Rule (final version):*

      m   ->   n   / $[…]_{[+N]}$ $[…]_A$ +____#

In words, an adjective preceded by another nominal element (in the same DP) may occur with the inflection -*en*. Notice that the rule does not apply to adjectives that have already undergone Impoverishment due to a preceding determiner. The latter has changed the ending on the adjective from -*em* to -*en* independently. The varying inflections on the pronouns are due to the three paradigms above.[8]

At first glance, the different frequencies in Table 4 seem to confirm the left-to-right asymmetry noted in Section 2.1 (i.e., a strong inflection precedes a weak one). Specifically, (13a) is generally preferred over (13b). Furthermore, the strong ending on the adjective is preferred over the weak one in (13a) but vice versa in (13b) (the percentage sign indicates a less frequent option, which I interpret as a less preferred string):

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[8] As my focus is on adjectives, I do not reformulate the three paradigms of the indefinite pronouns as vocabulary insertion rules.

(13) a. *jemand   ander-em/[%]-en*
          somebody different-ST/-WK
          'somebody different'

      b. % *jemand-em/-en   ander-en/[%]-em*
             somebody-ST/-WK different-WK/-ST
             'somebody different'

However, unlike in Section 2.1, the different frequencies seen with the indefinite pronoun construction are only tendencies, rather than clearcut left-to-right asymmetries. In fact, an element with a weak ending can precede one with a strong ending (e.g., *jemand-en ander-em* 'somebody-WK different-ST'), and a weak adjective can occur despite the fact that there is no element with a strong inflection preceding it (e.g., *jemand(-en) ander-en* 'somebody(-WK) different-WK'). Recall that these inflectional distributions are not possible with two adjectives in a row. This means that explanations involving parsing or analogy as mentioned in Section 2.1 cannot be the whole story. I submit that the rule in (12) is better able to capture these inflectional distributions. Indeed, this rule is extended in Section 5 to pronominal DPs like *mir nett-em/[%]-en Studenten* 'me (nice-ST/[%]-WK student)'.

     To sum up, we arrive then at a first secondary mechanism to explain inflectional variation, here accounting for unexpected weak adjectives in canonical DPs. Note that the weak endings here occur in a combination of certain featural and lexical contexts (i.e., an adjective in the genitive masculine/neuter is preceded by another nominal element). Next, I turn to some special cases that share a phonological constraint but are lexically restricted.

3. Canonical DPs Involving Adjectives with Optional or no Inflections and Definite Determiners with no Inflections

In this section, I discuss two types of variation. I address the special inflectional behavior of certain adjectives, and I analyze some uninflected forms of the definite article and its related distal demonstrative. On the basis of the second discussion, I relate the distal and proximal demonstratives to the definite article in terms of their decompositions. More generally, I propose that all these cases have something in common: they exhibit the avoidance of a hiatus – the occurrence of two adjacent vowels in a prosodic word.

     In Chapter 1, Section 3.1.1, I briefly illustrated some adjectives exhibiting special inflectional behaviors. Recall that there are three types of cases. First, the adjectives *lila* 'purple' and *rosa* 'pink' participate in the strong/weak alternation, but the inflection is optional: it can be absent, and it can be present (14a-b). In order to account for the presence of *-n-*, I assume for convenience that the latter consonant has been epenthesized.[9] Inflected forms without *n*-epenthesis are no possible (14c):

(14) a. *das lila(-n-e)   Kleid*
          the purple-n-WK dress
          'the purple dress'

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[9] Bjȫrn Kȫhnlein (p.c.) points out that *-n-* is not a typical epenthetic consonant (the glottal stop being the usual element).

b.   *ein lila(-n-es)   Kleid*
         a   purple-n-ST dress
         'a purple dress'

c. *   *ein lila-es   Kleid*
         a   purple-ST dress

There are two ways to analyze this optionality. On the one hand, we could assume that InflP of the extended projection of the adjective is built optionally: if InflP is not projected, we obtain the uninflected forms; if InflP is projected, *n*-epenthesis occurs, and we get the inflected forms. On the other hand, we could suggest that InflP is built in every instance. In this scenario, the inflection is deleted yielding the uninflect forms, or *n*-epenthesis occurs resulting in the inflected forms.[10] Note that either option involves *n*-epenthesis and results in the avoidance of a hiatus.

Turning to the second case, certain adjectives never take inflections. This holds for *prima* 'great', *sexy* 'sexy', *super* 'super', and others (Duden 1995: 256-57). Note that *n*-epenthesis cannot rescue these cases (e.g., **prima-n-es*, **sexy-n-es*). Observe that many of these cases seem to be borrowings from other languages. Following the idea of a reviewer, I assume that these cases are not fully intergrated into the language yet. To make this idea more formal, I suggest that InflP is not projected in these instances (note in this regard that the emergence of InflP on top of an adjective takes time; see Sapp & Roehrs 2016 for the discussion of *viele* 'many' changing from the uninflected noun *vil* in OHG to the inflected quantificational adjective emerging in the 16th century).

Third, adjectives derived from place names by adding *-er* never take inflections either, for instance *Berlin-er-(*es)*. Again, there are two options to analyze this. We could suggest that either this derivational suffix blocks the projection of InflP, or alternatively, we could assume that the derivational ending *-er* does double duty as an invariant inflectional element under Infl. Note in this regard that this *-er* can license a genitive noun phrase, for instance, *der Verkauf Berlin-er Bier-es* 'the sale of Berlin-INFL beer-GEN' (Fuhrhop 2003) (for more discussion of the Genitive Rule, see Section 4).

Notice that these three sets of cases have other intriguing properties that may help us decide between the different analytical options.[11] While I cannot investigate these three special

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[10] The deletion could be made more formal by assuming that Impoverishment either deletes all the features of the Infl head, or it deletes a feature that all inflections have in common (perhaps a nominal feature like [+N]).

[11] I have not investigated adjectives in ellipsis contexts in detail. As far as I am aware, all ordinary adjectives have the same inflections in ellipsis and non-ellipsis contexts. However, the three types of adjectives discussed in the main text are also special in ellipsis contexts. First, Fanselow (1988: 101) observes that the inflectional ending with *lila* 'purple' and *rosa* 'pink' is obligatory in ellipsis contexts:
     (i)   *ein lila*(-n-es)*
              a   purple-n-ST
              'a purple one'
Second, uninflected adjectives like *prima* 'great', *sexy* 'sexy', and *super* 'super' cannot appear with an elided noun. Third, derived adjectives like *Berliner* '(from) Berlin' can occur in ellipsis contexts (as also noted by Rehn 2019: 221-24 for Alemannic German). Given that ordinary adjectives have the same forms in ellipsis contexts and that only the special cases behave differently, I leave the analysis of ellipsis for future research. Note though that a detailed analysis of these facts may help narrow down the analytical options mentioned in the main text, which were offered to account for the optionality or absence of the inflections in non-ellipsis contexts.

cases of adjectives in more detail here, it seems clear that the avoidance of a hiatus plays a role here and in the cases I turn to next.

Definite articles also have some special forms. Consider Table 5, where the inflections are set off by hyphens. The parsing follows the one proposed in R. Wiese (1988: 33) closely:

Table 5: Definite Articles

	Masculine	Neuter	Feminine	Plural
Nominative	de-r	da-s	die	die
Accusative	de-n	da-s	die	die
Dative	de-m	de-m	de-r	de-n
Genitive	de-s	de-s	de-r	de-r

As can be observed in Table 5, there are two points of interest (see also Gunkel *et al*. 2017: 1297-98). First, there is no inflection on *die* 'the (/that)'. In other words, this form is pronounced [di] as an article and [di:] as its related distal demonstrative (where stress and the slightly different vowel quality of the demonstrative are often indicated by capitalization as in *DIE*). Second, the stem forms vary between *de-* in most instances vs. *da-* in the nominative/accusative neuter vs. *di-* in the nominative/accusative in feminine/plural contexts.

Starting with the first issue, it is clear that schwa cannot occur with the form *die* 'the (/that)'. On the one hand, it cannot be added to the stem directly; compare (15a) to (15b); on the other hand, it cannot be added and mitigated by *n*-epenthesis (15c):

(15)   a.   *die*   [di(:)]
                 the
                 'the (/that)'

        b. *   *di-e*   [di(:)ə]
                 the-ST

        c. *   *di-n-e*
                 the-n-ST

We can suggest that (15b) follows from the avoidance of a hiatus, and that (15c) indicates that *n*-epenthesis is not possible. As seen with the proximal demonstrative below, the avoidance of a hiatus and the non-availability of *n*-epenthesis also play a role in the account of other determiners. Indeed, this type of analysis is even more general accounting also for the third-person pronoun *sie* 'she, her; they, them', which is pronounced as [zi:] (for the discussion of pronouns, see Section 5). If so, then the final *-e* on *die* and *sie* can be taken as an orthographic element marking the quality of the stem vowel (cf. also *nie* 'never', *wie* 'how', *Knie* 'knee', *Chemie* 'chemistry', etc.).

As to the second issue, the different stem forms, I assumed in Chapter 2, Section 2.1.2 that the schwas in adjectival inflections are due to epenthesis. This is presumably different for *-e-* in the relevant stem forms of the definite article: *der*, *den*, *dem*, *des*. R. Wiese (1988: 34) observes that the stem vowels are short and lax if an obstruent follows (*des*, also *das*) but long and tense otherwise (*der*, *den*, *dem*, also *die*). Again, this is more general and applies to the

different vowel qualities in *es* 'it' vs. *er* 'he', *ihn* 'him(ACC)', *ihm* 'him(DAT)', *sie* 'she, her; they, them', *ihr* 'her(DAT)', and *ihnen* 'them(DAT)'.

Given this regularity and to make the vocabulary entries of the different definite article forms parallel, I include the stem vowel *-e-* in the vocabulary insertion rule. I analyze the different stem forms as another instance of contextually conditioned allomorphy. The vocabulary insertion rule for the nominative/accusative form in the neuter is given in (16a), the one for the nominative/accusative in the feminine and plural is in (16b), and the elsewhere case is provided in (16c) (adapted here from Roehrs 2009a: 132):[12]

(16) a. [+D; +DEF] → *da-* / __ [-O, -F, +N]

      b. [+D; +DEF] → *di-* / __ [-O, +F]

      c. [+D; +DEF] → *de-*

Note that the stem form spells out the features on the left of the arrow; the features on the right specify the context of application of the vocabulary insertion rules. As just discussed, I assume that the phonological environment (i.e., the following element) determines the specific properties of the stem vowels in (16). To bring about the inflected forms of the definite article, inflections are added to the stems in (16) by the vocabulary inflection rules, discussed in Chapter 2, Section 2.1.5, which spell out the CNG features of the article structure. With these insertion rules in mind, consider demonstratives.

It is well known that demonstratives and definite articles are diachronically related in that the latter has evolved from the former (e.g., Greenberg 1978, van Gelderen 2007). As briefly mentioned in Chapter 1, Section 4.1.2, it is also often argued that they are synchronically related such that the demonstratives consist of the definite article and an additional deictic component (e.g., Leu 2007; Roehrs 2010, 2013). Starting with the proximal demonstrative, its decomposition is exemplified in (17a). This set of examples illustrates the masculine, neuter, and feminine forms in the nominative, where *d-* spells out [+D; +DEF], *-ies-* spells out [+DEIX], and the varying inflections spell out the different CNG feature bundles. Note though that the vocabulary insertion rules proposed in (16) should actually yield the strings in (17b) or (17c), contrary to fact:

(17) a. *d-ies-er*,   *d-ies-es*,   *d-ies-e*
          the-DEIX-ST, the-DEIX-ST, the-DEIX-ST
          'this'

      b. * *de-ies-er*,   *da-ies-es*,   *di-ies-e*
          the-DEIX-ST, the-DEIX-ST, the-DEIX-ST

      c. * *de-n-ies-er*,   *da-n-ies-es*,   *di-n-ies-e*
          the-n-DEIX-ST, the-n-DEIX-ST, the-n-DEIX-ST

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[12] Referencing unpublished work by B. Wiese, G. Müller (2002a: 125) derives both issues (absence of schwa on *die*, different stem forms) by assuming one stem form (*de-*), where the stem vowel /e/ is realized as [a] in nominative/accusative neuter contexts and as [i:] when the inflection schwa is added to *de-* yielding a sequence of /e/-/e/. As far as I know, these are not regular phonetic realizations of an underlying /e/.

If demonstratives and definite articles are indeed related, then certain adjustments have to occur. To generate the correct forms in (17a), I follow Roehrs (2013) in suggesting that (17b) shows that a hiatus is avoided. Furthermore, (17c) indicates that similar to definite articles, *n*-epenthesis cannot rescues the cases in (17b). As to the distal demonstrative *DER* 'that', I follow Roehrs (2013) in assuming that the deitic component involves a null element here (i.e. *de-Ø-r*). Given this null element, no adjustments have to be made. Moving forward, I abstract away from these finer points continuing with *d-* as the stem for the definite article and its related distal demonstrative and with *dies-* as the stem for the proximal demonstrative.

To sum up, this section accounted for some unexpected forms of certain adjectives, definite articles and their related demonstratives. All these cases show that hiatuses do not occur. While it seems clear that a hiatus is generally avoided in the determiner system, the exact conditions that induce the avoidance of a hiatus with adjectives are less clear: a hiatus is avoided with certain disyllabic adjectives ending in *-a*, but other instances tolerate a hiatus (e.g., *blau-e* 'blue', *roh-e* 'raw'). I leave the detailed investigation of these differences for future research. Next, I discuss a type of variation that has received very little attention in the theoretical literature.

4.   Canonical DPs with Unexpected Weak Determiners: Impoverishment Rule 2

In this section, I continue discussing variation that concerns the inflections on the determiners themselves. Unlike in the previous section, here the variation involves inflections on *der*-words other than the definite article and its related distal demonstrative. Furthermore, the inflection here is obligatorily present alternating between strong and weak. Moreover, this variation is also restricted, but here to genitive masculine/neuter environments. Given the discussion of Chapter 2, it is surprising that determiners may have a weak ending at all. I propose that this variation is the result of Impoverishment; in particular, it is due to a more general application of Impoverishment Rule 2. First, I present the data, and then I provide my account along with an additional restriction.

To begin, certain determiners show inflectional variation in genitive masculine/neuter contexts. Considering the data below, the (a)-examples exhibit the (expected) strong endings on the determiners *dieser* 'this', *jeder* 'every', and *aller* 'all'; the (b)-examples show these elements with the corresponding weak endings:

(18)   a.   *im   Sommer dies-es Jahr-es*
                in.the summer this-ST year-GEN
                'in the summer of this year'

        b.   *im   Sommer dies-en Jahr-es*
                in.the summer this-WK year-GEN
                'in the summer of this year'

(19)   a.   *die Verarbeitung jed-es   Holz-es*
                the processing   every-ST wood-GEN
                'the processing of every (type of) wood'

b. *die Verarbeitung jed-en   Holz-es*
   the processing   every-WK wood-GEN
   'the processing of every (type of) wood'

(20) a. *der Beginn   all-es Schön-en*
        the beginning all-ST beautiful-WK
        'the beginning of everything beautiful'

b. *die Wege all-en Übel-s*
   the ways all-WK evil-GEN
   'the ways of all evil'

As noted by other scholars, this variation is possible with the following *der*-words: *dieser* 'this' (G. Müller 2002a: 137 fn. 38), *jener* 'that' (Gallmann 2004: 154), *jeder* 'every' (also *jedweder* 'every', *jeglicher* 'every'), *aller* 'all', *mancher* 'some', *solcher* 'such', *welcher* 'which' (the latter are all mentioned in Zifonun *et al.* 1997: 1936-1948). In contrast, there is no inflectional variation with the definite article *der* 'the', its related demonstrative *DER* 'that', and *ein*-words in general – the latter must all have strong inflections:

(21) a. *der Verkauf d-es Wagen-s*
        the sale   the-ST car-GEN
        'the sale of the car'

b. * *der Verkauf d-en   Wagen-s*
     the sale   the-WK car-GEN

c. *der Verkauf ein-es Wagen-s*
   the sale   a-ST   car-GEN
   'the sale of a car'

d. * *der Verkauf ein-en Wagen-s*
     the sale   a-WK car-GEN

B. Wiese (2009: 184f) states that there is no variation in this context with regular adjectives either. However, unlike the determiners in (21), adjectives are always weak in this context. Rather than explaining the variation on the relevant *der*-words by analogy with adjectives, I make the stronger and more interesting claim that the weak endings on these determiners are also due to Impoverishment.

I argued in Chapter 2, Section 2.3 that adjectives in genitive masculine/neuter contexts have weak inflections due to Impoverishment Rule 2. Impoverishment affects elements that have their InflP in the specifier of AgrP:

(22)   *Impoverishment Rule 2:*

$$\text{AgrP}$$

InflP   Agr'
[-F, αN, +O, ~~+S~~]   [-F, αN, +O, +S]
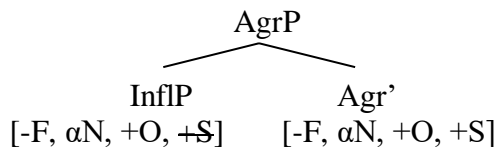
Observe again that genitive masculine/neuter contexts are the exact same featural environments where the relevant *der*-words from above can have weak inflections too. By contrast, note again that *der* 'the', *DER* 'that', and *ein*-words do not exhibit this variation. The same goes for the head noun itself – its ending is never changed from *-(e)s* to *-(e)n*. The difference between these two types of elements seems to involve structural size: the first group (*der*-words other than *der* and *DER*) involves phrasal elements but that the second group (*der*, *DER*, *ein*-words, nouns) consists of heads. I propose that Impoverishment only applies to the inflections on the phrasal elements.[13] Consider this in more detail.

I proposed in Chapter 2, Section 2.1.6 that demonstratives have a more complex structure than articles in that they have InflP at the top of their structure:

(23)   *Demonstrative*

$$\text{InflP}_{[+D;\ +DEF,\ +DEIX][F,\ N,\ O,\ S]}$$

[F, N, O, S]   DemP
                           |
                    [+D; +DEF, +DEIX]
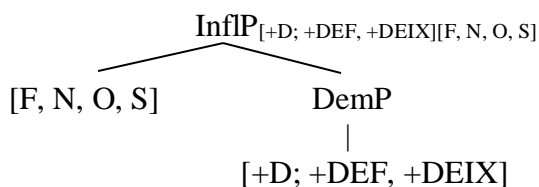
This yields a phrasal determiner, which occurs in phrasal (e.g., specifier) positions. Extending this discussion, I propose that besides *dieser* 'this', *jener* 'that', *jeder* 'every' (also *jedweder* 'every', *jeglicher* 'every'), *aller* 'all', *mancher* 'some', *solcher* 'such', and *welcher* 'which' also have structures similar to (23).

With that in mind, I argue that Impoverishment Rule 2 has a more general context of application, updated as Impoverishment Rule 2'. Rather than just applying in AgrP, the rule operates in all phrases indicated by XP below:

(24)   *Impoverishment Rule 2':*

$$\text{XP}$$

InflP   X'
[-F, αN, +O, ~~+S~~]   [-F, αN, +O, +S]
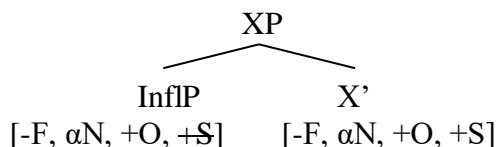
Given this, the more general Impoverishment rule in (24) now applies to all determiners in Spec,ArtP, adjectives in Spec,AgrP, quantifiers/numerals in Spec,CardP, and determiners in

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[13] The demonstrative *DER* 'that' presumably patterns with the article *der* 'the' due to their obvious relatedness.

Spec,DP.[14] More generally, if Impoverishment applies in this featural context, then only the least specified ending *-en* can be inserted as discussed with adjectives in Chapter 2. This accounts for the weak ending on the relevant determiners.

It is not entirely clear to me how to derive the optionality of the strong/weak alternation on these determiners. Currently, I see two analytical options. First, it would be possible to stipulate that there are actually two independent Impoverishment rules, Rule 2 and Rule 2', where the former applies obligatorily, but the latter does not. Note though that both rules have the same basic context of application. Assuming the existence of two separate rules applying in the same context runs the risk of losing an important generalization. Alternatively, it would be possible to suggest that – what I have proposed to be – phrasal determiners can actually vacillate between involving phrases or heads (cf. Borer 2005: 169ff). If the relevant determiners merged as heads, Impoverishment Rule 2' would not apply to them (but only to their phrasal counterparts and adjectives more generally). Whichever is the right solution to pursue, note that determiners, be they phrases or heads, still trigger Impoverishment on the adjective (by Impoverishment Rule 1).[15]

I close this section by discussing a final restriction. The occurrence of weak endings on the determiners is constrained by the ending on the following noun: if the ending on the noun is *-(e)s*, both strong or weak endings on the determiners are usually possible (25a-b); if the ending on the noun is *-(e)n*, only strong endings on the determiners are possible; compare (25c) to (25d) (data are from Gallmann 1996: 293, also Gallmann 1990: 268ff):

(25) a. *der Traum manch-es Schüler-s*
          the dream some-ST   pupil-GEN
          'the dream of some pupil'

      b. *der Traum manch-en Schüler-s*
          the dream some-WK pupil-GEN
          'the dream of some pupil'

      c. *der Traum manch-es Student-en*
          the dream some-ST   student-GEN
          'the dream of some student'

      d. * *der Traum manch-en Student-en*
          the dream some-WK student-GEN

---

[14] Note that Impoverishment Rule 2' applies to CardP with some restrictions. While it is applicable to inflected singular quantifiers (e.g., *vieler* 'much'), it is not relevant to the singularity numeral *EIN* 'one', which consists of a null element in Spec,CardP and *ein* in Card (Chapter 5).

[15] This makes the predication that a determiner with a weak inflection can be followed by an adjective with a weak inflection. While I have not found any attested examples yet, such cases seem possible to me:

      (i) a. *im   Verlauf dies-en schön-en   Sommer-s*
               in.the course this-WK beautiful-WK summer-GEN
               'in the course of this beautiful summer'
           b. *im   Sommer jed-en   heiß-en Jahr-es*
               in.the summer every-WK hot-WK year-GEN
               'in the summer of every hot year'

134

Note that this restriction has nothing to do with the strong/weak alternation per se. Rather, it involves a dependency between the inflection on the determiner (or adjective, not discussed here separately; for some remarks, see Chapter 2, Section 2.3) and that on the noun.

In Chapter 2, I provided a specificity-based account of the inventory and distribution of adjectival inflections. Gallmann (1996, 1998, 2018) utilizes specificity of inflections to account for the cases above. Given the interplay between the inflection on the determiner element and that on the noun, Gallmann (1996) formulates the Genitive Rule: a noun phrase in the genitive must contain at least one element that is sufficiently specific as regards case.[16] Gallmann states that -es and -er are more specific than -en: the first two are [+Genitive], which consists of [+Oblique] and other features, but the third is only [+Oblique] (see Gallmann 1998: 146, 153). This is consistent with the feature specifications in Chapter 2, where the strong inflections -es and -er are also more specific than the weak inflection -en (the latter is interpreted as the elsewhere case and has no feature specification at all).[17] Since there is no sufficiently specific element in (25d), this example violates the Genitive Rule, and its ungrammaticality is explained.

To sum up, this section illustrated some inflectional variation on certain der-words in genitive masculine/neuter contexts. I suggested that Impoverishment Rule 2 from Chapter 2 appears to have a more general context of application. I made two tentative suggestions to account for the (restricted) optionality of this variation. Given its restricted application, Impoverishment Rule 2 can be interpreted as another (second) secondary mechanism.

5.   Canonical DPs with Unexpected Strong Adjectives: Pronominal Determiners

In this section, I return to the discussion of pronominal DPs. I show that there is variation as regards the inflections on adjectives: in some cases, both (expected) weak and (unexpected) strong adjectives are possible; in others, only (unexpected) strong adjectives occur. I propose that pronominal DPs involve regular structures. However, pronominal determiners lack features that trigger Impoverishment. This accounts for the general option of strong adjectives. Weak adjectives are due to the phonetic rule discussed in Section 2.2 and to (phonetically constrained) analogy with ordinary definite DPs.

I also discuss briefly preferences for strong adjectives over weak adjectives and vice versa. I suggest that, if possible, strong endings on adjectives are preferred as they are more specified as regards CNG features than their corresponding pronominal elements. At the end of

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[16] While I cannot discuss this rule in detail here, note that there might be more to this rule than stated in Gallmann's work. Gunkel *et al*. (2017: 1315) note that genitives behave differently after nouns vs. prepositions. To provide one example, Vogel (2006: 178) points out that the indefinite article in the genitive cannot be reduced after a noun but possibly after a preposition (to my ears, (ib) sounds marked):

(i)   a.   *   *das Auto 'n-es Freund-es*
                      the car   a-ST friend-GEN
                      'the car of a friend'
          b.   %   *während 'n-es Ausflug-s*
                      during   an-ST outing-GEN
                      'during an outing'

Note in passing that the conditions as to when the indefinite article can, must, or must not be reduced are poorly understood.

[17] Although case suffixes on nouns and adjectival inflections on determiners and adjectives are not the same elements (Chapter 2, Section 2.3), the case suffix -es presumably has a similar specification as the adjectival inflection -es.

this section, I summarize the data and analysis. Note that I often refer to pronouns as pronominal elements or short as pronominals. Given the complexity of the data and the fact that this variation has not received much attention in the theoretical literature, I discuss pronominal DPs in quite some detail.

5.1.   Data

First, I present the data under discussion. I focus on the first-person pronominal elements. Second-person pronominals show the same distribution and are only briefly mentioned in what follows. Starting with the singular, there is no variation in the nominative and accusative in that only strong adjectives are possible:[18]

(26)   a.   *ich   dumm-er Idiot*
                I.NOM stupid-ST idiot.MASC
                'I (stupid idiot)'

         b.   *mich   dumm-es Schwein*
                me.ACC stupid-ST pig.NEUT
                'me (stupid idiot)'

The second-person pronominal element *du* 'you(NOM.SGL)' shows the pattern in (26a), and *dich* 'you(ACC.SGL)' is as in (26b).
         There is variation in the dative in all three genders. Strong adjectives are preferred over weak ones in the masculine and neuter but vice versa in the feminine (the less preferred option is indicated by %):

(27)   a. % *mir   groß-en Esel*
                me.DAT great-WK donkey.MASC
                'me (stupid idiot)'

         b.   *mir   groß-em Esel*
                me.DAT great-ST donkey.MASC
                'me (stupid idiot)'

(28)   a. % *mir   groß-en Schwein*
                me.DAT great-WK pig.NEUT
                'me (stupid idiot)'

---

[18] Recall that adjectival inflections in the nominative/accusative feminine involve *-e*, which is ambiguous between a strong and a weak inflection. Such a case is not provided in (26). Also, strings like (26a-b) are ungrammatical in English. Given that there are no straightforward translations of such German examples, I put the adjective and noun in parentheses in the English translations. For simplicity, I translate the figurative meaning of animal names as 'idiot'. Note though that different animal names have different implications; for instance, *Schwein* 'pig' implies that the person is, in some sense, dirty whereas *Esel* 'donkey' implies that the person is not very bright.

b.	*mir	groß-em Schwein*
	me.DAT great-ST pig.NEUT
	'me (stupid idiot)'

(29)	a.	*mir	groß-en	Gans*
		me.DAT great-WK goose.FEM
		'me (stupid idiot)'

	b. %	*mir	groß-er	Gans*
		me.DAT great-ST goose.FEM
		'me (stupid idiot)'

The same patterns hold for the second-person pronominal element *dir* 'you(DAT.SGL)'. The cases in the singular are summarized in Table 6:

Table 6: Summary of Adjectival Inflections in Singular Pronominal DPs

Pronominal Element	Gender of the noun	Weak	Strong
ich 'I(NOM)'/*du* 'you(NOM)'		-	√
mich 'me(ACC)'/*dich* 'you(ACC)'		-	√
mir 'me(DAT)'/*dir* 'you(DAT)'	[-F]	%	√
	[+F]	√	%

In the plural, there is variation in the nominative where, like in the dative feminine singular, weak adjectives are preferred over strong ones (30a-b). There is no variation in the accusative and dative (30c-d), with the qualification that the inflections on the adjectives in the dative are ambiguous between weak and strong (30d):

(30)	a.	*wir	nett-en	Studenten*
		we.NOM nice-WK students
		'we nice students'

	b. %	*wir	nett-e	Studenten*
		we.NOM nice-ST students
		'we nice students'

	c.	*für uns	nett-e	Studenten*
		for us.ACC nice-ST students
		'for us nice students'

	d.	*von	uns	nett-en	Studenten*
		from us.DAT nice-WK/ST students
		'from us nice students'

The nominative plural pronominal element *ihr* 'you(NOM.PL)' has the same distribution as in (30a-b), and the dative/accusative pronominal element *euch* 'you(ACC/DAT.PL)' is as in (30c-d). The plural cases are summarized in Table 7:

Table 7: Summary of Adjectival Inflections in Plural Pronominal DPs

Pronominal element	Case of the DP	Weak	Strong
wir 'we(NOM)'/*ihr* 'you(NOM)'	[-O, -S]	√	%
uns 'us(ACC)'/*euch* 'you(ACC)'	[-O, +S]	-	√
uns 'us(DAT)'/*euch* 'you(DAT)'	[+O, -S]	ambiguous	ambiguous

Finally, as is well known, third-person pronominals do not take overt complements in the singular or plural (for recent discussion, see Höhn 2020):[19]

(31)   a. *   *er Idiot*
               he idiot

       b. *   *sie   Linguisten*
               they linguists

Note also that pronominal elements in the genitive are not commonly used in German and do not do double duty as (transitive) pronominal determiners – similar to third-person pronominals.[20]

Taking stock thus far, pronominal determiners are definite elements. Given their similarity to ordinary definite determiners, we would expect all adjectives to have weak inflections. However, all adjectives allow strong inflections, and adjectives have weak inflections in the dative singular and in the nominative plural, but not in the nominative/accusative singular and in the accusative plural; adjectives in the dative plural are inflectionally ambiguous (see also Bhatt 1990: 154f; Darski 1979: 198; Duden 1995: 280, 2007: 39; Gunkel *et al.* 2017: 1308). Third-person and genitive pronominals do not take adjectives and nouns.

Observe again that the strong endings cannot mark indefiniteness. Furthermore, similar to the distribution of strong adjectival inflections where, for instance, *-em* only occurs in the masculine/neuter, and *-e* only surfaces in the feminine/plural, here masculine also patterns with neuter and feminine also with plural. In the current contexts though, the similarity concerns the preference of the relevant endings: strong endings are preferred in the dative masculine/neuter but weak endings in the dative feminine and in the nominative plural.

Before moving on, consider the complete set of pronominal elements in Table 8 (for detailed discussion of the internal structure, see Fischer 2006). Starting with the first and second-person pronominals, notice that these elements do not involve inflections. Furthermore, they do not distinguish gender in the singular, and they do not have different forms in the accusative and dative case in the plural (*uns*, *euch*):

---

[19] A brief note on older forms of German is of interest here. MHG appears to have tolerated forms of the third person, for instance, *er süezer man vil guoter* 'he (nice man), very good' (see Paul *et al.* 1989: 359). However, these strings may actually involve appositives (as suggested by the continuation with *vil guoter*). Be that as it may, it is clear that MHG is different in that pronominal elements in the nominative singular could be followed by a weak adjective, for instance, *ich arme tore* 'I (poor-WK fool)'. For similar facts in ENHG, see Ebert *et al.* (1993: 197).

[20] Recall that transitive determiners have overt complements, but intransitive determiners have covert complements.

Table 8: Pronominal Elements in German

Number	Singular					Plural		
Person	1st Pers.	2nd Pers.	3rd Masc	3rd Neut	3rd Fem	1st Pers.	2nd Pers.	3rd Pers.
Nom	ich	du	e-r	e-s	sie	wir	ihr	sie
Acc	mich	dich	ih-n	e-s	sie	uns	euch	sie
Dat	mir	dir	ih-m	ih-m	ih-r	uns	euch	ih-n-en
Gen	meiner	deiner	seiner	seiner	ihrer	unserer	eurer	ihrer

Third-person pronominal elements are different in a number of ways. First, as mentioned above, these pronominals, like genitive pronominals more generally, do not take overt complements. Second, they have the typical determiner endings, and the singular instances of these pronominals also distinguish gender. Note that the form *sie* is special: on the one hand, it is pronounced as [zi:]; that is, it does not have an inflection (see Section 3); on the other hand, it is the only pronominal element unspecified for number: it translates as 'she/her', 'they/them', or, when capitalized in writing, as 'you(SGL/PL.FORMAL)'. The first two cases are third person, which, as just pointed out, do not take overt complements (for the third case, capitalized *Sie*, see Chapter 7). Finally, note that dative plural *ihnen* has the additional inflection *-en* (similar to the dative plural pronominal *d-en-en* 'those (ones)') and that genitive pronominal elements do not involve (regular) adjectival inflections. This is particularly clear in masculine/neuter contexts where the strong inflection would be *-es* or the weak one would be *-en*, both contrasting with *-er*. I provide the vocabulary insertion rules for all these elements in Section 5.3.2.

The lack of gender specification in the first and second person singular and the fact that case is not uniquely differentiated by all these pronominal elements in the plural can be linked to the general preference of strong adjectives (provided there is variation). I propose in Section 5.3.3 that *wir* 'we' and *ihr* 'you(NOM.PL)' are the only first and second-person pronominals that are specified for all CNG features. Consequently, they are preferably followed by weak adjectives. By contrast, all other relevant pronominal determiners are not fully specified for CNG features (note again that one form covers multiple feature combinations), and the following adjective is recruited to indicate those features with a strong inflection.

In the next section, I briefly discuss three types of proposals that might be offered to account for the inflectional variation on the adjectives inside the pronominal DPs. Given certain assumptions, I point out some shortcomings for all of them. In Section 5.3, I propose a different analysis that avoids these issues. Section 5.4 summarizes the discussion.

5.2.   Three Types of Proposals

As discussed in Chapter 2, Section 3.5, personal pronouns are determiners. They take the adjective and noun as their complement. This can be represented in the following, simplified structure (AgrP involves the canonical structure discussed at length in Chapters 1 and 2):

(32)   a.   *wir nett-en Studenten*
            we nice-WK students
            'us nice students'

b.   *(Pro)nominal DP – Complementation*

```
              (LPP)
             /      \
                     DP
                   /    \
                 wir     CardP
                        /     \
                               AgrP
                         netten Studenten
```
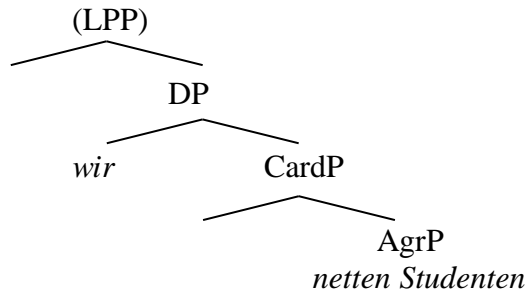
If personal pronouns are indeed determiners (e.g., Postal 1966), then they should trigger Impoverishment, and the weak ending on the following adjective in (32a) is expected (in Section 5.2.4, I discuss the absence of weak adjectives in certain instances; this leads to the ultimate proposal that pronominal determiners do not trigger Impoverishment). In order to account for the variation, that is, the unexpected strong ending on the following adjective, I entertain three basic types of proposals. All these proposals involve the structural analysis in (32) above and some additional assumptions.

5.2.1. One Structure: Agreeing vs. Non-agreeing Pronominal Elements
The first type of proposal involves one structure where the pronominal element is in the same position in (32) above. This position could be Spec,DP or D.[21] This is what I assumed in Chapter 2, Section 3.5 to account for the weak ending on the following adjective. To explain the strong ending, Roehrs (2005: 259) makes a distinction between "agreeing" and "non-agreeing" determiners. Note first that these pronominal elements share concord features with the following adjective and noun; that is, a nominative pronominal does not combine with, say, a dative adjective and noun. This means that non-agreeing cannot mean non-participation of these pronominal elements as regards concord in agreement features. Rather, we could assume that (non-)agreeing has to do with the presence or absence of agreement morphology on the pronominal element. This idea could be made more concrete by assuming a null inflection for the agreeing type (33a) and the lack of such an inflection for the non-agreeing type (33b):

(33)   a.   *wir-Ø*
                we-INFL
                'we'

        b.   *wir*
                we
                'we'

---

[21] Note that in the present account, determiners in either of these positions trigger Impoverishment. Having said that, I point out in Section 5.3.1 that pronominals of the first and second person seem to be associated with different deixis (in fact, their different kind of deixis will be crucial for the discussion of Impoverishment). As such, they are similar to demonstratives and are assumed to project phrasal structures. If so, these pronominal determiners are presumably in Spec,DP.

Roehrs proposes that an agreeing determiner takes a weak adjective; a non-agreeing determiner takes a strong adjective. Elements like this exist in German, with the qualification that they show an overt inflection in the agreeing cases; compare (34a) to (34b) (the same distribution holds with *solch(e)* 'such' and *welch(e)* 'which'):[22]

(34)   a.   *manch-e gut-en   Freunde*
                 some-ST good-WK friends
                 'some good friends'

         b.   *manch gut-e   Freunde*
                 some   good-ST friends
                 'some good friends'

Note though that the notion of (non-)agreeing determiner is not entirely straightforeward. Unlike with *manch-* 'some', *solch-* 'such', and *welch-* 'which', agreeing pronominals involve (putative) null inflections. However, given that first and second-person pronominal elements never have overt inflections in German, this raises the question if the postulation of null inflections is indeed warranted.

      To sum up, given the issue of a real distinction between agreeing vs. non-agreeing pronominal elements, this proposal seems to lack proper motivation. Furthermore, this distinction would not work in the current system at all as inflections on adjectives are a function of the determiner stem – its categorial feature [+D] – but not its inflection.

5.2.2. One Structure: Pronominal Elements in Different Positions
Similar to the previous subsection, this type of proposal also involves one structure – the one in (32b). However, the pronominal element could be proposed to be in different phrasal levels in that structure. Like in the previous subsection, the pronominal could be in the DP-level. In this case, the pronominal would be a determiner trigging Impoverishment and, consequently, it would occur with a weak adjective. In addition, the pronominal could be in a different structural level. There are two options: either it could be a quantifier in CardP, or it could be a predeterminer in LPP. As explicated in more detail below, Impoverishment would not be triggered in either case, and the following adjective would surface with a strong ending.

      As a first option, the pronominal element could do double duty as a quantifier in CardP. This option was entertained in a previous version of this work. As a quantifier, the pronominal element would not have the feature [+D], and as such, it would not trigger Impoverishment (for details, see Roehrs 2021, also Roehrs 2009a: 166-67). However, there does not seem to be evidence that pronominal elements can also appear as quantifiers. In fact, they can co-occur with numerals, a type of quantifier located in CardP:

(35)   *wir drei Freunde*
       we three friends
       'us three friends'

As such, this possibility seems unlikely to be on the right track.

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[22] Recall from Chapter 2, Footnote 18 that I analyze uninflected *manch* in (34b) as a modificational element.

The second option involves the claim that pronominal elements can do double duty as predeterminers in LPP. Unlike quantifiers, predeterminers are determiner-like elements with the feature [+D]. Unlike determiners, these elements are base-generated in LPP and neither trigger no undergo Impoverishment (Chapter 2, Section 4). Ambiguous elements like this exist elsewhere in German. For instance, *alle* 'all' and *dies-* 'this/these' can be in two positions. When in the DP-level, these elements are determiners triggering Impoverishment (36):

(36) a. *alle gut-en   Freunde*
        all   good-WK friends
        'all good friends'

     b. *diese gut-en   Freunde*
        these good-WK friends
        'these good friends'

When in the LPP-level, they are predeterminers, which do not bring about Impoverishment, neither on a following determiner (37) nor on a lower adjective (38):

(37) a. *alle mein-e gut-en   Freunde*
        all   my-ST good-WK friends
        'all my good friends'

     b. *diese mein-e gut-en   Freunde*
        these my-ST good-WK friends
        'these good friends of mine'

(38) a. *all mein groß-es Glück*
        all my   great-ST happiness
        'all my great happiness'

     b. *dies-es mein groß-es Glück*
        this-ST my   great-ST happiness
        'this my great happiness'

Before moving on, note that this conjecture is more promising as pronominals of the first and second person seem to be associated with deixis; that is, these pronominals are similar to the demonstrative *dies-* 'this/these' above.

Again, it is hard to provide direct independent evidence for the claim that pronominal elements can be in two different positions. On the one hand, these elements are distributionally restricted (they must occur before numerals, adjectives, and nouns); on the other hand, non-third elements are inflectionally restricted (they exhibit no overt endings). Thus far, I have come across only one distributional restriction such that these pronominals cannot co-occur with ordinary predeterminers in German (39a-b). Note that this is different for English (39c) ((39c) is taken from Pesetsky 1978: 353):

(39) a. * *all(e) wir Studenten*
              all(ST) we students
              'all us students'

      b. * *diese wir Studenten*
              these we students
              '(these) us students'

      c.   all us linguists

Given the occurrence of (39c) in English, (39a) presumably involves a language-specific account. As we see below, this account extends to (39b). In other words, there is an independent explanation for the ungrammaticality of (39a) and (39b) under the option of pronominal elements as determiners. Indeed, the following discussion provides evidence that pronominal elements are indeed determiners. After this discussion, I turn to pronominal elements as predeterminers.

Starting with pronominal elements as determiners, Haider (1988: 53) discusses the contrast between the possessive article in (40a) and the Saxon Genitive in (40b) (see also Haider 1992: 314-15, Bayer 2015). Both of these elements are usually assumed to be in the DP-level:

(40) a.   *all(e) ihr-e Autos*
              all(ST) her-ST cars
              'all her cars'

      b. * *all(e) Marias Autos*
              all(ST) Mary's cars
              'all Mary's cars'

To the constrast in (40), we can add a similar distinction involving the predeterminer *diese* 'these' (41). While the (a)-example may sound slightly marked, there is a clear contrast between (41a) and (41b), just as in (40) above:

(41) a. ? *dies-e ihr-e Autos*
              these-ST her-ST cars
              'these cars of hers'

      b. * *dies-e Marias Autos*
              these-ST Mary's cars
              '(these) Mary's cars'

The difference between *ihre* 'her' in (40a) and (41a), on the one hand, and *wir* 'we' in (39a-b) and *Marias* 'Mary's' in (40b) and (41b), on the other hand, is that the former has an overt inflection but latter do not. Indeed, *wir* and *Marias* never take an overt adjectival inflection (unlike *mein* in (38), which, for instance, may appear as *mein-em* in dative masculine/neuter contexts). The failure to (ever) take an inflection may account for this constrast (for fuller discussion, see Roehrs 2021). If this is on the right track, then we can account for the ungrammaticality of (39a-b) under the option of the pronominals as determiners on par with the

ungrammaticality of the determiner-like element *Marias* in (40b) and (41b). Given that the ungrammaticality receives an independent explanation, we can continue maintaining that pronominals are determiners. Indeed, this explanation is based on the very assumption that pronominal elements are in fact determiners in the DP-level, just like possessive articles and Saxon Genitives.

In addition to being determiners, it could be suggested that pronominals could do double duty as predeterminers. As seen in (42), ordinary predeterminers can be stacked:

(42)   *all-e   dies-e   mein-e Freunde*
       all-ST these-ST my-ST friends
       'all these friends of mine'

As such, there is no structural competition between predeterminers – each can be housed in its own LPP. In other words, the occurrence of multiple predeterminers should be fine. However, analyzing the strings in (39a-b) in such a way does not provide an explanation for the ungrammaticality of these cases. Note though that if pronominal elements as predeterminer are in LPP, then the DP-level does not involve an overt determiner (e.g., a definite article) or determiner-like element (e.g., a Saxon Genitive). This, however, is something that is required for definite noun phrases (see Longobardi 1994). Returning to the simple cases, this means that grammatical strings like *wir nette Studenten* 'we nice-ST students' cannot be analyzed as *wir* involving a predeterminer as the DP-level would not contain an overt element – a non-overt DP-level should lead to ungrammatical, contrary to fact. Thus, this option, like pronominal determiners as quantifiers, is not straightforward. On those assumptions then, the variation of the adjectival inflection remains unclear.

5.2.3. Two Different Structures: Complementation and Adjunction
Besides the structure in (32b), a second structure could be proposed to account for the possibility of a strong ending on the adjective. Beside being the complement of the pronominal determiner, the adjective and noun could be right-adjoined to the pronominal determiner. There are two basic options: the adjective and noun could be adjoined high or in the middle of the structure. High right-adjunction was utilized in the discussion of appositional DPs (Chapter 2, Section 3.4). The structure of the pronominal DP would look as follows:

(43)   a.   *wir nett-e   Studenten*
               we nice-ST students
               'us nice students'

       b.   *Pronominal DP – High Right-Adjunction*

                   DP
                 /   \
            DP   AgrP
           wir   *nette Studenten*
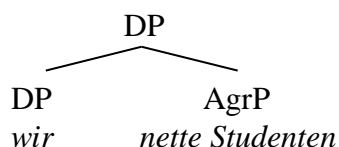
Importantly, unlike appositional DPs, pronominal DPs do not involve comma intonation, and their adjectives may receive a restrictive interpretation (at least in the plural cases). Alternatively,

the adjunction could be located in the middle (44), where XP might range over CardP, AgrP, ArtP, NumP, or NP (recall that e$_N$ is the null head noun of a pronominal DP with an intransitive determiner):

(44)   *Pronominal DP – Mid Right-Adjunction*

```
              DP
           ___|___
          /        \
        wir         XP
                 ___|___
                /        \
              XP          AgrP
              |        nette Studenten
              e_N
```
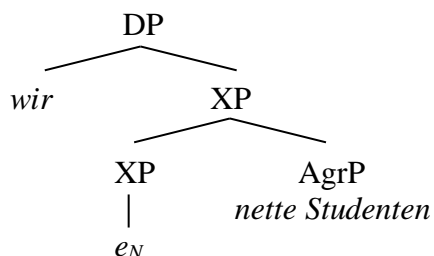
Mid right-adjunction was employed in the discussion of indefinite pronoun constructions (and noun-adjective exclamatives). The latter construction does not involve comma intonation and its adjective may have a restrictive interpretation. These properties fit well with pronominal DPs. Thus, unlike high adjunction, this structure is a more promising candidate. Note now that this is a non-canonical structure. As such, Impoverishment would not apply, and a strong ending would surface on the adjective. More generally, assuming two structures (complementation, adjunction) would essentially result in the claim that pronominals are transitive and intransitive (cf. Bhatt 1990: 155), where complementation of the adjective and noun would instantiate a transitive pronominal element, but adjunction of the adjective and noun would manifest an intransitive pronominal element.

Note that despite the issues raised, all three types of proposals can potentially account for the strong adjectives, possible in all contexts. However, it is not clear why weak adjectives can only occur in some instances.

5.2.4. Absence of Weak Adjectives in Certain Instances
As mentioned above, pronominal determiners are definite elements. As such, we expect weak adjectives to occur with them. However, as documented above, all featural combinations pronominal DPs appear in exhibit strong adjectives and only some have weak adjectives. Weak adjectives are missing in three instances: nominative and accusative singular (which is very clear in the masculine/neuter) and accusative plural. All three (types of) proposals discussed above have to come to terms with the general variation in some instances and the lack of it in others.

As I show below, all the three proposals can account for the absence of weak adjectives in the nominative/accusative singular. Given certain assumptions, they all can account for the lack of variation here. The instances in the accusative plural are special. As far as I can see, none of the three proposals can rule them out without ad-hoc stipulations. At the end of this subsection, I provide a functional explanation for the absence of weak adjectives there.

In order to account for the absence of weak adjectives in the nominative/accusative singular, we could follow Roehrs (2005) in observing that the strong adjectives in these contexts are mirrowed by certain stings involving *ein*-words (also Bhatt 1990: 155). The first proposal could suggest that the pronominal elements involve non-agreeing determiners. Like *ein*, these elements would have no inflections at all, and consequently the adjectives would be strong. The second proposal could follow the assumptions in Chapter 2 claiming that these pronominal

elements are like *ein*-words as well in not inducing Impoverishment. Consequently, the adjectives would be strong. The third proposal could take a different route. It could claim that all instances in the singular, including the dative, only involve adjunction (and not complementation) of the adjective and noun.

If so, the question arises why the dative singular does involve variation. The first two proposals have a straightforward answer: *ein*-words are only special in the nominative and accusative singular. The third proposal has to make additional assumptions to allow weak adjectives in the dative. Now, while this may indicate an advantage of the first two proposals, an account involving *ein*-words is not straightforward. As discussed in Chapter 2, Section 2.2.3 and Chapter 5, *ein*-words are composite forms consisting of semantically vacuous *ein* and another component. As such, it is *ein* itself that has special properties. Crucially, *ein* contrasts with pronominal elements as regards definiteness. This makes these two types of elements rather different from each other, and an extension of the properties of *ein* to these pronominal elements does not seem straightforward. Again, given these assumptions, all three proposals face some challenges. It appears then as if a different solution needs to be found (see Section 5.2.3).

Turning to the instances in the accusative plural where weak adjectives do not occur (45a), observe again that the ending *-en* on the adjectives in the dative counterpart in (45b) is ambiguous between strong and weak:

(45) a.   *für uns nett-e(*n)   Schüler*
            for us   nice-ST/*WK pupils
            'for us nice pupils'

      b.   *von   uns nett-en   Schüler-n*
            from us   nice-ST/WK pupils-DAT
            'from us nice pupils'

Note that case is not overtly manifested by a unique form of the pronominal element – it is *uns* 'us' (or *euch* 'you(PL)') in both the accusative and dative cases. Observe also that the weak ending in the accusative plural would be *-en*, the same as the (ambiguous) ending in the dative plural. As such, it is the different inflections on the adjectives in (45) that distinguish the accusative from the dative.[23]

It is not clear how the three proposals can account for this lack of variation: *ein*-words are only special in the singular instances, and complementation (which allows weak inflections) should not be restricted to specific morphological cases like nominative and dative. Given this state-of-affairs, I follow Duden (2007: 39) in providing a functional explanation for the absence of the weak inflection in the accusative plural.

I assume that morphological case needs to be distinguished (if possible). Since the cases at hand involve dative and accusative, this may be related to their typical functions, indirect object and direct object, respectively. Now, as is well known, German has relatively free word

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[23] Note though that the head noun has the case inflection *-n* in the dative in (45b), but not in the accusative in (45a) This case marking may potentially provide manifestation of the case feature in the dative. There are two points that need to be made here. First, case in this instance would be manifested on the noun (rather than on the pronominal element). Second, Wegener (1995: 154-63) and Gallmann (1996: 289) point out that this case inflection on the noun has become somewhat unstable. Furthermore, this case marking cannot occur at all if the plural of the noun is formed in *-n* or *-s*, for instance, *Junge-n-(*en)* 'boy-s' or *Jung-s-(*en)* '(coll.) guy-s'. Given these points, I put the case marking on the noun aside.

order due to the availability of scrambling its objects. Roehrs (2005: 261-62) provides the following examples where the pronominal noun phrases are in the order of indirect object > direct object in (46a) but in the sequence of direct object > indirect object in (46b):

(46)   a.   *Sie   haben uns nett-en   Jungen euch klug-e   Mädchen vorgestellt.*
                they have us nice-DAT.ST/WK boys   you smart-ACC.ST girls   introduced
                'They introduced you smart girls to us nice boys.'
        b.   *Sie   haben uns nett-e   Jungen euch klug-en   Mädchen vorgestellt.*
                they have us nice-ACC.ST boys   you smart-DAT.ST/WK girls   introduced
                'They introduced us nice boys to you smart girls.'

Note that despite the two orderings of the objects in (46a) vs. (46b), the different inflections on the adjectives inside the objects make it clear who was introduced to whom in each case. This functional explanation of the accusative plural inflection can apply to all three (and other) proposals.

    To conclude, given the issues with the postulation of (non-)agreeing pronominals, with pronominals doing double duty as determiners and quantifiers or predeterminers, and with the proposal of two co-existing types of structures, I make a different proposal.

5.3.   *Pronominal Determiners and Complementation*

In this section, I discuss the structure of pronominal DPs, and the structure and feature specification of the pronominal determiners themselves. I provide the vocabulary insertion rules for pronominal elements, and I account for the preferences of strong or weak adjectives in certain pronominal DPs.

5.3.1. Structures and Feature Specification

I propose that pronominal DPs involve complementation and that pronominal elements are determiners that lack features that provide the context for [+D] to trigger Impoverishment. In other words, this proposal postulates one structure and one type of pronominal element. The fact that Impoverishment does not occur accounts for the general option of strong adjectives. The restricted occurrence of weak adjectives follows from certain phonetic considerations – the phonetic rule discussed in Section 2.2 and phonetically conditioned analogy with ordinary definite DPs.

    As far as I am aware, this is the simplest account with the fewest additional assumptions. Furthermore, proposing that pronominal DPs involve complemenation is compatible with the discussion in later chapters. Specifically, Chapters 6 and 7 investigate similarities and differences between noun phrases (DPs) and clauses (TPs) of the form "pronoun + (copular verb) + noun". TPs involve complementation and if DPs also constitute cases of complementation, where the string "pronoun + noun" is analyzed as the determiner taking the noun as its complement, then this allows a straightforward comparison between the nominal and clausal domains.

    The proposal that pronominal elements are determiners is compabitle with work by Postal (1966) and others, briefly discussed in Chapter 2, Section 3.5. As determiners, pronominals have the categorial feature [+D]. They are merged in ArtP and take overt complements. I propose that the difference in inflections on adjectives in ordinary vs. pronominal DPs lies in the different

structure and feature specification of pronominal determiners. At first glance, there seem to be two options.

Pronominal elements could involve structures of demonstratives (47a). Recalling that the relevant pronominal determiners are of the first and second person, they are associated with deixis, similar (but not identical) to that of third-person demonstratives. I follow Halle (1997: 429) and Nevins (2007: 288) in that grammatical person can be broken down into the features [±AUTH(or)] and [±PART(icipant)]: first person consists of [+AUTH, +PART], second person involves [-AUTH, +PART], and third person has [-AUTH, -PART].[24] As an alternative to (47a), pronominal determiners could project reduced structures where InflP is missing at the top (47b). This yields the following feature specifications for the two structural options of, say, the first-person pronominal *wir* 'we':

(47)   a.   *Pronominal Determiner (Variant 1)*

InflP$_{[+D; +AUTH, +PART][F, N, O, S]}$

[F, N, O, S]   DemP
                             |
                            Dem
                   [+D; +AUTH, +PART]   →   *wir*

   b.   *Pronominal Determiner (Variant 2)*

DemP$_{[+D; +AUTH, +PART]}$
   |
  Dem
[+D; +AUTH, +PART]   →   *wir*
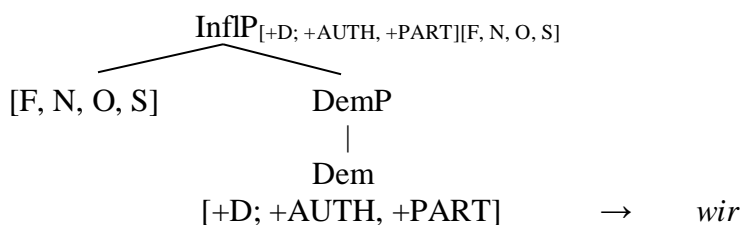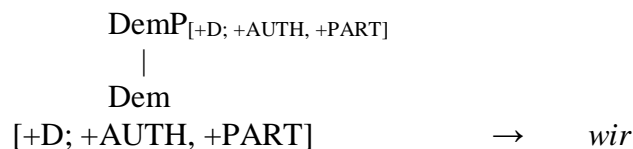
The immediate advantage of the variant in (47a) is that all phrasal determiners have the same basic structure. As for (47b), it provides a straightforward account of the absence of inflections on first and second-person elements. Note that neither of the two structures involves features for definiteness or deixis. However, first and second person (i.e., [+PART]) presumably entail definiteness, and grammatical person is relatable to deixis (see, e.g., Roehrs 2019: 378f). Crucially, with [+DEF] and [+DEIX] absent, the presence of the CNG feature bundle in (47a) but its absence in (47b) have different consequences for the occurrence of Impoverishment. Thus, depending on which of the two structural variants in (47) is adopted, we need to find different ways to account for the general variation and the varying preferences as regards the inflectional distribution on the adjectives.

If we adopt (47a), we expect the adjectives after pronominal determiners to pattern with those after *ein*-words – the featural specification in (47a) is similar to the article *ein* in that Impoverishment is not triggered in [-F, -O] contexts. In other words, the masculine/neuter instances in the nominative/accusative are expected to surface with strong adjectives. By contrast, Impoverishment is triggered in all other featural contexts yielding weak adjectives in the remaining cases including the nominative/accusative feminine (where both the strong and the weak inflections are -*e*). However, it is not clear how to account for the strong inflections in the

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[24] It is possible that third person only includes [-PART].

oblique and/or plural instances. By assumption, there is no other structural option available as regards the larger DP (as all these pronominal DPs involve canonical structures). Furthermore, note that analogy with other, related DPs is not straightforward as definite DPs of the form "determiner + adjective + noun" do not have strong inflections in these instances either. The variant in (47b) fares better.

If (47b) is adopted, all adjectives should be strong. With no feature present that provides the context for [+D] to trigger Impoverishment, feature deletion does not occur at all. This accounts for the general option of strong adjectives. The restricted occurrence of weak adjectives requires a different account. There are three cases that can all be related by certain phonetic considerations. First, recall that instances in the dative masculine/neuter involve strong adjectives ending in *-em* or weak adjectives ending in *-en*. Notice that the weak inflection has a phonetic resemblance to the strong inflection – both involve nasal sounds. Extending the discussion in Section 2.2, I assume that this presents another case of nasal alternation such that *-em* can be changed into *-en*, provided a nominal element (here: the pronominal) precedes the adjective.

Second, the dative feminine instances involve phonetic resemblance between – what sounds like – strong inflections on the pronominal determiners *mi-r* 'me(DAT)' and *di-r* 'you(DAT.SGL)' and the strong inflection *-er* on following adjectives. This brings about a special distribution such that two strong inflections occur on two different lexical categories at the same time (i.e., the pronominal determiner and adjective). Sequences like *mi-r groß-er Gans* 'me (stupid idiot)' do not exist elsewhere in the system. Following Duden (1995: 281, 2007: 39), I assume that speakers tend to avoid such strings. Note again that the ending on *mir* and *dir* is the same as the one on the dative feminine article *der* 'the'. I suggest that the weak adjectives are the result of analogy with other definite DPs (e.g., *d-er nett-en Frau* 'the-ST nice-WK woman').

Before moving on to the third case, notice that there is no phonetic remembrance in the nominative/accusative singular, neither as regards the nasal alternation on adjectives nor as regards the ending on the pronominal determiners and the adjectives: the strong inflections *-er*, *-en*, *-es*, *-e* are very different from (or identical to) the weak inflection *-e*, and all these inflections are different from the ending on the relevant pronominal determiners *ich* 'I', *mich* 'me(ACC)', *du* 'you(NOM.SGL)', *dich* 'you(ACC.SGL)'. This means that the phonetic rule and analogy do not play a role in the nominative/accusative singular intances.

The third case involves the instances in the plural. Starting with the dative, recall that the inflection is *-en*, which is ambiguous between strong and weak. Given my analysis, I interpret this inflection as strong. Continuing with the nominative, note that we cannot easily state that the weak endings here are also due to the phonetic considerations mentioned above: the strong inflection *-e* is different from the weak inflection *-en*, and both of these inflections are different from the endings on the pronominals *wir* 'we' and *ihr* 'you(NOM.PL)'. However, like in dative feminine, the forms of the ordinary and pronominal determiners are related. Unlike in the dative feminine, here the relatedness concerns the fact that *die* 'the/those' has no inflection, just like *wir* and *ihr*. I suggest that the weak adjectives in the nominative plural are also due to analogy with other definite DPs (e.g., *die nett-en Frauen* 'the nice-WK women'). Finally, observe that uninflected *die* also occurs in the accusative plural. However, as discussed in Section 5.2.4, this case is special. I assume that the analogy is blocked here – the absence of the weak adjectives has a functional explanation.

Above, I made use of analogy with ordinary definite DPs in two instances (i.e., dative feminine, nominative plural). In order to constrain the application of analogy, I have assumed

that analogy is only possible if there are special phonetic circumstances as regards the determiners: related endings on *mi-r/di-r* and *d-er*, and no inflections on *wir/ihr* and *die*. Note in passing that the presence or absence of endings on determiners seems to play a role here for the inflections on adjectives. However, both cases bring about weak adjectives by analogy, making these cases different from *ein*-words (which have strong endings in the exceptional cases).

       To sum up, all pronominal DPs may involve strong adjectives. Assuming complementation, this is explained by the reduced demonstrative structure and the feature specification of the first and second-person pronominals. As a consequence, Impoverishment does not occur resulting in strong adjectives. Weak adjectives in the dative masculine/neuter are due to the fairly general phonetic rule that accounts for the nasal alternation on adjectives. Weak adjectives in the dative feminine and nominative plural are due to analogy (constrained by the related endings on ordinary and pronominal determiners). In other words, weak adjectives in all these cases only occur under specific phonetic conditions. Note again that masculine/neuter pattern in opposition to feminine/plural. Before turning to the discussion of the different preferences as regards strong or weak adjectives, I provide the vocabulary insertion rules for pronominal elements.

5.3.2. Vocabulary Insertion Rules for Pronominal Elements
I illustrate the vocabulary insertion rules with first-person elements (second-person items are like the first-person ones but have a negative value as regards [AUTH]). Third-person pronominals are provided for completeness' sake (for some discussion, see also Höhn 2020). Starting with the first-person pronominals, I take genitive pronouns to be the most specific elements. Recall though that they do not take overt complements. This is indicated in (48a-b) such that no overt element can be in the right edge of the noun phrase. Furthermore, CNG features after the forward slash sign specify the featural context of insertion. As to the pronominals that do take overt complements, I pointed out in Section 5.1 that *wir* 'we' is the only (transitive) pronominal that has a unique form for the relevant CNG features. Indeed, singular pronominals do not distinguish different genders, and *uns* 'us(ACC/DAT)' is the only form that does not distinguish (accusative/dative) case. Importantly, note again that accusative and dative case do not form a natural class in German (i.e., they are not syncretic except here). Given these points, I take *wir* as the most specific transitive element, and *uns* as the least specific transitive item. The latter presents the elsewhere case. The vocabulary insertion rules below are ordered by decreasing specificity and are grouped according to case. Similar to the weak adjectival ending *-e* (Chapter 2, Section 2.1.5), I utilize the category variable $[\gamma]$, where a negative value indicates singular:

(48) a.   [+D; +AUTH, +PART]   →   *unserer* / __]$_\Phi$ [+F, +N, +O, +S]
        b.   [+D; +AUTH, +PART]   →   *meiner* / __]$_\Phi$ [+O, +S]

        c.   [+D; +AUTH, +PART]   →   *wir*   /   [+F, +N, -O, -S]
        d.   [+D; +AUTH, +PART]   →   *ich*   /   [-O, -S]

        e.   [+D; +AUTH, +PART]   →   *mich* /   [-γ, -O]

        f.   [+D; +AUTH, +PART]   →   *mir*   /   [-γ]

        g.   [+D; +AUTH, +PART]   →   *uns*

To round off the discussion, I also provide the vocabulary insertion rules for the third-person pronominals.

Without going into much detail here, it is clear that pronominals like *er* 'he' have to be distinguished from ordinary determiners like *der*-words, *ein*-words, or the null articles. Note that pronominals are inherently definite but that ordinary determiners have to be specified for definiteness. As such, I assume that the features [-AUTH] and/or [-PART] also entail definiteness. This allows me to leave out the feature for definiteness in the vocabulary insertion rules, provided in (49).[25] As above, the rules are ordered with decreasing specificity and are grouped according to case (if possible). Note that unlike first and second-person pronominals, their third-person counterparts involve adjectival inflections. Consequently, they have separate CNG feature bundles. As briefly discussed in Chapter 2, Section 2.2.3, I single out exceptional *ihn* 'him' as the most specific case (49a). Recall also that I pointed out above that the genitive pronominals do not have regular inflections. As such, I assume that like uninflected *ein*, they spell out the stem features and the CNG features by one morpheme (49b-c). Furthermore, (49c) and (49d) are equally specified but differ in the value of [O]. The remaining pronominals are given in (49e-f), with (49f) forming the elsewhere case. The inflections for (49a) and (49d-f) are given in (49g-h) (for some discussion, see also Gunkel *et al*. 2017: 1298):[26]

(49)   a.   [+D; -AUTH, -PART]   →   *ih-*   / __]$_\Phi$ [-F, -N, -O, +S]

        b.   [+D; -AUTH, -PART][-F, +O, +S] →   *seiner*   / __]$_\Phi$
        c.   [+D; -AUTH, -PART][+O, +S]   →   *ihrer*   / __]$_\Phi$

        d.   [+D; -AUTH, -PART]   →   *e-*   / __]$_\Phi$ [-F, -O]
        e.   [+D; -AUTH, -PART]   →   *sie-*   / __]$_\Phi$ [-O]

        f.   [+D; -AUTH, -PART]   →   *ih-*   / __]$_\Phi$

        g.   [+F, -N, +O, αS]   →   *-r*
        h.   etc.

Recall from Section 3 that the inflection on *sie* 'she, her; they, them' is later deleted to avoid a hiatus.

5.3.3. Preferences for Strong or Weak Adjectives
As discussed above, there is no variation as regards the inflections on the adjectives after *ich* 'I', *mich* 'me(ACC)', *du* 'you(NOM.SGL)', *dich* 'you(ACC.SGL)', *uns* 'us(ACC/DAT)', *euch*

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[25] If this turns out to be untenable, then the feature [+DEF] could be added to these pronominals. Note that this does not affect the discussion of Impoverishment as third-person pronominals do not take adjectives.

[26] The elsewhere case in (49f) involves an additional *-en* in the dative plural. This makes *ih-n-en* 'them' similar to the dative plural pronominal *d-en-en* 'those (ones)'. Interestingly, this additional *-en* is not possible with *ein*-words (e.g., *mein-en-en 'mine', *kein-en-en 'none'). Again, what the latter elements have in common is that they consist of vacuous *ein* and another component. The obvious difference between the first type of elements and *ein* is that the first involves definiteness. There are different ways to account for this additional *-en* on the definite pronominals. We could follow, for instance, work by Corver & van Koppen (2010), or we could formulate a late insertion rule. I leave the decision between these options for future research.

'you(ACC/DAT.PL)'. All these adjectives are strong – there are no specific phonetic conditions that induce the phonetic rule from Section 2.2 or facilitate analogy with other definite DPs. In contrast, dative singular *mir* 'me(DAT)' and *dir* 'you(DAT.SGL)', and nominative plural *wir* 'we' and *ihr* 'you(NOM.PL)' do involve variation where both strong and weak adjectives are possible. The account of this variation was based on certain phonological conditions. Interestingly, the preference for either strong or weak adjectives is not the same. I propose that this has to do with the underlying features of the larger noun phrase and the specificity of the vocabulary insertion rules of the pronominal determiner.

Recall that elements in DPs including pronominal DPs share concord features in case, number, and gender. As is well known, ordinary DPs involving count nouns require a determiner. In fact, as has been observed for German, it is the determiner that typically spells out the features for case, number, and gender on its inflection.[27] The inflection on the determiner is typically strong. This is different for the cases under discussion here. While first and second-person pronominals also combine with count nouns, they do not have inflections. In fact, they do not have spellout forms specified for the different genders in the singular, and with the exception of *wir* 'we' and *ihr* 'you(NOM.PL)', they do not have spellout forms specified for the different cases in the plural (Section 5.3.1). I propose that if an adjective is present, it is the latter that preferably surfaces with a strong ending thereby providing a more specified spellout form of the underlying features of the noun phrase.

Table 9 lists the four pronouns that involve different inflections on their following adjectives. It shows which case, number, or gender the pronominal forms distinguish, and it contains the featural contexts in which their corresponding vocabulary insertion rules apply (Section 5.3.2). Finally, the table repeats the general variation and the varying preferences, pointing out again that strong adjectives are preferred in dative masculine/neuter contexts and weak adjectives in dative feminine and nominative pural instances:

Table 9: Specifications of Pronominal Elements and their Relation to the Inflection on the Adjective

Pronom. element	Unique form for		Featural contexts of vocabulary insert. rules	Ending on the following adjective
	Case	Number/gender		
mir, *dir*	dative	unspecified (gender)	[-γ]	[-F]: strong/%weak
				[+F, -N]: weak/%strong
wir, *ihr*	nominative	plural	[+F, +N, +O, +S]	weak/%strong

It is important to state that, while adjectival inflections spell out CNG features (Chapter 2, Section 2.1.5), pronominals do not. As seen in the previous subsection, they are inserted in the context of CNG features. Note though that both sets of vocabulary insertion rules have something in common: they are ordered as regards the specificity of insertion such that strong inflections take precedence over weak inflections, and *wir* 'we' and *ihr* 'you(NOM.PL)' take precedence over the other relevant pronominal determiners.

Abstracting away from the dative feminine instances for a moment, Table 9 suggests a certain correlation provided in (50a) and (50b). This correlation can be collapsed into the statement in (50c):

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[27] This is particularly clear with gender, which is inherently specified on the noun but has no overt manifestation on it.

(50)　　a.　　less specified pronominal ~ preference for more specified (/strong) adjective

　　　　b.　　more specified pronominal ~ preference for less specified (/weak) adjective

　　　　c.　　DPs prefer one element to be more specified (where the element is of the lexical category determiner or adjective).

Some comments are in order here. In both (50a) and (50b), a more specified and a less specified element combine. In other words, it appears as if less specified pronominals and weak adjectives have something in common, and more specified pronominals and strong adjectives have something in common – the two groups differ in their degree of specificity and stand in opposition to each other. Note again that this correlation is not about the spellout of features, but rather it is about the specificity of the vocabulary insertion rules involved.

　　　　Furthermore, the unified correlation in (50c) states a preference, not a requirement. Since the form of the pronominal is determined by the morpho-syntactic and semantic context, the actual choice has to do with the vocabulary insertion rule that yields the preferred inflection on the adjective (NB: the use of the term preference is also compatible with the fact that adjectives are generally optional). Observe that this is different from, for instance, the generalization Weak After Strong, which describes an either/or distribution of the different inflectional forms. Finally, note also that (50c) is not in conflict with Weak After Strong as (50c) involves a weaker statement. With this in place, consider the three individual cases in the last column of Table 9.

　　　　I start with *wir* 'we' and *ihr* 'you(NOM.PL)', which are the only relevant first and second-person pronominals whose vocabulary insertion rules involve a fully specified context as regards CNG features (i.e., [+F, +N, +O, +S]). I propose that since all the underlying features of the larger noun phrase are part of the vocabulary insertion rules for *wir* and *ihr*, the less specified weak inflection is preferred. The latter involves *-en*, and its vocabulary insertion rule is the elsewhere case.

　　　　Singular pronominals of the first and second person are not specified for gender. The vocabulary insertion rules of the dative singular pronominals *mir* 'me(DAT)' and *dir* 'you(DAT.SGL)' are specified as [-γ]. Note that this involves a low degree of specificity. Starting with the dative masculine/neuter instances, I propose that the inflectable adjective is recruited to indicate the gender of the larger noun phrase. Specifically, since gender is not specified in the vocabulary insertion rules of the relevant pronominals, a more specified inflection on the adjective is preferred. Note in this regard that the vocabulary insertion rule for the strong inflection *-em* is specified as [-F, +O, -S] (see Chapter 2, Section 2.1.5). This explains the preference for the strong adjective in the dative masculine/neuter instances.

　　　　Given that the dative pronominal in feminine contexts is also specified as [-γ], the question arises why these instances prefer weak adjectives. I suggest that this involves the same type of explanation that was offered in Section 5.3.1 to account for the very existence of weak adjectives in this context. Again, I follow Duden (1995: 281, 2007: 39) in observing that the feminine instances lead to – what sounds like – the sequence of two strong endings (e.g., *mi-r groß-er Gans*). It seems as if speakers tend to avoid similar endings on co-occurring but lexically different elements (i.e., the pronominal element and adjective). Note though, if *-r* on the pronominal element were to be interpreted as a strong inflection, then it would be possible to claim that this element provides the more specified form (observe in this regard that the

vocabulary insertion rule of *-er* is specified as [+F, -N, +O, αS]). Unlike in the dative masculine/neuter instances, here the pronominal element itself would provide the more specified form. This would make these instances similar to the ones involving *wir* 'we' and *ihr* 'you(NOM.PL)' discussed above. Indeed, this parallelism would be in line with the general observation that feminine and plural often behave alike.

Note that the preference of strong adjectives discussed above is consistent with the instances that do not involve variation. Recall that the pronominal determiners *ich* 'I', *mich* 'me(ACC)', *du* 'you(NOM.SGL)', *dich* 'you(ACC.SGL)', *uns* 'us(ACC/DAT)', *euch* 'you(ACC/DAT.PL)' only take strong adjectives. Importantly, none of these elements involve forms specified for gender in the singular or case in the plural. Finally, I briefly comment on the different degrees of specificity of the vocabulary insertion rules for adjectival inflections and pronominal elements. This includes a brief discussion of how these vocabulary insertion rules relate to the terminals nodes in the syntactic representation.

The different adjectival inflections and pronominal elements are not specified for all the features present in the underlying structure. Adopting DM, vocabulary insertion rules involve underspecification, which regulates the order of the application of the rules. In other words, the absence of features in the vocabulary insertion rules has to do with the very assumptions of how Vocabulary Insertion works in DM. Indeed, the varying numbers of features in rules lead to different degrees of specificity of those rules. For instance, the strong inflection *-er* has more features and is thus more specified than the strong inflection *-em*, and both of these are more specified than the weak inflection *-en*, the elsewhere case. Similar considerations hold for the contexts of vocabulary insertion of pronominal determiners.

Returning to the correlation in (50), note that the more specified elements involve three (e.g., *-em*: [-F, +O, -S]) or four (e.g., *wir*: [+F, +N, +O, +S]) features. By contrast, the less specified elements contain no (e.g., *-en*: []) or one (e.g., *mir*: [-γ]) feature. Comparing adjectival inflections to each other and pronominal forms to each other, they each involve a difference of three CNG features. This constitutes different degrees of specificity that find overt manifestation in the varying preferences for adjectival inflections.

Finally, note that the specification of the vocabulary insertion rules differs from that of the terminal nodes in the syntactic representation. Provided that the relevant terminal nodes are present, they involve all CNG features. In other words, all CNG features are present in the abstract representation, but only a subset of those features are specified in the vocabulary insertion rules to be applied. I summarize the discussion.

5.4.   *Summary of the Discussion*

All pronominal DPs involve canonical DPs; that is, pronominal determiners take adjectives and nouns as part of their complement structure. If modifiers are present, all pronominal DPs may exhibit strong adjectives. This is explained by the reduced demonstrative structure and the feature specifications involving [±AUTH] and [±PART]. With CNG, definiteness, and deixis features absent on the pronominal determiners, Impoverishment cannot occur resulting in the strong adjectives. Besides strong adjectives, some instances may also involve weak adjectives. The weak adjectives in the dative masculine/neuter are part of the nasal alternation and can be accounted for by the phonetic rule from Section 2.2. The weak adjectives in the dative feminine and nominative plural follow from analogy with ordinary definite DPs (constrained by the

related endings on ordinary and pronominal determiners). In other words, all the weak adjectives surface only under specific phonetic conditions.

The variation in the dative singular and in the nominative plural shows varying preferences as regards strong or weak inflections on adjectives. The preference for strong adjectives in the dative masculine/neuter is a reflex of the preference for more specified forms provided by the adjectival inflection. If the forms of the pronominal determiners are taken into consideration, then the weak adjectives in the dative feminine and in the nominative plural are also a reflex of the preference for more specified forms, the latter provided by the pronominal determiners themselves. As the above discussion has made clear again, masculine/neuter pattern in opposition to feminine/plural. In the next section, I turn to variation in a non-canonical structure. Like in Section 3 and 4, it is lexically restricted.

6. Non-canonical Structures with Optional Inflections on Predeterminer *alle*

In this section, I discuss the presence and absence of the strong endings on the predeterminer *alle* 'all' in the plural. Recall from Chapter 1, Section 4.1.2 that a predeterminer is a type of determiner-like element that intensifies the meaning of the following DP in a certain way.

As is well known, both uninflected *all* and inflected *alle* can appear before elements such as possessive determiners (51) or demonstratives (52). Interestingly, there is a restriction such that the co-occurrence of inflected *alle* and a definite article results in slight degradedness (53b). Note that in this section, I gloss determiners like *die* 'the/those' differently. Recall that they are pronounced as [di(:)]; that is, they are monosyllabic. This will become important below.[28]

(51)   a.   *all mein-e Freunde*
                all my-ST friends
                'all my friends'

        b.   *all-e   mein-e Freunde*
                all-ST my-ST friends
                'all my friends'

(52)   a.   *all dies-e   Leute*
                all these-ST people
                'all these people'

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[28] Cirillo (2016: 197ff) states that inflected *alle* in the (b)-examples in the main text are marked or even ungrammatical for some speakers; that is, uninflected *all* is the dominant or correct form. While I agree that (53b) is indeed marked, (51b) and (52b) are completely fine for me. An informal *google*-search has revealed that uninflected *all* is actually less frequent than inflected *alle*. Compare (i) to (ii):

(i)	a.	*all meine*:	1.4M
	b.	*all diese*:	16.5M
(ii)	a.	*alle meine*:	8.8M
	b.	*alle diese*:	21.2M

These numbers are too large to check every example for relevance. Note though that while there may be many false positives, it is clear that inflected *alle* is fine for many speakers.

b.   *all-e dies-e   Leute*
all-ST these-ST people
'all these people'

(53)   a.   *all die   Leute*
all the.NOM people
'all the people'

       b. ?   *all-e die   Leute*
all-ST the.NOM people
'all the people'

Given the data above, there are two questions that arise here. First, why is the inflection on *all-* optional in (51) and (52)? Second, why is the inflection in (53b) dispreferred?

Starting with the first question, I proposed in Chapter 2, Section 4 that *alle* 'all' in the cases above is located in LPP. Not being part of the DP proper at any point, the predeterminer *alle* can neither undergo nor trigger Impoverishment explaining the strong ending on *alle* itself and on the following determiner:

(54)
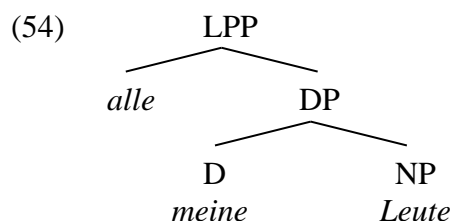
Pafel (1994: 264-266) makes a similar syntactic proposal for inflected *alle* such that this predeterminer selects a DP complement.[29] Several options have been proposed to account for the absence of the inflection on *all-*. There are two basic types.

First, a number of authors have proposed that uninflected *all* is in a different position. For instance, Pafel (1994) proposes that *all* is adjoined to the determiner in D. Bošković (2004: 701) argues inflected *alle* is either left-adjoined to DP or in a higher position; uninflected *all* is in that higher position (left unspecified in Bošković, see his footnote 23). Given the discussion above, this higher position can be identified as the LPP-layer.

The second type of proposal involves the claim that inflected and uninflected *all-* start out in the same position but that uninflected *all* undergoes some further operation. To name just two ideas, we could build on Pafel suggesting that uninflected *all* is a deficient element that starts out in LPP but undergoes adjunction to D late in the derivation. Alternatively, we could formulate an Impoverishment rule that deletes the inflection optionally (cf. Footnote 10). Since the account of the inflection on *all-* has repucussions for the analysis of floating quantifiers (where *all-* must have an inflection), I will not pursue this question further here and turn to the second query.[30]

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[29] Bhatt (1990: 217-18) claims that *alle*, *diese*, and *meine* in *alle diese meine Freunde* 'all these friends of mine' are heads. She proposes that *alle* is adjoined to *diese* and the resulting complex is adjoined to *meine*. The entire complex is inside Spec,DP. Note that it is not a standard assumption that heads reside in phrasal positions.
[30] Notice also that it is sometimes claimed that uninflected *all* and inflected *alle* have different semantics (see Merchant 1996: 183 and Kobele & Zimmermann 2012: 249). For some brief discussion, see Chapter 8.

As far as I am aware, there is no explanation of the contrast in (53), neither in Pafel's nor in any other work. Following an idea from Björn Köhnlein (p.c.), I make a tentative suggestion at the end of this section. To begin, note that the contrast above is found in the other morphological cases as well, here illustrated with the dative:[31]

(55)   a.   *mit all den   Leuten*
             with all the.DAT people
             'with all the people'

        b. ? *mit all-en den   Leuten*
             with all-ST the.DAT people
             'with all the people'

If the (lower) DP is replaced by a disyllabic pronoun, the counterparts of (55a) and (55b) are both fine:

(56)   a.   *mit all denen*
             with all those
             'with all those'

        b.   *mit all-en denen*
             with all-ST those
             'with all those'

The obvious difference between these plural elements is that possessive determiners and demonstratives are disyllabic, but definite articles are monosyllabic. Assuming that LPP constitutes the left periphery of the noun phrase, I formulate a preliminary version of the relevant generalization:

(57)   *Generalization (preliminary version):*
       A disyllabic determiner-like element in the left periphery cannot be followed by a monosyllabic determiner.

Note that the generalization is silent about sequences starting with a monosyllabic element; that is, it says nothing about the grammatical (a)-examples above.

At first glance, it might be suggested that German prefers trochaic feet, which yield a certain phonotactic rhythm in the pronunciation. This suggestion seems to get confirmation when three determiner elements are present (58a). However, we have already seen above that two monosyllabic elements do co-occur (*all die* 'all the'). Furthermore, as pointed out to me by David Fertig (p.c.), the string in (53b) above becomes better with stress on *die* (58b); that is, when *die* functions as a demonstrative. Note that cases as in (58b) are often followed by a relative clause (also Pafel 1994: 238):

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[31] Like *all-*, the demonstrative *dies-* 'this/these' can also do double duty as a determiner and as a predeterminer. Unlike *all-*, its inflection can be left out on the determiner variant (but not on the predeterminer variant) and crucially only in the nominative/accusative neuter yielding *dieses* vs. *dies* (see Chapter 4, Section 5).

(58) a.   *all-e   dies-e   mein-e Freunde*
           all-ST these-ST my-ST friends
           'all these friends of mine'

      b.   *all-e   DIE   Leute (, die   in einer Stadt wohnen)*
           all-ST those.NOM people who in a   city   live
           'all those people (who live in a city)'

While *die* is stressed now, it is still a monosyllabic element. I interpret multiple syllabicity and stress as related measures of heaviness. In other words, I assume that multiple syllables in an element, on the one hand, or stress on an element, on the other hand, leads to heaviness of a word. This groups disyllabic and stressed monosyllabic words together in opposition to unstressed monosyllabic words. With this in mind, I finalize the generalization as follows:

(59) *Generalization (final version):*
      A multisyllabic determiner-like element in the left periphery cannot be followed by a lighter determiner.

Put differently, the relevant elements must be of the same weight or the relevant elements must increase (but not decrease) in weight from left to right. It is not clear to me what the explanation of this phenomenon is.

      Björn Köhnlein (p.c.) makes the interesting suggestion that the generalization above actually involves an epiphenomenon of the fact that (definite) articles are clitics. In more detail, phonology tends to avoid lapses, that is, sequences of two adjacent unstressed syllables in the same phonological word. Assuming that definite articles are clitics, the phonological word [*all-die*] would consist of a sequence of a stressed and one unstressed syllable. In contrast, [*alle-die*] would consist of a sequence of a stressed and two adjacent unstressed syllables, something that is marked in the phonology (yielding the slight degree of grammatical markedness). Unlike articles, demonstratives and possessive determiners are not clitics, and they do not form a phonological word with *all(e)*. Consequently, those sequences are fine, with or without the inflection on *all-*. Similarly, when *die* is stressed, it is no longer a clitic and forms a different phonological word.

      In the last couple of sections, I discussed variation of adjectival inflections in German noun phrases. With this in mind, I return to the traditional generalizations Weak After Strong and the Principle of Monoinflection.

7.   Revisiting Two Traditional Generalizations of Adjectival Inflections

In this section, I return to the two traditional generalizations that describe the strong/weak alternation in German. To recapitulate, compare the canonical cases in (60), where the adjective is weak provided it is preceded by a determiner with a strong inflection (60a); the adjective is strong in all other cases (60b-c):

(60) a.   *d-er gut-e   Kaffee*
           the-ST good-WK coffee
           'the good coffee'

b. *ein gut-er   Kaffee*
    a   good-ST coffee
    'a good coffee'

c. *gut-er   Kaffee*
    good-ST coffee
    'good coffee'

This inflectional distribution can be summarized in the generalization in (61), repeated from Chapter 2, Section 2.1.1 (again, for similar statements, see Bierwisch 1967: 257, Eisenberg 1998: 171-73, Gallmann 1998: 144, G. Müller 2002a: 129, Pfaff 2017: 286, Rehn 2019: 58, Sauerland 1996: 34, Schoorlemmer 2009: 53, and many others):

(61) *Weak After Strong*
      An adjective with a weak inflection is preceded by a determiner with a strong inflection.

It is clear that reference to lexical categories like adjective vs. determiner or determiner-like element is essential to the proper workings of this generalization. As documented above, inflections on elements of the same lexical category are the same. Specifically, independent of the presence or absence of *ein*, an adjective that follows a strong adjective must also be strong (62a). As for determiners and determiner-like elements, they typically exhibit strong inflections. In fact, as long as the determiner(-like) elements appear in the order in (62b), any combination of them will yield a grammatical string:

(62) a. *(ein) gut-er   frisch-er Kaffee*
         a   good-ST fresh-ST coffee
         '(a) good fresh coffee'

      b. *(all-e) (dies-e) (mein-e) Freunde*
         all-ST these-ST my-ST   friends
         'all these friends of mine'

To be clear, the generalization Weak After Strong must take the different lexical categories of the elements involved into consideration. Recall that determiners and determiner-like elements have the categorial feature [+D], but adjectives do not. This distinction prevents us from expecting the second adjective in (62a) and the non-initial determiner(-like) elements in (62b) to exhibit weak inflections.

Note that this generalization is surface-oriented making reference to the notion of precedence. While I already pointed out in Chapter 2, Section 2.1.1 that this generalization is, in and of itself, not an explanation, there are also two basic types of exceptions: (i) strong adjectives can be preceded by determiners with strong inflections; (ii) weak adjectives can occur without determiners with strong inflections preceding them.

The first type of exception holds when complex proper names are embedded in larger nominals. In these cases, strong adjectives that are part of proper names are preceded by the determiners of the larger nominals, where the determiners also have strong inflections:

(63)   a.   *d-em* [*Deutsch-e Bahn*]   *Personal*
              the-ST German-ST Railroad personnel
              '(to) the German-Railroad personnel'

       b.   *d-es* [*Deutsch-e   Bank*] *Chef-s*
              the-ST German-ST Bank   boss-GEN
              '(of) the German-Bank boss'

It is clear that any generalization (or proposal) of the strong/weak alternation must take structure into account. I argued above that the determiners are in nominals different from those of the complex proper names in (63). As the determiners do not adjoin to any parts of AgrPs containing the adjectives, Impoverishment does not apply. This explains the strong adjectives in (63).

      As to the second type of exception, weak adjectives routinely occur in the genitive masculine/neuter without any determiners being present (64a). Furthermore, they also occur in the presence of Saxon Genitives, items often taken to be determiner(-like) elements (64b). Observe that – what looks like – strong inflections (i.e., *-s*) are present in both (64a) and (64b). Crucially though, these inflections are on elements that follow (but not precede) the relevant adjectives – they are on the head nouns. Third, weak adjectives can be preceded by pronominal determiners, which do not have inflections in the first and second person (64c). Finally, weak adjectives can also be preceded by uninflected *dies* 'this' (64d):[32]

(64)   a.   *trotz   heiß-en Kaffee-s*
              despite hot-WK coffee-GEN
              'despite hot coffee'

       b.   *trotz   Peters heiß-en Kaffee-s*
              despite Peter's hot-WK coffee-GEN
              'despite Peter's hot coffee'

       c.   *wir nett-en Studenten*
              we nice-WK students
              'we nice students'

       d.   *dies schön-e   Kleid*
              this pretty-WK dress
              'this pretty dress'

The cases in (64) involve canonical structures. Above, I argued that Impoverishment Rule 2 is at work in (64a-b). Turning to (64c), the weak adjective is due to analogy with related definite DPs. As for (64d), I argued that the feature [+D] on the determiner stem triggers Impoverishment on the adjective. There are other issues with this generalization.

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[32] I argue in detail in Chapter 4, Section 5 that uninflected *dies* is not based on inflected *dieses* such that the ending *-es* has been deleted. This is different for *die* 'the/that/those'. Recall from Section 3 that schwa has been deleted here. Note that, if the generalization above only applies to surface strings, then nominals involving *die* present another exception to it.

Strictly speaking, Weak After Strong is a generalization about inflections on adjectives. More precisely, it describes the dependency of the inflections on the adjectives with regard to the inflections on determiners. The inflectional behavior of determiners or determiner-like elements themselves is not covered. Since inflections on determiners, determiner-like elements, and adjectives are identical, it is desirable to put forth a generalization that captures the distribution of the inflections on all these elements.

A more general statement than the first generalization has come to be known as the Principle of Monoinflection, also repeated here from Chapter 2, Section 2.1.1 (see also, e.g., Darski 1979, Esau 1973, Helbig & Buscha 2001: 274-76, Murphy 2018: 344, Roehrs 2009a: 135, Wegener 1995: 105, 153, cf. Nübling 2011: 178):

(65)   *Principle of Monoinflection*
        The first inflected element within a noun phrase carries the strong and the second one the weak ending.

As with the first generalization, reference to lexical categories must be made. In other words, the first element of a nominal string is taken to be of a different lexical category than the second element. Given that determiner(-like) elements and adjectives can each be stacked, the notion of element (of a certain lexical category) must be understood as group of elements (of the same category). To briefly illustrate, given that (66) involves determiner(-like) elements, they are all considered to be one type of element. As such, they are all taken to be first in the relevant sense, that is, as regards the same lexical category, and the generalization correctly describes the fact that all of them have a strong ending:

(66)   *(all-e) (dies-e) (mein-e) Freunde*
         all-ST these-ST my-ST   friends
        'all these friends of mine'

While this generalization covers more empirical ground, it faces the same general challenges as Weak After Strong. Besides the issues already mentioned above, a determiner-like element with a strong ending may precede an adjective with a strong ending (67a).[33] Similarly, taking indefinite pronouns to be determiner-like elements (Section 2.2), indefinite pronoun constructions present a similar problem (67b):

(67)   a.   *dies-es mein groß-es Glück*
              this-ST my   great-ST happiness
              'this great happiness of mine'

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[33] Note that this case cannot simply be discounted by stating that the adjective is not immediately preceded by *dieses* 'this'. This is so because weak adjectives do follow determiners with a strong inflection even if an uninflected element intervenes:
        (i)   *dies-e   zehn klein-en   Autos*
               these-ST ten   small-WK cars
               'these ten small cars'
Again, a surface-oriented generalization involving precedence cannot capture all the cases.

b. % *jemand-em   ander-em*
    somebody-ST different-ST
    'somebody different'

In Chapter 2, I argued that the demonstrative in (67a) is base-generated in LPP. As such, it can neither trigger nor undergo Impoverishment. As to (67b), I formulated in Section 2.2 three different paradigms for *jemand* 'somebody' and an optional phonetic rule, which has not applied to the inflection on the adjective in (67b).

    The second type of exception concerns a weak ending on the first inflected element. This may hold with determiners (68a), indefinite pronouns (68b), and adjectives (68c):

(68)   a.   *im   Sommer dies-en Jahr-es*
           in.the summer this-WK year-GEN
           'in the summer of this year'

       b. % *jemand-en   ander-en*
            somebody-WK different-WK
            'somebody different'

       c. % *jemand   ander-en*
            somebody different-WK
            'somebody different'

While the occurrence of these strings is admittedly restricted, these distributions do exist. In Section 4, I argued that determiners can optionally undergo Impoverishment in genitive masculine/neuter contexts (68a). In Section 2.2, I provided three paradigms for *jemand* 'somebody' (68b-c) and an optional phonetic rule, which has applied to the inflections on the adjectives in (68b-c). Finally, notice that both generalizations are silent about prenominal adjectives that can appear without inflections (e.g., *das lila/prima/Berliner Auto* 'the purple/great/Berlin car').

    Given these issues, I propose the following generalization. Note that the generalization below is not based on precedence but on structure, where canonical DPs play a crucial role:

(69)   *Strong/Weak Alternation in German*
       Disregarding a few (mostly) lexical exceptions, both adjectives and determiners have strong or weak inflections. Weak inflections only occur in canonical DPs, either
          (a) in the context of certain lexical items, or
          (b) in certain featural contexts, or
          (c) in a combination of (a) and (b).
       Strong inflections occur in all other environments.

To briefly illustrate, (69a) refers to *der*-words, (69b) involves genitive masculine/neuter contexts, and (69c) is instantiated by *ein*-words occurring in the feminine, plural, and in the two oblique cases. Furthermore, (69c) is also manifested by an adjective in dative masculine/neuter contexts that is preceded by a nominal element, and by pronominal determiners in the dative singular and in the nominative plural. These are the main contexts where weak inflections occur.

To sum up, the generalization Weak After Strong is a good initial description of the canonical facts, but it does not capture the whole spectrum. The Principle of Monoinflection is more general but faces the same general issues. Many (but not all) of the issues with these generalizations reveal themselves when we consider non-canonical constructions. An analysis that seeks to be more comprehensive has to include the latter cases as well. If so, the different structures involved must be part of the account of the strong/weak alternation. As mentioned before, I argue that the non-canonical constructions reveal the true nature of adjectival inflections.

Thus far, I have discussed variation in the same dialect – colloquial Standard German. Next, I turn to variation of a different kind by discussing a regional variety. I chose Mannheim German for two reasons. First, the account developed above can be straightforwardly extended to this dialect showcasing its more general applicability. Second and more importantly, the discussion of this regional dialect will reiterate the special status of *ein*-words in the four exceptional cases, delineated in Chapter 2, Section 2.2.2 as masculine/neuter in the nominative and accusative.

8.   Dialectal Variation: Mannheim German

In his critique of Bierwisch (1967), Blevins (1995), Wunderlich (1997), and B. Wiese (1999), G. Müller (2002b) discusses a regional variety of German spoken in and around Mannheim, a dialect that is influenced by the local palatinate variety. For convenience, I refer to this dialect as Mannheim German. G. Müller observes that regular nominative masculine forms are used in accusative masculine contexts (data from G. Müller 2002b: 354):

(70)   a.   *Ich kenn* [*d-er ander-e   Mann*].   (Mannheim German)
             I   know the-ST other-WK man
             'I know the other man.'

        b.   *Der hat* [*ein groß-er Hubser*] *gemacht.*
             he has a big-ST jump   done
             'He did a big jump.'

        c.   *Ich mag* [*gut-er   Wein*].
             I   like   good-ST wine
             'I like good wine.'

        d.   *Ich seh* [*ein-er*].
             I   see one-ST
             'I see one.'

Müller concludes that all analyses including his own can straightforwardly account for this dialect by deleting a rule or changing the featural specification of a rule. We see below that the current proposal can also explain this variety. Unlike G. Müller's discussion, here I also address the weak inflections and *ein*-words.

I start by updating the two inflectional paradigms. Considering (70a), note that the strong and weak ending *-en* in the accusative masculine is replaced by the strong ending *-er* and the weak ending *-e*, respectively ((70b-d) provide additional evidence that the nominative masculine form occurs in accusative contexts). The inflectional paradigm of Mannheim German is summarized in Table 10:

Table 10: Strong and Weak Endings in Mannheim German

STRONG	[-F, -N]	[-F, +N]	[+F, -N]	[+F, +N]	WEAK	[-γ]	[+F, +N]
[-O, -S]	*-er*	*-es*	*(-e)*	*-e*	[-O]	*(-e)*	
[-O, +S]	*-er*	*-es*	*(-e)*	*-e*			
[+O, -S]	*-em*	*-em*	*-er*	*{-en}*	[+O]	*{-en}*	
[+O, +S]	*-es*	*-es*	*-er*	*-er*			

The rules for vocabulary insertion are provided below. There are three differences to Standard German as regards adjectival inflections: (i) the rule inserting *-en* in the accusative masculine has been deleted, (ii) both rules inserting *-er* have been changed in their feature specifications, and (iii) due to the latter change, these two rules have been reordered using the same specificity metrics as above (in Table 11 below, I juxtapose the rule systems of Standard and Mannheim German):

(71)   Strong (except for feminine *-e* and plural *-en*):
        a.   [+F, +N, +O, +S]   →   *-er*

        b.   [+F, +N, -O, αS]   →   *-e*

        c.   [αF, -N, αO, βS]   →   *-er*

        d.   [-F, +O, -S]   →   *-em*

        e.   [-F, αO, βS]   →   *-es*

(72)   Weak (including strong feminine *-e* and plural *-en*):
        a.   [-γ, -O]   →   *-e*

        b.   []   →   *-en*

As regards *ein*-words, the rule that inserts accusative masculine *einen* 'a' has been deleted yielding the following insertion rules. Recall that if (73a) does not apply, (73b) will in conjunction with the inflectional rules in (73c) or (73d):

(73)   a.   [+D][-F, -O]   →   *ein* / __ word]Φ
        b.   [+D]   →   *ein-*
        c.   [+F, +N, +O, +S]   →   *-er*
        d.   etc.

164

Besides the three differences in adjectival inflections, this adds a fourth difference to Standard German.

More generally, deleting the vocabulary insertion rules for accusative masculine *-en* and for accusative masculine *einen* 'a' highlights the fact that the feature combination of "nominative/accusative + masculine/neuter" has a special status (see again (73a) above).

The vocabulary insertion rules for the two varieties are provided in Table 11 juxtaposing the strong endings in (1), the weak endings in (2), and *ein* in (3) in Standard German and their counterparts in (1'), (2'), and (3') in Mannheim German:

Table 11: Comparison between Standard and Mannheim German

Standard German			Mannheim German		
1a. [+F, -N, +O, αS]	→	*-er*	1a'. [+F, +N, +O, +S] →		*-er*
[+F, +N, -O, αS]	→	*-e*			
			b'. [+F, +N, -O, αS] →		*-e*
b. [αF, αN, αO, αS]	→	*-er*			
			c'. [αF, -N, αO, βS] →		*-er*
c. [-F, -N, -O]	→	*-en*			
[-F, +O, -S]	→	*-em*	d'. [-F, +O, -S]	→	*-em*
d. [-F, αO, βS]	→	*-es*	e'. [-F, αO, βS]	→	*-es*
2a. [-γ, -O]	→	*-e*	2a'. [-γ, -O]	→	*-e*
b. []	→	*-en*	b'. []	→	*-en*
3a. [+D]	→	*ein-* / [-F, -N, -O, +S]	3a'. [+D][-F, -O]	→	*ein* / __ word]$_\Phi$
b. [+D][-F, -O]	→	*ein* / __ word]$_\Phi$	b'. [+D]	→	*ein-*
c. [+D]	→	*ein-*			

Note again that the rule inserting *-en* in (1c) in Table 11 has no counterpart in (1'). Given that, all vocabulary insertion rules for adjectival inflections in Mannheim German in (1a'-e') have the feature [S]. Impoverishment applies as in Chapter 2 but now to all (unambiguously) strong inflections.

To sum up, like the five other analyses, the current system can also account for the regional variety of Mannheim German, including the variation seen with weak inflections and *ein*-words. Notice that I focused here on one regional dialect to show that the current system can capture dialectal variation as well. For the description of other dialects, see Schirmunski (2010); for some tentative discussion of Alemannic German, see Chapter 8, Section 2.1.

9. Conclusion

This chapter continued the discussion of adjectival inflections begun in Chapter 2. Here I focused on variation in (mostly) canonical DPs where unexpected strong or unexpected weak adjectives occur. The unexpected strong adjectives are due to pronominal determiners not triggering Impoverishment. The unexpected weak adjectives follow from a phonetic rule,

presumably a reflex of markedness reduction. The unexpected weak inflections on determiners are accounted for by a more general application of Impoverishment Rule 2. We arrive then at three different mechanisms that explain the weak adjectives: one primary mechanism (Impoverishment Rule 1) and two secondary mechanisms (phonetic rule, Impoverishment Rule 2). Unlike the primary mechanism, the secondary ones apply in restricted contexts, that is, certain constructions and/or specific featural contexts. Note that the secondary mechanisms are brought to light when the primary one does not apply. The main patterns of Chapters 2 and 3 along with their analyses are summarized in Table 12 (the inflection under consideration is set off by a hyphen):

Table 12: Summary Chart

Construction: Example	Inflection: Analysis
Regular DP: *der heiß-e schwarz-e Kaffee*	Weak: *Impoverishment Rule 1*
Regular DP: (i) *heiß-en Kaffees*; (ii) *dies-en Jahres*	Weak: *Impoverishment Rule 2*
Regular DP: %*mit frischem schwarz-en Kaffee*	Weak: *Phonetic Rule*
Regular DP: *ein heiß-er schwarz-er Kaffee*	Strong: ein-*words*
Close Appositions: *der Indianer Groß-er Bär*	Strong: *Low Right-Adjunction*
Indefinite Pronoun Constructions: *wer ander-er*	Strong: *Mid Right-Adjunction*
Noun-Adjective Exclamatives: *Schwein, schwarz-es!*	Strong: *Mid Right-Adjunction*
Loose Apposition: *wir, begeistert-e Linguisten*	Strong: *High Right-Adjunction*
Agreement in Pronominal DPs: *ich dumm-er Idiot*	Strong: *Pronominal Determiner*
Dis-agreement in Pronominal DPs: *ihr jung-es Gemüse*	Strong: *Complex Specifier inside DP*
Split Topicalization: *bunt-e Hemden ... diese da*	Strong: *Separate Base-generation*
Complex Compound Modifiers: *dem Deutsch-e Bank Chef*	Strong: *Nominal Compound*
Vocatives: *Dumm-er Idiot!*	Strong: *Voc Head and Absence of Det*
Predeterminer: *dieses mein groß-es Glück*	Strong: *Determiner Outside DP Proper*

Besides these cases, I also discussed inflectional variation on certain adjectives (e.g., *lila* 'purple', *prima* 'great', *Berliner* '(from) Berlin'), and I addressed the uninflected forms of the definite article and its related distal demonstrative. Furthermore, I discussed the optional inflection on the predeterminer *all-* 'all'. On the basis of these cases, I demonstrated that the generalization Weak After Strong and the more general Principle of Monoinflection face a number of challenges. Finally, I showed that the current system can be straightforwardly extended to Mannheim German, one of the dialects in Germany. The overall conclusion is that a purely surface-oriented account does not work – the consideration of structure appears to be an essential part of any proposal. The next chapter discusses consequences of the current proposal for other accounts.

Chapter 4: Consequences for Other Analyses

## 1.	Introduction

In this chapter, I turn to some other consequences of the analysis developed in Chapter 2. Unlike the previous chapter, I now consider implications for other proposals. In so doing, I provide more evidence for the hypotheses proposed in Chapter 1. I consider three types of accounts where adjectival inflections are revealing as regards the proposed structure (Hypothesis 2a). Starting with analyses that seek to account for the presence of spurious indefinite articles, I show that weak adjectives present problems for structures involving Predicate Inversion and for analyses postulating null nouns. Second, discussing discontinuous noun phrases, I argue that strong endings on topicalized adjectives are only compatible with split topicalizations being analyzed as the base-generation of two separate nominals but not as movement involving one nominal. Third, returning to weak inflections, I show that adjectives involving a restrictive or a non-restrictive interpretation have the same basic structure. The discussion of these consequences documents some other properties of adjectival inflections. For instance, I demonstrate that strong endings are not "referential" but simply serve to make nominal features such as case, number, and gender visible (Hypothesis 2b). I begin by discussing the analysis involving Predicate Inversion and take up the discussion of the other points in the order mentioned above.

## 2.	Weak Adjectives in the Context of Spurious Indefinite Articles

In this section, I discuss two types of analysis that seek to account for the occurrence of spurious indefinite articles in Dutch. These proposals involve Predicate Inversion, on the one hand, and null nouns, on the other hand. Extending the discussion to German, it is shown that weak adjectives follow the spurious articles. Given that both proposals involve structures different from canonical DPs, the weak adjectives indicate that these types of analysis are not compatible with the system laid out in Chapter 2.

### 2.1.	Weak Adjectives in Structures Involving Predicate Inversion

Taking Dutch as their empirical basis, Bennis *et al*. (1998) discuss – what they call – *wat*-exclamative constructions (1a). Like some other constructions they investigate (1b), a singular indefinite article occurs with a plural noun. They call this element spurious article. This article is syntactically obligatory in the first construction but not in the second, where its presence or absence has semantic consequences (data are taken from Bennis *et al*. 1998: 98, 101, see also den Dikken 2006):

(1)	a.	*Wat *(een) jongens!*			(Dutch)
			what	a	boys
			'What boys!'

b. 	*idioten van (een) mannen*
	idiots of a men
	'idiots of men'

I focus on the exclamative construction in (1a) as that has a counterpart in German.

Adopting the general framework of den Dikken (1995), Bennis *et al.* (1998) 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. Bennis *et al.* propose that D is an [+EXCL] operator, and this element 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. The authors interpret this as something similar to the Verb Second Constraint in the clause (their tree diagram on page 106 is slightly adapted here):

(2)

```
                    DP
           _____/  _____
       Wat_k              D'
                  _____/  _____
          een_i+[+EXCL]           XP
                           _____/  _____
                       jongens            X'
                                    _____/  _____
                                  t_i              t_k
```
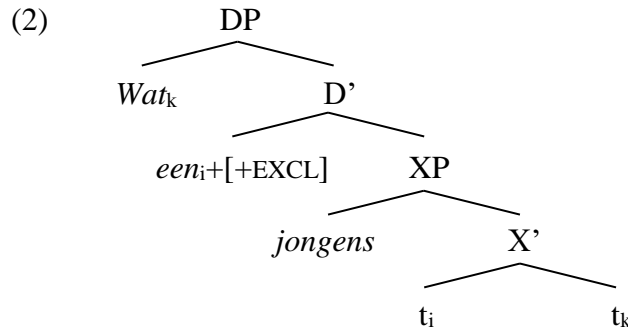
The counterpart of the *wat*-exclamative in German is different. First, unlike in Dutch, the prepositional element *für* 'for' must be present (3a). Second, the spurious article is not obligatory in this construction. In fact, as pointed out in Chapter 1, Section 2.2, it typically occurs in colloquial northern dialects (% indicates dialectal variation). Note again that this *ein* has a typical plural ending as seen in the attested example in (3b), taken from the Appendix:

(3)	a. 	*Was *(für) Idioten!*
		what for idiots
		'What idiots!'

	b. %	*"Was für eine Idioten" sagte Liam*
		 what for a-PL idiots	said Liam
		'"What idiots!", said Liam'

After these preliminary observations, I return to the main line of investigation. To make these cases relevant, it is important to determine how adjectives, especially their inflections, fare when they are added to the subject of the small clause.

Inserting an adjective yields an interesting asymmetry. With no determiner present, the adjective has a strong ending (4a). This is expected and follows from the system developed in Chapter 2. When the spurious article is present, the adjective is weak. In fact, all the examples I

have found involve weak adjectives only. Consequently, I mark the strong inflection in the attested example in (4b) as ungrammatical:

(4)   a.   *Was für geil-e(*n)   Bilder!*
            what for awesome-ST/*WK pictures
            'What awesome pictures!'

      b. % *Was für ein-e geil-e*(n)   Bilder   wer hat die   bloß gemacht*
            what for a-PL awesome-WK/*ST pictures who has those PRT made
            'What awesome pictures! Who in the world took those?'

With Bennis *et al.*'s (1998) discussion in mind, the structure for (4b) would presumably look as follows:

(5)   *Predicate Inversion*
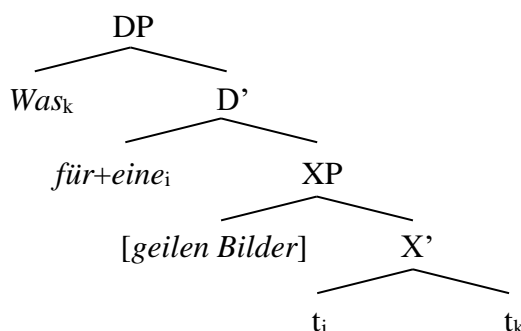
The question that arises now is how to account for the weak ending in (4b), given this structure.[1]
        Note that the Predicate Inversion structure above is configurationally identical to pronominal DPs involving dis-agreement. This type of case was discussed in Chapter 2, Section 3.5 and is repeated below as (6). Notice first that both the spurious article in (5) and the pronoun in (6b) move from a lower position to the DP-level. Second and more importantly, in both cases, the adjective and noun form a complex specifier. In other words, unlike canonical DPs, the two cases in (5) and (6b) have an additional layer of embedding. However, unlike (4b), the nominal in (6a) involves a strong adjective:

(6)   a.   *ihr   dumm-e*(s) Pack*
            you(PL) stupid-ST/*WK gang
            'you stupid gang'

---

[1] In their discussion of *N of a N*-constructions, Bennis *et al.* (1998) 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.

b.

```
            DP
          /    \
       ihr_i    DisP
              /      \
   [_AgrP dummes Pack]  Dis'
                      /      \
                    Dis       ArtP
                            /      \
                          t_t       XP
                                    e_N
```
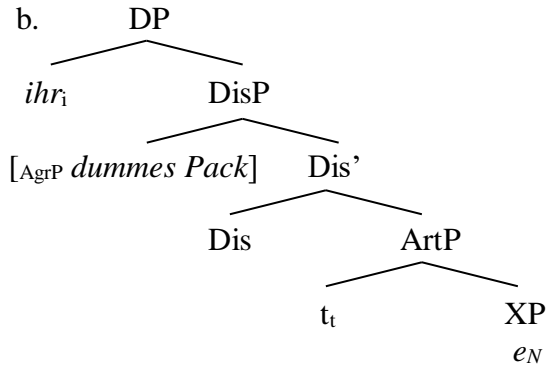
As mentioned above, German *ein* exhibits a typical plural ending in these cases. It appears then as if the spurious article morphologically agrees with the plural noun. Now, Bennis *et al.* (1998: 94, 97) explicitly claim that the indefinite article does not form a constituent with the following noun. In their base positions, though, the noun and the indefinite article are in a Spec-head relation. This, for instance, accounts for the absence of spurious articles in English, as witnessed in the ungrammatical string **What a men!*.

In order to explain the contrast in the plural between English and German, we could assume that English *a* is specified for singular morphological number but that German *ein* is unspecified as regards morphological number: [αPL morph] (see Chapter 5). Given the assumed Spec-head relation, English *a* is only compatible with a singular noun but German *ein* is with both a singular and 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 that concord is not a sufficient condition for weak adjectives. What is required is an appropriate structure. As is clear from the above discussion, the Predicate Inversion structure is not a regular DP – the adjective is more deeply embedded. This leaves the occurrence of the weak adjective unexplained. However, it is possible that the structure in (5) in not correct. There are several options. For instance, one option might be to assume that a null article is present as part of the nominal in Spec,XP. However, as documented in Chapter 2, Section 2.3, null articles occur with strong adjectives (except in the genitive masculine/neuter). In other words, a null article cannot account for the weak adjective either. To keep Bennis *et al.*'s structure, we would need to change the system of Chapter 2 to account for the weak adjectives here.

As a second option, we could suggest that the adjective itself is in a position different from that 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*]]]]

Importantly, the adjective is also in the specifier below the determiner, just as in the canonical cases in Chapter 2 (note that this holds independently of whether or not the adjective is base-generated or moved there). Updating the structure in (5), notice though that the entire RP, which

includes the noun in (7b), would form the subject located in Spec,XP. This would yield essentially the same configuration as in (5). Note also that the entire DP/NumP in (7b) cannot form the subject in (5) as it would involve a null article in the plural, an option that does not explain the weak adjective as already pointed out above.

To sum up this subsection, at best, we can observe that the indefinite article in these constructions is not entirely spurious in German. Accepting Bennis *et al.*'s (1998) structure (or adopting a similar structure), we would need to modify the analysis in Chapter 2 to account for the weak adjectives. It is currently not clear to me how to do that without losing the account of the canonical and other non-canonical constructions. If a solution can be found, this modification should preferably not be another (construction-specific) mechanism that simply serves to "save" the Predicate Inversion analysis. At worst, the weak endings on the adjectives hint at the fact that Bennis *et al.*'s structure is not on the right track (for other issues, see Matushansky 2002).

Note that Chapters 2 and 3 documented a number of points that speak in favor of keeping the current analysis – it accounts not only for the canonical but also for many non-canonical cases. Indeed, if we accept the system laid out in Chapter 2, then this discussion reiterates the fact that the inflections of the adjectives are closely tied to the structure of the noun phrase as a whole (Hypothesis 2b). If so, we have a means to narrow down the choices of possible analyses of other constructions. In the next subsection, I consider another type of analysis that seeks to account for the occurrence of spurious articles. We will see that given current assumptions, this type of proposal is also ill-equipped to deal with weak adjectives.

2.2. *Weak Adjectives in Structures Involving Null Nouns*

Extending earlier work by Leu, later published as Leu (2008a,b), van Riemsdijk (2005) also discusses spurious articles in Dutch. Discussing various constructions, the example in (8) shows a non-*wh*-exclamative ((8) is taken from van Riemsdijk 2005: 165, see also Bennis *et al*. 1998: 92 fn. 7):

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

Unlike the Predicate Inversion analysis, van Riemsdijk argues for the presence of a semi-lexical null noun. He labels this element TYPE (again, capitalization here indicates non-pronunciation). Based on his structure on page 173, the datum in (8) is analyzed as in (9), where !!! stands for an exclamative operator:

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

With this in place, I return to the discussion of the spurious articles and weak adjectives in German. Since I have not come across any examples like (8) in German that involve adjectives, I use a slightly different type of case as the basis for discussion – examples where *so* 'so' precedes the indefinite articles. As far as I can see, this additional element does not affect the point to be made.

The presence of null nouns allows a different analysis of the spurious articles. Consider (10a), an example taken from the Appendix. Unlike Predicate Inversion, here a null noun is

present by assumption, and the ending on *ein* could be interpreted as feminine agreeing with that null noun (recall that the strong inflection *-e* is ambiguous between feminine and plural in the nominative/accusative). As for the postulated null noun with feminine gender, an overt counterpart in German would be *Art* 'kind' (10b). In certain "affective" contexts, this noun would remain unpronounced (10c):

(10)   a. %   *ich hab mal [so'n-e   ferien]   in den alpen mit   ner jugendgruppe gemacht*
              I   have PRT so.a-PL/FEM holidays in the Alps with a   youth.group   made
              'Once, I had such a vacation with a youth group in the Alps.'

       b.   *so eine Art   Ferien*
              so a   kind holidays
              'such a kind of holidays'

       c.   *so eine ART   Ferien*
              so a   TYPE holidays

In other words, the bracketed string in (10a) is analyzed as in (10c). Note that the presence of a null noun leads to a split of these structures into two subparts, each involving a noun (i.e., *ART*, *Ferien*). To be clear, then, the postulation of null nouns involves an analysis different from the Predicate Inversion structure.

　　　　Notice, however, that this type of account also faces problems as regards weak adjectives. Considering an attested example with an adjective (11a), there are two ways to analyze this datum as regards the modifier. The adjective could precede the null noun (11b), or it could follow the null noun (11c):

(11)   a. %   *ihr macht so ne geilen   lieder*
              you make so a   awesome songs
              'You compose such awesome songs.'

       b. (*)   *so eine geilen ART Lieder*

       c. (*)   *so eine ART geilen Lieder*

There are strong indications that both analyses in (11b) and (11c) are not correct. Starting with (11b), it is clear that the feminine form *eine* can only occur in the nominative/accusative. I point out that *-en* is not a possible adjective ending, strong or weak, in those instances (it would be *-e*). As for (11c), the adjective is located in the second subpart together with the plural noun. This type of structure is familiar from pseudo-partitive constructions. This seems an avenue worth taking. Löbel (1989) observes in this regard that the second nominal in pseudo-partitives can be in all four morphological cases in German. In light of this, I entertain the possibility that the adjective inflection *-en* could be interpreted as weak or strong.

　　　　Starting with the strong endings, I observe that *-en* can only occur in the dative plural (the strong endings in the other cases are *-e* or *-er*). In the dative plural, the head noun usually takes *-n* (e.g., *mit geilen Lieder-n* 'with awesome songs'). Crucially though, *Liedern* is not at all

possible in (11a). This means that *geilen* cannot be in the dative plural and thus cannot be strong. If so, then *geilen* should be weak in these instances.

Note first that the weak ending *-en* occurs in all morphological cases in the plural. As argued in Chapter 2, this implies the presence of a determiner triggering Impoverishment. However, *geilen* in (11c) does not have its own relevant determiner (recall again that a null determiner, arguably present in the second nominal in (11c), does not trigger Impoverishment). This leaves the option of the weak inflection unexplained. I conclude then that the presence of a null feminine noun cannot explain (11a). In other words, weak adjectives also present a problem for this type of analysis (for other issues, see Corver & van Koppen 2011: 6 fn. 6, 69 fn. 24).

In order to explain the weak adjectives in the current system, it is clear that the indefinite articles and the adjectives must form regular DPs. While I cannot fully discuss all these constructions here, note that they are, in some sense, "affective" or "emotive." As such, I would like to suggest that such contexts license the occurrence of these constructions in the plural. In Chapter 8, Section 2.2.3, I propose that these contexts license the presence of certain null operators (cf. the operator !!! in (9)). These null operators are flagged by *ein* yielding the instances of the plural article. The latter triggers Impoverishment on the adjectives as discussed in Chapter 2.

Summarizing the last two subsections, I documented that overt plural indefinite articles are followed by weak adjectives in German. Given the current analysis, I pointed out that these weak adjectives pose a challenge for accounts involving Predicate Inversion or null nouns. There are two ways to proceed: either the current analysis of adjectival inflections needs to be modified, or the above accounts of the spurious articles need to be changed. In other words, proponents of analyses involving Predicate Inversion or null nouns need to find a solution to explain the weak adjectives in these non-canonical constructions (NB: this proposal should also explain the canonical and other non-canonical cases). Since I am not aware of any such attempts, the alterntive is to suggest that constructions with spurious articles involve regular structures licensed in certain contexts.

More generally, given that the current analysis has broad empirical coverage as regards adjectival inflections, it shows good promise for a (more) comprehensive account. Indeed, the current system has revealed a number of interesting consequences. Most importantly, adjectival inflections in German are related to abstract structure (Hypothesis 2b). To reiterate, if this turns out to be true, then this account narrows down the options of possible structural analyses of nominals. In the next section, I discuss strong adjectives that raise issues for certain analyses of split topicalization.

3. Strong Adjectives in Structures Involving Split Topicalization

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 indicated by slash marks below:

(12) a. *Ich habe keine Bücher gelesen.*
          I   have no   books   read
          'I have read no books.'

b.   /**BÜcher** *habe ich* **KEI\ne** *gelesen.*
 books   have   I   none   read.
 'As for books, I have read none.'

To establish some terminology, I refer to this construction as split topicalization, to the left nominal as split-off, and to the right one as source.

As is well known, discontinuous DPs exhibit a number of paradoxical properties indicating both movement and separate base-generation. With current purposes in mind, I focus on the intriguing behavior of adjectives (for paradoxical properties not related to adjectives, see, for instance, Ott 2011a and other references mentioned below). To account for these properties, different proposals have been made. In what follows, I discuss three types of analysis (see also van Hoof 2006 and references cited therein). I show that movement out of one noun phrase faces problems in the account of strong adjectives. Similarly, a copy-and-delete approach to split topicalization cannot account for strong adjectives either. However, the base-generation of two independent noun phrases is completely compatible with the discussion in Chapter 2.

3.1.   Movement out of the Source

Van Riemsdijk (1989: 122) observes that the linear order of the adjectives in split topicalizations 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):[2]

(13)   a.   *ein neues amerikanisches Auto*
 a   new   American   car
 'a new American car'

  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
 'As for an American car, I cannot afford a new one.'

  b. *   ***Ein neues Auto*** *kann ich mir* **kein amerikanisches** *leisten.*
 an   new   car   can   I   REFL no   American   afford

This can straightforwardly be explained under a movement analysis. In more detail, 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, Murphy 2018):

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[2] The judgments in (13b) and (14b) are not uncontroversial and probably too strong (see Fanselow & Ćavar 2002: 79-80, Ott 2011a: 30). However, I continue providing the original judgments.

(15)   a.   ***Ein amerikanisches Auto*** *kann ich mir   kein neues leisten.*
            an American   car can I   REFL no   new   afford
            'As for an American car, I cannot afford a new one.'

       b.   [***Ein amerikanisches Auto***]$_i$ *kann ich mir* [$_{DP}$ ***kein neues*** [t$_i$]] *leisten..*

Note that there are two determiners in (15), *ein* 'a' and *kein* 'no', where *ein* in the split-off is apparently doubling the determiner element in the source. To explain the presence of *ein* in the split-off, it is assumed that this element is inserted later in the derivation. In Section 3.4, I show that late insertion of *ein* is unlikely to be correct.

Indefinite articles are usually absent in the split-off. Crucially, the distribution of adjectival inflections in such cases indicates a different type of analysis. Note in this regard that adjectival inflections differ in regular and discontinuous noun phrases: the adjective is weak in a regular, unsplit DP (16a); it is strong, if the adjective is topicalized (16b):

(16)   a.   *Ich habe kein-e bunt-en   Blumen gekauft.*
            I   have no-ST multi.colored-WK flowers bought
            'I have bought no multi-colored flowers.'

       b.   [***Bunt-e***   ***Blumen***]$_i$ *habe ich* [$_{DP}$ ***kein-e*** [t$_i$]] *gekauft..*
             multi.colored-ST flowers   have I   none-ST   bought
            'As for multi-colored flowers, I have bought none.'

With Chapter 2 in mind, I point out that the weak ending in (16a) shows that Impoverishment has taken place. The strong ending in (16b) indicates that Impoverishment has not occurred. This implies that either (16b) involves a non-canonical structure or that no relevant determiner is present in the split-off (or both).

Given a movement type of analysis, note that the entire noun phrase is assembled first. This is followed by movement of the split-off. Observe though that late separation, that is, building a regular DP and then moving the lower part out would bring about a (wrong) weak ending in (16b). In other words, assuming movement out of the DP, the change of the adjective ending from weak in (16a) to strong in (16b) becomes mysterious. As documented in Chapters 2 and 3, a simple surface-oriented account of the strong/weak alternation does not suffice to explain these data.[3]

However, a strong ending on an unpreceded adjective is exactly what we expect if the two noun phrases in (16b) are base-generated independently of each other; that is, these elements do not seem to be related by movement. In the latter case though, the structure is different – there are two separate nominals, and the determiner that could trigger Impoverishment on the adjective is in the other noun phrase. As a consequence, Impoverishment does not occur, and the adjective in the split-off surfaces with a strong inflection.

To drive this point home, note that two related adjectives may show different inflections when split up such that the adjective in the source is weak, but the adjective in the split-off is strong (cf. Haider 1993: 215 for similar data). Compare (17a) to (17b):

---

[3] Note that proponents of this and other structures of split topicalization do usually not provide (m)any details of their account of the strong/weak alternation of adjectives.

(17) a. *Ich habe kein-e groß-en bunt-en Blumen gekauft.*
    I have no-ST big-WK multi.colored-WK flowers bought
    'I have bought no big multi-colored flowers.'

  b. **Bunt-e**   **Blumen** *habe ich* **kein-e groß-en** *gekauft.*
    multi.colored-ST flowers have I no-ST big-WK bought
    'As for multi-colored flowers, I have not bought any big ones.'

Again, a movement analysis cannot account for the different endings on the two adjectives. This is particularly clear since the underlyingly higher adjective (*groß* 'big') is weak, but the underlyingly lower adjective (*bunt* 'multi-colored') is strong. With the determiner having moved to the DP-level in the source, all adjectives should have the same inflection in a nominal split up by subsequent movement.[4]

3.2. *Movement but not out of the Source*

Fanselow and Ćavar (2002) hypothesize that split topicalizations involve movement but crucially *not* out of the DP that will surface in two different parts. 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 (18a) as in (18b):

(18) a. **Wagen** *hat er sich noch k-***einen** *leisten können.*
    car has he REFL yet NEG-one afford could
    'As for a car, he has not been able to afford one.'

  b. {~~einen~~ Wagen} hat er sich noch k- {einen ~~Wagen~~} leisten können

Note that these authors treat *keinen* 'no/none' as a composite form consisting of negative *k-* and the indefinite article *einen* (Chapter 5).

  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 be suspended yielding two instances of *ein*:

(19) a. **Einen Wagen** *hat er sich noch k-***einen** *leisten können.*
    a car has he REFL yet NEG-one afford could
    'As for a car, he has not been able to afford one.'

---

[4] There is another type of analysis involving movement out of the source. 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
      'As for such a car, I cannot afford one.'
    b. [DP *so'nen* [NP *Wagen*]i] *kann ich mir* [DP *keinen* ti] *leisten*
This proposal leads Tappe to revise standard assumptions about chains, which raises other issues.

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 (20a). In fact, when the determiner in the source is definite, the one in the split-off cannot be definite (20b):

(20)　a.　***Einen Wagen*** *hat er sich nur* ***diesen*** *leisten können.*
　　　　　a　　car　　has he REFL only this　　afford could
　　　　　'As for a car, he has only been able to afford this one.'

　　　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 (20) to be the reverse. It could be suggested though that this type of contrast is handled by repair rules. However, we see in Section 3.4 that there is some indication that *ein* in (20a) is not due to late insertion.

　　　Returning to the main line of argument, we can observe that this type of proposal is not compatible with the analysis of adjectival inflections in Chapter 2 either. Specifically, constructing a regular DP first (*keine bunt-en Blumen* 'no multi-colored-WK flowers'), we would expect the weak ending *-en* on the adjective in the split-off, contrary to fact. Note that this would hold independently of whether or not *keine* is treated as a composite (21b) or not (21c):

(21)　a.　***Bunt-e***　　***Blumen*** *habe ich* ***kein-e***　*gekauft.*
　　　　　multi.colored-ST flowers have I　　none-ST bought
　　　　　'As for multi-colored flowers, I have bought none.'

　　　b. (*)　{~~eine~~ bunt-en Blumen} habe ich k- {ein-e ~~bunten Blumen~~} gekauft.

　　　c. (*)　{~~keine~~ bunt-en Blumen} habe ich {kein-e ~~bunten Blumen~~} gekauft.

As mentioned already above, a surface-oriented explanation of the strong ending is not enough. In view of these and some other issues (e.g., the licensing of Negative Polarity Items, see Bosse 2009: 278), a different technical implementation of split topicalizations is called for.

3.3.　Separate Base-generation

Some alternative analyses take as their point of departure Fanselow and Ćavar's (2002) generalization that split topicalizations involve movement but crucially *not* out of the DP that surfaces in two separate parts. Specifically, these proposals involve the base-generation of two separate nominals in the VP and moving one of them (or both) to the left. 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. There have been several proposals to make this idea concrete.

Specifically, Bosse (2009) proposes an analysis where she links split topicalizations to Restrictive Elliptical Appositives (van Riemsdijk 1998b). Ott (2011a) argues for an account that involves breaking up a symmetric bare-predication structure. Third, Roehrs (2011) also argues for the base-generation of two separate nominals. All three analyses are compatible with the discussion in Chapter 2. Given that the third analysis involves fewer new assumptions, I illustrate this proposal here in some detail.

Basing the following account on Fanselow (1988), Roehrs (2011) proposes that there is a division of labor between the syntax and the semantics. In particular, it is suggested in that paper that split topicalizations involve the separate base-generation of an argumental DP and a related predicative nominal in the same local domain, the VP. The argumental part contains an empty noun (e_N). The initial stage of the derivation of (22a) is illustrated in (22b):

(22) a. ***Bunt-e   Blumen*** *habe ich* ***kein-e*** *gekauft.*
          multi.colored-ST flowers have I   none-ST bought
          'As for multi-colored flowers, I have bought none.'

  b.
```
                        VP
            ┌───────────┴───────────┐
          AgrP                      V'
        bunte Blumen         ┌──────┴──────┐
                            DP              V
                          keine eₙ       gekauft
```
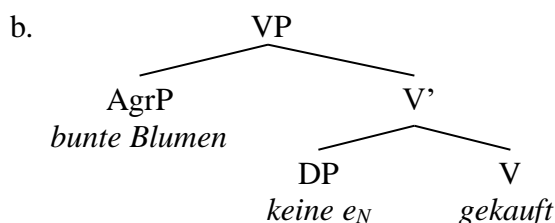
Both the predicate split-off and the argumental source undergo movement to the left: AgrP undergoes topicalization to Spec,CP; DP moves for case. This yields the correct word order. Assuming that the overt nominal in the split-off and e_N in the source are of the same semantic type, the "unsaturated" 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 the issue of inflection, both nominals involve regular structures where the adjective in the split-off is in Spec,AgrP. It is clear though that the adjective is in a nominal different from that of the determiner, and as such Impoverishment does not occur. As a consequence, the CNG features on the adjective are not reduced, and the adjective surfaces with a strong ending. This gives the desired result (see also Chapter 2, Section 3.6). More generally, proposals involving separate base-generation are fully compatible with the analysis in Chapter 2. I briefly return to the discussion of *ein*.

3.4. Ein *in the Split-off*

We saw in Section 2 that *ein* is not entirely spurious in that it triggers a weak ending on a following adjective. This means that *ein*, or more precisely its feature bundles, cannot be inserted late. There is independent evidence for this conclusion. It derives from indefinite pronoun constructions occurring as split topicalizations.

As illustrated in Chapters 2 and 3, adjectives can follow an indefinite pronoun (23a). Interestingly, an adjective preceded by an indefinite article cannot (23b):

(23) a.   *etwas   Amerikanisches*
            something American
            'something American'

      b. * *etwas   ein Amerikanisches*
            something an American

At first glance, we might claim that this is a phonetic restriction such that the pronoun and *ein* cannot be adjacent. However, consistent with (23b), split topicalizations formed on the indefinite pronoun construction cannot involve *ein* in the split-off either. Compare (24a) to (24b):

(24) 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
            'As for American stuff, he has been able to afford something.'

Considering *nichts (*ein) Amerikanisches* 'nothing American', the same facts hold if the source involves the negative counterpart of *etwas* 'something':

(25) 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
            'As for American stuff, he has not been able to afford anything.'

In view of the ungrammaticality induced by *ein* in (24b) and (25b), a phonetic restriction cannot explain all the ungrammatical cases: unlike in (23b), the pronoun and *ein* are neither adjacent in (24b) nor in (25b). Furthermore, if *ein* were inserted late (i.e., in PF), the local context of *ein* inside the split-off in the grammatical (24a) and (25a) and in the ungrammatical (24b) and (25b) would be the same; that is, *ein* would precede the adjectives (and be separated from the pronouns) in both the grammatical and ungrammatical cases of (24) and (25). Consequently, this cannot explain the difference between the (a)-examples and the (b)-examples above. Rather, the difference between these cases seems to be located in the source: while *eins* 'one' and *keins* 'none' are pronominal forms related to *ein* 'a' and *kein* 'no', *etwas* 'something' and *nichts* 'nothing' are inherent pronouns.

Above, I suggested that the split-off is related to the source by interpreting the former inside the latter. Note that interpretation occurs at LF (and not PF). Now, the pronominal forms (*eins*, *keins*) presumably involve an internal makeup different from that of the inherent pronouns (*etwas*, *nichts*). While there are several options to implement this idea, it seems clear that interpreting the split-off containing *ein* inside the source is compatible with the makeup of the

179

pronominal forms but that this is not compatible with the makeup of the inherent pronouns.[5] Be that as it may, it seems clear that the presence of *ein* is not a late phenomenon in the ungrammatical (24b) and (25b). If so, then the occurrence of *ein* in the grammatical (24a) and (25a) cannot involve a PF phenomenon on parity of assumption.

To sum up, I have demonstrated that split topicalizations are only compatible with the analysis of Chapter 2 if they involve two separate base-generations (but not if they involve movement out of the DP or a copy-and-delete approach). Next, I briefly discuss adjectival inflections as regards semantic concepts. Specifically, I discuss inflections on adjectives as regards the restrictive and non-restrictive interpretation of adjectives, and I examine inflections on determiners as regards "referentiality". In keeping with the current discussion, we will see that independent of their interpretations, inflected adjectives are in their regular positions (i.e., Spec,AgrP) and that the inflections themselves make no semantic contribution in German.

4.   Weak Adjectives with Non-restrictive Interpretation

As documented in detail in Chapter 2, adjectives are usually weak if they follow a determiner. Note that these types of strings can actually have two interpretation. The restrictive interpretation of the adjective is given in the translation line in (26a), and the non-restrictive interpretation is provided in that of (26b). For clarity, I use a relative clause to translate the adjective. The non-restrictive interpretation is clearly brought out by the addition of *übrigens* 'by the way' and is sometimes called a by-the-way remark:[6]

(26)   a.   *der alt-e   Mann*
            the old-WK man
            'the man that is old'

       b.   *der (übrigens)   alt-e   Mann*
            the   incidentally old-WK man
            'the man, who is (by the way) old'

---

[5] One idea to make this more concrete is to assume that DPs and smaller elements can be interpreted in e_N of the pronominal forms but that DPs are too large to be interpreted inside the inherent pronouns – only smaller elements, the ones lacking *ein*, can do so. Alternatively, in the second part of the book, I argue that *ein* flags the presence of a null operator. If so, it might be claimed that it is actually this null operator that is incompatible with the inherent pronouns.

[6] In other languages, the strong/weak alternation of the adjective does indicate a difference in restrictive interpretation. In Icelandic, 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; Sigurðsson 2006: 200 fn. 3):

       (i)   a.   *gul-i   bill-inn*   (Icelandic)
                     wellow-WK car-DEF
                     'the car that is yellow'
              b.   *gul-ur   bill-inn*
                     yellow-ST car-DEF
                     'the car, which is yellow'

For recent discussion, see also Pfaff (2017). As regards inflection and position of prenominal adjectives, note also Evans (2021), who discusses a correlation of inflected and uninflected adjectives with different interpretations in Dutch. He proposes that inflected and uninflected adjectives are in different positions yielding the different interpretations.

With the above analysis of weak endings in mind, this implies that both restrictive and non-restrictive interpretations involve the same basic (regular) structure to which Impoverishment has applied. In other words, inflected non-restrictive adjectives cannot be inserted late, that is, after Impoverishment has occurred. Rather, I suggest that the structure of non-restrictive adjectives involves an additional lexical element.

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

(27)   [*der* [(pro$_i$) *alte*] *Mann*]$_{(i)}$
           the   old   man

In order to account for the uniform inflectional behavior of the adjectives, it is important to be more specific about the relevant structures and derivations. With the focus on the morpho-syntax, I only briefly discuss the semantics (for the denotations, see Roehrs 2009a: Chapter 3). I start with the case involving a restrictive interpretation.

Recall from Chapter 2 that the determiner moves from below the adjective to the DP-level (28). Given this structure and the presence of a determiner, Impoverishment occurs bringing about the weak ending on the adjective. As to the semantics, I assume that kind nouns are of type <e>. Following de Swart *et al.* (2007), I argue in Chapter 6 that a kind noun combines with the realization operator REL (type <e<e,t>>) to yield a predicate (type <e,t>). This predicate combines with the adjective by Predicate Modification. The resulting conjunction of the two predicates is combined with the determiner (type <<e,t>e>) by Functional Application yielding an individual (type <e>):

(28)   *Restrictive Interpretation*

```
                    DP<e>
                   /     \                    (Functional Application)
      der<<e,t>e>i      AgrP<e,t>
                       /      \                (Predicate Modification)
               alte<e,t>      ArtP<e,t>
                             /      \
                          d̶e̶r̶ᵢ      NumP<e,t>
                                   /      \     (Application of REL)
                        NumREL<e<e,t>>    NP
                                        Mann<e>
```
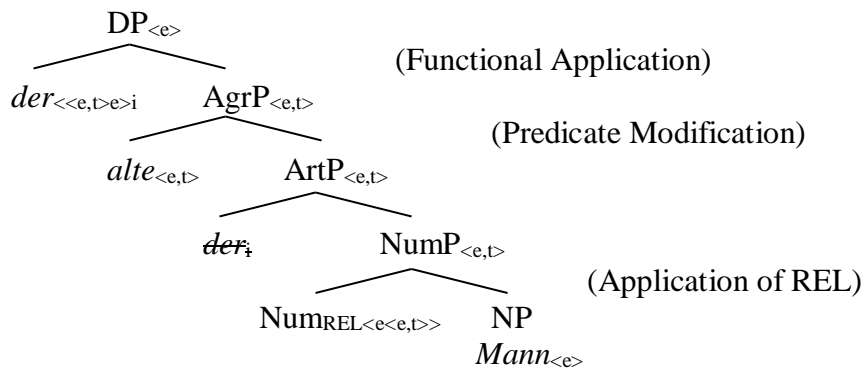
The structure of the non-restrictive reading is basically the same. Unlike above, however, the determiner is interpreted in its base-position; that is, the adjective is outside the scope of the determiner (29) (see also Partee 1973: 54, Schoorlemmer 2009). Proceeding bottom-up and much like above, the kind noun combines with the realization operator REL to yield a predicate. Unlike above, the low copy of the determiner combines with the predicate noun yielding an element of type <e>. In order for this resultant nominal to combine with a clausal predicate (type <e,t>), I adopt a model of multiple semantic spell-out, whereby the higher by-the-way remark is

sent off for interpretation separately (for details, see Roehrs 2009a: 102ff). Structurally, this remark consists of the adjective and *pro*, indicated by square brackets below. These two elements combine by Functional Application yielding a truth value (I continue the discussion of this subcomponent further below). After this element is sent off to Spellout, the remaining nominal can combine with a clausal predicate (not shown here):

(29)   *Non-restrictive Interpretation*

$$DP_{<e>}$$

der$_i$ AgrP$_{<e>}$

[pro$_{<e>}$ alte$_{<e,t>}$]$_{<t>}$ ArtP$_{<e>}$ (Functional Application)

Spellout   der$_{<<e,t>e>i}$ NumP$_{<e,t>}$ (Application of REL)

Num$_{REL<e<e,t>>}$ NP
Mann$_{<e>}$
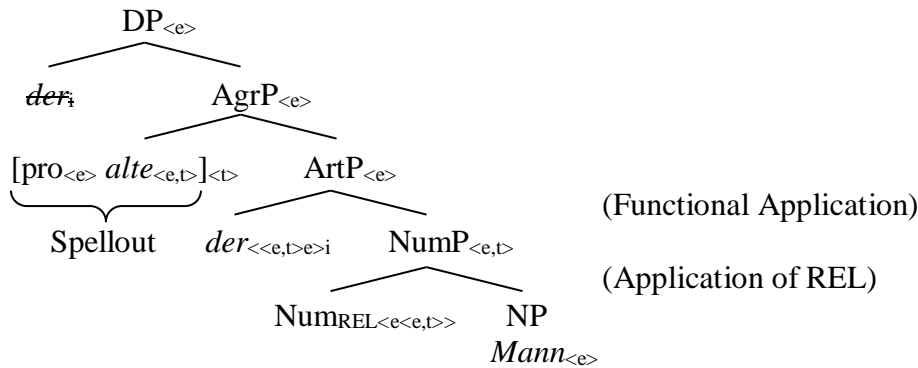
Recalling that *pro* and *der Mann* 'the man' are coindexed, the expression involving *pro* and the adjective is interpreted as an additional, non-restrictive remark about *der Mann*, something along the lines of 'the man – he is old'. To be clear then, the determiner in both interpretations has moved to the DP in syntax triggering Impoverishment. However, the determiner is interpreted in different positions at LF. Consider the internal structure of the non-restrictive modifier in more detail.

In Chapter 2, Section 2.4, I argued that adjectives involve extended projections. In particular, I suggested there 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:

(30)   InflP

AP$_{<t>k}$ Infl'   (Functional Application)

pro$_{<e>}$ alt$_{<e,t>}$ -e   t$_k$
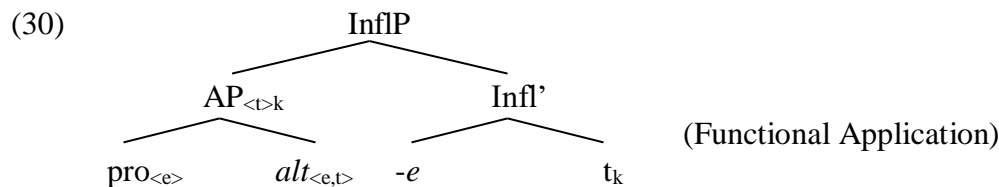
Semantically, the pronominal element *pro* (type <e>) combines with the adjective (type <e,t>) by Functional Application yielding a truth value (type <t>). This is the desired result for the by-the-way remark 'he is old'.

Observe that independently of the presence of *pro*, Impoverishment can occur in a local fashion, namely on the highest head of the extended projection of the adjective (Infl). In other words, given this structure, Impoverishment is compatible with different interpretations of the adjective. If this is accepted, then I can continue claiming that weak adjectival inflections indicate one and the same structural constellation and are independent of the semantics (Hypothesis 1a). Finally, I turn to a case where an adjectival inflection seems to be related to "referentiality".

5.   Adjectival Inflections Make Nominal Features Visible

Adjectival inflections occur on determiners and adjectives but not, for instance, on verbs. It is clear that they are nominal in nature. Above, I argued that they are semantically vacuous. I demonstrated that adjectival inflections do not indicate, or are a reflex of, (in-)definiteness or (non-)restrictiveness in interpretation. Considering certain other data, there is another possible semantic concept they could be associated with.

Alexiadou *et al.* (2011: 31) point out that inflected *dieses* 'this' is an anaphor for noun phrases only, but uninflected *dies* 'this' is an anaphor for both noun phrases and clauses. Compare (31a) to (31b) (data slightly adapted; see also Helbig & Buscha 2001: 229-30):

(31)   a.   *Hans hat ein rotes Buch. {Dies-es / Dies} war sehr teuer.*
              Hans has a   red   book. this-ST   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.'

Given the data above, we might suggest that the two demonstrative forms are semantically different in that inflected *dieses* must have a noun phrase as its antecedent, but uninflected *dies* is less restricted and tolerates both a noun phrase and a clause as its antecedent. As these two elements differ in inflection, we might further suggest that adjectival endings have or are sensitive to the semantics after all. In particular, since inflected *dieses* can only refer back to noun phrases, we could claim that inflectional endings are, in some sense, "referential". I believe this possible interpretation of the facts is not correct.

In Chapter 3, Section 3, I discussed adjectives like *lila* 'purple' and *rosa* 'pink'. I pointed out that the inflections on these adjectives are optional when a noun follows (32a) but that they are obligatory when such a noun is absent (32b). Above, I argued that the source of split topicalization structures contains a null noun, which is licensed by the predicate split-off. I suggest that (32b) also involves a null noun, here licensed by the anaphoric relation with the noun in the previous sentence (Fanselow 1988: 101, Murphy 2018):

(32)   a.   *ein lila(-nes)   Kleid*
              a   purple-INFL dress
              'a purple dress'

        b.   *Da   waren viele bunte   Kleider. Ich kaufte ein lila*(-nes).*
              there were   many multi-colored dresses I   bought a   purple-INFL
              'There were many multi-colored dresses. I bought a purple one.'

Notably, indeclinable elements never have endings including in anaphoric contexts. This can be illustrated with the numeral for 'ten':

(33) a.   *zehn Kleider*
           ten   dresses
           'ten dresses'

      b.   *Da   waren viele Kleider. Ich kaufte zehn.*
           there were   many dresses I   bought ten
           'There were many dresses. I bought ten.'

The generalization that seems to be emerging is that adjectival inflections are obligatory when the hosting elements are declinable and occur in anaphoric contexts; indeclinable elements remain uninflected in anaphoric contexts. If this holds more generally, then there is an interesting consequence for the two forms of the demonstrative *dies* and *dieses*.

   At first glance, this demonstrative appears to be similar to the adjectives *lila* and *rosa* – when overt material follows, the inflection is optional. Note though that uninflected *dies* can only occur in nominative/accusative contexts, both as a determiner (34a) or as a predeterminer (34b):[7]

(34) a.   *dies(-es) schön-e   Kleid*
           this-INFL pretty-WK dress
           'this pretty dress'

      b.   *dies(-es) mein Glück.*
           this-INFL my   happiness
           'this happiness of mine'

There are two differences to the adjectives above. First, both the inflected and the uninflected forms of the demonstrative are possible in anaphoric contexts involving noun phrases. Second, the demonstrative is also possible in anaphoric contexts involving clauses, but here only the uninflected form appears. If the generalization above is correct, then we cannot say that the demonstrative involves one element with an optional inflection. If this were so, then we would expect only the inflected form *dieses* to occur in anaphoric contexts, contrary to fact. In order to explain the occurrence of uninflected *dies* in (31a), we have to assume that there are actually two independent elements, a declinable *dieses* and an indeclinable *dies*. In other words, we cannot simply assume that *dies* is based on *dieses* such that the ending has been deleted in PF (for this idea, see Gallmann 2004: 154 fn. 3, Roehrs 2009a: 159 fn. 33, cf. also G. Müller 2002a: 117 fn. 8). Note that the proposal of two separate elements is consistent with the aforementioned fact that unlike inflected *dieses*, uninflected *dies* is restricted to nominative/accusative neuter contexts.

   The structure of inflected *dieses* is repeated below:

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[7] Recall that this restriction makes *dies(es)* different from *all(e)* 'all'. The inflection of the latter is not subject to a restriction in morphological case (see again Chapter 3, Section 6).

(35) *Inflected* dieses

$$\text{InflP}_{[+D; +DEF, +DEIX][F, N, O, S]}$$

[F, N, O, S]   DemP
                     |
                   Dem
[+D; +DEF, +DEIX] → *dies-*
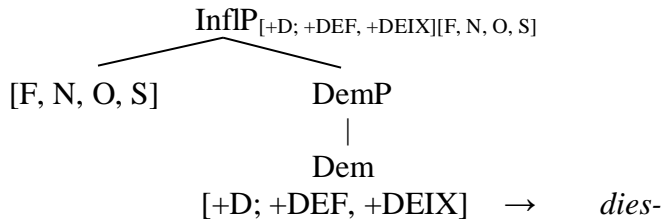
Recall that the stem *dies-* spells out [+D; +DEF, +DEIX] and that the varying inflections realize the CNG feature bundle in Infl. As for uninflected *dies*, I propose that this element is like the first and second-person pronominals discussed in Chapter 3, Section 5. As such, I assume that *dies* involves a reduced demonstrative structure (36). The restriction of *dies* to nominative/accusative neuter contexts can be captured by restriction features on [+DEIX], indicated below by the features following the colon sign. Specifically, on the one hand, the features [-F, +N, -O] are only compatible with the structure (36) being inserted in nominative/accusative neuter contexts; on the other hand, this type of deictic feature only projects a reduced structure:[8]

(36) *Uninflected* dies

$$\text{DemP}_{[+D; +DEF, +DEIX]}$$
|
Dem
[+D; +DEF, +DEIX: -F, +N, -O]
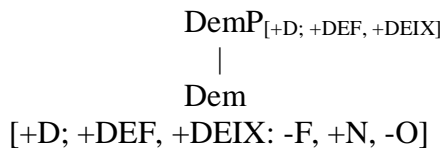
Note that the vocabulary insertion rule for *dies-* can apply to both (35) and (36). If it spells out the features in (35), then we get an inflected form of *dies-*, where the CNG bundle are separately realized by the adjectival inflection; if it applies to (36), then we get an uninflected form of *dies-*, with the proviso that the structure in (36) can only occur in nominative/accusative contexts. To be clear, the possibility of projecting two different demonstrative structures accounts for the two different forms – the form of *dies-* simply depends on which structure, (35) or (36), is merged in Spec,ArtP of the syntactic represenation. With this in mind, I return to the data in (31) from the beginning of this section.

      Above, I proposed that anaphoric contexts involve null nouns. I extend this claim now to the two forms of the demonstrative. Specifically, I propose that the structure of the demonstrative for the nominal case in (31a) involves a DP that contains either (35) or (36) along with a null noun (37a-b). As for the clausal instance in (31b), I assume for concreteness that the two demonstrative structures combine with a propositional element, here illustrated with TP (37c-d):

(37)   a.   [DP *dieses* [NP e_N]]

        b.   [DP *dies* [NP e_N]]

---

[8] These types of restriction features are discussed in more detail in Chapter 8, Section 2.2.5. Among others, they account for the varying distribution of *ein* in regular singular contexts (e.g., *ein Auto* 'a car') vs. in plural contexts (e.g., *m-eine Autos* 'my cars').

c. [DP *dies* [TP e_T]]

d. * [DP *dieses* [TP e_T]]

Starting with uninflected *dies* in (37b-c), I propose that this element is not subject to any conditions as regards agreement. Given the absence of inflection, *dies* does not have to undergo concord in agreement features, and it is fine in both nominal and clausal contexts. Note again that the restriction to nominative/accusative neuter environments follows from the restriction features on [+DEIX] in (36).

  Turning to *dieses* in (37a, d), observe now that *-es* is a neuter inflection. Given the presence of a null noun in (37a), the inflection on *dieses* is licensed by concord in agreement features with that noun. Consequently, this demonstrative can be part of a nominal anaphor. In order to explain the ungrammaticality of *dieses* in (37d), I suggest that the nominal features of the inflection cannot be licensed as there is no noun present. As such, *dieses* is ungrammatical in this context and cannot serve as a propositional anaphor.[9]

  More generally, I propose that the varying inflectional morphology and the different semantic restrictions in (31) result from the different demonstrative structures and the element following the demonstrative, either a null nominal (37a-b) or a null clausal element (37c-d). If so, I can maintain the claim that adjectival endings are semantically vacuous (Hypothesis 1a). Indeed, as this section has made clear again, they are licensed in certain contexts. Furthermore, I propose that adjectival inflections serve to make nominal features such as case, number, and gender visible (Hypothesis 2b). This is particularly clear in contexts where overt nouns are absent.

  A remark on the inflection of the adjective in (34a) above is in order, repeating the data for convenience below. Note again that the two forms of the demonstrative, *dieses* and *dies*, can only take a weak adjective:

(38) a. *dies-es schön-e Kleid*
    this-ST pretty-WK dress
    'this pretty dress'

  b. *dies schön-e Kleid*
    this pretty-WK dress
    'this pretty dress'

If *dieses* and *dies* are indeed two separate elements, then the weak inflection on the following adjective in (38b) is not a function of a preceding strong ending but rather of the preceding determiner stem. Note in this regard that both *dieses* and *dies* involve the feature [+DEF], a context where [+D] triggers Impoverishment. Another interesting point can be made more explicit here.

  Recall that Impoverishment only deletes [S] from the syntactic representation. The other features remain intact. Furthermore, as mentioned before, the vocabulary insertion rules are

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[9] 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 of the neuter inflection are different; for instance, neuter gender could be licensed as a default option.

underspecified for some of the CNG features. This means that overt inflections only make a subset of the underlying features visible. In other words, Hypothesis 2b does not claim that adjectival inflections make all CNG features visible.

Finally, I documented in Chapter 2 that *ein*-words can involve pronominal forms too. Exemplifying with *ein*, this element is different from the cases discussed above in certain ways. Similar to the demonstrative, *ein* can also occur in anaphoric contexts (39). Unlike the demonstrative, *ein* must have an ending in anaphoric contexts involving noun phrases:

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

Assuming the presence of a null noun, I argue that the obligatory inflection on *ein* indicates that there can be only one type of *ein*. As proposed in Chapter 2, Section 2.2, this element is a determiner. Second, like the inflection on *dieses* and other elements, the ending on *ein* in (39) makes nominal features visible. In the next chapter, I discuss *ein* in more detail. We will see that there are actually two types of *ein*. I hasten to add though that the other type of *ein* is an adjective that follows definite determiners and crucially is not related to the article *ein* in (39).

6.   **Conclusion**

In this chapter, I turned to four consequences of the analysis laid out in Chapter 2. I discussed two influential proposals of spurious articles – Predicate Inversion and null nouns. I argued that the weak endings on adjectives in these structures indicate that the plural indefinite article in German is not entirely spurious. The two proposals involve non-canonical structures. As such, the weak adjectives do not follow from the system developed in Chapter 2. Awaiting an account that can explain the weak adjectives in these non-canonical structures without losing the account of the canonical and other non-canonical instances, I assume that spurious articles actually involve regular structures. While the discussion of these structures is postponed to Chapter 8, I continue assuming that the current account of the strong/weak alternation is on the right track.

Next, I turned to some consequences for the discussion of discontinuous noun phrases. Illustrating some paradoxical properties, I showed that analyses postulating movement that involve one underlying noun phrase cannot account for the strong adjective in the split-off under current assumptions. In contrast, accounts involving the base-generation of two separate underlying nominals and subsequent movement are completely compatible with the analysis of Chapter 2. I also provided evidence that *ein* (or its feature bundles) cannot be inserted late.

Finally, I 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, I argued that adjectival inflections are not tied to concepts like "referentiality" but make nominal features like case, number, and gender visible (Hypothesis 2b).

More generally, I can maintain the claim that adjectival endings are a reflex of the structure (Hypothesis 1b) but not of the semantics (Hypothesis 1a). Furthermore, the discussion of Predicate Inversion has shown in more detail that the degree of the embedding of the adjective

is important for the account of the strong/weak alternation (Hypothesis 2a). In the next chapter, I turn to the discussion of *ein* in more detail. We will see that *ein* shares some of the properties of adjectival inflections.

Chapter 5: *Ein*-words and Adjectival *eine*

1. Introduction

The previous three chapters detailed the current account of adjectival inflections. I now turn to related issues as regards *ein*-words. Adjectival endings will play an important part in this discussion as they help narrow down the choices when proposing plausible structures. With that in mind, I turn to the main hypotheses about *ein*, formulated in Chapter 1 and repeated here for convenience. Recall that (1b) can be fleshed out as in (2a):

(1)   *Hypothesis 1*
        Adjectival inflections and *ein*:
            a.   are expletive elements and
            b.   indicate abstract structure in the noun phrase.

(2)   *Hypothesis 3*
        Ein:
            a.   indicates abstract structure in the lower layers of the noun phrase (NP vs. ArtP), and
            b.   it supports overt semantic operators (e.g., NEG *k-*) and flags the presence of covert semantic operators (e.g., REL).

As already stated in Chapter 1, the difference between supporting and flagging the operator by *ein* is that the presence of the operator itself is in some way detectable in the first case but not in the second. The hypotheses in (1) and (2) are addressed in detail in this and the next two chapters. I start with some general considerations and some basic data involving *ein*.

1.1.   *Preliminaries and Basic Data*

As amply illustrated above, German noun phrases have determiners. For instance, depending on the context, a singular noun may occur with the appropriate form of the indefinite article. The latter is often reduced in speech (3a). This reduction of the stem from *ein-* to *n-* is marked by parentheses or apostrophe below.[1] Alternatively, such a noun can surface with the definite article or its almost homophonous demonstrative counterpart (3b) (the ambiguous status of *die* as the article 'the' or the demonstrative 'that' is indicated as DET(erminer) in the gloss):

(3)   a.   *(ei)ne Freundin*
                a   girlfriend
                'a girlfriend'

---

[1] I distinguish different kinds of *ein* below. Parentheses indicate the optionality of the vocalic part of the stem provided that the element is not stressed (which is the case with the indefinite article *ein*, but not with the singularity numeral *EIN* or adjectival *eine*). In some cases, I use an apostrophe to clearly indicate the (reduced) indefinite article.

b. *die Freundin*
DET girlfriend
'the / that girlfriend'

As is well known, indefinite and definite determiners cannot co-occur. This applies to both reduced and unreduced indefinite articles as well as to definite articles and demonstratives (for (5b) below, see Pafel 1994: 251; I discuss the unreduced form of *eine* in contexts like (5b) below):

(4)   a. *   *(ei)ne (ei)ne Freundin*
                 an   a   girlfriend

        b. *   *(ei)ne die Freundin*
                 an   DET girlfriend

(5)   a. *   *die die Freundin*
                 DET DET girlfriend

        b. *   *die 'ne Freundin*
                 DET a   girlfriend

The same distributional restrictions hold if *die* is replaced by the proximal demonstrative *diese* 'this'.

      Casting the empirical net wider, it is not surprising that the negation particle *nicht* 'not' can precede determiners (6). However, I point out that possessives like *mein* 'my' and the negator *kein* 'no' are in complementary distribution with the indefinite article, the definite article, and the related demonstrative; consider (7) and (8):

(6)   a.   *nicht 'ne Freundin*
              not   a girlfriend
              'not a girlfriend'

        b.   *nicht die Freundin*
              not   DET girlfriend
              'not the / that girlfriend'

(7)   a. *   *meine 'ne Freundin*
                 my   a girlfriend

        b. *   *meine die Freundin*
                 my   DET girlfriend

(8)   a. *   *keine 'ne Freundin*
               no   a   girlfriend

        b. *   *keine die Freundin*
               no   DET girlfriend

The same holds if the determiner precedes the possessive or negator in (7) and (8). In view of this mutually exclusive distribution, I point out again that the possessive pronominal and the negator are labeled possessive article and negative article, respectively. These names foreshadow the analysis to be developed below.

       Interestingly, the distribution is partially different when *ein* is stressed and must occur in its unreduced form (stress is indicated here with capital letters). Similar to (6a), the negation particle *nicht* is compatible with *eine* (9a). Unlike (7a), *ein* can, when stressed and unreduced, co-occur with the possessive article (9b). Importantly, this element is still impossible with the negative article or the indefinite article (9c-d) ((9c) is adopted from Fanselow 1988: 111 fn. 29):[2]

(9)   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 elements in (9b) and (9c-d) relates to definiteness: the possessive in (9b) is definite, but the negator and the indefinite article in (9c-d) are not. Thus, besides stress and phonetic non-reducibility, definiteness seems to be a relevant factor in the distribution of *ein*. In other words, any account that seeks to be on the right track needs to take into account the different stress and reduction patterns of *ein* and the syntactic-semantic context this indefinite element occurs in.

       It is apparent from the relevant literature (see Section 7) that there is relatively little discussion about the morpho-syntax and semantics of all the different kinds of *ein*. As with adjectival inflections, only the canonical cases are usually discussed. In what follows, I seek to provide a more comprehensive overview of this type of element in German (for some brief cross-linguistic discussion, see Chapter 1, Section 2.1.3). Again, as with adjectival inflections, I propose that the discussion of the non-canonical cases reveals the true nature of *ein*.

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[2] Note already here that the two instances of *ein* in (9a) and (9b) are not the same: (9a) involves the singularity numeral *EIN*, but (9b) contains adjectival *eine*. One of the differences is that (9b) has an additional interpretation that involves a duality presupposition roughly translated as 'one of my two girlfriends'. The differences including the various interpretations are discussed below.

I assume the following initial classification. This taxonomy 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 component:

(10)   a. *ein* as an article:
                     - indefinite article
                     - vacuous article:
                              - *ein* as part of a composite:
                                       - possessive
                                       - negation
                              - *ein* in predicate noun phrases
                     - *ein* as part of a complex determiner

        b. *ein* as a numeral

        c. *ein* as an adjective

I refer to the types of *ein* in (10a) and (10b) collectively as *ein*-words; the type in (10c) is called adjectival *eine*. In fact, reducing the numeral to the article, I propose below that there are just two types of *ein*: the article and the adjective. Thus, these two designations, *ein*-word and adjectival *eine*, reflect the analysis to be developed below. Before I go into any specifics, consider first some illustrative examples of the above taxonomy. Note that while *ein*-words have no ending in (11a-f), adjectival *eine* has a weak ending in (11g):[3]

(11)   a.   Indefinite Article
                Ich habe immer nur (ei)n frisch-es Brot   mitgebracht.
                I   have always only a   fresh-ST bread brought
                'I have always brought only a fresh loaf of bread.'

        b.   Possessive
                Ich habe immer nur mein frisch-es Brot   mitgebracht.
                I   have always only my   fresh-ST bread brought
                'I have always brought only my fresh loaf of bread.'

        c.   Negation
                Ich habe kein frisch-es Brot   mitgebracht.
                I   have no   fresh-ST bread brought
                'I have brought no fresh loaf of bread.'

---

[3] The German noun *Brot* 'bread' is countable. This count reading is translated into English using the classifier *loaf* (e.g., *zwei Brote* '(two breads =) two loaves of bread'). Also, I often use the [-figurative] noun *Lehrer* 'teacher' in predicative contexts. As a term for a profession, it takes an optional indefinite article in such contexts (Chapter 6). This optionality is crucial for formulating hypotheses about the true nature of *ein*.

d.　Predicative
Mein Vater ist (ein) Lehrer.
my   father is a   teacher
'My father is a teacher.'

e.　Complex Determiner
Ich habe ein jedes frisch-es Brot   mitgebracht.
I   have an every fresh-ST bread brought
'I have brought each fresh loaf of bread.'

f.　Numeral
Ich habe immer nur EIN frisch-es Brot   mitgebracht.
I   have always only one fresh-ST bread brought
'I have always brought only one fresh loaf of bread.'

g.　Adjective
Ich habe nur das ein-e frisch-e Brot   mitgebracht.
I   have only the one-WK fresh-WK   bread brought
'I have only brought the one fresh loaf of bread.'

The discussion of the current and the next two chapters can be anticipated as follows.

1.3.　Outlook

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 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 argue that the article is semantically vacuous (Hypothesis 1a) but that 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 articles, the negative article, and the singularity numeral are composite forms consisting of the indefinite article and another component. Providing some brief remarks on the possessive and negative composites, I dedicate most of the discussion to the article, the numeral, and adjectival *eine*. Some distinctions between the last three elements are argued to follow from their different featural specifications and others from their different positions in the syntactic tree. Specifically, deriving the numeral from the combination of the indefinite article and another component, I account for the identical morphology but the different semantics of the numeral and article. Thus, I propose that the numeral is related to the article in a way that adjectival *eine* is not – the latter is a separate lexical element.

　　　As to the remaining types in (11), predicative *ein* is illustrated below but discussed in greater detail in Chapter 6. I do not address the complex determiner *ein jeder* '(an every =) each' in much detail here (but see Roehrs 2012, Zimmermann 2011).[4] More generally, the current

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[4] Note that *ein* here occurs in the context of the semantically plural and definite element *jeder* 'every'. It is proposed in Roehrs (2012) that *ein* intensifies the distributivity of *jeder*. I tentatively suggest in Chapter 8 that *ein* may flag

chapter discusses the morpho-syntax of *ein* and its relation to indefiniteness, and the next two chapters focus on *ein* in relation to semantic notions like emotiveness (Chapter 6) and number (Chapter 7).

The current chapter is organized as follows. In order to motivate the approach that some types of *ein* should be treated in the same way, I first illustrate certain morphological similarities between the different kinds of *ein*. In Section 3, some phonetic and semantic differences are pointed out. These differences are summarized in Table 1 below. A bipartite proposal involving different feature specifications and different syntactic positions is discussed in Sections 4 and 5, respectively. Section 6 provides some diachronic and cross-linguistic evidence that *ein*-words are indeed composite forms in (Modern) German. In Section 7, I critique a previous proposal, and Section 8 forms the conclusion.

2.   Similarities

In Section 1.2, I provided my taxonomy along with an illustration of the basic cases. With these reference points in mind, I discuss the occurrence of the different inflections on *ein* in split topicalizations and with elided nouns. Note that these constructions require special contexts to be felicitous (see again Chapter 4, Section 3).

2.1.   *Split Topicalization*

Comparing (11) to (12), split topicalizations with in-situ adjectives have the same morphology as non-split noun phrases; that is, *ein*-words have no endings in (12a-e), but adjectival *eine* has a weak inflection in (12f):[5]

(12)   a.   Indefinite Article
                Brot   habe ich immer nur (ei)n frisch-es mitgebracht.
                bread have I   always only a   fresh-ST brought
                'As for bread, I have always brought only a fresh loaf.'

        b.   Possessive
                Brot   habe ich immer nur   mein frisch-es mitgebracht.
                bread have I   always only my   fresh-ST brought
                'As for bread, I have always brought only my fresh loaf.'

        c.   Negation
                Brot   habe ich kein frisch-es mitgebracht.
                bread have I   no   fresh-ST brought
                'As for bread, I have brought no fresh loaf.'

---

the presence of a null distributivity operator (cf. de Swart *et al.* 2007: 218). This is consistent with the proposal that *ein* is semantically vacuous, including in the string *ein jeder*.

[5] To investigate the relevant aspects of the morpho-syntax of predicative *ein* in split topicalizations, I chose a non-canonical construction involving the modal particle *vielleicht* 'really'. This element makes the split of the predicative construction more felicitous. Note also that the translations of the following examples into English are not always straightforward – they often are approximations of the German originals.

d. Numeral
Brot   habe ich immer nur EIN frisch-es mitgebracht.
bread have I   always only one fresh-ST brought
'As for bread, I have always brought only one fresh loaf.'

e. Predicative
Brot   ist das vielleicht (ei)n frisch-es!
bread is that PRT   a   fresh-ST
'As for bread, this is really a fresh loaf.'

f. Adjective
Brot   habe ich nur   das ein-e   frisch-e   mitgebracht.
bread have I   only the one-WK fresh-WK brought
'As for bread, I have only brought the one fresh loaf.'

2.2. *Split Topicalization with Fronted Adjective*

If the adjectives are part of the split-offs, the *ein*-words exhibit strong endings (13a-e). Interestingly, the stranded *ein*-words have optional schwas (see also Roehrs 2009a: 156, Sternefeld 2008: 152), where the options with schwa seem to be, at least to my ears, of elevated style. With a determiner preceding, there is no change for *eine* in (13f):[6]

(13) a. Indefinite Article
(Frisch-es) Brot   habe ich immer nur ein-(e)s mitgebracht.
 fresh-ST   bread have I   always only a-ST   brought
'As for (fresh) bread, I have always brought only a loaf.'

b. Possessive
(Frisch-es) Brot   habe ich immer nur mein-(e)s mitgebracht.
 fresh-ST   bread have I   always only my-ST   brought
'As for (fresh) bread, I have always brought only my loaf.'

c. Negation
(Frisch-es) Brot   habe ich kein-(e)s mitgebracht.
 fresh-ST   bread have I   no-ST   brought
'As for (fresh) bread, I have brought no loaf.'

---

[6] When *ein* is stranded by itself (13a), it is actually stressed. This makes the indefinite article ambiguous with the numeral. 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
'As for bread, I have always brought only this kind of loaf.'

Note that *ein* in (i) is used pronominally and as such, it has some stress on it. This presumably explains the degradedness of the reduced forms. It is not clear to me though if this instance of *ein* is the unreduced article or the numeral (which consists of the article and an additional component).

d. Numeral
(Frisch-es) Brot   habe ich immer nur EIN-(E)S mitgebracht.
 fresh-ST   bread have I   always only one-ST   brought
'As for (fresh) bread, I have always brought only one loaf.'

e. Predicative
(Frisch-es) Brot   ist das vielleicht ein-(e)s!
 fresh-ST   bread is that PRT   one-ST
'As for (fresh) bread, this is really one [fresh] loaf.'

f. Adjective
(Frisch-es) Brot   habe ich nur das ein-e   mitgebracht.
 fresh-ST   bread have I   only the one-WK brought
'As for (fresh) bread, I have only brought the one loaf.'

Comparing the inflections on the adjectives in Section 2.1 to the ones on the *ein*-words here, we can observe again that they are the same. In keeping with Chapter 4, Section 5, I assume that these inflections make nominal features like case, number, and gender visible (Hypothesis 2b). Recall also that the emergence of the strong ending on the *ein*-words is due to a certain vocabulary insertion rule (Chapter 2, Section 2.2). Parallel facts hold when the noun is elided.

2.3.   Adjective Followed by Elided Noun

When adjectives are present, noun phrases with elided nouns have the same morphology as those with non-elided nouns (Chapter 2); that is, the *ein*-words have no endings in (14a-e), but adjectival *eine* has a weak inflection in (14f):

(14)   a.   Indefinite Article
Ich habe immer nur (ei)n frisch-es mitgebracht.
I   have always only a   fresh-ST brought
'I have always brought only a fresh loaf.'

b. Possessive
Ich habe immer nur mein frisch-es mitgebracht.
I   have always only my   fresh-ST brought
'I have always brought only my fresh loaf.'

c. Negation
Ich habe kein frisch-es mitgebracht.
I   have no   fresh-ST brought
'I have brought no fresh loaf.'

d. Numeral
Ich habe immer nur EIN frisch-es mitgebracht.
I   have always only one fresh-ST brought
'I have always brought only one fresh loaf.'

e.	Predicative
	Das ist vielleicht (ei)n frisch-es!
	that is PRT	a	fresh-ST
	'This is really a fresh loaf.'

f.	Adjective
	Ich habe nur das ein-e frisch-e mitgebracht.
	I have only the one-WK fresh-WK brought
	'I have only brought the one fresh loaf.'

Finally, consider topicalization where the split-off contains an adjective and an elided noun.

*2.4.	Split Topicalization with Fronted Adjective and Elided Noun*

If the noun phrases are split and the adjectives and elided nouns are part of the split-offs, then similar to Section 2.2, the *ein*-words have strong endings (15a-e). Again, there is no change for *eine* in (15f):

(15)	a.	Indefinite Article
		Frisch-es habe ich immer nur ein-(e)s mitgebracht.
		fresh-ST have I always only a-ST brought
		'As for a fresh one, I have always brought only a loaf.'

	b.	Possessive
		Frisch-es habe ich immer nur mein-(e)s mitgebracht.
		fresh-ST have I always only my-ST brought
		'As for a fresh one, I have always brought only my loaf.'

	c.	Negation
		Frisch-es habe ich kein-(e)s mitgebracht.
		fresh-ST have I no-ST brought
		'As for a fresh one, I have brought no loaf.'

	d.	Numeral
		Frisch-es habe ich immer nur EIN-(E)S mitgebracht.
		fresh-ST have I always only one-ST brought
		'As for a fresh one, I have always brought only one loaf.'

	e.	Predicative
		Frisch-es ist das vielleicht ein-(e)s!
		fresh-ST is that PRT one-ST
		'As for a fresh one, this is really one [fresh] loaf.'

f.   Adjective
Frisch-es habe ich nur das ein-e   mitgebracht.
fresh-ST   have I   only the one-WK brought
'As for a fresh one, I have only brought the one loaf.'

To summarize these sections, all *ein*-words are marked by the emergence of strong endings when they are "stranded" by themselves in split topicalizations. Adjectival *eine* is different – it remains unchanged. Similar facts of the *ein*-words were observed when the latter occur in elliptical contexts; that is, when the adjective and the noun are absent (Chapter 2, Section 2.2.2). The emergence of the strong inflections on the *ein*-words follow from the same vocabulary insertion rule mentioned in Section 2.2.2: it applies to *ein*-words, independently of whether *ein* is "stranded" by split topicalization or occurs in elliptical contexts – in each case, there is no overt material following *ein*.[7]

3.   Differences

In this section, I focus on three phonetic and semantic differences: encliticization, stressability, and semantic singularity (see also Pafel 2005: 180). These differences are summarized in tabular form at the end of this section.

3.1.   Encliticization

As seen above, reduced forms of the indefinite article are independently possible. Thus, I take encliticization of *ein* to be instantiated when the indefinite article undergoes further phonetic changes due to 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 (R. Wiese 1996a: 166). For this purpose, I use, for the most part, verbal hosts with their endings apocopated (e.g., *habe > hab'* 'have'). With this in mind, note that cliticization to a preceding word is only possible with an indefinite article (16a) and predicative *ein* (16e) (encliticization is indicated in the gloss by a period; I do not use phonetic brackets to indicate the phonetic change):[8]

(16)   a.   Indefinite Article
Ich hab'm (frisch-es) Brot   mitgebracht.
I   have.a   fresh-ST   bread brought
'I have brought a (fresh) loaf of bread.'

b.   Possessive
*   *Ich hab' m'm (frisch-es) Brot   mitgebracht.*
I   have POSS.a fresh-ST   bread brought
'I have brought my (fresh) loaf of bread.'

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[7] Recall from Chapter 4, Section 3 that *ein* is not acutally stranded by the adjective and/or noun moving out of the source DP. Rather, the adjective and/or noun are part of a separate nominal, the split-off. As such, both split topicalization and ellipsis involve null nouns in the nomninal containing *ein*.
[8] In the predicative context, the copular *sein* 'to be' was changed to *bleiben* 'to remain'. This was done to have a verbal stem ending in a non-coronal sound.

c. Negation
  * *Ich hab' k'ŋ   (frisch-es) Brot   mitgebracht.*
    I   have NEG.a fresh-ST   bread brought
    'I have brought no (fresh) loaf of bread.'

d. Numeral
  * *Ich hab'M   (frisch-es) Brot   mitgebracht.*
    I   have.one fresh-ST   bread brought
    'I have brought one (fresh) loaf of bread.'

e. Predicative
  Ich bleib'm (jung-er) Lehrer.
  I   remain.a young-ST teacher
  'I remain a (young) teacher.'

f. Adjective
  * *Ich habe gestern   nur dem'm-en (frisch-en) Brot   zugesprochen.*
    I   have yesterday only the.one-WK fresh-WK bread eaten
    'Yesterday, I only ate the one (fresh) loaf of bread.'

To be clear, encliticization of *ein* is not possible when *ein* is part of a composite (16b-c) or stressed (16d, f). I will not have much more to say here about the regularities that govern encliticization.

3.2.   Stressability

With regard to the possibility of bearing stress, some of the judgments from Section 3.1 reverse. The types of *ein* fall into three groups: first, the indefinite article may not be stressed (17a); second, the possessive article, the negative article, and *ein* in predicate noun phrases may be stressed (17b, c, e); and third, the numeral and adjectival *eine* must be stressed (17d, f, f'):

(17) a.   Indefinite Article
        * *Ich habe 'N (frisch-es) Brot   mitgebracht.*
          I   have a fresh-ST   bread brought
          'I have brought a (fresh) loaf of bread.'

      b.   Possessive
          Ich habe MEIN (frisch-es) Brot   mitgebracht.
          I   have my   fresh-ST   bread brought
          'I have brought my (fresh) loaf of bread.'

      c.   Negation
          Ich habe KEIN (frisch-es) Brot   mitgebracht.
          I   have no   fresh-ST   bread brought
          'I have brought no (fresh) loaf of bread.'

199

d. Numeral
  * *Ich habe 'n (frisch-es) Brot mitgebracht.*
    I have one fresh-ST bread brought
    'I have brought one (fresh) loaf of bread.'

e. Predicative
  Mein Vater ist EIN Lehrer.
  my father is one teacher
  'My father is one teacher.'

f. Adjective
  * *Ich habe nur das 'n-e (frisch-e) Brot mitgebracht.*
    I have only the one-WK fresh-WK bread brought
    'I have brought only the one (fresh) loaf of bread.'

f'. Adjective
  Ich habe nur das EIN-E (frisch-e) Brot mitgebracht.
  I have only the one-WK fresh-WK bread brought
  'I have brought only the one (fresh) loaf of bread.'

Although stressed, I do not provide adjectival *eine* in capital letters below in order to distinguish it better from the singularity numeral. Note that with the exception of the singularity numeral and adjectival *eine* (which are both independently stressed), it seems clear that stress has a semantic effect. For instance, (17e) suggests that my father is not just a teacher but one teacher among others (cf. Higginbotham's 1987: 68 fn. 4 discussion of English).[9]

3.3. Semantic Singularity

I turn to some semantic differences. While the indefinite article usually implies singularity of the entity (18a), the numeral emphasizes singularity as opposed to plurality (18b):

(18) 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).'

Below, I argue that singularity in (18a) does not come from *ein* itself – the latter is proposed to be a semantically vacuous element. Note again that this is consistent with the indefinite article occuring in plural contexts as illustrated in the previous chapters and discussed in more detail in

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[9] In fact, stressed *EIN* in (17e) might be a numeral in a predicative context. Note that with the exception of the singularity numeral and adjectival *eine*, I do not discuss the effects of stress on the semantics.

Section 4 below. In contrast, the singularity numeral has semantics, and it is proposed below that it consists of (vacuous) *ein* and a contentful element.

There are other cases where *ein* is not associated with singularity (also Schoorlemmer 2009: 197 fn. 17). It is clear that *ein* as part of the possessive articles or the negative article has no relevance with regard to semantic singularity either. In fact, these two *ein*-words can take head nouns with plural morphology (19a-b). Note also that a predicate noun phrase does not denote an entity but a property (19c). As such, semantic singularity is not a relevant characteristic here either (see Chapter 7):

(19) 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.'

Note in passing that the cases above also show that *ein* cannot be related to indefiniteness.

Finally, nominalized infinitives and generic noun phrases make no claim about singularity of the event or entity either (the data are adopted from Bisle-Müller 1991: 115, 151):[10]

(20) a. *(Ei)n Abweichen vom   Kurs ist nicht gut.*
           a   departing   from.the course is not   good
          'Departing from one's course is not good.'

      b. * *EIN Abweichen vom   Kurs ist nicht gut.*
          one departing   from.the course is not   good
          'Departing from one's course is not good.'

      c. *(Ei)n Wal   ist ein Säugetier.*
           a   whale is a   mammal
          'A whale is a mammal.'

---

[10] While a nominalized infinitive is not compatible with the singularity numeral (20b), it is fine with adjectival *einmalig* 'one-time' preceded by the indefinite article:

      (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, note that (20a), (20c), and (i) allow *ein* to be replaced by a definite article (triggering a weak inflection on the following adjective in (i)).

d. * *EIN Wal   ist ein Säugetier.*
  one whale is a   mammal
  'A whale is a mammal.'

As to adjectival *eine*, note again that like the numeral *EIN* in (21a), this type of *ein* is stressed (21b) (recall though that I do not mark it as such). Crucially, unlike the numeral, adjectival *eine* usually presupposes the existence of a second entity and thus implies a certain plurality of the members of the relevant kind. In fact, as observed by M. Müller (1986: 43), *eine* in (21b) has a partitive sense, presupposing a set of typically two entities in the relevant world of discourse (cf. also Vater 1982: 71). I indicated this in the English translation:

(21) a. *EIN Mann*
    one man
    'one man'

  b. *der eine Mann*
    the one man
    'one of the two men'

Note that this duality presupposition cannot come from the definite article – the latter typically presupposes uniqueness in singular contexts. Importantly, *eine* must be preceded by a definite element, and it is often contrasted with a second DP containing *andere* 'other':[11]

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

Finally, 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 (22) to (23):[12]

(23) *die einen, die anderen*
   the.PL one   the.PL other
   'these, those'

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[11] This construction already existed in OHG (ia). Furthermore, this distribution is also possible in related Yiddish (ib) (from Reershemius 1997: 362):
 (i) a. *ther eino – ther ander*   (OHG)
     the one   the other
     'one (of the two) – the other'
      (Otfrid, Braune & Reiffenstein 2004: 234)
   b. *...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… One (of the two) was called Elon and the other Aladan.'
[12] Interestingly, Börjars (1998: 18 fn. 7) points out for Swedish that these two sets can be of different sizes. The same is true of German.

We will see in Section 4.3.1 that the duality presupposition associated with adjectival *eine* can be cancelled.

The differences discussed above are summarized in Table 1 (the properties are coded as follows: OK indicates an optional property; +/- signifies an inherent characteristic; N.A. means that this criterion is not applicable; I comment on the use of the parentheses below):

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

Kinds of *ein*			Enclitic	Stress	Sem. singularity	Morphological plural
Article	Indefinite		OK	-	(+)	(-)
	Vacuous	Possessive	-	OK	N.A.	OK
		Negative	-	OK	N.A.	OK
		Predicative	OK	OK	N.A.	(-)
Numeral			-	+	+	-
Adjective			-	+	OK (with canceled presupposition)	OK

These are the most typical properties. Having set out the basic similarities and differences, I turn to accounting for them. In the course of the following discussion, I refine the statements about the indefinite article, especially with regard to semantic and morphological number (for predicative *ein*, see Chapters 6 and 7). Specifically, I propose that the article *ein* is semantically vacuous (Hypothesis 1a), and I illustrate again that it can occur in morphologically plural contexts. The upcoming refinement of the statements about number is indicated in Table 1 by parentheses (that is, it is argued below that the indefinite article is not specified for number).

4. Step 1 of the Proposal: Morphology and Semantics

Recall the generalization from Section 1 that determiners may, independent of word order, not co-occur. Focusing on *ein*-words, the definite article, and the demonstratives, this is illustrated again below (recall that *die*, glossed below as DET, comprises the definite article *die* and its related distal demonstrative *DIE*):

(24) * *keine / meine / 'ne / die / diese Freundin*
         no   / my   / a / DET / this   girlfriend

There were basically two potential exceptions to this generalization: (i) definite determiners may occur with stressed *eine* (25a-c), and (ii) *diese* 'this' can occur with a possessive article (25d). In Section 4.3.1, I discuss the different interpretations of the strings in (25a-b) in detail:[13]

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[13] In poetic or elevated German, a possessive element can also be combined with a definite article (ia). Given the presence of the article and the weak inflection on the possessive element, this lower possessive is presumably an adjective. Note that this syntactic distribution is familiar from older varieties of German (ib):

> (i) a. *Du bist d-er   mein-e.*
>   you are the-ST my-WK
>   'You are mine.'
>   b. *in dheru sineru heilegun chiburdi*   (OHG)
>   in the   his   holy   birth

(25) a. *meine eine Freundin*
        my   one girlfriend
        'one of the two of my girlfriends'
        'my one girlfriend'

   b. *die eine Freundin*
        DET one girlfriend
        'one of the two girlfriends'
        'that one girlfriend'

   c. *diese eine Freundin*
        this   one girlfriend
        'this one girlfriend'

   d. *diese meine Freundin*
        this   my   girlfriend
        'this girlfriend of mine'

Furthermore, I showed in Section 2 that the indefinite article (including predicative *ein*), the 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. In this and the next section, I account for these and some other facts. I provide a brief preview of the account of *ein*.[14]

Starting with (24), I follow much discussion in the literature and assume that indefinite and definite articles are in D, and demonstratives are in Spec,DP (e.g., Alexiadou *et al.* 2007: 108ff; Bernstein 1997, 2001b; Giusti 1997, 2002; Leu 2007, 2015; Roehrs 2010; van Gelderen 2007; see also Chapter 1, Section 4.1.2). Furthermore, it is well documented for German that only one such element can be in the DP-level. If so, this restriction accounts for the non-co-occurrence of these three elements in the same DP.[15] Turning to the two remaining elements in (24), that is, to the negative and the possessive articles, I develop a composite analysis of *keine* and *meine* (and other elements) below arguing that these elements consist of vacuous *ein* and an abstract component denoting negation or possession. Among others, this proposal explains, on the one hand, the non-co-occurrence of the latter two elements with articles and demonstratives and, on the other hand, the identical morphology of the various composites and *ein*.

          'in his holy birth'
              (Harbert 2007: 155)
Given these points, I assume that (ia) is part of a different grammar.

[14] For the discussion of some previous proposals of the indefinite article, see Section 7. It will become clear there that when we study these accounts, we 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.

[15] Usually, the Doubly-filled DP Filter is brought into play here (for some discussion, see Abney 1987: 271; Giusti 1997: 109, 2002: 70). In Roehrs (2019), I propose that unlike the North Germanic languages, the West Germanic languages have only one (complex) feature bundle for definiteness explaining why there is only one element showing definiteness in the DP in the latter type of language. Note that this account makes no claim about the co-occurrence of a definite and a semantically vacuous element (see the discussion of *m+ein* 'my' below).

If this is on the right track, then *eine* in (25a-c) cannot be derived from vacuous *ein* and must be a different element. I propose that this type of *ein* is an adjective in a high specifier position.[16] If so, the distributions in (25a-c) do not present exceptions to the generalization about the non-co-occurrence of determiners. Turning to (25d), this datum has greater potential of being an exception to this generalization. However, as already discussed in Chapter 2, Section 4, this type of *diese* is not in Spec,DP. Rather, it is a semantic intensifier, a predeterminer, in LPP (also Section 5.2.3). Thus, there is only one element in the DP-level here as well.

These initial remarks can be summarized in the following simplified structure where all elements just discussed are put in their surface positions. Disregarding restrictions on the co-occurrence of these elements, this one structure illustrates the left part of the noun phrase in German. For completeness, I have added the semantic component of the singularity numeral *EIN* 'one', illustrated below as $\emptyset_{[-PL]}$ (see Section 5.1). Note that NEG is the abstract element later to be spelled out as *nicht* 'not' or *k(-ein)* 'no' (see Section 4.1.2):

(26)

```
                    LPP
                   /    \
                NEG      LPP
                        /    \
                    diese     DP
                             /    \
                         diese     D'
                         DIE      /    \
                         m-      D      CardP
                                die    /      \
                               (ei)ne Ø[-PL]   Card'
                                             /       \
                                          Card        AgrP
                                                    /      \
                                              eine_ADJ      Agr'
                                                          /      \
                                                        Agr       …
```
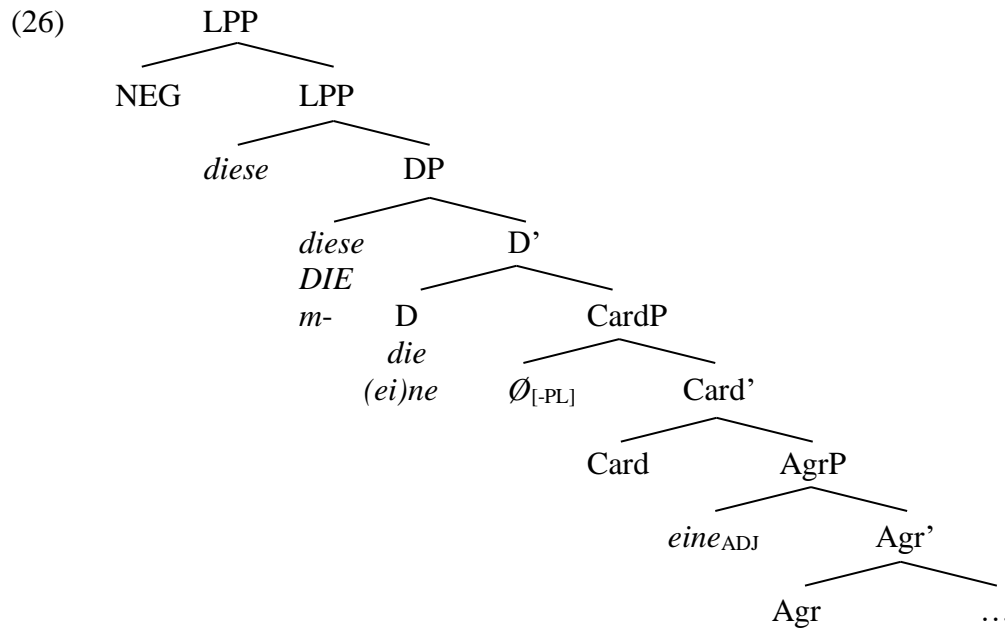
To anticipate the structural discussion below, I assume that only one element with the categorial feature [+D] can be merged in ArtP. Given that determiners move to the DP-level, this explains why only one determiner can surface in this layer: *diese*, *DIE*, *die*, *(ei)ne*. Note now that NEG, the predeterminer *diese*, possessives, the singularity component $\emptyset_{[-PL]}$, and adjectival *eine* are not merged in ArtP and can, at least in principle, co-occur with the determiners. Specifically, NEG is

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[16] That this type of *ein* is indeed special is quite clear in Norwegian. As is well known, this language has a singularity numeral that has the neuter form *ett* 'one' (ia). However, in the construction under discussion, the expected form *ette* is impossible, and only a – what looks like – non-neuter form can be used (ib) (Marit Julien, p.c.):

> (i)   a.   *ett stor-t hus*   (Norwegian)
>   one big-ST house
>   'one big house'
>   b.   *det en-e   stor-e hus-et*
>   the one-WK big-WK house-DEF
>   'one of the two big houses'

adjoined to LPP, the predeterminer *diese* is base-generated in Spec,LPP, possessives move from Spec,NP to Spec,DP, and the singularity component is base-generated in Spec,CardP. Focusing on the different types of *ein*, it will become clear in the next section that the negative article, the possessive articles, and the singularity numeral are restricted to the occurrence of *ein* – these elements form composites. Finally, adjectival *eine* is base-generated in the specifier position of a high AgrP and is restricted to definite contexts. With these points in mind, I flesh out these ideas below.

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

I start by providing my basic proposal. This is followed by a detailed discussion of the derivations of the different *ein*-words. Finally, I point out some advantages and initial consequences of this proposal.

4.1.1. Basic Proposal

Starting with *ein* itself, I provided a fair amount of empirical evidence above that this element is special. Among others, it can occur not only in singular but also plural contexts. Furthermore, *ein* can surface not only in indefinite but also definite environments. This means that *ein* is not a singular indefinite article. Rather, I propose that it is a semantically vacuous element (Hypothesis 1a). This is in agreement with some of the semantic literature. For instance, Heim & Kratzer (1998: 62) state that the indefinite article can be defined as follows: $[[\mathbf{a}]] = \lambda f \in D_{<e,t>}$. f, which maps every function in $D_{<e,t>}$ to itself. In other words, *ein* makes no new semantic contribution. Similarly, Coppock & Beaver (2015: 400-01) assume that the indefinite article is a vacuous identity function on predicates: $a(n) = \lambda P.P$ (where like in Heim & Kratzer the input and the output is the same predicate).

Turning to the other *ein*-words, it was suggested in Roehrs (2009a: Chapter 4) that *ein* is part of the negative article *kein* 'no', possessive articles like *mein* 'my', and the singularity numeral *EIN* 'one' (27a-c). Below, this is instantiated by proposing that *ein* supports certain operators that are segmentally (NEG, POSS) or suprasegmentally ($\emptyset_{[-PL]}$) detectable.[17] We will see in Chapter 6 that *ein* also indicates the presence of the realization operator REL (27d). Unlike (27a-c), here *ein* flags the presence of an operator that has no independent manifestation. I indicate the co-occurrence relation of *ein* and REL by an underscore. Completing the picture, I propose that unlike these four elements, adjectival *eine* is an independent element (27e):

(27) a. (vacuous) *ein* + NEG $\rightarrow$ *kein*

b. (vacuous) *ein* + POSS$_{[1ST\ PERS\ -PL]}$ $\rightarrow$ *mein*

c. (vacuous) *ein* + $\emptyset_{[-PL]}$ $\rightarrow$ *EIN*

d. (vacuous) *ein* _ REL $\rightarrow$ *ein*

e. (non-composite) *eine*$_{ADJ}$

---

[17] I define operator broadly here. They involve scopal elements (negators, quantifiers), indexical elements (possessives), and other semantically active functional elements (see REL below and certain elements in subsequent chapters).

The claim that (27a-b) are composite forms is by no means new; for instance, Fanselow & Cavar (2002) and Kobele & Zimmermann (2012: 247) employ (27a), and Corver (2003: 4) and Corver & van Koppen (2010: 114) assume (27b) in their discussion of Dutch (cf. also Julien 2016: 94f for certain possessives in Scandinavian). Murphy (2018: 331) and Schoorlemmer (2009: 197 fn. 17) accept both (27a) and (27b) for German. The analysis in (27c) might be relatable to Ackles (1996), who proposes that English *a(n)* licenses NumP with singular count nouns. (27d) is also in good company; for instance, Bennis *et al.* (1998) claim that the operator [+EXCL] needs to be lexicalized by *een* 'a' in Dutch (Chapter 4, Section 2.1). Finally, adjectival *eine* is proposed by Gallmann (2004: 155), M. Müller (1986: 45), Pafel (2005: 179). Note that these related works lend some initial credence to the current proposal (more references are provided in the course of the following discussion). Consider the derivation of the composite elements in (27a-c) in the framework of DM.

4.1.2. Derivation of Composite Forms
Beginning with *ein* itself, I proposed in Chapter 2, Section 2.1.6 that this element consists of the categorial feature [+D] and features for case, number, and gender (I leave the values unspecified below). Unlike the definite article and the demonstratives, *ein* has no features for definiteness or deixis. As such, this is the least specified determiner. This fits well with the proposal above that *ein* is a semantically vacuous element:

(28)   *Indefinite Article* ein

                Art$_{[+D][F, N, O, S]}$
              ⌒‾‾‾‾‾‾‾‾‾‾
        [+D]   [F, N, O, S]
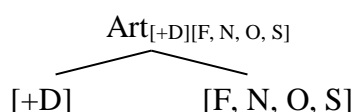
        I turn to the operators in (27a-c). Starting with the possessive articles, recall from Chapter 2, Section 2.2.3 that I analyze these elements as bound or free morphemes (29a-b). I point out now that these forms are more general (also Fischer 2006). For instance, the bound morphemes in (29a) also occur as part of reflexive pronominal forms (29c). In fact, this decomposition is quite pervasive with personal pronouns (29d) (I leave out the genitive forms, which are diachronically related to the possessive forms in (29a)):[18]

(29)   a.   *m-, d-,   s-*
                my-, your(SGL)-, his-

        b.   *ihr,   unser, euer*
                her/their/your(FORMAL), our,   your(PL)

        c.   *m-ich, d-ich, s-ich*
                myself, yourself, himself/herself/themselves
                'myself, yourself, himself/herself/themselves'

---

[18] Note that third-person *s-* is somewhat special: it only involves masculine with possessives (29a) but masculine and/or other specifications with reflexives (29c) and personal pronouns (29d). Notice also that *S-ie* 'you(FORMAL)', not provided in (29), is morphologically third but semantically second person (see Chapter 7).

d.　　*m-ich*,　*m-ir*;　　*d-u*,　　　*d-ich*,　　　*d-ir*;　　　*s-ie*
　　　me.ACC, me.DAT; you.NOM(SGL), you.ACC(SGL), you.DAT(SGL); she.NOM/her.ACC/
　　　they.NOM/them.ACC
　　　'me; you; she/her/they/them'

There is another subregularity here in that all elements in (29b) involve feminine and plural forms, which tend to pattern together in the nominal paradigms (Chapter 2, Section 2.1.5). Taken together, this provides some empirical motivation for separating possessive articles into bound and free morphemes in (29a) and (29b), respectively.

　　　In Roehrs (2020a), I propose that possessives involve a Possessive Phrase (PossP) and that they are base-generated low in the nominal structure. Following standard assumptions, I assume that prenominal possessives move from Spec,NP to Spec,DP (Chapter 1, Section 4.1.2). After movement of the article and PossP, the relevant part of the structure, the DP-level, can be illustrated as follows:

(30)　　　　　　　　　　DP
　　　　　　　┌──────┴──────┐
　　　　　PossP$_k$　　　　　D'
　　　　　　│　　　┌────────┴────────┐
　　　　　Poss　　D　　　　[… t$_i$ … t$_k$ …]
　　　　　　　┌───┴───┐
　　　　　　Art$_i$　　　D
　　　　┌──┴──┐
　　　[+D]　　[F, N, O, S]
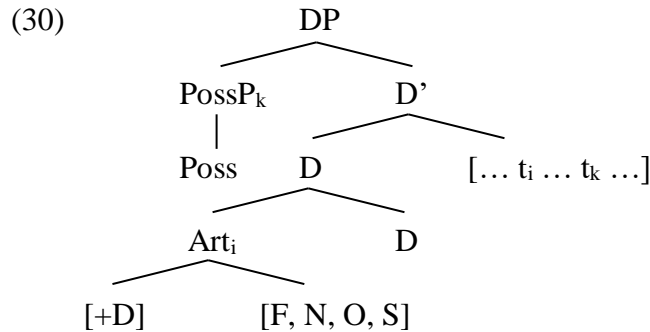
After Linearization of (30), Vocabulary Insertion occurs. There are two types of cases involving possessive articles.

　　　First, bound possessive morphemes like *m-* in (29a) are inserted in the left periphery as in (31) (cf. Poss in (30) above). In Chapter 2, Section 2.2.2, I formulated specific vocabulary insertion rules for *ein*. If an overt element like an adjective and/or noun follows, then *ein* in nominative/accusative and masculine/neuter contexts spells out both the categorial feature [+D] and the CNG feature bundle (cf. (30) above) yielding uninflected *ein*; if no such element follows, then *ein* spells out [+D], and an inflectional suffix spells out [F, N, O, S]. The latter scenario yields inflected forms of *ein*. Both options are illustrated below by putting the inflection in parentheses:

(31)　　　┌────────┴┐
　　　m-　　*ein*　(-INFL)
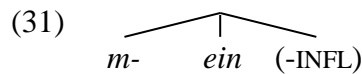
I propose that *ein* supports both the bound morpheme *m-* and the inflection (unless *ein* spells out both [+D] and the CNG feature bundle). Note now that all relevant elements are adjacent to each other. Given these local, linear relations, I suggest that the operation of support is instantiated by Local Dislocation such that *ein* undergoes this operation onto *m-* and that the inflection, if present, does so onto *m-ein* (cf. Murphy 2018).

Second, the free possessive morphemes in (29b) involve the same derivation as in (30) above. After Linearization and Vocabulary Insertion, the following string obtains exemplifying with *ihr* 'her':

(32)
    ihr   *ein*   (-INFL)
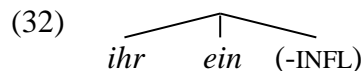
This is not the correct surface string yet. Note that there are two free morphemes in (32): *ihr* and *ein*. I suggest that only one free form can surface in this local domain. Given that the possessive has semantics but *ein* does not, I assume that the latter does not appear:[19]

(33)
    ihr   ~~*ein*~~   (-INFL)
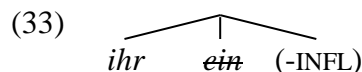
If an inflection is present (i.e., the CNG bundle of the article structure of *ein* remains untouched by the vocabulary insertion rules of *ein*), it will undergo Local Dislocation onto the possessive element.

    As to the two remaining composite elements in (27), I assume that *kein* 'no' is similar to *mein* 'my', the difference being that NEG is adjoined to the noun phrase in (30) and that it can be realized as either *k-* or *nicht*. The basic rule is provided below:

(34)   NEG →   *k-*   / __ (unstressed) *ein*
              →   *nicht* (elsewhere)

In words, NEG is spelled out as *k-* in the context of unstressed *ein* but as *nicht* in the remaining instances (but see also Section 4.2.1 for some complications arising from the apparent optionality of *kein* vs. *nicht* in certain instances). As with the bound possessive morphemes, *ein* undergoes Local Dislocation onto *k-*. Finally, the singularity numeral $\emptyset_{[-PL]}$ is also supported by *ein* instantiated by Local Dislocation (for detailed discussion including a tree structure, see Section 5.1). To be clear, the elements on the right of the arrows in (27a-c) are taken to be the spell-out forms of the combination of the elements on the left of them. With regard to the workings of *ein*, I continue speaking of support; that is, *ein* supports other elements (instantiated by Local Dislocation).

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[19] In a traditional tree structure, the Doubly-filled DP Filter could be brought into play here. However, the framework adopted here (DM) inserts vocabulary items after Linearization. If the tree structure is no longer accessible after Linearization, then a different way needs to be found to rule out the co-occurrence of the free possessive element and *ein*.

    Note in this regard that we cannot claim that *ein* is only merged as a Last Resort option (NB: this is consistent with Chapter 4, Section 3.4, where I argued that *ein* cannot be inserted late); for instance, we cannot claim that *ein* is inserted unless there is already another element present that can perform *ein*'s two main functions (supporting and flagging). This is so because, if *ein* were not inserted in the context of (32), the CNG bundle would remain untouched in the three (/four) exceptional cases. As a consequence, the inflection would be spelled out and would appear on (i.e., by supported by) the possessive in every instance yielding ungrammatical forms such as **ihr-er* in, say, a nominative masculine context. Rather, a more promising way to deal with this issue would be to delete *ein* in the context of [Poss, pron, +F], which covers feminine and plural possessive pronouns. Alternatively, we could follow Matushanksy (2006: 86f) in suggesting that *ein* and the possessive element undergo Fusion (into one element) in feminine and plural contexts.

4.1.3. Some Advantages and Initial Consequences

There are two immediate advantages of this proposal. With these composite elements made up of *ein* and another component, it is easy to see how semantically quite diverse elements can share identical morphology. Furthermore, with the article *ein* present, it follows that a second determiner cannot occur, and the complementary distribution with other determiners follows. Interestingly, noun phrases involving indefinite articles may have different interpretations with regard to specificity. As shown below, these interpretations are often claimed to be tied to the indefinite article being in different positions, for instance, D and Card. It could be suggested that vacuous *ein* also supports $D_{[+SPEC]}$ and $Card_{[-SPEC]}$. However, these are structural elements, and it is not likely that they are supported in the sense above.

In more detail, 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, Heusinger 2011, Zamparelli 2005: 760; also Diesing 1992 and Hallman 2004). For instance, they can have a non-specific (35a) or a presuppositional, specific (35b) interpretation:

(35) 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 much detail here, these readings are licensed by noun phrase-external factors, for instance, the different moods in the hosting clause (subjunctive vs. indicative). I 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, I 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 (Chapter 1). In particular, on the weak, non-specific reading in (35a), I assume that the indefinite article surfaces in Card, and on the strong, specific reading in (35b), it appears in D (also Alexiadou *et al.* 2007: 225, Borer 2005: 144f, Chomsky 1995: 342, Zamparelli 2000: 264-5). As proposed in Chapter 2, *ein* originates in ArtP. With *ein* lacking a feature for definiteness, it does not have to undergo movement to D. Thus, I propose that *ein* moves to Card if the nominal has a weak reading and to D if the nominal has a strong reading. As such, I assume that vacuous *ein* in $Card_{[-SPEC]}$ or in $D_{[+SPEC]}$ does not involve composite forms – the feature bundles later to be spelled out as *ein* simply move to these positions.

Finally, as regards (27d), I claim in Chapter 6 that vacuous *ein* (or a definite determiner) flags the presence of the realization operator REL. Recall that I suggested above that the negative, possessive, and singularity components of the *ein*-words also involve operators. I propose again that there are two ways to make operators visible by *ein*: supporting where the operator itself is in some way detectable, as claimed for (27a-c), and flagging where the operator itself remains invisible as in (27d). If this is tenable, then the term indefinite article seems inappropriate, but I continue with the traditional terminology. As to (27e), adjectival *eine* is not a composite form but a separate lexical item (for more details, see Section 5.2).

210

4.2.   Some Evidence for the Composite Analyses

In the previous section, I provided the derivations that bring about the three composite forms. What they all have in common is that the two relevant elements are adjacent to one another. I consider this in more detail now providing some evidence for the composite analyses. I start with the most straightforward case.

4.2.1. The Negative Article *kein*
It seems to be an established fact that *kein* 'no' consists of NEG + *ein* (e.g., Bech 1955/57, Jacobs 1980, Kratzer 1995: 144-147). I provide two morpho-syntactic arguments for the composite analysis. First, considering the data below, it seems clear that the contraction of NEG and *ein* is obligatory in certain cases (36), optional in others (37), but cannot occur in yet other contexts (38):

(36)   a. *   *Ich habe nicht (ei)n Buch gekauft.*
                 I   have not   a   book bought
                 'I did not buy a book.'

        b.   *Ich habe kein Buch gekauft.*
                 I   have no   book bought
                 'I bought no book.'

(37)   a.   *Ich habe nicht (ei)n BUCH gekauft, sondern (ei)n HEFT.*
                 I   have not   a   book   bought but   a   booklet
                 'I did not buy a book but a booklet.'

        b.   *Ich habe kein BUCH gekauft, sondern (ei)n HEFT.*
                 I   have no   book   bought but   a   booklet
                 'I did not buy a book but a booklet.'

(38)   a.   *(Ei)n Buch habe ich nicht gekauft.*
                  a   book have I   not   bought
                 'I bought no book/I did not buy a book.'

        b. *   *(Ei)n Buch habe ich kein gekauft.*
                  a   book have I   no   bought
                 'I bought no book/I did not buy a book.'

Specifically, with ordinary stress, NEG and *(ei)n* must form the negative article (36). This is different with contrastive stress on the noun where NEG and *ein* can optionally be spelled out separately as *nicht ein* or as the composite form *kein* (37). Finally, when NEG and *(ei)n* are not adjacent (38), both elements are spelled out separately, with NEG being realized as *nicht*.[20] Now,

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[20] Note that *ein* and *kein* can co-occur in split topicalizations:
        (i)   *(Ei)n Buch habe ich kein-s   gekauft.*
                  a   book have I   none-ST bought

211

the fact that NEG can be realized in two different ways depending on the stress pattern and the adjacency with *ein*, supports the claim that *kein* is a composite form.

Consider a second piece of evidence for this composite analysis. The examples in (39a) and (39b) establish that negation is higher than the type 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 evidenced by (39c) and (39d):

(39)   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

This provides a second argument that *kein* 'no' is a composite form subject to the adjacency of its two components. For other syntactic and semantic arguments for a composite analysis, see Pafel (2005: 186-187), von Fintel & Iatridou (2007: 467-468), and Zeijlstra (2011) (for English, see Klima 1964: 273ff); for the discussion of *kein so'n Idiot* '(NEG+a so an =) no such idiot', see Chapter 8, Section 2.2.2. If *kein* involves a composite analysis, then it is not implausible to propose this for the other complex *ein*-words as well.

4.2.2. Possessive Articles such as *mein*
There is also evidence that possessive articles are composite forms. While Saxon Genitives can both precede and follow their head nouns (40a-b) (e.g., Duden 2007: 366, Eisenberg & Smith 2002: 125, Fuß 2011), possessive articles can only precede their head nouns (40c-d):

(40)   a.   *Magdalenas Buch ist schön.*
               Magdalena's book is beautiful
               'Mary's book is beautiful.'

       b.   *Das Buch Magdalenas ist schön.*
               the book Magdalena's is beautiful
               'The book of Mary's is beautiful.'

'As for books, I bought none.'
Considering the strong ending on *kein* in (i), I assume that the negative article is followed by a null noun (see Chapter 4, Section 3.3). In other words, there are two separately 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 (38).

c.   *Mein Buch ist schön.*
      my   book is beautiful
      'My book is beautiful.'

d. *   *Das Buch mein(s) ist schön.*
      the book mine   is beautiful
      'The book of mine is beautiful.'

These facts follow from the assumption that possessive articles consist of a possessive component and *ein*. Specifically, *ein* can, as an article, only precede its head noun explaining the restriction in (40d). There is other evidence for a composite analysis.

It is well known that the possessive component of the possessive article agrees in gender with its antecedent but that the remaining part of the possessive article agrees in case, number, and gender with the head noun (41a). Furthermore, besides gender, the possessive component also agrees in person and number with its antecedent, as can easily be seen in (41b). These agreement relations are illustrated with different indices below:

(41)   a.   *Peter$_i$ hat s$_i$-einer$_k$ Freundin$_k$ geholfen.*
             Peter has POSS-a   girlfriend helped
             'Peter helped his girlfriend.'

       b.   *Ich$_i$ habe m$_i$-einen$_k$ Freunden$_k$ geholfen.*
             I   have POSS-a   friends   helped
             'I helped my friends.'

These apparent mismatches in agreement within the same word are straightforwardly explained by the composite analysis (cf. also Olsen 1989b: 139, 1991b: 53).[21]

4.2.3. The Singularity Numeral *EIN*

I discuss the advantages of a composite analysis of *EIN* 'one' in detail in Section 5. Note already here that $\emptyset_{[-PL]}$ is located in Spec,CardP in the weak reading of this indefinite element and that the supporting element *ein* is in Card (recall that *ein* lacks a definiteness feature and as such, it does not have to move to the DP-level). Something similar holds for the strong reading where $\emptyset_{[-PL]}$ has moved to Spec,DP, and *ein* is in D. Crucially, these are all Spec-head constellations, where adjacency holds inherently. Consequently, *ein* can support $\emptyset_{[-PL]}$, and both elements are spelled out by the morphology as the numeral (note also that *ein* supporting $\emptyset_{[-PL]}$ licenses this

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[21] Note that Olsen also assumes decomposition, but it is different. Exemplifying with *meinen* 'my', *mein* is in Spec,DP, and *-en* is in D. There are two issues here. First, Olsen also locates the possessive marker *-s* in D. Note that D has the same features when the inflection *-en* or the marker *-s* is located in D (Olsen 1991b: 48, 53). This raises the question of what rules out the possessive marker surfacing on the possessive pronoun (cf. *meins neues Auto* 'my-POSS new-ST car' vs. *Peters neues Auto* 'Peter's new-ST car'). Second and more importantly, the lack of decomposition of the stem into *m-* and *ein* loses the generalization that all *ein*-words behave the same morpho-syntactically. Third, we pointed out above that *ein* and the adjectival inflections have a status different from the possessive component: the first two elements are semantically vacuous, and they make linguistic items visible: *ein* supports or flags operators and adjectival inflections provide overt exponents for abstract features. As such, *ein* should be grouped with the inflection in D as in the current account (and not with the possessive component in Spec,DP as in Olsen's work).

null element at the same time). When $\emptyset_{[-PL]}$ is not present, the vacuous article is spelled out as *ein* under Card or D as discussed in Section 4.1.3.

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 all composites, and they involve post-syntactic spell-out forms. 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 I turn to some syntactic differences, I consider some of the semantic and morphological differences of these elements in more detail.

4.3.   Feature Specifications

First, I document that the presupposition induced by adjectival *eine* can be cancelled under certain conditions. This lays the foundation for the second subsection, where I provide the feature specifications of the different types of *ein*.

4.3.1. Cancelling the Presupposition of Adjectival *eine*
Recall that adjectival *eine* has to occur in definite contexts and that it involves a duality presupposition. This presupposition seems to be strongest with the definite article (42a), it is possible with the possessive article (42b), but it is absent with the demonstrative *diese* 'this' (42c):

(42)   a.   *die ein-e   Freundin*
             the one-WK girlfriend
             'one of the two girlfriends'

        b.   *meine ein-e   Freundin*
             my   one-WK girlfriend
             'one of the two of my girlfriends'
             'my one girlfriend'

        c.   *diese ein-e   Freundin*
             this   one-WK girlfriend
             'this one girlfriend'

Recall that the duality presupposition cannot stem from the singular definite article. On the one hand, this determiner carries a uniqueness presupposition; on the other hand, other definite elements like possessive articles can also license adjectival *eine*. This means that the duality cannot come from the definite article itself. Rather, I pointed out above that in conjunction with a definite element, the presence of *eine* brings about partitive semantics in that it presupposes the existence of two elements in singular contexts or two sets of elements in plural contexts.

Besides the definite and the possessive articles, there are other definite elements that occur with adjectival *eine*. Specifically, the periphrastic possessive in (43a) and the Saxon Genitive in (43b) can each involve a duality presupposition (for (43b), see Gunkel *et al.* 2017: 1300):

(43) a.   *Peter sein ein-er Sohn*
           Peter his   one-ST son
           'one of the two of Peter's sons'
           'Peter's one son'

      b.   *Peters ein-er Sohn*
           Peter's one-ST son
           'one of the two of Peter's sons'
           'Peter's one son'

Before moving on, note already here that the weak inflection on *eine* in (42) and the strong inflection on *eine* in (43) indicate that *eine* is indeed adjectival (see Section 5.2 for detailed morpho-syntactic discussion). Returning to the semantics, the question arises why the duality presupposition is absent with demonstratives.

     That the duality presupposition is missing with demonstratives is quite clear in (44a). In this case, there is no presupposition that there is a second boy with the relevant property. As might be expected, if the definite article is stressed and functions as the distal demonstrative, there is no presupposition either (44b). In a similar vein, (44c) consists of a singular subject and a predicate nominal modified by a relative clause. Indeed, there is no presupposition that there is a second man with the property denoted by the relative clause. 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 (44d). This is indeed the case ((44b) is taken from M. Müller 1986: 45):[22]

(44) a.   *Dieser eine Junge hat viele Wunder vollbracht.*
           this   one boy   has many miracles accomplished
           'This one boy has performed many miracles.'

      b.   *alle Frauen wollen plötzlich   nur   das (/dies(es)) eine: Zärtlichkeit*
           all women want   suddenly only that / this   one tenderness
           'Suddenly, all women only want one thing: tenderness.'

      c.   *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.'

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[22] In Footnote 11, we saw that *ein* with duality presupposition could also follow a definite determiner in OHG. Apparently, this presupposition could also be cancelled with demonstratives (ia) and in contexts involving a unique entity (ib):
(i)   a.   *thiz eina jār*   (OHG)
           this one year
           'this year'
                   (Tatian, Braune & Reiffenstein 2004: 234)
      b.   *der eino almahtico cot*
           the one almighty   god
           'the almighty God'
                   (Wessobrunner Gebet 7, Schrodt 2004: 21)

      d.   *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 and is presumably the same element, it may lack the presupposition property under certain conditions (also M. Müller 1986: 45).

      I tentatively suggest for (44a-b) that demonstrative determiners, with their strong deictic force, cancel the presupposition of adjectival *eine*. Furthermore, note that *eine* is not (strongly) stressed in this case, presumably also a reflex of the presence of word stress on the demonstratives. Possessives as in (42b) and (43) have been related to demonstratives in that possessives are also deictic elements. For instance, *meine* 'my' can be compared to *diese* 'this' such that both are associated with the speaker (see Lyons 1999: 18-19, Roehrs 2019: 378). This presumably explains why the duality presupposition can be absent with possessives (it is less clear to me though why this presupposition can sometimes be present with possessives).[23] As to (44c), I assume that the duality presupposition of adjectival *eine* is also cancelled when the nominal containing *eine* forms the predicate of a singular subject. Finally turning to (44d), 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*.

      To sum up, I proposed that *eine* is an adjective that can only occur in definite contexts. I assume that this distributional restriction has to do with *eine*'s own (contribution to the) duality presupposition such that presuppositions in general often arise only in definite contexts. With these remarks in mind, I turn to the feature specifications.

4.3.2. Feature Specifications of the Different Types of *ein*
As documented in Chapter 1, Section 2.2, *ein* as an article can occur not only in singular but also plural contexts (45). Note that in each of the two cases below, there is no duality presupposition. This is expected given that these are indefinite contexts:

(45)   a. %   "*Was   für eine Idioten*" *sagte Liam*
               what for   a   idiots   said Liam
               '"Such idiots!" said Liam.'

      b. %   *Das Personal war sehr unfreundlich. Ich hatte noch nie   so eine Ferien.*
              the staff   was very unfriendly I   had   still never so a   holidays
              'The staff was very unfriendly. I have never had such a (bad) vacation.'

Again, it is clear that *ein* can appear in plural contexts. Given the proposal that this element is a semantically vacuous element, I assume that *ein* can be plural as regards its morphology.
In contrast, adjectival *eine* has semantics regarding number as just discussed. Thus, I make a distinction between morphological and semantic number (also Chapter 7), morph vs. sem for

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[23] The possible presence of a duality presupposition with possessives might be related to the fact that possessives do not presuppose singleton sets (Coppock & Beaver 2015).

short. I assume a plural feature [PL] in the feature makeup where *α* may range over a negative or positive value:[24]

(46)   Number: [αPL morph; αPL sem]

Starting with the feature specification of the indefinite article, I proposed that *ein* is a semantically vacuous element. To review briefly, this element can occur in singular and plural contexts as well as in indefinite and definite environments. As such, this element cannot have a specification for semantic number or definiteness. Furthermore, given the composite analysis of the possessive and negative articles, which can each occur with a mass noun (e.g., *meine / keine Milch* 'my / no milk), *ein* does not bring about countability either.[25] Thus, this element has no feature for countability. However, we have seen that *ein* morphologically agrees with its singular or plural head noun. I conclude again that this element must have morpho-syntactic features. Above, I proposed that *ein* involves the feature [+D] and a feature bundle for case, number, and gender:

(47)   *Indefinite Overt Article*

$$\text{Art}_{[+D][F, N, O, S]}$$

[+D]   [F, N, O, S]   →   *ein-*
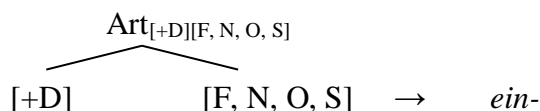
The CNG features in (47) are valued/checked during the derivation. Abstracting away from case and gender, morphological number has to do with [F, N], here more simply restated as [αPL morph]. Thus, besides [+D], [αPL morph] is part of the feature specification for *ein*.[26]

Turning to the singularity numeral *EIN*, I proposed above that this element is a composite form consisting of vacuous *ein* and the numeral component $\emptyset_{[-PL]}$. I suggested that $\emptyset_{[-PL]}$ is the contentful part, a type of operator, and I assume that it is this component that is responsible for singularity and stress (cf. Barbiers 2005: 168). I propose that $\emptyset_{[-PL]}$ is inherently specified for [-PL] semantically. Given that $\emptyset_{[-PL]}$ and vacuous *ein* form a composite, I take it that morphological number comes from *ein* as specified above. Now, since semantic number and morphological number have to match with *EIN*, I assume that there is a condition such that semantically singular $\emptyset_{[-PL]}$ is only compatible with morphological singular contexts. The number specification for $\emptyset_{[-PL]}$ can be stated as [-PL sem, where αPL morph = αPL sem]. I discuss the syntactic structure of *EIN* in Section 5.1.2.

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[24] With Chapter 2 in mind, plural actually consists of the features [+F, +N]. The difference between plural and singular is that in the plural, both α and β in [αF, βN] are valued positively but in the singular, α and/or β is valued negatively (the latter was captured by a category variable: [-γ]). For simplicity, I use the feature [±PL] moving forward.

[25] In Chapter 7, I discuss in more detail that countability in the current analysis is due to a side-effect, which is related to number agreement mitigated by the head of NumP.

[26] Note that the usual restriction of *ein* to singular count contexts follows from a – what I call – restriction feature on the categorial feature yielding [+D: -PL] (cf. also uninflected *dies* 'this' in Chapter 4, Section 5). This restriction feature can be deleted by the operators POSS, NEG, and certain others that are licensed in emotive/affective contexts (cf. the exclamative operators [+EXCL] and !!! dicussed in Chapter 4, Section 2). This deletion will widen the distribution of *ein* allowing it to appear in non-singular contexts (for detailed discussion, see Chapter 8, Section 2.2.5).

Adjectival *eine* is different. Like *ein*, I suggest that *eine*ADJ has an unvalued/unchecked feature for morphological number. Unlike *ein*, it is an adjective and has a specification for semantic number as regards the cardinality of items (n) presupposed. This can be stated as follows: [αPL morph; n = 2 sem, where n is the number of presupposed entities or sets of entities]. Morphological number is encoded in the CNG feature bundle, and the duality presupposition is located with the adjectival stem *ein*:

(48)   *Adjectival* eine

```
                    InflP
                 ╱        ╲
        [F, N, O, S]        AP
                            │
                            A
                           ein
```
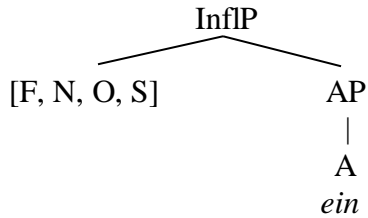
Abstracting away from the categorial features (and case and gender), I summarize the feature specifiactions of the three types of *ein*:

(49)   a.   *ein*:   [αPL morph]

        b.   Ø[-PL]:   [-PL sem, where αPL morph = αPL sem]

        c.   *eine*ADJ: [αPL morph; n = 2 sem unless in the context of a demonstrative, etc.]

To be clear, given the complex internal structure of determiners and adjectives (i.e., stem + inflection), the semantic specifications in (49) are assumed to be on the stems of the relevant elements, but the morphological ones are encoded in the inflections as unvalued/unchecked feature bundles. With this in mind, let me briefly address the statement in (49b) again.

There is an interesting interaction between (49a) and (49b). As proposed in more detail below, the numeral *EIN* derives from the combination of (49a) and (49b), where the stem of *ein* adds the categorial feature [+D], the inflection on *ein* supplies unvalued/unchecked morphological features for case, number, and gender, and Ø[-PL] imposes the restriction that only singular number will be compatible with other elements in the larger noun phrase whose number features have been valued/checked for singular by the more general operation that brings about concord in agreement featrues.

Finally, I suggested above that the wider linguistic context (e.g., different moods in the hosting clause) licenses the different readings of indefinites with regard to specificity. I proposed that this involves different positions of *ein* inside the DP. If these claims are on the right track, then we can maintain the claim that *ein* is semantically vacuous (Hypothesis 1a).

5.   Step 2 of the Proposal: Syntax

In the first subsection, I propose in more syntactic detail that synchronically, the numeral *EIN* is, in certain respects, based on the indefinite article even though diachronically, the article derived from the numeral. With the different specifications from above in mind, the remaining

differences between *EIN* and *ein* are argued to follow from the two different positions that $\emptyset_{[-PL]}$ and *ein* occupy in the syntactic tree. In the second subsection, adjectival *eine* is shown to be independent of the indefinite article and numeral, and occupies a third position.

5.1.   Article vs. Numeral

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

5.1.1. Uniform Position(s) of all Numerals
Recall from Chapter 1 that numerals are in a position different from determiners or determiner-like elements. Straightforward evidence for this comes from the following cases:

(50)   a.   *die zwei Freunde*
                DET two friends
                'the / those two friends'

        b.   *Peters zwei Freunde*
                Peter's two friends
                'Peter's two friends'

I assumed that numerals are in Spec,CardP. Following previous work though, I also suggested that if there is no determiner, then numerals may be in Spec,DP yielding a specific interpretation. The picture is slightly more complicated with *ein*-words, specifically the numeral *EIN* and the article *ein*.

        In the last section, I discussed the different interpretations of nominals involving *ein* with regard to specificity. In particular, I proposed that when the interpretation is non-specific, *ein* is in Card, but when it is specific, *ein* is in D. In other words, *ein* in (51a) may be in two different positions. Furthermore, I proposed that *EIN* consists of the singularity part $\emptyset_{[-PL]}$ and vacuous *ein*. As regards the different specificity interpretations, I pointed out that when the interpretation is non-specific, $\emptyset_{[-PL]}$ is in Spec,CardP and supporting *ein* is in Card, but when it is specific, $\emptyset_{[-PL]}$ is in Spec,DP and *ein* is in D. In other words, just like other numerals, $\emptyset_{[-PL]}$ may be located in two phrasal positions in (51b):[27]

(51)   a.   *(ei)n Freund*
                 a   friend
                'a friend'

        b.   *EIN Freund*
                one friend
                'one friend'

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[27] Despite certain differences between the singularity numeral and the other numerals, Barbiers (2005: 171) also assumes the same position for all numerals (see also his footnote 29). For typological discussion of numerals, see Corbett (2000) and Hurford (2003).

Regarding *ein*-words then, the relevant elements are in two positions involving phrases (Spec,CardP and Spec,DP for Ø$_{[-PL]}$) and in two positions involving heads (Card and D for *ein*). There are two issues that need to be addressed now.

First, if the article and the numeral (or a part of it) are in different positions, then I need to explain why the two cannot co-occur (52a-b). This is presumably not due to semantic reasons as other (adjectival) elements emphasizing singularity are possible (52c-d). In fact, under the right (emotive) conditions, *ein* can occur with a non-singularity numeral (52e), repeating an example from Chapter 1, Section 2.2 here (for the latter distribution in Dutch, see Bennis *et al.* 1998: 112):[28]

(52)　a. *　*(ei)n EIN Freund*
　　　　　 a　one friend

　　　b. *　*EIN (ei)n Freund*
　　　　　 one　a　friend

　　　c.　*(ei)n einziger Freund*
　　　　　 a　sole　　friend
　　　　　 'a sole friend'

　　　d.　*(ei)n einzelner Mann*
　　　　　 a　individual man
　　　　　 'a individual man'

　　　e. %　*ach man wir sind schon so　ne zwei wärmflaschen*
　　　　　 oh boy we are PRT　such a　two warm.bottles
　　　　　 'Oh boy, we are such two hot-water bottles.'

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[28] 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 one brother'
　　　　　　　 'one of the two of Peter's brothers'
Furthermore, an indication that adjectival *eine* is different from *einziger* 'only' can be seen in Negative Polarity contexts. Note first that neither a definite nor an indefinite article can license *je* 'ever' (iia). However, adding *einziger*, but not *eine*, after the definite article results in a completely fine example (iib):
　　(ii)　a. *　*Du bist {der / ein} Mann, der mich je　geliebt hat.*
　　　　　　　 you are the / a　man　that me ever loved has
　　　　　 b.　*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.'
Finally, another indication that *eine* is different from *einziger* 'only' is that both elements can cooccur (iic) ((iic) is from Zifonun *et al.* 1997: 1931):
　　(iii)　　*der eine einzige Gegensatz*
　　　　　　 the one unique contrast
　　　　　　 'the only contrast'

220

The ungrammaticality of (52a-b) follows from the assumptions above. Recall that *ein* originates in Art and undergoes movement to Card or D. Proposing that $\emptyset_{[-PL]}$ and *ein* are spelled out together as *EIN* under adjacency explains why an indefinite article cannot co-occur with the singularity numeral but only with other (non-composite) numerals (52e). I return to the discussion of (52e) at the end of this section. Adjectives like *einziger* 'sole' (52c) and *einzelner* 'individual' (52d) can occur with *ein* as they are elements morpho-syntactically independent of *ein*.

Turning to the second issue, I 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 endings in the genitive. In this instance, these two numerals and the following adjective have identical inflections (53a). This is in stark contrast to *EIN*, which does not have the same ending as the adjective (53b):

(53) a. *das Auto zwei-er   nett-er Freunde*
          the car   two-ST.GEN nice-ST friends
          'the car of two nice friends'

      b. *das Auto EIN-ES   nett-en Freundes*
          the car   one-ST.GEN nice-WK friend
          'the car of one nice friend'

Assuming that all numerals are in the same positions (Spec,CardP or Spec,DP), we need to explain why the numerals for 'two' and 'three' have a different morphological impact on the following adjective than *EIN*.

Historically, the indefinite article derives from the numeral for 'one'. Importantly, the inflectional properties of the singularity numeral have changed over time. In particular, OHG *éin* behaves like Modern German *zwei* 'two' and *drei* 'three' but crucially not like Modern German *EIN*: *éin* takes a strong adjective like *zwei* and *drei*, but *EIN* takes a weak one. Compare the dative strings in (54a) to (54b) (the (a)-example is taken from Demske 2001: 76):

(54) a. *mít éin-emo rôt-emo tûoche*   (OHG)
          with one-ST   red-ST   scarf
          'with one red scarf'

      b. *mit EIN-EM rot-en Tuch*
          with one-ST   red-WK scarf
          'with one red 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 OHG to Modern German, *éin* split into two parts: (vacuous) *ein* + $\emptyset_{[-PL]}$. Now, once two separate elements are available, the indefinite article can occur with $\emptyset_{[-PL]}$ (yielding the singularity numeral), but it can also start occurring by itself. In other words, the null part $\emptyset_{[-PL]}$ can also be left out resulting in the emergence of the indefinite article. If we make this assumption, then it is not implausible to

suggest that synchronically, Modern German *EIN* is based on the indefinite article, at least in certain respects. This explains why Modern German *EIN* has the morphological properties of a determiner because it consists in part of vacuous *ein*. The latter element may trigger Impoverishment, and this explains the weak adjective in (53b) and (54b). *EIN* has the semantic properties of a numeral because it involves $\emptyset_{[-PL]}$. In Section 6, I return to the diachronic split of *éin* into two components suggesting that the same occurred with possessive and negative articles – the other two complex *ein*-words.

More generally, accounting for these morpho-syntactic and semantic differences provides an argument that these elements are in different positions: like other articles, *ein* is in a head position; like other numerals, $\emptyset_{[-PL]}$ is in a phrasal position.

5.1.2. Different Scope of *mehr als*

Above, I proposed that articles are in head positions but that numerals are in specifier positions. 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, *mehr als* in (55a-b) implies that the relevant person is more than just a student (perhaps he is also the speaker's friend), and *mehr als* in (55c) implies that not only exactly the one hundred students came but perhaps other students showed up or even other people that are not students:

(55)   a.   *Er ist* [*mehr als (ei)n Student*].
           he is   more than a   student
           'He is more than a student.'

       b.   *Er ist* [*mehr als   mein Student*].
           he is   more than my   student
           'He is more than my student.'

       c.   *Es   kamen* [*mehr als   die hundert   Studenten*].
           there came   more than the one.hundred students
           'More than the one hundred students came.'

These scopal effects can be derived as follows.

Illustrating with (55b), the possessive element has undergone movement to Spec,DP, and the article has moved to D. Consider the relevant portion of the syntactic tree in (56). Since Spec,DP is occupied, the scopal element must be outside the DP proper. For concreteness, I assume that it is adjoined to the DP:

(56)

$$
\begin{array}{c}
\text{DP} \\
\diagup\diagdown \\
\textit{mehr als} \qquad \text{DP} \\
\diagup\diagdown \\
\text{PossP} \qquad\quad \text{D'} \\
\textit{m-}_{k} \qquad\quad \diagup\diagdown \\
\text{D} \qquad\quad \text{ArtP} \\
\textit{ein}_{i} \qquad [\ t_{i}\ t_{k}\ \textit{Student}\ ]
\end{array}
$$
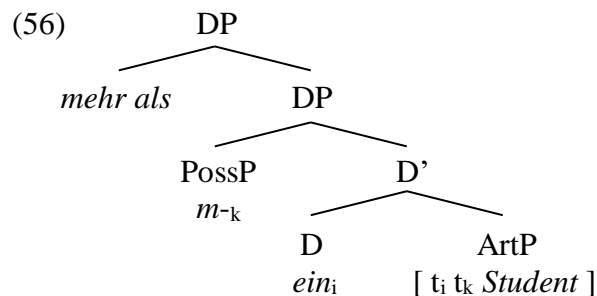
To be clear, *mehr als* c-commands the entire DP. It takes scope over the possessive and the head noun explaining the various interpretations.

In contrast, *mehr als* may also take scope over numerals only. For the following sentences to be true, it must hold for (57a) that at least two students came and for (57b) that at least one hundred and one did:

(57)   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, note that *mehr als* in (55) occurs in the left periphery of the DP: it immediately precedes *ein*-words as well as the definite article. In contrast, *mehr als* in (57) immediately precedes the numerals – this is particularly clear in (57b), where *mehr als* follows the definite article. In order to derive the different scopal readings in (55) vs. (57), I propose that *mehr als* is in a different position when it precedes the numerals in (57). This, in turn, will provide an argument that the two instances of *ein* (article vs. numeral) are in different positions. Consider this in more detail.

Recall that the scopal element *mehr als* immediately precedes the numerals in (57). Given the readings above, it only affects the interpretation of the numerals. In order to find a plausible structure, I follow Svenonius' (1993: 445-446) argumentation for adjectives in that the modifier and its modifiee must be embedded inside a specifier position. This prevents the modifier from taking scope over the entire noun phrase. If we assume that the same holds for modifiers and their numeral modifiees, then numerals are also in specifier positions in this case (rather than in a head positions in the extended projection of the noun) and their modifiers including scopal elements are part of the same specifiers. Again, I assume that this position is Spec,CardP (or after movement Spec,DP). I continue focusing on the singularity numeral.

With this in mind, recall that the numeral *EIN* consists of vacuous *ein* and contentful $\emptyset_{[\text{-PL}]}$. The latter component is responsible for singularity and stress (but has no independent segmental phonetic realization). I propose that $\emptyset_{[\text{-PL}]}$ and the scopal element *mehr als* are both part of a specifier, below illustrated with the specifier of CardP. Embedded in a specifier, *mehr als* cannot take scope over the entire noun phrase:

(58)

```
              DP
               \
                D'
               /  \
              D    CardP
                  /    \
                QP      Card'
               /  \    /    \
          mehr als  Q  Card   ArtP
                    Ø[-PL] einᵢ    \
                                    Art'
                                   /    \
                                 Art    NumP
                                 einᵢ   Student
```
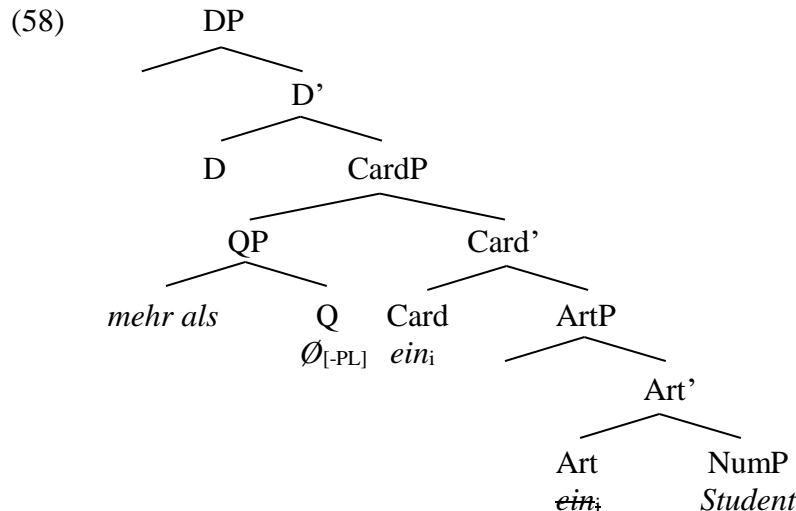
Some further remarks are in order.

Recall that the indefinite article has a feature for [+D], but not for definiteness. Consequently, *ein* does not have to move to the DP-level but can surface in Card. Indeed, on the current analysis, $\emptyset_{[-PL]}$ and *ein* are separate elements in different positions. After Linearization, Vocabulary Insertion, and Copy Reduction, the relevant portion of (58) above can be illustrated as in (59):

(59)

```
        _____
       /     ↑\
  Ø[-PL]   ein   (-INFL)
```
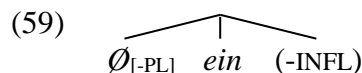
Null elements have to be licensed in some way (Kester 1996a, 1996b; Lobeck 1995; Rizzi 1986; but also Murphy 2018). This also applies to $\emptyset_{[-PL]}$. I proposed above that *ein* licenses $\emptyset_{[-PL]}$ by supporting it – both elements are adjacent to each other in (59). As with the possessive and negative articles, the operation of support can be instantiated by Local Dislocation (Section 4.1.2). This derives, in certain respects, the numeral from the indefinite article or, put differently, the numeral is based in part on the indefinite article.[29]

Returing to the discussion of scope, unlike in (56), in (58) *mehr als* is part of a specifier inside the DP c-commanding the numeral *EIN*, or more precisely, the element $\emptyset_{[-PL]}$, which is the semantically active part. This presents clear evidence that $\emptyset_{[-PL]}$ is in a different location from *ein*: like other numerals, $\emptyset_{[-PL]}$ is in a specifier; like other articles, *ein* is in a head position. Finally, recall that, in order to derive the strong reading of the numeral in (58), I assume that the article and $\emptyset_{[-PL]}$ (or rather QP) move to D and Spec,DP, respectively; morphological spell-out occurs as in (59).

To take stock thus far, deriving the Modern German singularity numeral from the combination of $\emptyset_{[-PL]}$ and the vacuous article has a number of advantages. On the one hand, I can

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[29] 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, see Perlmutter 1970: 239 fn. 10, 244 fn. 13): for instance, it is unclear to me how to account for the different morphological properties of *ein* and *EIN* vs. non-singularity, non-composite numerals as regards the inflections on the following adjectives (cf. (53) above) – if *EIN* were a non-composite numeral, then the adjectives following *EIN* and the other non-composite numerals should pattern the same in German, contrary to fact.

put all numerals in the same phrasal position(s) and explain the different scopal effects of *mehr als* on the various *ein*-words. On the other hand, I can account for the facts that *EIN* inflects like the indefinite article, that both of these elements cannot co-occur, and that both elements can take a weak adjective. In other words, the splitting of the numeral into two underlying parts and their subsequent composite spell-out accounts for the hybrid properties of *EIN*.[30] To highlight the special status of *EIN* further, consider the interaction between *ein* and other numerals in more detail.

Returning briefly to the co-occurrence of *ein* and non-singularity numerals, consider the examples in (60), where (60a) contains plural *eine* and (60b) involves the negative article in a plural context:

(60)   a.   %   *und so ne zwei Kämpfer die   alles umpflügen,*
                and so a two fighters who all   under.plough
                'and such two guys, who create such chaos'

       b.   *Es waren k-eine zehn Leute da.*
                it were NEG-a ten people there
                'There were not even ten people.'

These distributions follow from the fact that unlike *EIN*, other numerals are not composite forms – they are not morphologically related to *ein*. As to the structure, I suggest that the numerals in (60) are in Spec,CardP and that *ein* is in a higher head position (D).

5.2.   Article / Numeral 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 indefinite article may not (separately) co-occur although they are in different positions (specifier vs. head). This now makes the prediction that if a form of *ein* were to occur with a determiner, this *ein* could not be the indefinite article (or the numeral). We will see again that such distributions are indeed possible, but I argue that this instance of *ein* is adjectival. In what follows I provide more evidence for this categorially different *ein* suggesting that it is in a different position.

5.2.1. Different Morphology
Determiners do not have weak endings. There is just one exception. As discussed in Chapter 3, Section 4, some determiners may optionally have a weak ending in genitive masculine/neuter contexts. However, as seen there, this does not apply to *ein*-words. Now, we saw in Section 3 above that adjectival *eine* can have a weak ending in singular contexts (e.g., *der ein-e*) or in plural ones (e.g., *die ein-en*). Thus, this element behaves morphologically like a regular adjective (and not like an *ein*-word). This provides some first motivation for the current classification of

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[30] A composite analysis could also explain the alternation between the indefinite article and the numeral for 'one' in some other languages closely related to Standard German:

(i)   a.   *a(n)*   vs.   *one*   (English)
      b.   *a(n)*   vs.   *eyn*   (Yiddish)
      c.   *een*   vs.   *één*   (Dutch)
      d.   *a*   vs.   *õa*   (Bavarian German)

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

ein as regards article/numeral vs. adjective. In addition to the difference in weak inflection, there are other inflectional distinctions. Consider this in more detail.

As amply documented in Section 2, the indefinite article and the singularity numeral cannot have an ending when an overt noun follows (61a-b). An account of this was provided in the context of adjectival inflections in Chapter 2, Section 2.2.2. We have also seen that adjectival *eine* has an inflection when a noun follows. Recall though that is has to occur in a definite context – an indefinite environment yields ungrammaticality (61c):

(61)   a.   *(ei)n-(*er) Sohn*
            a-ST   son
            'a son'

       b.   *EIN-(*ER) Sohn*
            one-ST   son
            'one son'

       c. * *ein-er Sohn*
            one-ST son

It is less well known that PP can be added to the left periphery of noun phrases (Bhatt 1990, Haider 1992, Fortmann 1996, Roehrs 2020a). This includes *von*-possessives. Interestingly, this context yields the same facts as regards the different kinds of *ein*. Compare the examples in (61) with their respective counterparts below:

(62)   a.   *von Peter (ei)n Sohn*
            of   Peter a   son
            'a son of Peter'

       b.   *von Peter EIN Sohn*
            of   Peter one son
            'one son of Peter'

       c. * *von Peter ein-er Sohn*
            of   Peter one-ST son

The judgments reverse with a Saxon Genitive. Compare (62a-b) to (63a-b). Adjectival *eine* has a strong ending in this context (63c), again exhibiting similarities with a regular adjective (63d):

(63)   a. * *Peters (ei)n Sohn*
            Peter's a   son

       b. * *Peters EIN Sohn*
            Peter's one son

c. *Peters ein-er Sohn*
 Peter's one-ST son
 'one of the two of Peter's sons'
 'Peter's one son'

d. *Peters groß-er Sohn*
 Peter's big-ST   son
 'Peter's big son'

As is expected, concomitant with the different distributions in (61-62) vs. (63), there is a difference in the semantics: while there is no duality presupposition in the first two sets of data, it is present in (63c) of the third paradigm. This is confirmed by the fact that this nominal can straightforwardly be followed by *Peters anderer Sohn* 'Peter's other son'.

The different inflections on *ein* and the different semantics just discussed correlate with another morpho-syntactic distinction: the definite article can replace *ein* in (61a-b) and (62a-b) but not *einer* in (63c). Consider (64a-b) vs. (64c). With a definite article present in (64a-b), adjectival *eine* can be added to these strings yielding (64d):

(64) a. *der Sohn*
 the son
 'the son'

b. *von Peter der Sohn*
 of Peter the son
 'Peter's son'

c. * *Peters der Sohn*
 Peter's the son

d. *(von Peter) der eine Sohn*
  of   Peter   the one son
 'one of the two sons (of Peter's)'

Thus far, we have seen that the indefinite article and the singularity numeral exhibit different inflections than adjectival *eine* – the latter inflects like an adjective (and must appear in definite contexts). Before I continue the discussion of the inflections on the different kinds of *ein*, I briefly summarize the data and account for the different distributions of the possessives and their following elements.

To sum up thus far, *von*-possessives can occur with the definite article, the indefinite article, the singularity numeral, but not with adjectival *eine* (unless a definite article is also present). In contrast, Saxon Genitives can occur with adjectival *eine*, but not with the definite article, the indefinite article, and the singularity numeral. In Roehrs (2020a), I propose that *von*-possessives are outside the DP proper but that Saxon Genitives are in Spec,DP. Given this analysis, it follows that the former allows different determiners including the singularity numeral but the latter does not (recall also from Chapter 2, Section 2.3 that Saxon Genitives involve null

articles). The reason why *von*-possessives do not tolerate adjectival *eine*, but Saxon Genitives do, is that the former involve an indefinite context, but the latter do not.

Returning to the inflections, the morphological parallelism of adjectival *eine* and regular adjectives can be strengthened further. As already seen above, the indefinite article and the singularity numeral have endings different from the following adjective. This is illustrated here again in the nominative and dative neuter:

(65) a. *(ei)n frisch-es   Brot*
     a   fresh-NOM.ST bread
    'a loaf of fresh bread'

    b. *EIN frisch-es   Brot*
    one fresh-NOM.ST bread
    'one loaf of fresh bread'

    c. *(ei)n-em frisch-en Brot*
     a-DAT.ST fresh-WK bread
    'a loaf of fresh bread'

    d. *EIN-EM   frisch-en Brot*
    one-DAT.ST fresh-WK bread
    'one loaf of fresh bread'

Now, comparing (63c) to (63d) above, where adjectival *eine* and a regular adjective have each a strong inflection in isolation, we expect that when both of these elements co-occur, they both have the same endings. This is indeed borne out: both elements are weak in (66a-b) but strong in (66c):

(66) a. *da-s   ein-e   frisch-e Brot*
    the-NOM.ST one-WK fresh-WK bread
    'one of the two loaves of fresh bread'

    b. *de-m   ein-en   frisch-en Brot*
    the-DAT.ST one-WK fresh-WK bread
    'one of the two loaves of fresh 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.'

I return to the parallelism of adjectival *eine* and *andere* 'other' in (66c) in Section 5.2.5 below. Now, in order to derive the adjectival endings in a uniform way (compatible with Chapter 2), recall that I proposed in Section 4.3.2 that adjectival *eine* involves an adjectival structure (i.e., it has InflP at the top). Given this, I propose that adjectival *eine* is merged in a position similar to that of other adjectives. Presumably, this is the highest Spec,AgrP in the nominal structure (see

also Gallmann 2004: 155, Pafel 2005: 179). The tree representation for adjectival *eine* is provided in Section 5.2.3 after I have made a few other remarks.

5.2.2. Different Semantics

As discussed above, the numeral *EIN* involves singularity, but adjectival *eine* presupposes duality. Besides this difference, numerals can be modified by *mehr als* 'more than' (67a, b, d) whereas adjectival *eine* cannot (67c):

(67) 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 an element semantically different from numerals including *EIN*.

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

Above, *ein* was discussed in the context of prenominal possessives like *von*-phrases and Saxon Genitives. Turning to possessive articles, it is worth pointing out again that unlike the negative and the indefinite articles (68a-b), possessive articles (68c) may occur with adjectival *eine*. This includes cases where possessive articles are part of periphrastic possessive constructions (68d):

(68) a. * *keine eine Freundin*
             no   one girlfriend

   b. * *(ei)ne eine Freundin*
          an   one girlfriend

   c. *meine eine Freundin*
       my   one girlfriend
       'one of the two of my girlfriends'
       'my one girlfriend'

   d. *Peter seine eine Freundin*
       Peter his   one girlfriend
       'one of the two of Peter's girlfriends'
       'Peter's girlfriend'

The sequence of two instances of *ein* in (68a) and (68b) cannot be ruled out by haplology. Roughly, this describes the reduction of identical sequences of sounds (for the discussion of (68b) in this regard, see Bhatt 1990: 201; more generally, see Neeleman & van de Koot 2006). If this were the case, we would expect (68c-d) to be ungrammatical as well, contrary to fact. The difference between (68a-b) and (68c-d) has to do with definiteness. Again, I conclude that adjectival *eine* must occur in definite contexts.

Note though that *ein* preceding the noun in (68) is actually morphologically ambiguous in the feminine between the singularity numeral and the adjective (indeed, both of these elements are also stressed). Thus, it could be objected that *eine* here is not the adjective. To confirm the analysis of *ein* as an adjective in (68), I consider each of the two analytical options of the *ein* before the noun (i.e., numeral vs. adjective) more carefully.

I start with the first option, where lower *ein* could be taken to be the numeral *EIN*. Consider cases in the nominative masculine, where the morphology clearly distinguishes between *ein*-words and adjectives. As can be seen in (69), these instances with the numeral *EIN* are ungrammatical:

(69)   a. *   *kein EIN Freund*
              no   one friend

       b. *   *(ei)n EIN Freund*
               a   one friend

       c. *   *mein EIN Freund*
              my   one friend

       d. *   *Peter sein EIN Freund*
              Peter his   one friend

Given the ungrammaticality of (68a-b), the status of (69a-b) may not be unexpected. However, note that unlike the grammatical cases in (68c-d), their counterparts in (69c-d) are ungrammatical here. This means that the lower *ein* in (68c-d) cannot involve the numeral *EIN*.

In order to account for (69), observe that there are two copies of *ein* in these instances, one before *EIN* and one that apparently has formed a composite with $Ø_{[-PL]}$ yielding the singularity numeral *EIN* itself. I suggest that after Copy Reduction there is only the higher copy of *ein* present. This means that $Ø_{[-PL]}$ cannot form a composite with *ein* and as such, it is not licensed as a null element. This explains the ungrammaticality of (69).[31]

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[31] In Chapter 8, Section 2.2.2, we will see that there are instances where a second copy of *ein* can occur (ia). Crucially, this second copy must be a reduced form of *ein* as can be verified in (ib):

    (i)   a.   *EINE so'ne Tochter*
                     one   so.a daughter
                     'one such daughter'
           b. *   *EINE so   eine Tochter*
                     one   such a   daughter

Following Nunes (2001), I argue in Chapter 8 that encliticized elements can escape Copy Reduction. Note that a reduced copy of *ein* is not possible with $Ø_{[-PL]}$ as *'n* cannot encliticize to a null element (e.g. *meine [$Ø_{[-PL]}$]*'ne Tochter* 'my one daughter').

This is different for adjectival *eine*, the second option for lower *ein* in (68). While this element cannot occur with a negative article or an indefinite article in the nominative masculine either (70a-b), it can appear with the possessives under discussion here (70c-d), similar to the Saxon Genitives discussed in Section 5.2.1:

(70)   a. * *kein ein-er Freund*
                no   one-ST friend

        b. * *(ei)n ein-er Freund*
                 a   one-ST friend

        c.   *mein ein-er Freund*
                my   one-ST friend
                'one of the two of my friends'
                'my one friend'

        d.   *Peter sein ein-er Freund*
                Peter his one-ST friend
                'one of the two of Peter's friends'
                'Peter's one friend'

This essentially yields the distribution in (68) above confirming the claim that (68) involves adjectival *eine*. Note now that (70a-b) are ungrammatical as adjectival *eine* is not in definite contexts here. No such semantic problems arise with the possessives in (70c-d), which are definite in interpretation. I turn to the syntactic derivation of adjectival *eine*.

      I have argued that *ein* as part of the possessive article and *eine* as an adjective are of different lexical categories. I can point out then that they do not stand in a relevant morpho-syntactic relation with one another. If so, it is expected that these types of *ein* can co-occur. Recalling that adjectival *eine* involves InfP, the syntactic distribution can be illustrated as follows:

(71)
```
              DP
          ┌────┴────┐
       PossP        D'
        m-      ┌────┴────┐
                D        AgrP
              einei    ┌───┴────┐
                    InflP      Agr'
                   eineADJ   ┌───┴────┐
                            Agr      ArtP
                            eˈinei  ┌───┴────┐
                                           Art'
                                      ┌─────┴─────┐
                                     Art          NP
                                     eˈinei     Freundin
```
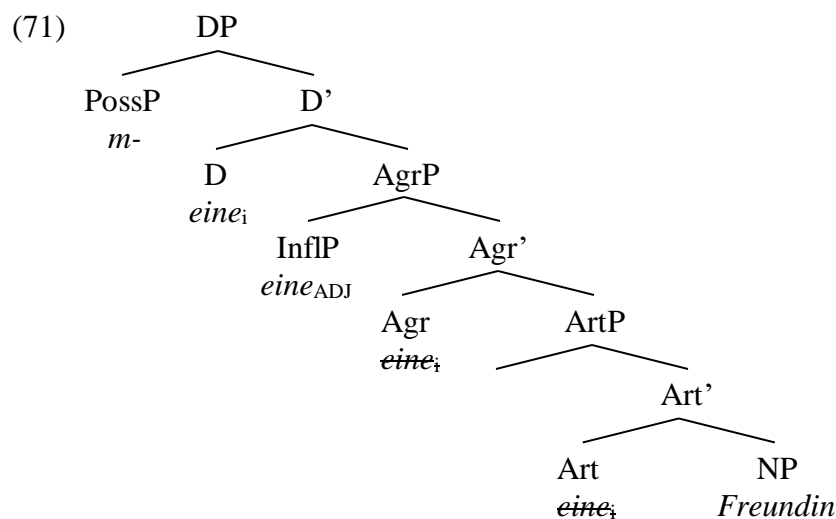
This derivation also applies to more complex cases.

Unsurprisingly, like possessive articles, *diese* 'this' can also co-occur with adjectival *eine* (72a). As discussed in Chapter 2, *diese* and *meine* can co-occur (72b). In fact, adjectival *eine* can appear with both of these elements at the same time (72c), and an adjective can also be added (72d) (recall that there is no duality presupposition with demonstratives):

(72)   a.   *diese eine Freundin*
            this   one girlfriend
            'this one girlfriend'

       b.   *diese meine Freundin*
            this   my   girlfriend
            'this girlfriend of mine'

       c.   *diese meine eine Freundin*
            this   my   one girlfriend
            'this one girlfriend of mine'

       d.   *und diese meine eine große Liebe zu sehen*
            and this   my   one great love to see
            'and to see this one great love of mine'
                     (https://www.kirmesforum.de/threads/faszination-break-
                     dancer.1520/page-2)

On current assumptions, *diese* is in Spec,DP in (72a) but in Spec,LPP in (72b-d); *meine* is in Spec,DP in (72b-d). Thus, these distributions are expected to be possible. Conversely, if we were to assume just one type of *ein*; that is, if we were to try and derive both the numeral *EIN* and adjectival *eine* from (vacuous) *ein*, then a number of distributions would be hard to account for. This is what I focus on next.

5.2.4. Co-occurrence of *ein* and Determiners Revisited
In this subsection, I make the point that adjectival *eine* is a different element from another perspective. Recall that the indefinite article and the numeral have no ending when they appear in front of a noun (73a-b). As is well known, a definite determiner cannot precede either of them (73c-d):

(73)   a.   *(ei)n Mann*
             a   man
            'a man'

       b.   *EIN Mann*
            one man
            'one man'

       c. * *der (ei)n Mann*
            the one man

232

      d. *   *der EIN Mann*
            the one man

Note that *ein* with a weak inflection is possible here (74a). Finally, recall again that Saxon Genitives can occur with *ein* provided the latter has a strong inflection. Compare (74b) to (74c-d):

(74)   a.   **(der) ein-e   Mann*
              the   one-WK man
              'one of the two men'

      b.   *Peters ein-er Sohn*
             Peter's one-ST son
             'one of the two of Peter's sons'
             'Peter's one son'

      c. *   *Peters (ei)n Sohn*
             Peter's a   son

      d. *   *Peters EIN Sohn*
             Peter's one son

Consider (73) and (74) in the context of the current system.

       Under current assumptions, the indefinite article in (73c) is ruled out because only one article can appear in a noun phrase. If I assume again that *EIN* consists, in part, of (vacuous) *ein*, then I can rule out the option of (73d) under the same assumption. In other words, these cases are not ruled out because *ein* does not have a weak adjectival ending. 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 (74), if I assume – as I have all along – that adjectival *eine* is a non-composite form, then this element is predicted to occur with another article in (74a). Similarly, if I assume that Saxon Genitives as in (74b) involve a null article (Chapters 2), then this distribution follows from the same assumptions. This means that (74c-d) are out as there are two articles, vacuous *ein* and the null article.

       To be clear, then, assuming two basic types of *ein*, I can explain why sometimes a form of *ein* cannot occur with another article but sometimes it can, provided that form of *ein* appears in a definite context. These distributions are hard to account for if we assume just one type of *ein*. Indeed, if *EIN* and adjectival *eine* were both derived from vacuous *ein*, then (74a-b) should be, under current assumptions, ungrammatical – there would be two articles just like (74c-d). Given the different grammaticalities, this, however, does not seem to be the case.

       If a different analysis than the current one is to be pursued, then assumptions about the base-generated position of *ein* and its different possible landing sites need to be clearly layed out. Additionally, the assumptions about the inflections on *ein* need to be spelled out in detail. As demonstrated in previous chapters, a simple surface-oriented explanation does not suffice. This means that if the inflection on *ein* is invoked as an explanation, it has to be part of a (more) comprehensive account of *ein* itself and adjectival inflections in general. In addition to the

different syntactic and morphological assumptions, such an account also needs to capture the different semantics of the various types of *ein*. As of now, I am not aware of the existence of such an alternative account. Finally, I return to the parallelism between adjectival *eine* and *andere* 'other'.

5.2.5. More Evidence for Adjectival *eine*

The claim that *ein* can be an adjective is further strengthened if *eine* is treated as categorially parallel to *andere* 'other'. Consider (75a), where *eine* and *andere* are in different, coordinated DPs showing similar morpho-syntactic behavior. Now, as briefly discussed in Chapter 2, Section 2.3, there are certain types of adjectives – often called definite adjectives – that can license singular count nouns (75b-b'). The adjective *andere* is different and requires the presence of a determiner (75c-c'):[32]

(75) a. *Meine ein-e   Tochter kam, mein-e andere   nicht.*
          my   one-WK daughter came, my   other-WK not
          'One of my daughters came, the other did not.'

     b. *Folgendes Beispiel illustriert das.*
          following example illustrate this
          'The following example illustrates this.'

     b'. *Das folgende Beispiel illustriert das.*
          the following example illustrate this
          'The following example illustrates this.'

     c. * *Anderes Beispiel illustriert das.*
          other   example illustrate this

     c'. *Das andere Beispiel illustriert das.*
          the other   example illustrate this
          'The other example illustrates this.'

The need for the presence of a determiner in (75c-c') is exactly what we saw with adjectival *eine* above. In other words, both adjectival *eine* and *andere* 'other' require a determiner. Thus, both of these elements are not definite adjectives. Interestingly, the adjective *andere* can also have the meaning 'different'. This meaning is subject to a certain context, and this reveals another parallelism of *eine* and *andere* in the meaning of 'other'.

I observed 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 type/degree particle *so*

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[32] Another indication for categorial parallelism comes from the fact that adjectival *eine* can also be co-ordinated with *andere*, as in the following idiom:

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

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

'such'. Compare (76a) and (76b). Consistent with that, the adjective *andere* can only be interpreted as 'different' (but not 'other') under this condition (76c):

(76)   a.   *so (ei)n Mann*
                so a   man
                'such a man/a man like that'

        b. *   *der so eine Mann*
                the so one man

        c.   *der so andere   Mann*
                the so different man
                'the so different man'
                #'the so other man'

Thus, the ungrammaticality of (76b) and the interpretative restriction in (76c) fit well with the discussion above, where I showed that adjectival *eine* often co-occurs with *andere* in the meaning of 'other'. This provides additional evidence that this type of *ein* is adjectival.

       To sum up this section, I discussed more evidence that there are two main types of *ein*: the indefinite article and adjectival *eine*. The singularity numeral *EIN* is based, in part, on the indefinite article. All three elements are in different positions: the indefinite article is in Card or D, the singularity numeral, that is, its semantic component, is in Spec,CardP or Spec,DP, and adjectival *eine* is in a high Spec,AgrP position. The adjectival inflections on these different elements support the classification into the two main types. The different inflections follow from the system developed in Chapter 2, again highlighting the fact that adjectival inflections and *ein* can (and should) be discussed in tandem. Before I review some previous work on *ein*, I briefly return to the discussion of *ein*-words as composite forms.

6.   Diachronic and Cross-linguistic Evidence for *ein*-words as Composites

As mentioned in Section 4.2.2, there is an interesting asymmetry in the syntactic distribution of Saxon Genitives and possessive articles. Whereas the former can follow their head nouns, the latter cannot:

(77)   a.   *das Buch Maximilians*
                the book Maximilian's
                'Maximilian's book'

        b. *   *das Buch sein*
                the book his

This distribution was used to motivate the composite analysis of possessive articles. Other languages seem to be revealing in this respect confirming that the lower position of the possessive pronominal in (77b) is not ungrammatical in principle.

Unlike Modern German, OHG allows possessive pronominals to follow their head nouns (78a). Furthermore, note that Norwegian can also have possessive pronominals in postnominal position (78b):

(78) a. *(ther) fater min*   (OHG)
          the   father my
          'my father'
                  (Demske 2001: 173)
      b. *katt-a   mi*   (Norwegian)
          cat-DEF my
          'my cat'
                  (Julien 2005a: 140)

I propose that the properties of the possessive articles in Modern German follow from the decompositional structure discussed above. Specifically, since *ein* itself cannot follow the head noun (79a), other *ein*-words cannot either (79b-c):

(79) a. * *{das / ein / Ø_D} Buch ein*
             the / a   book a

      b. * *{das / ein / Ø_D} Buch EIN*
             the / a   book one

      c. * *{das / ein / Ø_D} Buch kein*
             the / a   book no

While (79b-c) are also out for independent reasons (i.e., the high base positions of $\emptyset_{\text{[-PL]}}$ and NEG), the ungrammaticality of (79a) suggests a straightforward account of the absence of postnominal possessive pronominals in Modern German.

In more detail, as seen in (77a) and (78) above, possessives can be base-generated in a low position. As such, possessive pronominals in Modern German could also be expected to be grammatical in such a low position. This, however, is not the case. Given the composite analysis, note though that the possessive component of the article (e.g., *s-* in (77b)) cannot be supported by *ein* in Modern German if the possessive stays in situ – as (79a) indicates, *ein* itself cannot occur in such a low position. Assuming that the possessive pronominals in OHG and Norwegian are not composite forms involving an indefinite article, they can surface in postnominal position.[33] This diachronic and cross-linguistic difference lends more credence to the proposal that possessive articles in (Modern) German are composite forms. I briefly sketch the diachronic path of the three *ein*-words involving composites.

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[33] Interestingly, prenominal possessives can also occur lower in the structure in OHG, namely between the determiner and the head noun (see also Footnote 13):
      (i)   *in dhemu heilegin daniheles chiscribe*   (OHG)
            in the   holy   Daniel's scripture
            'in Daniel's holy scriptures'
                     (Demske 2001: 227)
Again, this indicates that possessives have a different analysis in the older varieties of German.

In Section 5.1.1, I tentatively suggested that OHG *éin* 'one' was split into two components in the development of the language (80a) leading to the emergence of the indefinite article. With this in mind, I suggest that the other *ein*-words were also split into two parts over time. Specifically, possessive pronominals were split into a possessive component and vacuous *ein* (80b). Note that this process is presumably tied to ENHG Diphthongization, which changed [iː] to [aɪ]. As for the negative article, judging from the diachronic development of *kein* 'no' described in Paul *et al.* (1989: 235), it appears as if the negative article consisted of two components early on (80c). Importantly though, the inner makeup seems to have changed from the combination of a negative element with the singularity numeral to a negative element with the indefinite article:

(80)   a.   *éin*   -> $\emptyset_{[-PL]}+ein$
            one $\emptyset_{[-PL]}+a$

       b.   *mīn*   ->   m   +*ein*
            my   POSS+a

       c.   *ne(c)h+ein*   ->   *nekein*   ->   k +*ein*
            not   +one   NEG+a

To sum up, unlike vacuous *ein*, the other Modern German *ein*-words are composite forms. In contrast, the counterparts of the latter elements in OHG (and Norwegian) are not. Note that this difference in decompositionality is also compatible with the change in inflection that adjectives went through in the history of German; for instance, recall from Chapter 2, Section 1.2 that possessive pronominals in OHG (and Norwegian) take adjectives with weak inflections but that possessive articles in Modern German take adjectives with mixed inflections. Thus, while the old possessive pronominals pattern with the definite article, the Modern German counterparts are related to *ein*. It is clear that German has undergone some changes in this empirical domain. It is clear that OHG and Modern German must have a different account of these phenomena.

In the next section, I turn to some previous accounts discussing one proposal in more detail. Unlike adjectival endings discussed in Chapter 2, there are much fewer analyses of *ein*.

7.   A Brief Critique of a Previous Proposal

In the descriptive 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: 303ff). 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*, Higginbotham (1987: 47) argues that the indefinite article in predicate nominals is an adjective meaning 'one', and Ackles (1996) argues that *a(n)* marks the presence of NumP with singular count nouns.[34] Elaborating on work by Oomen (1977), Vater (1982, 1984, 2002)

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[34] For the discussion of English *a(n)* in quantifying expressions (e.g., *a lot*, *a few*), see Klockmann (2020). The author tentatively extends the discussion to ordinary noun phrases like *a book* claiming that *a(n)* is not an indefinite element – it is featureless but involves countability. This is partially different from the current discussion of German,

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 proposals just mentioned make different claims. No consensus has emerged. Recall now that I showed in Chapter 1, Section 2.1.3 that German, Nowegian, and Yiddish seem to differ in some of the empirical details, and care must be taken when we compare different languages in this part of the grammar. Similar to adjectival inflections in Chapter 2, I have proposed that it is these details that show the true nature of *ein*. In what follows, I review only Vater's proposal, which explicitly discusses German. 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 of 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 non-specific but also to a specific interpretation of the containing noun phrase (for examples, see Section 4.1.3 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 elements belong to a different part of speech – numerals/quantifiers. He provides some syntactic and semantic arguments for this claim. After illustrating some of these arguments, I return to them showcasing some shortcomings.

Starting with some syntactic arguments, Vater points out that like other quantifiers, *ein* can undergo quantifier float (note that the translations of the examples here and below are my own):

(81)   a.   *Antrag   habe ich keinen gestellt.*
            application have I   no   submitted
            'As for applications, I have submitted none.'

       b.   *Antrag   habe ich einen gestellt.*
            application have I   one   submitted
            'As for applications, I have submitted one.'

Second, like other numerals (82a), *ein* can co-occur with a determiner (82b):

(82)   a.   *die zwei Bücher*
            the two books
            'the two books'

       b.   *das eine Buch*
            the one book
            'one of the two books'

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where *ein* is also claimed not to be related to indefiniteness. However, the indefinite article is proposed here to have a feature (i.e., [+D]), and it is not responsible for countabilily.

Turning to some semantic arguments, Vater argues that like other numerals, *ein* can individuate mass nouns. Glossing over some of the details, the interpretation in (83a) can involve certain types of bread or certain amounts of bread. Modulo the singular, the example in (83b) has a similar range of readings. Importantly, the definite article by itself does not have this individuating function. Note though that the example in (83c) is still ambiguous, here between a mass and a count reading:

(83) a. *zwei Brote*
          two breads
          'two types of bread'
          'two loaves of bread'

      b. *ein Brot*
          one bread
          'one type of bread'
          'one loaf of bread'

      c. *das Brot*
          the bread
          'the (substance of) bread'
          'the loaf of bread'

Following certain aspects of Perlmutter (1970), Vater (1984: 39) proposes that the mass interpretation in (83c) only involves a definite article (84a). In contrast, the definite singular count reading in (83c) involves *ein*, which is deleted (84b). Interestingly, this *ein* can also surface. In this scenario, the interpretation is, according to Vater, partitive. This is indicated by the translation in (84c). Below, I return to the word put in brackets:

(84) a. *das Brot*
          the bread
          'the (substance of) bread'

      b. *das ~~eine~~ Brot*
          the one bread
          'the loaf of bread'

      c. *das eine Brot*
          the one bread
          'one of the [two] breads'

After this brief illustration, I 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 4, Section 3, I labeled this construction split topicalization. One argument against Vater's view is that under certain conditions, this type of split does allow (other) determiners to be stranded:

239

(85)   *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 that either *ein* or *diese* 'these' can occur in a source DP, we can maintain the claim that *ein* is a determiner.

    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 (86a). The same holds for two quantifiers on Vater's assumptions or, alternatively, two determiner elements on my assumptions (86b):

(86)   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 the possibility of co-occurrence, I continue claiming that *ein* is an article when it occurs with another determiner as in (86b) (specifically, this type of *ein* is a predeterminer, see also Footnote 4). As for the semantic arguments, I agree that *ein* seems to be individuating in nature. However, I suggest in Chapter 8, Section 2.2.3 that *ein* is not responsible for this effect, but rather it flags the presence of an operator. Finally, I 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; that is, *ein* is taken to be the singularity numeral. Consider (87). Vater (1982: 72) explicitly states that *ein* here presupposes a larger set of elements. However, this claim is not accurate. Rather, while the paraphrase does indeed imply a larger set, *ein* preceded by the definite article as in (87a) presupposes just two elements.[35] Furthermore, as mentioned above, this duality presupposition can be cancelled when a demonstrative replaces the definite article (87b). Importantly, the partitive reading in the paraphrase is not cancelled when the demonstrative replaces the definite article there (note again that the translations are mine):

(87)   a.   *das eine Buch – eins der   Bücher*
              the one book – one of.the books
              'one of the two books – one of the books'

        b.   *dieses eine Buch – eins dieser   Bücher*
              this   one book – one of.these books
              'this one book – one of these books'

I take this to mean that the paraphrases do not capture the semantics of this *ein* accurately. In other words, *ein* is not the singularity numeral here. Furthermore, it appears that other numerals

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[35] Recall from Section 3.3 that adjectival *eine* in plural contexts presupposes two *sets* of elements.

do not invoke this partitivity either; that is, *die zwei Bücher* 'the two books' does not mean 'two of the books'. I conclude that the *ein* in (87) is of a different type. Above, I proposed that this *ein* is adjectival, an element only licensed in definite contexts. Besides these issues, it is also worth pointing out that a number of other, important types of *ein* are not discussed in Vater. This shows the limited empirical coverage of that proposal.

Predicate nominals and cases in the plural are not mentioned in Vater's discussion at all:

(88)   a.   *Er ist (ein) Lehrer*
              he is a   teacher
              'He is a teacher.'

       b. % *So ein-e Idioten!*
             such a-PL idiots
             'Such Idiots!'

It is quite clear that the noun phrases in (88a) and (88b) have nothing to do with singularity: (88a) denotes a property, and (88b) involves a plurality.

Furthermore, note also that Vater does not discuss reduced forms. However, as can be seen in (89), the form of *ein*, reduced or unreduced, does make an important difference with regard to the grammaticality judgments and with regard to the interpretations (for (89c), see Pafel 1994: 251):

(89)   a.   *Geben Sie mir (ei)nen Apfel!*
             give   you me an   apple
             'Give me an apple!'

       b.   *Geben Sie mir *(EI)NEN Apfel!*
             give   you me   one   apple
             'Give me one apple!'

       c.   *Geben Sie mir *(ei)nen!*
             give   you me   one
             'Give me one!'

The distinction of reduced and unreduced forms has played an important role in distinguishing the different kinds of *ein* in the current account. (89a) involves the indefinite article *ein*, and (89b) shows the singularity numeral *EIN*. As for (89c), note that *ein* is used pronominally here. I reiterate the idea that the reduced form of *ein* is ungrammatical as pronominal forms of *ein* involve some stress, which prevents the reduced forms from occurring.

Finally, Vater treats the negator *kein* 'no' as an unanalyzed form, and possessives such as *mein* 'my' are not discussed at all. As documented above, *ein* and the other *ein*-words exhibit a number of morpho-syntactic similarities; for instances, as regards their inflections. Since inflections are not addressed by Vater, an important morpho-syntactic generalization over the different *ein*-words is being missed here. In my view, adjectival inflections and *ein*-words should be discussed in tandem. In this respect, I point out again that adjectival inflections provide important clues about the lexical categories of items in the noun phrase – they only surface on

determiners, certain quantifiers, and adjectives – and clues about 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 there are two types of *ein*: one is a semantically vacuous element, and the other is adjectival *eine*, which has semantics.

8.   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 of the article and the numeral, I proposed that the numeral is a composite form – it involves the null element $\emptyset_{\text{[-PL]}}$, and the latter is supported by the article. Something similar holds for the possessive and negative articles. Adjectival *eine* was proposed to be an independent lexical element. In order to account for the differences, I suggested that the three elements have different feature 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 *ein*		Morphology	Semantics	Position
Article *ein*	Vacuous (indefinite, possessive, negative, predicative)	αPL morph		Card or D (depending on the reading, weak vs. strong)[a]
	Numeral $\emptyset_{\text{[-PL]}}$	(αPL morph = αPL sem)	-PL sem	Spec,CardP or Spec,DP
Adjectival *eine*		αPL morph	n = 2 (unless in certain contexts)	(high) Spec,AgrP

[a] In Chapter 6, I propose that predicative *ein* can also occur in Art (the head of ArtP).

It is clear that the conditions under which adjectival *eine* induces and loses its duality presupposition require more investigation.

The second goal was to identify more general properties of *ein*. Similar to adjectival inflections in Chapter 2, I concluded here that *ein* is semantically vacuous (Hypothesis 1a). In the next two chapters, I turn to more properties of *ein* by discussing some consequences of the current analysis. In particular, I discuss *ein* in relation to semantic concepts such as emotiveness and number. This includes the discussion of *ein* in predicative contexts. We will find confirmation of the conclusions reached thus far. Furthermore, we will see more evidence that *ein* can also indicate a certain amount of structure in the noun phrase, and it can flag the presence of covert operators (Hypothesis 3).

Chapter 6: *Ein* and Emotiveness

1.   Introduction

In Chapter 5, I argued that *ein* is semantically vacuous (Hypothesis 1a). I now turn to two consequences. In this and the next chapter, I discuss *ein* with regard to emotiveness and number. These next two chapters are also meant to be broader in their empirical and theoretical range; that is, they discuss *ein* in the context of both the noun phrase (DP) and the clause (TP). Specifically, I provide a more detailed survey of two (partially known) restrictions. Focusing on the contribution of *ein*, I identify three types of readings in this chapter where the notion of emotiveness is of importance in singular, out-of-the-blue contexts. In the next chapter, I isolate restrictions with regard to both morphological and semantic number in the plural. Consistent with the previous discussion, I reach the conclusion that *ein* does not make a semantic contribution. To contextualize the following discussion, I begin with some general remarks.

1.1.   General Structural Similarities Between DP and TP

It was pointed out in Chapter 1 that it is generally assumed that clauses and noun phrases are parallel in meaning and structure (e.g., Abney 1987, Chomsky 1970, Iordăchioaia 2020). To repeat the relevant data, consider the following juxtaposition:

(1)   a.   The Romans destroyed the city.

         b.   the Romans' destruction of the city

In view of the similar interpretations of the arguments in (1), the structural parallelism in (2) has come to be established:[1]

(2)   a.   CP   TP   AgrP   VP

         b.   PP   DP   NumP   NP

The investigation of this parallel has been very fruitful in its empirical discoveries and theoretical innovations (for a survey, see Alexiadou *et al.* 2007). This and the next chapter intend to add to this body of work focusing on certain combinations of "pronoun + (copular verb) + noun" in simple DPs and copular TPs. Unlike the cases in (1) above, I investigate noun phrases and copular sentences that involve non-theta nouns. Many of these cases involve non-canonical constructions.

Observe first that the DPs and TPs under discussion here involve a pronoun and a noun (3a-b). The difference is that the TPs also contain an auxiliary:

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[1] As mentioned in Chapter 1, this alignment is not uncontroversial. Recall that I take DP to be parallel to TP. Note in this regard that Heim & Kratzer (1998) take (root) clauses to be of category S. As is clear from their discussion of relative clauses (their Chapter 5), S is under CP. Given the alignment in (2), I take S to be TP here.

(3) a. *wir Idioten*
          we idiots
          'us idiots'

     b. *Wir sind Idioten.*
          we are   idiots
          'We are idiots.'

Unlike in the plural above, *ein* is added in TPs involving the singular:[2]

(4) a. *du Idiot*
          you idiot
          'you (idiot)'

     b. *Du bist (ei)n Idiot.*
          you are   an idiot
          'You are an idiot.'

Considering (3) and (4), we can observe that these structures are fairly similar to each other and involve comparatively little complexity. Specifically, taking the auxiliary to be semantically vacuous (Coppock & Beaver 2015: 429; Heim & Kratzer 1998: 61-62), I assume that this verbal element simply indicates the presence of more structure, for instance, the TP-layer. As we will see below, *ein* is similar to the auxiliary in this regard. 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.

Overall, I reach the conclusion that *ein* makes no semantic contribution in these constructions either and that the nominal and clausal combinations of "pronoun + (copular verb) + noun" are quite similar albeit not entirely identical. The few differences between the two domains follow from certain assumptions about the different pragmatics involved (Rauh 2004), lexical differences between certain overt and covert elements (*als* 'as' vs. ALS), and the obligatoriness of NumP in the DP but its syntactic optionality in the predicate nominal of the TP. If this discussion is on the right track, then I provide additional evidence that the nominal and clausal domains are essentially parallel. With these general remarks in mind, I begin the investigation. Postponing the discussion of number to the next chapter, I start by examining *ein* in emotive contexts.

1.2.   *General Interpretatory Differences Between DP and TP*

In this chapter, I compare the structural and interpretatory differences of constructions where pronouns combine with bare nouns (5) or with nouns preceded by overt elements like *als* 'as' or *ein* 'a' (6). To avoid certain ambiguities (Chapter 5), the indefinite article is provided in its reduced and unstressable form *'n*. Interestingly, nouns such as *Bauer* are ambiguous in that they have a neutral/literal meaning ('farmer') and an emotive/figurative one ('peasant') (e.g., Harbert 2007: 147, de Swart *et al.* 2007, and references below). However, this ambiguity disappears in

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[2] Recall that I put the nominal complement of singular pronominal determiners in parentheses in the English translations.

these different types of DP and TP in interesting ways. Specifically, bare nouns have an emotive/figurative meaning in the DP (5a) but a neutral/literal meaning in the TP (5b). In contrast, nouns preceded by *als* have a neutral/literal meaning in the DP (6a), but nouns preceded by *ein* have a (predominantly) emotive/figurative meaning the TP (6b) (# indicates that the interpretation is not available; % means that the interpretation is possible but somewhat less prevalent or for some speakers not available at all):[3]

(5) a. *du Bauer*
you peasant
'you (peasant)'
#'you (farmer)'

b. *Du bist Bauer.*
you are farmer
'You are a farmer.'
#'You are a peasant.'

(6) a. *du als Bauer*
you as farmer
'you as a farmer'
#'you as a peasant'

b. *Du bist 'n Bauer.*
you are a peasant/farmer
'You are a peasant.'
%'You are a farmer.'

Comparing the (a)-examples to the (b)-examples, we find a near complementary distribution of the two readings of the noun. Indeed, comparing the (a)-examples to each other and the (b)-examples to each other, this difference in interpretation correlates with the presence or absence of *als* 'as' and *ein* 'a'. Focusing on the latter, this means that *ein* seems to have, at least in some contexts, semantic import. Given the proposal that *ein* is semantically vacuous, this is unexpected and in need of an explanation.

To anticipate the discussion, I follow Rauh (2004) for (5a) and (6a) in arguing that the pragmatics involved here need to be taken into consideration to explain this difference. As to (5b) and (6b), it could be claimed that *ein* brings about the semantic difference. However, I suggest that the added emotiveness in (6b) stems from the interaction between an operator,

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[3] A brief note on the data in (6) is in order here. The string in (6a) can felicitously be used in a sentence like *Was würdest du als Bauer dazu sagen?* 'What would you as a farmer say about this?'. As to (6b), Harbert (2007: 147-48) states that the indefinite article is not possible with role nouns in predicative contexts in German, a statement also often found in textbooks of German. As we see here and below, this statement is too strong. Indeed, the use of *ein* with terms of professions is already attested in ENHG (Ebert *et al*. 1993: 316).

Cross-linguistically, predicate nouns in English typically have an indefinite article in cases like (5b) yielding (6b), but their Romance counterparts do not. Zamparelli's (2008) explanation that this is due to lack of morphological gender in English is probably not the whole story as Yiddish, which does have morphological gender, patterns with English (see Lockwood 1995: 112, also Harbert 2007: 148). For the discussion of morphological case on predicate nominals, see Maling & Sprouse (1995).

specifically the realization operator REL (de Swart *et al.* 2007), and nouns lexically specified as [+figurative]. I propose that on the one hand, *ein* indicates the presence of syntactic structure above NP (Hypothesis 3a) and that on the other hand, it flags the presence of the realization operator REL (Hypothesis 3b). As such, similar to adjectival inflections, I maintain that *ein* is a reflex of the structure but not of the semantics.

   The chapter is organized as follows. Section 2 provides the data discussing three different readings in the DP and TP, and the role emotiveness plays in them. In Section 3, I first lay out my main assumptions, and then I provide the proposal and detailed derivations for these different readings. Section 4 summarizes the main findings of this chapter.

2. Data

This section investigates the parallels between the nominal and clausal domains with regard to certain readings. Of particular interest here are interpretations that seem to relate the presence of *ein* to emotiveness. In order to understand and classify the data better, I start with some preliminary remarks, where I dicuss the different types of nouns involved in pronominal DPs and copular TPs and how their various meanings relate to different readings. In the second section, I turn to the data in more detail, and I provide a summary of the different readings in the nominal and clausal domains.

2.1. Preliminary Remarks

In this section, I illustrate some of the properties of the different types of nouns. Specifically, I discuss how role and kind nouns fare in pronominal DPs and copular TPs. In the second subsection, I expand on concepts like emotiveness and figurative extension. In the final subsection, I establish three readings that help classify and analyze the data.

2.1.1. Basic Differences Between Role and Kind Nouns in DPs and TPs
Nouns can be classified along different dimensions: role vs. kind, neutral vs. emotive, and related to neutral/emotive, literal vs. figurative (for the latter, see next subsection). It is important to point out that the restrictions to be discussed reveal themselves with certain types of nouns only.

   Starting with role nouns, de Swart *et al.* (2005: 453) provide a convenient summary of the properties of bare predicate nominals such as *Landwirt* 'farmer':[4] (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 the authors 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 to follow, I revisit (i), (ii), and (iv). Furthermore, I add a sixth characteristic to this: in their literal meaning, bare role nouns are never emotive in pragmatically neutral contexts.

   Kind nouns comprise a more diverse group; for instance, they involve names for humans, animals, and inanimates. For current purposes, animate nouns can be classified as regards neutral (*Mann* 'man') and emotive (*Idiot* 'idiot'). With this in place, I turn to the combinations of

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[4] For relevant discussion, see also Kupferman (1991), Stowell (1989, 1991), and more recently Alexiadou (2005: 814ff), Déprez (2005), Matushansky & Spector (2005), Munn & Schmitt (2005: 846ff), Winter (2005: 780ff), and Zamparelli (2008). The latter paper also contains detailed critical discussion of earlier work on this topic.

"pronoun + (copular verb) + noun" to identify some initial properties and restrictions. I focus for now on pragmatically neutral, out-of-the-blue contexts (but see Section 3.1.3).

It is well known that pronominal DPs in the singular only allow emotive kind nouns like *Idiot* 'idiot'; (neutral) role nouns like *Landwirt* 'farmer' and neutral kind nouns like *Mann* 'man' are marked (7):

(7)   a.   *du Idiot*
            you idiot
            'you (idiot)'

        b. ?? *du Landwirt*
            you farmer
            'you (farmer)'

        c. ?? *du Mann*
            you man
            'you (man)'

In contrast, copular constructions can involve bare predicate nouns only if the relevant nominals consist of role nouns like *Landwirt*. Note again though that the indefinite article is optional here for many speakers (8a). Unlike role nouns, kind nouns like emotive *Idiot* and non-emotive *Mann* require an indefinite article (8b-c):

(8)   a.   *Du bist ('n) Landwirt.*
            you are a farmer
            'You are a farmer.'

        b.   *Du bist *('n) Idiot.*
            you are   an idiot
            'You are an idiot.'

        c.   *Du bist *('n) Mann.*
            you are   a man
            'You are a man.'

To be clear, abstracting away from the determiners in (7a) and (8a), bare nouns involve emotive kind nouns in the DP but (neutral) role nouns in the TP. Furthermore, role nouns in the DP (7b) and emotive kind nouns in the TP (8b) pattern like neutral kind nouns such as *Mann* in the (c)-examples.

Examining these cases, it becomes clear that true minimal pairs between DPs and TPs are not possible. In other words, in pragmatically neutral, out-of-the-blue contexts, there do not seem to be lexical items that share properties of being both emotive nouns and role nouns; that is, there are no nouns that allow licit patterns such as *du Noun₁* 'you Noun' as well as *Du bist Noun₁* 'You are a Noun'. The generalization to be explained, then, is that emotive nouns cannot involve role nouns and that role nouns (in their literal meaning) are not emotive. Expressed in more structural terms, emotive nouns can occur in DPs but require *ein* in TPs, and role nouns cannot occur in

DPs but can be bare in TPs. As will become clear, these restrictions only hold in singular, pragmatically neutral contexts.

Before moving on, note that adding an evaluative adjective creates minimal pairs. However, this covers up the differences in (7) and (8) above, lexico-semantically (all nouns are equally fine now) and syntactically (all copulative cases must have *ein* now):

(9)   a.   *du   blöder Idiot*
             you stupid   idiot
             'you (stupid idiot)'

       b.   *du   blöder Landwirt*
             you stupid farmer
             'you (stupid farmer)'

       c.   *du   blöder Mann*
             you stupid man
             'you (stupid man)'

(10)   a.   *Du bist *('n) blöder Landwirt.*
             you are   a   stupid farmer
             'You are a stupid farmer.'

       b.   *Du bist *('n) blöder Idiot.*
             you are   a   stupid idiot
             'You are a stupid idiot.'

       c.   *Du bist *('n) blöder Mann.*
             you are   a   stupid man
             'You are a stupid man.'

As can be seen in (10a), modified role nouns must also take *ein* in predicative contexts. This is explained in Section 3.4.1. Thus, in order to probe into certain restrictions, I use unmodified nouns.[5] In the introduction, I made a distinction of nouns as regards their meanings: neutral/literal vs. emotive/figurative. It is important to be more precise about this. We will see that emotiveness and figurativeness are not the same.

2.1.2. Emotiveness and Figurative Extension
Role and kind nouns can have two subtypes as regards their meaning. Focusing on the main cases discussed below, role nouns like *Landwirt* have a neutral-only meaning ('farmer'); others like *Bauer* can take on an additional figurative meaning: besides 'farmer', *Bauer* can also mean 'peasant' in certain contexts (Section 2.2).[6] Briefly, the figurative meaning of a role noun like

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[5] I concentrate on countable nouns (for the discussion of the concept of countability, see Allan 1980, also Chapters 7 and 8), and I basically leave aside group nouns and *pluralia tantum* nouns. Also, I abstract away from special cases such as "royal" *ihr* 'you' and "nursely" *wir* 'we'.

[6] Besides figurative, there are other terms found in the literature: metaphorical, extended, approximative, subjective, descriptive, "gradable", and [+scalar]. Also, note that this difference in interpretative possibilities also holds true of

Bauer denotes certain stereotypical properties of a farmer (but there is no implication that this person is a farmer; more on this below). This figurative meaning is emotive. This means that while role nouns are not emotive in their literal meaning, they are in their figurative meaning. Kind nouns like *Schwein* have a neutral-only meaning ('pig'), but if applied to contexts involving humans, they can also take on a figurative meaning ('swine/pig-like person'); other kind nouns like *Idiot* have an emotive-only meaning ('idiot').

As regards emotiveness then, some nouns become emotive when "figuratively extended" in certain pragmatic contexts (*Schwein*, *Bauer*), but others are inherently emotive (*Idiot*). This means that not all emotive readings are due to figurative extension. That said, it is important to elaborate on the figurative extension of *Schwein* and *Bauer* some more. In their neutral/literal meaning, these nouns denote properties like 'pig' or 'farmer'; in their emotive/figurative meaning, these nouns denote 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 here that the individuals are actually pigs or farmers. Below, this type of reading is labeled 'comparative'.

In sum, while certain role nouns only have a neutral/literal meaning (*Landwirt*), other such nouns may have an additional emotive/figurative one (*Bauer*). Emotive kind nouns only have an emotive meaning (*Idiot*), but neutral kind nouns may have an additional emotive/figurative meaning (*Schwein*). Importantly, while a figurative meaning is emotive (*Bauer*/*Schwein*), an unambiguous emotive noun does not have a figurative meaning (*Idiot*). In the summary Table 1, I distinguish the different types of nouns by the terms unambiguous and ambiguous (NB: since the neutral meaning of *Schwein* 'pig' cannot apply to a human, I put it in parentheses; the negative value in parentheses indicates that this is not a possible reading in pragmatically neutral contexts):[7]

Table 1: Different Types of Count Nouns

Type of noun		Role		Kind	
(Non-)ambiguity of the noun		*Landwirt* Unamb.	*Bauer* Ambiguous	*Idiot* Unamb.	*Schwein* Ambiguous
Meaning	Neutral/literal	'farmer'	'farmer'	-	('pig')
	Emotive	(-)	(-)	'idiot'	(-)
	Figur. (emot.) [Comparative]	-	'peasant' ["farmer-like person"]	-	'swine' ["pig-like person"]

Note that the word pairs *Landwirt/Bauer* and *Idiot/Schwein* in Table 1 are intriguing in that one element is unambiguous and the other is ambiguous (with the qualification that the literal meaning of *Schwein* 'pig' will not be relevant below). To account for this difference, some amount of lexical specification must be assumed (if so, we might also expect some dialectal and

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'.

[7] As we will see below, role nouns in their literal meaning (e.g., *Landwirt/Bauer* 'farmer') can take on an emotive component ('very good/bad farmer'). The same goes for kind nouns (but this is not relevant for current purposes as humans cannot be pigs even in emotive contexts). Furthermore, emotive nouns like *Idiot* 'idiot' cannot have a neutral reading and, as far as I can tell, they cannot have a figurative reading. As to the latter, note that *Du bist 'n Idiot!* does not seem to mean 'You are an idiot-like person!', which states that the person addressed only has certain features of an idiot (whatever those may be).

cross-linguistic variation in this regard, which I think is true; I return to the issue of lexical specification in Section 3.1.2). In combination with pronominal determiners, these different types of nouns yield three different readings, as explicated in the next subsection. These readings help organize the data in Section 2.2 and the subsequent analysis in Section 3.

2.1.3. Three Different Readings

Basically following den Dikken's (2006: Chapter 5) discussion of binominal structures of the type *an idiot of a doctor*, I point out that there are three relevant interpretations in the cases under discussion here. Focusing for now on pronominal DPs (11), I label the first case 'ordinary' reading. The second and the third case are called 'comparative' and 'capacity' readings:[8]

(11)   a. Ordinary reading:
            du   Idiot
            you idiot
            'you (idiot)'

        b. Comparative reading:
            du   Schwein
            you pig
            'you (idiot)'

        c. Capacity reading:
            du   als Landwirt
            you as farmer
            'you as a farmer'

I paraphrase each of these three readings as follows:

(12)   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

As we will see in the data section below, similar readings can also be identified in the TP. Before I turn to the data, some further remarks about the readings are in order here.

I point out that 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 3.2), I suggest that this type involves direct predication.

The comparative reading is also emotive but involves nouns with emotive/figurative meanings. Unlike the first case, it involves indirect predication; that is, the predication seems to

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[8] Den Dikken labels the capacity reading as 'attributive', a term I would like to avoid.

be mediated by a predicate such as *like* or *similar to*.[9] Note again that epithetically used nouns like *Schwein* '(pig =) idiot' in (11b) characterize the individual in their entirety, but there is no implication that the individual being addressed is actually a pig, as reflected in the translation.[10]

      Finally, in contrast to the first two cases, the capacity reading is neutral and features nouns with neutral/literal meanings. Like the second reading, it also involves indirect predication, which in this case is mediated by the element *als* 'as; 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* is taken to be relevant. In contrast to the comparative reading, which characterizes individuals in their entirety, the capacity reading zooms in on a certain aspect of the individual.

      With this in place, I turn to the data in more detail to see how role nouns and emotive or figurative kind nouns pattern as regards the three readings in various morpho-syntactic contexts. I compare the relevant readings in the DP to those of the TP.

2.2.   *Data*

I start with the data involving nouns in the plural. We will see that with the exception of the capacity reading, there are no restrictions in these cases. This is followed by unambiguous nouns in the singular, which reveal more restrictions. After providing an interim summary, I discuss ambiguous nouns in the singular, which exhibit a complementary loss of their potential meanings.

2.2.1. Plural
I begin with the two unambiguous nouns from Table 1. As can be seen in (13) and (14), role as well as emotive kind nouns are equally possible in ordinary readings:

(13)   a.   *ihr Landwirte*
             you farmers
             'you farmers'

          b.   *Ihr seid Landwirte*.
             you are farmers
             'You are farmers.'

(14)   a.   *ihr Idioten*
             you idiots
              'you idiots'

          b.   *Ihr seid Idioten.*
             you are idiots
             'You are idiots.'

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[9] This is what I assume for now. Below, I suggest that the comparative reading follows from the realization operator REL.

[10] Recall that I translate the figurative meaning of animal names simply as 'idiot' (although the name may imply different attributes).

Continuing with ambiguous kind nouns, something similar holds for the comparative reading with figuratively extended nouns:

(15)   a.   *ihr Schweine*
              you pigs
              'you idiots'

        b.   *Ihr seid Schweine.*
              you are pigs
              'You are idiots.'

As for the capacity reading, I note that only certain predicate nouns are possible. In particular, role nouns (and certain kind nouns, see below) are fine (16a). However, as pointed out in Lawrence (1993: 93) and Rauh (2004: 86), emotive and figuratively extended kind nouns are marked (16b-c). It seems to me that the latter also holds true of kind nouns that have a more general, hypernym-like denotation (16d):

(16)   a.   *ihr als Landwirte*
              you as farmers
              'you as farmers'

        b. ?? *ihr als Idioten*
              you as   idiots

        c. ?? *ihr als Schweine*
              you as pigs

        d. ?? *ihr als Personen*
              you as persons

The restriction shown in (16b-d) 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 some people typically have it in a given context. In other words, while it is clear that not each and every person is a farmer (16a), every person can presumably be in someone else's bad books (16b-c). As to (16d), every person is a human making *Personen* too general in meaning to be restrictive in the relevant way. To be clear, only *Landwirte* in (16a) singles out the addressed individuals in the relevant way but the other nouns in (16) do not. I turn to the capacity reading in the clause after I discuss ambiguous nouns.

Turning to ambiguous role nouns such as *Bauer* 'farmer/peasant', they are possible in the neutral/literal and emotive/figurative meanings in simple DPs and copular cases (17a-b), where both an ordinary and comparative reading is possible. In contrast, the restriction discussed for (16) emerges again in *als*-nominals (17c). In other words, the capacity reading in (17c) is the sum of *als* 'as' and the neutral/literal reading of the noun:

(17) 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
          'you as farmers'
          #'you as peasants'

Unlike DP cases as in (17c), clauses do not involve *als* 'as' in the capacity reading (18a). However, this reading can, as an approximation, be brought out when the modal particle *vielleicht* 'really' is added (18b). Note that this example also gets an intensified comparative reading with *Bauern* meaning 'peasants'. What is interesting to note is that even an unambiguous role noun like *Landwirt* 'farmer' can take on an emotive component in such a context, with a negative reading being somewhat easier to obtain (18c):[11]

(18) a. * *Ihr seid als Bauern.*
          you are as farmers/peasants

      b.   *Ihr seid vielleicht 'n paar Bauern!*
          you are PRT   a couple farmers/peasants
          'You are some farmers/peasants!'

      c.   *Ihr seid vielleicht 'n paar Landwirte!*
          you are PRT   a couple farmers
          'You are some farmers!'

Observe that the emotive reading in (18c) is not due to the properties of the noun itself or figurative extension. Rather, the modal particle *vielleicht* plays a role here. Specifically, this particle invokes a [+scalar] capacity reading; that is, the persons being addressed are described as being good or bad in the capacity of farmers.

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[11] Again, translations are not straightforward. Note that the element *some* in the English translations is intended to convey the emotive flavor. Also, these constructions can take – what Delsing (1993: 36) calls – an 'implicit argument'. To illustrate with German, the dative pronoun *mir* 'me' can be added to (18b):

    (i)   *Ihr seid mir vielleicht 'n paar Bauern!*
          you are me PRT   a couple farmers/peasants
          '(To me,) you are some farmers/peasants!'

Note that this often called ethical dative seems to bring out more clearly the capacity reading of *Bauern* meaning 'farmers' such that the presence of other properties is presupposed, but only the overt predicate is taken to be relevant. I stick to the simpler cases in the main text.

2.2.2. 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 appear. As with the plural cases above, I start with unambiguous nouns in the ordinary reading.

Recalling that I focus for now on pragmatically neutral contexts, I already noted in the introduction that role nouns are not possible in the DP (19a) but that they pattern more freely in the TP. As also mentioned above, many speakers allow these nouns not only to occur without *ein* but also with the indefinite article (19b). Unlike role nouns, emotive kind nouns are possible in the DP (20a) but must co-occur with an article in the TP (20b):

(19) a. ?? *du Landwirt*
          you farmer

      b.   *Du bist ('n) Landwirt.*
          you are   a farmer
          'You are a farmer.'

(20) a.   *du Idiot*
          you idiot
          'you (idiot)'

      b.   *Du bist *('n) Idiot.*
          you are   an idiot
          'You are an idiot.'

In the comparative reading in (21), the distribution is identical to the cases involving emotive kind nouns with ordinary readings (as just seen):

(21) a.   *du Schwein*
          you pig
          'you (idiot)'

      b.   *Du bist *('n) Schwein*
          you are   a pig
          'You are an idiot.'

In other words, kind nouns, be they inherently emotive or figuratively extended, pattern alike. Finally, I turn to the capacity reading.

Similar to the cases in the plural, only certain nouns are possible in *als*-nominals:

(22) a.   *du als Landwirt*
          you as farmer
          'you as a farmer'

      b. ?? *du   als Idiot*
          you as idiot

254

c. ?? *du   als Schwein*
      you as   pig

d. ?? *du   als Person*
      you as person

I assume that the restriction involved in (22b-d) is the same as that seen in the plural above.

   In the clausal counterpart, the indefinite article is obligatory with role nouns, and these cases are emotive (23a). Notice also that when emotive or figuratively extended kind nouns combine with the modal particle, the ordinary and comparative readings get intensified (23b-c):

(23)   a.   *Du bist vielleicht *('n) Landwirt!*
           you are PRT   a farmer
           'You are some farmer!'

       b.   *Du bist vielleicht 'n Idiot!*
           you are PRT   an idiot
           'You are really an idiot!'

       c.   *Du bist vielleicht 'n Schwein!*
           you are PRT   a pig
           'You are really an idiot!'

Finally, for completeness's sake, I discuss neutral kind nouns that involve words for humans.

   As already seen in Section 2.1.1, kind nouns such as *Mann* 'man' are awkward in the DP (24a). Importantly, although non-emotive, they nonetheless require *ein* in the TP (24b):

(24)   a. ?? *du Mann*
           you man

       b.   *Du bist *('n) Mann.*
           you are   a man
           'You are a man.'

These types of nouns do not occur with a comparative reading, but they do have a capacity reading:

(25)   a.   *du   als Mann*
           you as man
           'you as a man'

       b.   *Du bist vielleicht 'n Mann!*
           you are PRT   a man
           'You are some man!'

Before I discuss ambiguous role nouns like *Bauer* 'farmer/peasant' in the singular, I briefly summarize the discussion thus far.

2.2.3. Interim Summary

Starting with some remarks on emotiveness, the last two subsections have shown that unambiguous role nouns can take on an emotive component in the clausal capacity reading. The latter involves the modal particle *vielleicht* 'really'. In other words, emotiveness can be distinguished into an inherent property (*Idiot*), it can be due to figurative extension of a lexical meaning (*Schwein* 'pig' > 'swine', *Bauer* 'farmer' > 'peasant'), and it can be brought about in certain contexts where in conjunction with a modal particle, a neutral-only role noun may describe an individual performing their profession in an amazing or appalling way (*Landwirt* 'farmer' > 'some farmer'). The latter becomes particularly clear when evaluative adjectives like *toller* 'great' or *miserabler* 'poor' are added. In other words, the context where a neutral noun appears may change the reading of the noun. With this in place, I summarize the nominal and clausal cases according to morphological number and the three readings.

As can be seen in Table 2, DPs and TPs in the plural have basically the same readings – 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 [*als*]
TP	Emotive/Neutral	Emotive	Emotive [*vielleicht*]

The singular cases are more restricted, especially in the ordinary reading. In more detail, the ordinary reading in the DP only allows (inherent) emotive kind nouns, but the other two readings in the DP are as in the plural. As for the TP, role nouns take an optional article in the ordinary reading, but kind nouns must have *ein*. In the two other readings, nouns are emotive and require a determiner. Considering all three readings, *ein* appears in both neutral and emotive contexts. This is summarized in Table 3 (the subscript K stands for kind noun and the subscript R for role noun):

Table 3: Summary of the Readings in the Singular

	Ordinary reading	Comparative reading	Capacity reading
DP	Emotive [*du Idiot*$_K$]	Emotive [*du Schwein*$_K$]	Neutral [*du als Landwirt*$_R$/*Mann*$_K$]
TP	Neutral [(*ein*) *Landwirt*$_R$] Emotive [*ein Idiot*$_K$] Neutral [*ein Mann*$_K$]	Emotive [*ein Schwein*$_K$]	Emotive [*vielleicht ein Landwirt*$_R$/*Mann*$_K$]

Note that all comparative readings involve figurative extension and consequently are emotive. I make some more remarks.

Starting with the singular (Table 3), I can point out again that the ordinary reading and the capacity reading are complementary as regards emotiveness in the DP. The absence vs. presence of *als* 'as' seems to play a role here. Furthermore, emotiveness has less structure in the

nominal domain (*als* is not present) but more structure in the clausal domain (*ein* must be present). In fact, the bidirectional entailment "non-emotive ↔ *als*" holds in the DP, and assuming that pronouns are determiners (Chapter 3, Section 5), the unidirectional entailment "emotive → determiner" holds in both domains. Finally, as mentioned above, the unidirectional entailment "no determiner → role noun" holds in the predicate nominal of the TP.

Interestingly, these entailments allow the combination of a role noun and *ein* in the TP. This state-of-affairs is neatly summarized for the clause by de Swart *et al.* (2005: 451), who point out that the reading of a bare (role) noun is basically a subset of the readings of the corresponding "*ein* + noun" combination (also Zamparelli 2008: 114). In other words, while a bare (role) noun can only be neutral/literal in meaning, the same noun preceded by *ein* can be both neutral/literal (for many speakers) and emotive/figurative (for all speakers).[12] Below, we will see that the occurrence of *ein* is simply a side-effect and does not cause this figurative 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 ordinary reading in the DP (e.g., *ihr Linguisten* 'you linguists'), and second, *ein* is not present in the plural.[13] With this in place, I finally turn to ambiguous role nouns in singular contexts.

2.2.4. Ambiguous Role Nouns in the Singular

With the above discussion in mind, I consider examples involving *Bauer* 'farmer/peasant'. The expectation is that only some 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. To compare the distribution of the readings, I organize the data here according to syntactic domain.

Starting with the nominal domain, I showed in section 2.2.2 that unambiguous role nouns (e.g., *Landwirt* 'farmer') exhibit degraded grammaticality in the ordinary reading but are fine in the capacity reading. If so, we expect that ambiguous nouns have a complementary loss of meaning. Specifically, we predict that ambiguous nouns only involve an (emotive) comparative reading in the DP and that they have a neutral capacity reading in *als*-nominals. This is exactly what we find in (26a) and (26b), respectively:

(26) a. *du Bauer*
          you peasant
          'you (peasant)'
          #'you (farmer)'

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[12] 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), which for many speakers does not only have the emotive/figurative reading but also the neutral/literal one. I thank Veronika Ehrich for this reference and some discussion of this topic.

[13] Note that non-canonical predicative contexts may involve plural *ein*. This can be seen in the constructed example below:

(i) (?) *Ihr seid vielleicht ein-e Bauern!*
          you are PRT   a-PL peasants/farmers
          'You are some peasants!'
          %'You are some farmers!'

b. *du als Bauer*
you as farmer
'you as a farmer'
#'you as a peasant'

Turning to the clausal cases, a bare role noun should only have a neutral ordinary reading (27a), a role noun with an indefinite article should be ambiguous between a comparative and a neutral ordinary reading (27b), and a role noun in the context of the modal particle *vielleicht* 'really' should be ambiguous between an intensified comparative and an emotive capacity reading (27c). Again, this is exactly what the data bear out:

(27) a. *Du bist Bauer.*
you are farmer
'You are a farmer.'
#'You are a peasant.'

b. *Du bist 'n Bauer.*
you are a peasant/farmer
'You are a peasant.'
%'You are a farmer.'

c. *Du bist vielleicht 'n Bauer!*
you are PRT a peasant/farmer
'You are some peasant/farmer!'

The discussion can be summarized in Table 4:

Table 4: Summary of the Readings of Ambiguous Role Nouns in the Singular

	Ordinary reading	Comparative reading	Capacity reading
DP		Emotive [*du Bauer*]	Neutral [*du als Bauer*]
TP	Neutral [(*ein*) *Bauer*]	Emotive [*ein Bauer*]	Emotive [*vielleicht ein Bauer*]

Table 4 is similar to Table 3, except for the ordinary reading. The latter is only available in the TP and must be neutral there. Furthermore, note that *Bauer* is only ambiguous in the presence of *ein*. However, the article by itself does not have an "emotivizing" function as it does allow a neutral ordinary reading of *Bauer* in the TP.

Above, we saw that role nouns in clauses have optional indefinite articles but that kind nouns, independently of emotiveness, have obligatory indefinite articles. This difference between role and kind nouns is taken up in the next section. We will see that the appearance of *ein* is a mere side-effect of the presence of a certain semantic operator such that *ein* flags the presence of this operator (Hypothesis 3b). Thus, I continue to claim that *ein* is semantically vacuous (Hypothesis 1a). I also provide an explanation of the other highlighted properties of the aforementioned constructions. The proposal is based on two important works, de Swart *et al.* (2007) and Rauh (2004), that manifest an interesting division of labor, at least in the DP.

3.   Proposal

In this section, I account for the similarities and differences between pronominal DPs and their clausal counterparts. First, I lay out my assumptions. This includes the discussion of two previous proposals. Then I turn to the three readings in detail.

3.1.   Combining Two Previous Proposals

In order to account for the readings in the nominal and clausal domains, I basically follow de Swart *et al.*'s (2007) discussion of the copular cases and extend it to pronominal DPs. Before I get into the details, I lay the groundwork.

3.1.1. De Swart, Winter & Zwarts (2007)

As mentioned before, this book is not about the semantics of the DP *per se* (or the semantics of the TP, for that matter). Rather than providing detailed denotations, I use Type Theory to show that the relevant elements are semantically compatible with one another (for general background, see Chapter 1, Section 4.2.2; Heim & Kratzer 1998). As discussed in Chapter 3, Section 5, I take pronominal elements like *du* 'you' to be similar to definite articles like *der* 'the'; that is, pronouns are determiners.

   As discussed in Section 2.1.1, common nouns come in two types: kind nouns and (a specific set of) role nouns.[14] As is well known, kind nouns can be used to generically refer to a species (but not to individuals of that species) in cases like (28a). Carlson (1980) proposed that kind nouns are like names; that is, they are of type $\langle e \rangle$. Assuming that generic determiners are expletives (cf. Longobardi 1994: 656), kind nouns and verbal predicates (type $\langle e,t \rangle$) can combine to yield a truth value (type $\langle t \rangle$). Turning to (28b), these cases are different. Here, the nominal refers to an individual of that species. De Swart *et al.* (2007) follow Carlson (1980) in arguing that the realization operator REL takes a kind noun (type $\langle e \rangle$) and maps it to a set of individuals (type $\langle e,t \rangle$). The (substantive) determiner (type $\langle \langle e,t \rangle, e \rangle$ combines with this nominal predicate returning an entity (type $\langle e \rangle$). The latter can combine with a verbal predicate to yield a truth value:

(28)   a.   The dinosaur is a big animal / is extinct.

       b.   The dinosaur ate some fruit.

The novel claim of de Swart *et al.* (2007) is that they propose that role nouns are also of type $\langle e \rangle$. To map them into sets of individuals, they have to combine with the capacity operator CAP, a realization operator restricted to role nouns. To be clear then, 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.

   De Swart *et al.* (2007) relate the different realization operators to different syntactic structures. Kind nouns combine with REL, where the latter is assumed to be in NumP (29a). In

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[14] De Swart *et al.* (2007) call the latter 'capacity' nouns. There are two notions of capacity now: an interpretative one (a certain type of reading) and a lexical one (certain groups of nouns). These notions are not identical. For instance, certain kind nouns may also occur in capacity readings (Section 2). In order to avoid confusion, I continue calling the relevant lexical items 'role' nouns.

contrast, de Swart *et al.* (2007) propose that there are actually two options for role nouns. The first option involves a direct path, whereby role nouns combine with CAP. Note that CAP is in NP (29b). The second option constitutes an indirect path, whereby role nouns undergo kind coercion resulting in kind nouns. De Swart *et al.* (2007: 213) state that *kind* coercion involves an operator as well (but I will not go into the specifics here to keep the discussion simple). The latter elements then combine with REL in NumP (29b'):[15]

(29)   a.   kind nouns: $N_{<e>}$ + REL   → $NumP_{<e,t>}$

       b.   role nouns: $N_{<e>}$ + CAP   → $NP_{<e,t>}$

       b'.   role nouns: $N_{<e>}$ → kind coercion + REL → $NumP_{<e,t>}$

Note that REL and CAP are both of type <e<e,t>> – these operators take an entity as their argument and return a predicate.[16] Furthermore, these operators are mutually exclusive; that is, when one applies, the other cannot. Crucially for the current discussion, REL is part of NumP, which triggers the presence of the indefinite article *ein* 'a' (note that this is not further elaborated on in de Swart *et al.*). For the most part, I follow Swart *et al.*'s proposal. However, I refine it in certain ways below.

    The different paths to derive a predicate nominal are argued to explain the fact that bare role nouns are only neutral/literal in meaning, but role nouns preceded by *ein* 'a' are both neutral/literal and emotive/figurative (Swart *et al.*'s 2005 generalization, see Section 2.2.3 again). As such, de Swart *et al.* relate overt morphological clues directly to the relevant interpretative differences. Specifically, as predicate nominals, bare (role) nouns imply the presence of an NP, which in turn implies CAP (30a). In contrast, plural suffixes on predicate nouns, exemplified in (30b) by -*s*, are taken to be in NumP, and *ein* is taken to be in D in de Swart *et al.* Recall from above though that I proposed that singular *ein* is in ArtP, and this is what I assume for unmodified predicative nominals (30c). Note that both (30b) and (30c) involve REL. Thus, the minimal structures of predicate nominals are as follows (also Borer 2005: 67 fn. 4, Munn & Schmitt 2005: 827, cf. Déprez 2005: 866):[17]

(30)   a.   N   → [NP]   → CAP

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[15] 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 absence of the indefinite article in predicative contexts. To the extent that I understand this correctly, this basically implies the existence of two lexical items for every role noun. In contrast, de Swart *et al.*'s analysis takes one relevant lexical item as its point of departure and proposes two operations for the role noun to be able to function as a predicate. The latter approach appears to be more desirable.

[16] De Swart *et al.* (2007: 217) argue that CAP is actually more complicated than <e<e,t>>. However, the latter simplication is sufficient for the current account (keeping in mind that CAP only combines with role nouns).

[17] De Swart *et al.* (2007) make another important claim about these data. They propose that morphological number is actually not specified on nouns. In particular, bare nouns (30a) are number neutral (Section 2.1.1), but nouns with plural morphology (30b) and nouns preceded by *ein* (30c) are specified for plural and singular, respectively (the latter two are called 'Marked Nominals' by de Swart *et al.*). Given the presence of NumP in the latter two cases, de Swart *et al.* (2007: 214, 217) take morphological and semantic number to originate in NumP. This is compatible with my assumptions in Chapter 7.

b.   N-*s*   → [NumP [NP]]   → REL

c.   *ein* N → [ArtP [NumP [NP]]]   → REL

Given (30a-c), it is clear that unmodified predicate nominals do not involve DPs. Rather, such nominals are of a smaller size; that is, in the absence of adjectival modifiers, predicate nominals preceded by *ein* do not involve DP but ArtP (recall in this regard that *ein* has no feature for definiteness and does not have to move to the DP-level). If so, then this allows me to state that *ein* and REL are in a local relation (i.e., in adjacent phrases in underlying structure).[18] To be clear, considering (30), predicate nominals can be of different sizes: NP, NumP, ArtP, and larger structures (if adjectival modifiers are present).

Comparing (30a) to (30c), I note already here that *ein* indicates the presence of structure beyond NP (Hypothesis 3a) and that *ein* flags the presence of REL (Hypothesis 3b). The latter claim provides a reason for the appearance of *ein*.[19] Thus far, the proposal seems straightforward.

However, it is not entirely clear which part of de Swart *et al.*'s (2007) account derives the emotive/figurative reading. Although intuitively attractive at first glance, I show that the emotive/figurative reading does, most likely, not derive from kind coercion but from the presence of REL. Furthermore, as already briefly pointed out in Section 2.1.2, not all nouns undergo figurative extension (e.g., *Landwirt* 'farmer'). Thus, the figurative extension of the literal meaning (e.g., *Bauer* 'farmer' > 'peasant') must take a certain lexical specification of the head noun into account. Finally, I extend de Swart *et al.*'s (2007) proposal to pronominal DPs (note in this regard that de Swart *et al.* 2007: 215 assume that DPs like *the child* also involve REL). Consider these points in more detail.

3.1.2. Lexical Features on Nouns

As seen above, certain nouns can only be neutral/literal in meaning (e.g., *Landwirt* 'farmer'), but others can, under certain conditions, be ambiguous (e.g., *Bauer* 'farmer/peasant'). I start with the latter. It is clear from de Swart *et al.*'s (2007) proposal that the emotive/figurative reading is not derived from the direct path involving CAP. If this were the case, a bare role noun in the TP 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 in ArtP too. Unlike the bare noun counterpart, *ein Bauer* can have both a neutral/literal and a emotive/figurative reading, which is correct. The question then arises whether kind coercion or REL is responsible for the figurative reading. As we see momentarily, the answer is not entirely straightforward and involves several considerations. I wind up suggesting that in combination with a lexical feature, REL brings about the interpretative extension (*pace* de Swart *et al.* 2007).

First, considering *ein Landwirt* 'a farmer', we observe that an article is present with a role noun. This means that ArtP, NumP, and REL are present. With a structure larger than NP, kind coercion must have occurred. However, this nominal has a neutral/literal meaning only. This

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[18] If REL were to turn out to be in ArtP (at least in the singular cases), both *ein* and REL would be in the same phrase.
[19] Notice that this comes close to one of Ackles' (1996: 15) tentative suggestions that English *a(n)* might be a dummy that makes the presence of NumP in an indefinite singular count noun phrase identifiable. Assuming the structural sequence of Q D Num N, she proposes that *a(n)* is the minimal marker that is inserted in NumP when the latter is the leftmost empty phrase of a noun phrase.

means that certain nouns do not undergo extension of their neutral/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 automatically invokes the figurative extension.

Second, when applied to a person, names for animals (e.g., *Schwein* 'pig') can only have an emotive/figurative meaning. Since these nouns are kind nouns to begin with, they do not undergo kind coercion. As such and making minimal assumptions, REL must be responsible for this extension in meaning ('swine').[20] However, REL performing this task cannot be the whole story. Certain other kind nouns (e.g., *Katze* 'cat') do not seem to be able to undergo this extension easily or at all. This makes these kind nouns similar to the role noun *Landwirt* (see also the word pairs in Footnote 6).

I propose that certain vocabulary items (*Bauer*, *Schwein*) involve a lexical feature that allows figurative extension; other nouns (*Landwirt*, *Katze*) do not have this feature and cannot undergo this extension. With this in mind, I make the plausible assumption that *Bauer* and *Schwein* are similar in the relevant way (recall that the literal meaning of *Schwein* 'pig' is excluded for pragmatic reasons when the relevant entity is anatomically not a pig). For concreteness, I assume that the relevant lexical items are specified as [+figurative] if they are able to undergo the extension. Thus, while both *Bauer* and *Schwein* are specified with this feature, *Landwirt* and *Katze* are not. Given that *ein Bauer* can, for many speakers, also have a neutral/literal meaning, I assume that figurative extension is not obligatory (unless forced by the pragmatics).

To be clear then, I basically follow de Swart *et al*. (2007) with the refinement that figurative extension is not obligatory, that it is due to REL (and not kind coercion), and that it is constrained by the feature [+figurative] present on certain nouns.[21] Note again that kind coercion only applies to role nouns but figurative extension to both role and kind nouns. In other words, figurative extension does not entail kind coercion. However, figurative extension does yield a special case of emotiveness. More generally, if REL is indeed responsible for the (optional) figurative extension, then I can continue to claim that *ein* makes no semantic, but only a morpho-syntactic, contribution – it indicates the size of the structure and flags the presence of an operator. Before I extend de Swart *et al*.'s (2007) discussion to pronominal DPs, it is important to point out that the full explanation of the nominal cases involves a(nother) pragmatic aspect as part of the account.

3.1.3. Rauh (2004)

Thus far, I have only considered pragmatically neutral, out-of-the-blue examples for the ordinary reading in the DP (31a). However, as Rauh (2004) discusses in detail, these cases are perfectly fine given an appropriate context. Two of her examples may suffice here (31b-c) (stress is indicated here by capital letters):

(31)   a. ??   *{ich / du} Linguist*
                I   / you linguist

---

[20] Alternatively, it is possible to 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 proceed on minimal assumptions; that is, I assume that REL brings about the figurative extension.

[21] Notice that kind coercion is still needed to map a role noun to a kind noun, so that it can combine with REL.

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 beherrschst, 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 (Grice 1975, 1978).

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. In fact, by Grice's maxim of quantity (informally: "be as informative as required but not more"), it is redundant and thus yields a marked string. Given a different, more involved context as in (31b-c) above, such an NP complement may make a relevant contribution, and as such it is allowed by Grice's maxim of relation (informally: "be relevant"). Specifically, this contribution involves a contrastive or emotive component; compare (31b) to (31c). With this in mind, emotive NP complements such as *Idiot* 'idiot' are always relevant and thus always possible. Finally, plural pronouns are less deictically specified and thus allow restrictive material in the complement position. I relate Rauh's (2004) proposal for the DP to de Swart *et al.*'s (2007) account of the TP.

As I discuss in detail in Chapter 7, all DPs including pronominal DPs must involve NumP, and as such REL is always present there. With de Swart *et al.*'s discussion of the clause in mind, this makes both a neutral and an emotive noun, at least in principle, possible inside the complement position of a pronominal determiner. Now, recalling Rauh's (2004) pragmatic account of singular DPs, only an emotive complement remains possible in pragmatically neutral, out-of-the-blue contexts. In contrast, singular DPs in a different, appropriate context or plural DPs in general can have neutral or emotive NP complements. To be clear, then, the explanation of pronominal DPs involves a straightforward extension of Swart *et al.* (2007), once we assume that NumP (and thus REL) is always present there and that the explanation must also involve pragmatic considerations. Combining these two proposals also explains the fact that in pragmatically neutral, out-of-the-blue contexts, there are no true minimal pairs between pronominal DPs and copular TPs when both involve bare predicate nouns (for more details, see Section 3.3).

In the next section, I turn to the specifics of my proposal. I focus on the cases in the singular where I have identified most restrictions and where *ein* is present in emotive contexts. Before doing so, I summarize in Table 5 the cases in the singular (without *als* 'as'), discussed in this and the previous sections:

Table 5: Nouns and their Readings in the DP and TP

Noun	Reading	DP	TP
Neutral	Literal	*du LANDWIRT* 'you farmer' (stressed - contrastive)	*Du bist ('n) Landwirt.* 'You are a farmer.'
Emotive	Emotive	*du Idiot* 'you idiot'	*Du bist 'n Idiot!* 'You are an Idiot!'
Neutral	Emotive/figurative [comparative]	*du Schwein/Bauer* 'you idiot/peasant'	*Du bist 'n Schwein/Bauer!* 'You are an idiot/peasant!'
Neutral	Emotive	*du LANDWIRT* 'you farmer' (stressed - emotive)	*Du bist vielleicht 'n Landwirt!* 'You are some farmer!'

Note again that all the emotive readings have a determiner including *ein* in singular predicate nominals. However, it is clear from the optionality of *ein* in clausal cases like *Du bist ('n) Landwirt* that the presence of *ein* does not necessarily lead to emotiveness. This fact is consistent with the proposal that *ein* is semantically vacuous. This means that in instances where *ein* is present in emotive contexts, *ein* must be due to a different reason. I proposed above that *ein* flags the presence of a null operator. With this in place, I turn to the explanation of the individual readings in the DP and TP starting with the – what I have called – ordinary reading.

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. This is different from the comparative reading discussed in the next section. First, I discuss the nominal domain and then the clausal one.

3.2.1. Ordinary Reading in the DP

As discussed in Chapter 3, I assume that pronominal DPs consist of a head noun and a pronominal determiner. To keep the exposition simple, I abstract away from the lower base position of the determiner and its movement to the DP-level. I 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 Chapter 1, Section 4). Consider the example in (32a) and its structural analysis in (32b):

(32) a. *du   Idiot*
          you idiot
          'you (idiot)'

b. *Ordinary Reading in DP*

DP$_{<e>}$
  du$_{<<e,t>e>}$ NumP$_{<e,t>}$
       Num$_{REL<e<e,t>>}$ NP
                        Idiot$_{<e>}$

(Funtional Application)

(Functional Application)
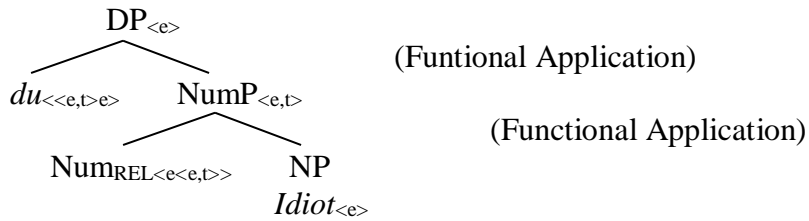
I turn to the semantics. With Section 3.1.1 in mind, I restrict myself to giving the semantic types of the relevant elements and how they are combined. This is shown in (32b). Putting it into words and starting at the bottom of the tree, the kind noun *Idiot* 'idiot' combines with the REL operator in NumP to return a predicate nominal. I take Postal's (1966) claim that pronouns are determiners at face value. In other words, I assume that *du* 'you(SGL)' is a pronominal determiner that is semantically similar to a definite determiner. Given that, Functional Application can apply to the predicate nominal and the pronominal determiner resulting in an entity with the following reading: the unique x (informally addressed) such that x is an idiot (in Chapter 7, I discuss the ungrammaticality of cases like *du 'n Idiot* 'you an idiot'). The derivation is the same for *Mann* 'man' but requires a special pragmatic context (Rauh 2004). Similar assumptions hold for *Landwirt* 'farmer', but the latter has undergone kind coercion. Since *Landwirt* is not marked by [+figurative], figurative extension has not occurred.

Before I discuss the clausal cases, I need to be more explicit about pronouns that have no noun as their complement. Similar to what we have just seen, I assume that they are not simply "intransitive" but more complex. In particular, consistent with Chapter 3, Section 5, I assume that there is actually a head noun. I suggest that this head is an unpronounced kind noun, indicated below as e_N (cf. PERSON in Rauh 2004: 89). The latter combines with REL to give a predicate nominal. This complex null element, semantically REL(e_N), can now function as an argument to the pronominal functor resulting in an entity:

(33)   *Pronouns Without Overt Complement*

DP$_{<e>}$
  du$_{<<e,t>e>}$ NumP$_{<e,t>}$
       Num$_{REL<e<e,t>>}$ NP
                        $e_{N<e>}$
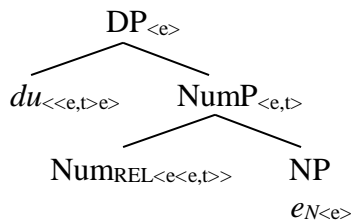
Note that this is the same abstract structure and derivation as in (32b) above.

3.2.2. Ordinary Reading in the TP

We saw in Section 3.1.1 that predicate nominals can be of different sizes: NP, NumP, ArtP, or larger (if an adjectival modifier is present). As proposed in the previous subsection, pronominal DPs involve regular structures that consist of NPs, NumPs, ArtPs, and other phrases. I propose that predicate nominals in copular TPs are different. Unlike DPs, I claim that predicate nominals in copular clauses do not necessarily involve NumPs, ArtPs, or other phrases – they can just be

NPs. Now, similar to the DP, the ordinary reading in the clause does not involve figurative extension either. Adopting fairly traditional tree representations, I assume that the clause involves a Predication Phrase (PrP, Bowers 1993) where the head Pr selects NP.[22] The underlying structure of (34a) is given in (34b) (for simplicity, I abstract away here from further movements to the left, see Chapter 7):

(34)   a.   *Du bist Bauer.*
            you are farmer
            'You are a farmer.'

       b. *Ordinary Reading in TP with Role Nouns*

$$PrP_{<t>}$$

[*du* REL e$_N$]$_{<e>}$ Pr'$_{<e,t>}$

                        bist   NP$_{CAP<e<e,t>>}$
                                              |
                                      Bauer$_{<e>}$
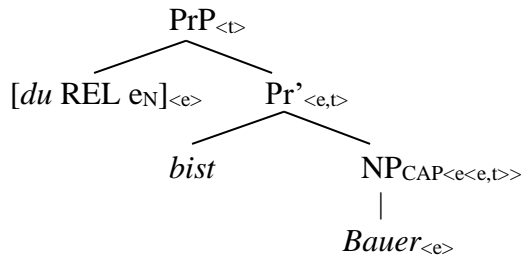
As to the semantics, *Bauer* is a role noun, and unlike kind nouns it can combine with CAP. The latter is located in NP and brings about a predicate nominal. Above, we saw that "intransitive" pronouns like *du* 'you(SGL)' actually involve pronominal DPs; that is, they involve entities enclosed by brackets in (34a). Recalling that the copula is semantically vacuous, the pronominal DP and the predicate nominal combine by Functional Application to yield a truth value. Note now that (34a) cannot have the emotive/figurative reading 'peasant'. This is so because 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 a pragmatic point of view. The same holds if we exchange *Bauer* with *Landwirt* 'farmer'.

Finally, it is worth mentioning again that the combination of "*ein* + N" can also result in ordinary readings (35a). With *Idiot* 'idiot' an emotive kind noun, it combines with REL in NumP bringing about *ein* in ArtP. The remainder of the derivation proceeds as above and is illustrated in (35b):

(35)   a.   *Du bist 'n Idiot.*
            you are   an idiot
            'You are an idiot.'

b. *Ordinary Reading in TP with Kind Nouns*

```
                    PrP<t>
                   /      \
      [du REL eₙ]<e>       Pr'
                          /    \
                       bist     ArtP
                               /    \
                             'n      NumP<e,t>
                                    /        \
                         Num_REL<e<e,t>>      NP
                                            Idiot<e>
```
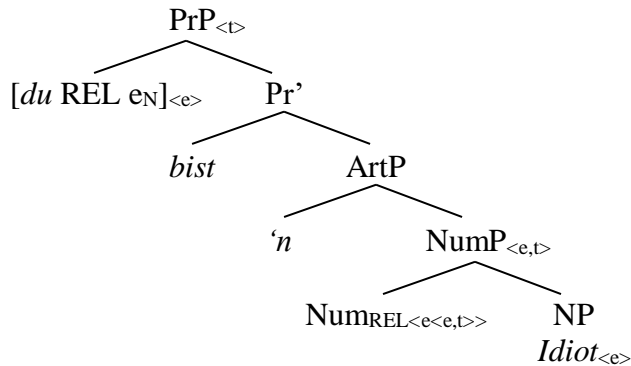
The same holds if the noun involves *Mann* 'man'. As to *ein*, note again that this element does not have an emotivizing function (e.g., *ein Mann* 'a man'); that is, *ein* is an expletive element and does not participate in the semantic derivation. The ambiguous noun *Bauer* 'farmer/peasant' preceded by *ein* will be discussed in the next section (comparative readings). This is also where I comment on the optional presence of *ein* in the ordinary reading in the TP (e.g., *Du bist ('n) Bauer.* 'You are a farmer.').

To summarize, the ordinary reading is emotive in the nominal domain but neutral or emotive in the clausal domain. Both cases involve direct predication; that is, there is no figurative extension in the DP (i.e., the head noun is inherently emotive), and the TP involves a role noun in combination with CAP or an emotive or neutral kind noun combining with REL. Next, I discuss cases with figurative extension.

3.3.   Comparative Reading

Before I provide the structures of the relevant DPs and TPs, I start with some general considerations.

3.3.1. Preliminaries

As a point of departure, I begin with more complex comparative structures. It is well documented that an attributive adjective and its head noun must agree in phi-features yielding concord. This means that the adjectives in (36) below are in the extended projection of their following noun (Chapter 1, Section 4). In Chapter 3, Section 5, I proposed that pronominal DPs involve canonical structures where the adjective is in the specifier just below the determiner:

(36)   a.   *ihr   dumm-en   Schweine*
              you.PL.NOM stupid-WK pigs
              'you stupid idiots'

        b.   *mir   groß-en Gans*
              me.SGL.DAT great-WK goose.FEM
              'me (stupid idiot)'

267

In other words, these comparative constructions have the pronominal determiner, the adjective, and the noun in a regular DP structure, just like with the ordinary reading. I proceed with examples involving unmodified nouns.

3.3.2. Comparative Reading in the DP

Recall that I proposed that the comparative reading involves a figurative extension of the neutral/literal meaning of the head noun; for example, the neutral/literal meaning of *Bauer* 'farmer' is extended to 'farmer-like person' or 'peasant'. I proposed that this is due to REL. This fits well with the assumption that NumP is present in the DP. The example in (37a) is derived as in (37b):

(37) a. *du   Bauer*
          you peasant
          'you (peasant)'
          #'you (farmer)'

      b. *Comparative Reading in DP*

$$
\begin{array}{c}
\text{DP}_{<e>} \\
\diagup \quad \diagdown \\
du_{<<e,t>e>} \quad \text{NumP}_{<e,t>} \\
\diagup \quad \diagdown \\
\text{Num}_{\text{REL}<e<e,t>>} \quad \text{NP} \\
Bauer_{<e>}
\end{array}
$$
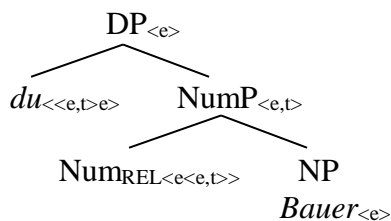
As for the interpretation, the role noun *Bauer* undergoes kind coercion and combines with REL in NumP. As the noun is lexically marked as [+figurative], it can undergo figurative extension. Unlike the neutral/literal reading, this extension yields emotiveness and is felicitous in pragmantically neutral, out-of-the-blue contexts (Rauh 2004). Next, NumP combines with the pronoun resulting in an entity with the following reading: the unique x (informally addressed) such that x is, in some way, similar to a farmer. Similar considerations apply to *Schwein* 'pig', with the proviso that the interpretation can only be 'pig-like person' or 'swine' for pragmatic reasons.

3.3.3. Comparative Reading in the TP

If the above discussion of the DP is tenable, then the comparative reading in the TP should involve a similar account. The example in (38a) is derived as in (38b):

(38) a. *Du   bist 'n Bauer.*
          you are   a peasant/farmer
          'You are a peasant.'
          %'You are a farmer.'

b. *Comparative Reading in TP*

```
                    PrP<t>
                  /      \
      [du REL e_N]<e>     Pr'
                        /     \
                     bist     ArtP
                            /      \
                          'n      NumP<e,t>
                                 /        \
                     Num_REL<e<e,t>>       NP
                                         Bauer<e>
```
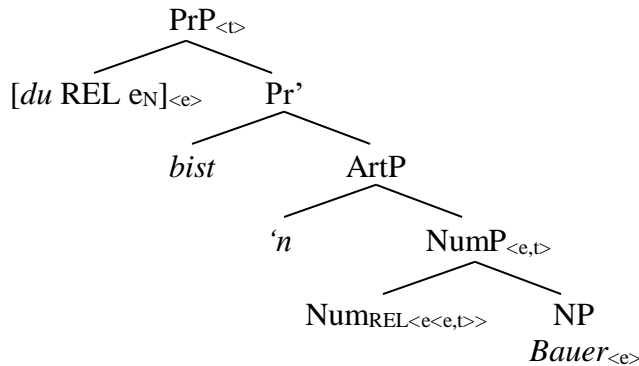
Like above, *Bauer* undergoes kind coercion and then combines with REL in NumP. Structurally, this brings about *ein* 'a' in ArtP. Semantically, this complex element, namely REL(*Bauer*), combines with the pronominal DP to return a truth value. Note that *Bauer* has the option of keeping its neutral/literal meaning or undergoing figurative extension. This is so because this noun is specified [+figurative], but the figurative extension by REL is not obligatory. This derives the two readings in (38a) above. The same basic derivation as in (38b) applies to *Schwein* 'pig', with the same proviso mentioned for the DP above.

Returning to an issue left open in the last section, notice that the ordinary reading of the role noun involves the indirect path in (38), and as such it entails more structure and more operations than the direct path (Section 3.1.1). This might explain why the combination of *ein* and *Bauer* in its neutral/literal meaning is somewhat less easily available or even absent for some speakers.

Finally, recall also that the modal particle *vielleicht* 'really' can intensify the comparative reading resulting in an interpretation close to 'really like' (39a). Consonant with the above discussion, the adjective and the noun are in their regular position (39b):

(39)　a.　*Du bist vielleicht 'n echter Bauer!*
　　　　　you are PRT   a real   peasant
　　　　　'You are really like a peasant!'

　　　b.　CardP

```
     b.    CardP
          /     \
        'n      AgrP<e,t>
               /        \
        echter<e,t>     NumP<e,t>              (Predicate Modification)
                       /         \
            Num_REL<e<e,t>>       NP
                               Bauer<e>
```
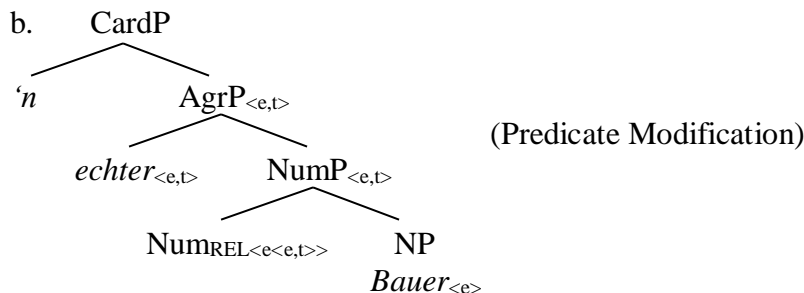
Note that the adjectival predicate and the nominal predicate combine by Predicate Modification.

Taking stock, the comparative reading in the nominal and clausal domain involves the operator REL in NumP. In combination with a [+figurative] role noun, this results in an emotive/figurative reading in the DP and in the TP (although a neutral/literal reading is not

excluded in the latter domain). Note now that the interaction between de Swart *et al.* (2007) and Rauh (2004) also affords us an explanation of why there are no true minimal pairs of the type *du Noun₁* 'you Noun' and *Du bist Noun₁* 'You are a Noun' in pragmatically neutral contexts.

Specifically, all pronominal DPs involve NumP and thus REL. The latter may bring about the emotive/figurative extension of the meaning of the head noun. Now, Rauh's pragmatic proposal explains why only inherently emotive kind nouns (*Idiot*), [+figurative] kind nouns (*Schwein*), and [+figurative] role nouns (*Bauer*) are possible in the DP. In contrast, de Swart *et al.* argue that bare predicate nouns in the TP only involve NP and thus CAP. With REL absent here, this only allows the occurrence of role nouns, with the feature [+figurative] (*Bauer*) or without (*Landwirt*). Due to the absence of REL, *Bauer* can only have the neutral/literal meaning like *Landwirt*. To be sure, then, Rauh's proposal forces the bare noun to be emotive in the DP, and de Swart *et al.*'s analysis explains why the bare noun can only be neutral in the TP. If so, the absence of minimal pairs should not be taken as an argument that DPs and TPs are fundamentally different after all – the difference is explained by the interplay of the two proposals above. I turn to the last reading.

3.4.   Capacity Reading

Before I discuss the detailed analyses of the DP and TP, I need to provide some background information motivating the relevant structures.

3.4.1. Preliminaries
We have seen that DPs involving *als* 'as' have a (neutral) capacity reading (40a). The latter can be paraphrased as 'in the capacity of / with regard to being'. In the TP (40b), the modal particle *vielleicht* 'really' invokes an emotive capacity reading similar to 'bad/good in the capacity of / with regard to being', and it intensifies the comparative reading (for the structure of the latter, see previous section):[23]

(40)   a.   *du   als Bauer*
                you as farmer
                'you as a farmer'
                #'you as a peasant'

        b.   *Du bist vielleicht 'n Bauer!*
                you are PRT   a farmer/peasant
                'You are some farmer/peasant!'

Starting with the DP, I make the fairly straightforward proposal that *als* 'as' brings about the capacity reading. As to the TP, 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. Like all null elements, ALS has to be licensed. I assume that the modal particle is responsible for that. Schematically, we arrive at the following, where the relevant noun phrases of the data in (40a-b) are put in brackets in (41a-b):

---

[23] De Swart *et al.* (2007: 218) assume that *als* + NP is a verb modifier. Note though that this does not work for *als*-nominals that are part of pronominal DPs: given the Verb Second Constraint in German, the latter clearly involve constituents: *Du als Arzt solltest das nicht machen* 'You as a doctor should not do that'.

(41) a. [*du als Bauer*]

    b. *vielleicht* [*ein* ALS *Bauer*]

The bracketed strings are of particular relevance below. To determine the syntactic properties of these two capacity constructions, I consider the latter in combination with third-person pronouns. As is well known, these pronouns are syntactically very restrictive and therefore help us find a plausible structural analysis.

    Unlike pronouns of the first and second person, pronouns of the third person cannot directly combine with adjectives and/or overt nouns (see Höhn 2020 and Chapter 3, Section 5). Compare (42a) to (42b-d):

(42) a. *er als Bauer*
          he as farmer
          'he as a farmer'

    b. * *er Gute(r)*
          he good

    c. * *er Bauer*
          he farmer

    d. * *er gute(r) Bauer*
          he good   farmer

However, they can be modified by relative clauses (43a) (see Rauh 2003, Vater 1985). In other words, I take (42a) to be on a par with (43a). Assuming the traditional adjunction analysis for relative clauses, I propose that *als Bauer* is also adjoined to the pronoun (cf. Rauh 2004: 94), schematically illustrated in (43b):

(43) a. *er, der gerade durch   die Tür gekommen ist*
          he who just   through the door come   is
          'he, who just came through the door'

    b. Adjunction-type Analysis
          du [*als Bauer*]

    Turning to the clausal counterpart (41b), recall from Chapter 2 that *ein* 'a' cannot have an ending when an adjective and/or a noun follows. This holds independently of the presence or absence of the modal particle. Compare (44a) to (44b-d):

(44) a. *Er ist vielleicht ein   (guter) Bauer!*
          he is PRT   a/one good   farmer
          'He is some great farmer!'

b. * *Er ist (vielleicht) ein-er   Gute(r)*
   he is   PRT   a/one-ST good

c. * *Er ist (vielleicht) ein-er   Bauer*
   he is   PRT   a/one-ST farmer

d. * *Er ist (vielleicht) ein-er   gute(r) Bauer*
   he is   PRT   a/one-ST good   farmer

Rather, inflected *ein* is only possible when the modifier is a relative clause (a genitive DP, or a PP) or when no relevant element follows at all (45a). Thus, in order to explain the absence of the inflection on *ein* in (41b), I propose that similar to the adjective in (44a), ALS *Bauer* is in a specifier. This is shown in simplified form in (45b):

(45)   a.   *Er ist ein-er (, der viel   arbeitet).*
            he is one-ST   who much works
            'He is one that works a lot.'

       b.   Specifier-type Analysis
            ein [ALS *Bauer*] e_N

To sum up thus far, we have seen some evidence that *als Bauer* is most likely in an adjoined position and that ALS *Bauer* is in a specifier position. Importantly, de Swart *et al.* (2007: 200) and others have noted that modifiers such as relative clauses and adjectives make optional determiners obligatory. This is particularly clear with role nouns (46a-b), even if such a noun is not pronounced (46c):

(46)   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.'

       c.   *Peter ist 'n schlechter Bauer, aber Hans ist *('n) guter.*
            Peter is a bad   farmer but Hans is   a good
            'Peter is a bad farmer, but Hans is a good one.'

It is clear then that modifiers in both adjoined and specifier positions require the presene of *ein*. I propose that *ein* is present because the modifiers in (46) combine with their nouns by Predicate Modification. Notice that this operation conjoins elements of type <e,t>. 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*.[24] Note that this also explains the presence of *ein* in (45b). Returning briefly to the analysis of the first case, *du als Bauer* in (43b), observe that this

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[24] For some discussion of why CAP cannot be involved here, see Chapter 7.

string involves adjunction just like (46a). However, unlike (46a), there is no *ein* in (43b). This difference needs to be addressed.

As discussed in Section 3.2.1, *du* itself involves a complex structure. Specifically, *du* is a determiner with NumP and a null noun in its complement structure. I update (43b) as in (47a). Notice now that this makes (47a) and (46a) completely parallel in that the adjoined material (in brackets) is preceded by a structurally complex nominal:[25]

(47)   a.   *du* REL e$_N$ [*als Bauer*]

       b.   *'n* REL *Bauer* [*der viel arbeitet*]

To explain the absence of *ein* in the first nominal in (47a), I suggest that elements like pronominal determiners can also flag REL. This is compatible with de Swart *et al.*'s assumptions about regular DPs like *the child*. In other words, besides *ein* and the definite article, other determiners can also indicate the presence of REL.

To sum up, *du als Bauer* involves adjunction, and *ein* ALS *Bauer* contains a complex specifier. The determiners *du* and *ein* are present due to REL. The absence of the inflection on *ein* is explained by the presence of an overt element following *ein*. With this much in place, I consider the relevant analyses in more detail. I start with the (neutral) capacity reading in the DP.

3.4.2. Capacity Reading in the DP

I have proposed that *du* itself involves a complex structure and that *als Bauer* is adjoined to that structure as in (47a) above. I assume that this type of adjunction is instantiated by a Modifier Phrase (ModP; see Chapter 2, Sections 3.2 and 3.3). I interpret *als* as the head of ModP, and this head takes *Bauer* as a complement. The head *als* brings about the capacity reading of the DP. I derive (48a) as (48b):

(48)   a.   *du   als Bauer*
               you as farmer
               'you as a farmer'
               #'you as a peasant'

       b. *(Neutral) Capacity Reading Licensed DP-internally*
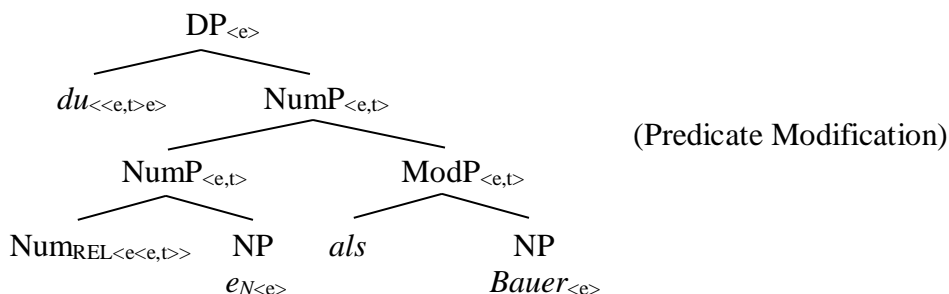
(Predicate Modification)

Observe that the lower NumP and ModP are both of type <e,t> (I comment on the role of *als* momentarily). I assume that they combine by Predicate Modification.

I point out that *als*-nominals are special in that *als* also combines with bare kind nouns such as *Mann* 'man' in appropriate contexts (49a). In fact, the presence of *ein* leads to awkwardness (49b):

(49)   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 in the adjoined structure. Furthermore, if REL were at work here, we would expect that the presence of *ein* is fully grammatical, contrary to fact. I assume that *als* is a general(ized) capacity operator that maps role and kind nouns alike into predicate nominals; that is, *als* is of type <e<e,t>>. I discuss this in more detail in Chapter 7. I turn to the data from the clausal domain.

3.4.3. Capacity Reading in the TP

As illustrated many times, adjectives exhibit strong endings after uninflected *ein*. In Chapter 2, I discussed two options to analyze this: either the adjective is in the regular specifier position, and the strong ending follows from the special morpho-syntactic properties of *ein*, or alternatively, the adjective is in a non-canonical position where its ending cannot undergo Impoverishment in the first place. As discussed in that chapter, one such non-canonical position involves the adjective to be deeply embedded in a complex specifier.

Recall now that the combination of "*vielleicht + ein* N" has two readings. I made use of the first option mentioned above (adjective is in regular position) with the intensified comparative reading in Section 3.3.3. The second option (adjective is more deeply embedded) was proposed for ALS-nominals in the preliminary section (see (45b) above). I now turn to the second option in more detail.

Specifically, I propose that cases with the emotive capacity reading (50a) have the adjective and noun embedded in a specifier position as in (50b). As discussed in Section 3.4.1, this complex specifier contains the null element ALS. I propose that similar to the DP, the embedded nominal involves ModP, and I assume that ALS is its head. Again, like the DP, Predicate Modification combines the two nominals, here ModP and Agr':

(50)   a.   *Du bist vielleicht 'n erstaunlicher Bauer!*
            you are PRT   an amazing   farmer
            'You are really an amazing farmer!'

b. *Emotive Capacity Reading Licensed DP-externally*

```
                CardP
              /      \
           'n         AgrP<e,t>                    (Predicate Modification)
                    /        \
            ModP<e,t>          Agr'<e,t>
           /       \              |
        ALS        AgrP<e,t>    NumP_REL
              [erstaunlicher REL Bauer]  |
                                        NP
                                      e_N<e>
```
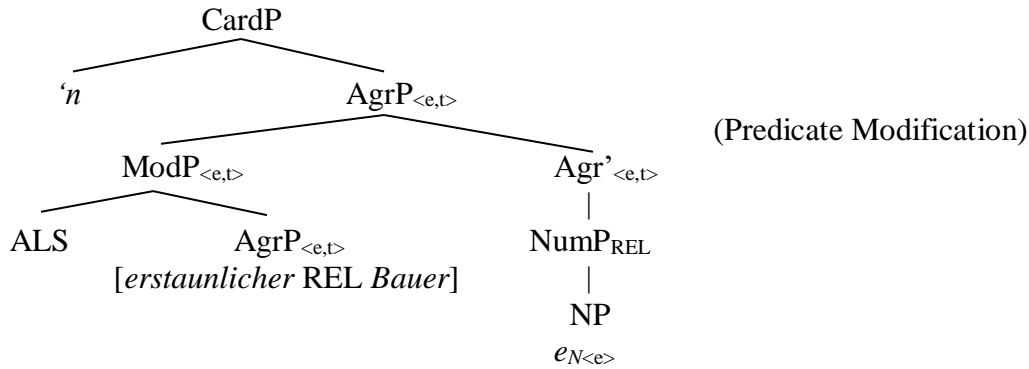
Recall that ALS is licensed by the modal particle *vielleicht*. Furthermore, *ein* is present due to REL in the matrix nominal and is uninflected due to the presence of an overt element in the specifier of the higher AgrP.[26] Finally, I assume that the emotive flavor originates with the modal particle.

For clarity, I review the capacity reading in the nominal and clausal domains adding a few more details in the process. There are two differences between the DP and the TP. First, the DP has a neutral interpretation, and the TP has an emotive one. This difference in emotiveness follows from the need to be restrictive enough in the former case (namely when the speaker singles someone out in a certain capacity, see Section 2.2.1) and the presence of the modal particle in the latter case.

Second, the indefinite determiner is absent in the DP (*du als Bauer*) but present in the TP (*ein* ALS *erstaunlicher Bauer* e_N). I consider two structural domains here, delineated by square brackets in the following examples. In the matrix nominal, *ein* is absent in *du* [*als Bauer*] as *du* itself flags REL of the matrix nominal; *ein* is present in *ein* [*erstaunlicher Bauer*] e_N as it flags REL. In the embedded nominal, *ein* is absent in [*als Bauer*] since *als* is a general(ized) capacity operator that takes role and kind nouns as arguments. As to the absence of *ein* in [*erstaunlicher Bauer*], I assume that this is due to haplology with *ein* in the matrix nominal.

To sum up this section, I derived the three readings established at the beginning of this chapter. In the DP, the ordinary and comparative readings involve canonical, simple DPs, but the capacity reading manifests an *als*-nominal in an adjoined position. As for the TP, the first two readings exhibit regular copular structures, but the capacity reading involves a modal particle licensing an unpronounced ALS, which is part of a complex specifier.

4.   Conclusion

This chapter discussed the first consequence of the proposal laid out Chapter 5 – *ein* in the context of emotive constructions. I started with the observation that the DP and the TP are parallel in structure and interpretation. Making this my general heuristic methodology, I

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[26] Note that these cases involve agreement between *ein* in the matrix nominal and the nominal embedded in Spec,AgrP. For the instances without adjectives, I assume that REL is also present. In other words, ALS always involves REL and thus NumP as part of its complement. I take it that the head Mod (ALS) mediates the agreement between the two nominals (also Chapter 8, Section 3.1).

extended the discussion to pronominal DPs and copular TPs containing non-theta nouns. Establishing three basic readings (cf. den Dikken 2006), I provided a more detailed investigation of how *ein* combines with certain role and kind nouns and how these combinations fare with regard to emotiveness in the nominal and clausal domains.

In order to explain the commonalities and slight differences, I employed, with a few refinements, de Swart *et al*.'s (2007) account of the clause and extended it to pronominal DPs. In order to explain the whole range of data, the explanation of the DP had to include some pragmatic considerations (Rauh 2004). In fact, 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, I showed that *ein* is not responsible for the emotiveness property. Rather, this property is due to REL in combination with a [+figurative] noun. It was argued that *ein* indicates the presence of structure on top of NP (Hypothesis 3a) and the presence of REL (Hypothesis 3b). In other words, I can maintain the claim that *ein* is semantically vacuous (Hypothesis 1a).

So far, I only discussed cases where we find morphological agreement between the pronoun and the predicate noun. Next I turn to cases of – what looks like – dis-agreement in number.

Chapter 7: *Ein* and Number

1.   Introduction

In this chapter, I continue the investigation begun in Chapter 5 and turn to the second and final consequence of the proposals about *ein*. I argue that *ein* is not a reflex of number, neither morphologically nor semantically. This is consistent with the claim that *ein* is semantically vacuous (Hypothesis 1a).

1.1.   A Brief Review

Recall from Chapter 6 that true minimal pairs between the DP and TP are not possible in singular, out-of-the-blue contexts. Specifically, although a bare role noun such as *Bauer* is possible in both the DP and TP, it crucially has different interpretations: it is emotive/figurative in the DP (meaning 'peasant') and neutral/literal in the TP (meaning 'farmer'). In other words, bare nouns are fairly restricted with regard to (non-)emotiveness in the two domains. I proposed that factors involving both pragmatics and semantics explain these restrictions, the former (Grician maxims) being particularly relevant for the DP and the latter (the operator CAP) for the TP. When *ein* appears in front of a role noun, the facts fall differently.

In particular, I noted that *ein* cannot surface in pronominal DPs. Compare (1a) to (1b). In order to indicate that *ein* is the indefinite article here, I provide the latter in its reduced, unstressable form *'n*:[1]

(1)   a.   *du   Bauer*
            you(SGL) peasant
            'you (peasant)'

        b. *   *du   'n Bauer*
            you(SGL) a peasant

However, *ein* is possible in predicate nominals in the TP. 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).

---

[1] As might be expected, the singularity numeral *EIN* 'one' is also ungrammatical here (ia), but adjectival *eine* is not (ib). Note that the second example involves a contrast cancelling the duality presupposition:

(i)   a.   *   *du EIN Bauer*
            you one peasant
        b.   *wir zwei Bauern und du   einer Bauer*
            we two farmers and you one   farmer
            'us two farmers and you one farmer'

In the text below, (1b) is ruled out due to the presence of two determiners in one DP. Given the composite analysis of *EIN* 'one' in German (Chapter 5), the same explanation extends to (ia). As adjectival *eine* is a lexical item, not morphologically related to *ein*, it can occur after a definite determiner as in (ib).

(2) a. *Du   bist Bauer.*
you(SGL) are farmer
'You are a farmer.'

b. *Du   bist 'n Bauer.*
you(SGL) are   a peasant/farmer
'You are a peasant.'
%'You are a farmer.'

I 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*. This is consistent with the claim that *ein* is a semantically vacuous element.

1.2. Number in the DP and TP

This chapter abstracts away from the different meanings of the noun. Below, I focus on issues related to number (for general typological discussion, see Corbett 2000 and Hurford 2003; 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 TP:

(3) a. *ihr   Schweine*
you(PL) pigs
'you idiots'

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 behave differently in the TP. Surprisingly, a singular noun is possible in copular contexts (5a). At face value, this presents a case of dis-agreement between a singular noun and a plural pronoun. Crucially though, when *ein* appears, restrictions in number reveal themselves again (5b):

(5) a. *Ihr   seid alle Arzt.*
you(PL) are all   doctor
'You are all doctors.'

b. ?* *Ihr   seid alle 'n Arzt.*
   you(PL) are all   a doctor

To sum up thus far, as seen in Chapter 6, bare nouns are restricted to non-emotiveness in singular TPs. As just seen though, they are unrestricted in number in TPs: bare nouns can occur not only in singular but also plural contexts – they are number-neutral. To repeat, bare nouns in TPs are restricted as regards emotiveness but unrestricted as regards number.

It is clear that the grammaticality status of (5a) vs. (5b) correlates with the absence vs. presence of *ein*. It could be claimed then that this difference is due to the morphology and/or semantics of *ein*. However, I proposed in Chapter 5 that *ein* itself is not specified for morphological number; that is, it has the specification [αPL 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, I reiterate the claim that morphological number is actually not specified on nouns in German. In Chapter 6, I followed de Swart *et al.* (2007) in assuming that number morphology has to do with NumP. Specifically, bare nouns such as the role noun *Arzt* 'doctor' are proposed to be unmarked for number and only project NP (6a). In contrast, plural nouns like *Ärzte* 'doctors' are argued to involve NumP (6b), and singular nominals such as *(ei)n Arzt* 'a doctor' are claimed to project more structure. I proposed in Chapter 6 that *pace* de Swart *et al.*, they may involve ArtP as in (6c). In order to differentiate between bare role nouns (6a) and singular nouns (6c), I label the first non-plural reserving the term singular for the second. In other words, what has traditionally been classified as a "singular" noun may have two structural interpretations depending on the presence of *ein*:[2]

(6)   a.   bare/non-plural *Arzt*: N   → [NP]

       b.   plural *Ärzte*:   N-PL → [NumP [NP]]

       c.   singular *'n Arzt*:   *ein* N → [[[ArtP [NumP [NP]]]

To explain the difference in grammaticality in (5), I make use of the structural proposal in (6), where NumP is absent with non-plural nouns (6a) but present with plural and singular nouns (6b-c). With NumP present in the latter two cases, REL is present too. Note again that the absence or presence of REL is indicated by overt morpho-syntactic elements in (6), and the same goes for (5). (5a) is grammatical as NumP is absent, but (5b) is ungrammatical as NumP is present. In other words, it is the absence vs. presence of NumP (but not *ein* itself) that is proposed to explain the difference in grammaticality in (5).

As for the DP cases in (4), I propose that NumP is always present, here for cartographic reasons. Unlike in the TP, where the presence of NumP is indicated by overt elements, in the DP higher, obligatory phrases like ArtP entail the presence of lower NumP. If so, the presence of

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[2] That bare nouns as in (6a) are neither singular nor plural in interpretation (i.e., they are number-neutral) can be seen in contexts other than the ones discussed in the main text:
       (i)   a.   flea(*s) infestation
               b.   stone carving
For the discussion of (i) and some other cases, see Borer (2005: 132-35).

NumP rules out (4a) due to a mismatch in number between a plural pronoun and a singular noun. Note now that what may look like a non-plural noun in (4a) actually involves a singular noun – NumP entails REL and thus *ein* should be present (NB: I usually provide the label for the surface forms given the terminology provided in (6)).

I suggest that the reason *ein* can never be present inside pronominal DPs, be they singular as in (1b) or plural as in (4b), 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 determiner elements are merged in ArtP, only one of them can be inserted and consequently appear. If these considerations are on the right track, then I can maintain the claim that *ein* does not determine number, neither morphologically nor semantically. As in the last chapter, I suggest that *ein* indicates more structure on top of NP (Hypothesis 3a) and that it flags the presence of a null operator (Hypothesis 3b).

The chapter is organized as follows. First, I present the data illustrating the restrictions on morphological and semantic number in more detail. In Section 3, I lay out my proposal to account for these facts. Section 4 summarizes the main findings.

2. Data

Given the discussion of the last chapter, I present the data of the DP with figuratively extended nouns and the examples of the TP with role nouns. The data are summarized in Tables 1 and 2 below. I start with pronominal DPs involving agreement in number. Recall that I refer to "singular" forms of the noun without *ein* as non-plural and to those with *ein* as singular.

2.1. Cases of Agreement

I start with the cases involving agreement in number. As already seen in the introduction, a non-plural noun can combine with a singular pronoun (7a) but a singular noun cannot (7b). Furthermore, a plural noun can combine with a plural pronoun (7c):

(7) a. *du   Schwein*
         you(SGL) pig
         'you (idiot)'

     b. * *du   'n Schwein*
          you(SGL) a pig

     c. *ihr   Schweine*
         you(PL) pigs
         'you idiots'

As expected, (7a) can only be singular in interpretation and (7c) only plural. In other words, the interpretations in (7a) and (7c) are parallel to the morphology on the noun. I discuss the ungrammatical case of (7b) in Section 3.2.5 in detail proposing that (7b) involves two determiners in the same DP.

Turning to the TP, we find similar facts with the exception of singular nouns. Specifically, a non-plural as well as a singular noun can combine with a singular pronoun (8a-b). Again, a plural noun can occur with a plural pronoun (8c):[3]

(8)   a.   *Du   bist Arzt.*
               you(SGL) are doctor
               'You are a doctor.'

        b.   *Du   bist 'n Arzt.*
               you(SGL) are   a doctor
               'You are a doctor.'

        c.   *Ihr   seid Ärzte.*
               you(PL) are doctors
               'You are doctors.'

Again, the semantics runs parallel to the morphology. Next, I illustrate the cases involving dis-agreement in number in more detail.

2.2.   *Cases of Dis-agreenent*

Starting with the DP, a plural noun cannot combine with a singular pronoun (9a). Conversely, a singular or a non-plural noun cannot combine with a plural pronoun either (9b-c):[4]

(9)   a. *   *du   Schweine*
              you(SGL) pigs

        b. *   *ihr   'n Schwein*
              you(PL) a pig

        c. *   *ihr   Schwein*
              you(PL) pig

So far, the facts are as we might expect.

Turning to the TP, it may not be surprising either that a plural noun cannot combine with a singular pronoun (10a) or a singular noun with a plural pronoun (10b). However, it is unexpected that a non-plural noun can combine with a plural pronoun (10c). Importantly, the interpretation here is plural (for similar facts in Dutch, see de Swart *et al.* 2005: 451):[5]

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[3] Recall from Chapter 6 that a predicative [-figurative] role noun in German can, for many speakers, take an indefinite article. In other words, these speakers allow both (8a) and (8b). Below, I focus on those speakers.

[4] In Section 3.3.2, I discuss special cases such as *Sie Schwein* 'you (pig =) idiot', which are characterized by semantic agreement but morphological dis-agreement (the latter though crucially holds between two different nominals as explicated in detail in that section).

[5] There seem to be some interesting cross-linguistic differences with this 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 fn. 4; also Munn & Schmitt 2005: 839).

(10) a. * *Du   bist Ärzte.*
              you(SGL) are doctors

      b. ?* *Ihr   seid alle 'n Arzt.*
              you(PL) are   all   a doctor

      c.   *Ihr   seid alle Arzt.*
              you(PL) are   all doctor
              'You are all doctors.'

Note that there is a floating quantifier in the grammatical instance (10c) above. This element can also be in a different position (11a) or be exchanged by another quanfitier (11b). Interestingly, when such an element is missing, the example becomes a bit marked, and the judgements are somewhat unstable (11c) (I indicate this by ᵐ here):[6]

(11) a.   *Ihr   alle seid Arzt.*
              you(PL) all   are doctor
              'You are all doctors.'

      b.   *Ihr   seid jeder Arzt.*
              you(PL) are   each doctor
              'You are each a doctor.'

      c. ᵐ   *Ihr   seid Arzt.*
              you(PL) are doctor
              'You are doctors.'

Similar facts hold in capacity constructions involving *als* 'as'. This is what I turn to next.

2.3.   *Cases Involving* als-*nominals*

Recall that I refer to nouns preceded by *als* 'as' as *als*-nominals. As we will see, *als*-nominals can occr in the context of pronominal DPs and non-copular TPs. First, I discuss cases of agreement and then instances of dis-agreement. Starting with the DPs, *als*-nominals agree with their preceding pronoun, independently of whether the pronoun is in the singular (12a) or in the plural (12c), with the qualification that the presence of *ein* leads to slight markedness (12b):

(12) a.   *du   als Arzt*
              you(SGL) as doctor
              'you as a doctor'

---

[6] Below I argue that the (overt) quantifiers in (11a-b) are distributivity operators that "single out" the individuals inside the set presupposed by the plural pronoun. As to (11c), I tentatively suggest below that there is a null distributivity operator present (also de Swart *et al*. 2017: 218). The difference in overtness of the operator may explain the more stable judgments in (11a-b) vs. (11c).

b. ? *du   als 'n Arzt*
   you(SGL) as   a doctor
   'you as a doctor'

c. *ihr   als Ärzte*
   you(PL) as doctors
   'you as doctors'

The same grammaticality judgments hold for the corresponding sentences involving a non-copular verb:[7]

(13) a.   *Du   sprichtst als Arzt.*
            you(SGL) speak   as doctor
            'You speak as a doctor.'

      b. ? *Du   sprichst als 'n Arzt.*
            you(SGL) speak   as a doctor
            'You speak as a doctor.'

      c.   *Ihr   sprecht als Ärzte.*
            you(PL) speak   as doctors
            'You speak as doctors.'

Turning to the cases involving dis-agreement, consider nominals where a singular pronoun is combined with a plural noun (14a), and a plural pronoun is followed by a singular noun (14b). While these two combinations lead to ungrammaticality, there is one exception: a plural pronoun can be followed by an *als*-nominal with a non-plural noun (14c):

(14) a. * *du   als Ärzte*
            you(SGL) as doctors

      b. ?* *ihr   alle als 'n Arzt*
            you(PL) all   as   a doctor

      c.   *ihr   alle als Arzt*
            you(PL) all   as doctor
            'you all as doctors'

Note that the interpretation of the non-plural nominal in (14c) is indeed plural. The same holds for the clausal cases (the datum in (15c) is adapted from de Swart *et al.* 2007: 206):

(15) a. * *Du   sprichst als Ärzte.*
            you(SGL) speak   as doctors

---

[7] Chapter 6 distinguished different readings of copular TPs (involving *sein* 'to be'). Copular TPs can have a capacity reading. However, they do not involve *als* 'as' but rather null ALS 'as' licensed by the modal particle *vielleicht* 'really' (Chapter 6, Section 3.4.1). Different readings are not distinguished here – the focus is on number.

b. ?? *Ihr   sprecht alle als 'n Arzt.*
   you(PL) speak   all   as   a doctor

c. *Ihr   sprecht alle als Arzt.*
   you(PL) speak   all   as   doctor
   'You speak all as doctors.'

To review, this last section discussed *als*-nominals in the context of pronominal DPs and non-copular TPs. These two cases show the same syntactic distributions and corresponding semantic interpretations as the copular TPs illustrated in the two preceding sections. Specifically, these three cases may involve morphological dis-agreement. This is in stark contrast to simple DPs, that is, DPs without *als*-nominals, which have to exhibit agreement. Before moving on, I provide a more detailed summary of the individual cases in tabular form.

2.4.   Summary of the Data

I summarize the syntactic distributions in the following charts. I mark the unexpected instances by (!), the latter all restricted to the occurrence of non-plural nouns. Note that if there is a difference in judgments between nominals with or without *als*, an explicit reference to *als* is provided. Table 1 shows the facts involving the DP (the shadings in Table 1 are commented on below):

Table 1: Summary of the Judgments in DPs

	Non-plural N	*(ei)n* N	N-PL
du 'you(SGL)'	√	* [without *als*] ? [with *als*]	*
ihr 'you(PL)'	* [without *als*] √ (!) [with *als*]	* [without *als*] ?* [with *als*]	√

Table 2 shows the facts of the TP. Observe again that non-plural nouns are surprising as they are grammatical in basically all clausal contexts:

Table 2: Summary of the Judgments in TPs

	Non-plural N	*(ei)n* N	N-PL
du 'you(SGL)'	√	√ [without *als*] ? [with *als*]	*
ihr 'you(PL)'	√ (!)	?* [without *als*] ?? [with *als*]	√

To repeat, the unexpected distributions occur when a plural pronoun is combined with a non-plural noun, both in the DP mediated by *als* 'as' and in the TP more generally. Furthermore, the judgments are basically the same with or without *als* (and these cases are treated below as the same). There are two exceptions to this that both hold in the DP (indicated by shading of the

relevant cells in Table 1): depending on the presence of *als*, the judgments differ markedly if a singular pronoun combines with a singular noun or a plural pronoun occurs with a non-plural noun.

In view of these data, I conclude that number is very restricted in simple DPs such that pronouns and nouns have to match in number. Syntactically, singular pronouns cannot combine with plural nouns and plural pronouns cannot combine with singular or non-plural nouns.[8] Semantically, singular and plural pronouns are interpreted as singular and plural, respectively; singular/non-plural and plural nouns are understood as singular and plural, respectively.

In contrast, copular clauses, non-copular clauses, and pronominal DPs, where the latter two involve *als*, are less restricted, both syntactically and semantically. Syntactically, plural pronouns can, under certain conditions, occur with non-plural nouns. Semantically, non-plural nouns are compatible with a plural interpretation. In addition, singular pronouns can occur with singular nouns without *als* being present too. In the next section, I turn to an explanation of these syntactic and semantic facts.

3.   Proposal

In this section, I account for the different morphological and semantic possibilities licensed in the different syntactic domains. Just as in Chapter 6, I follow de Swart *et al.* (2007) and extend their proposal to pronominal DPs explaining the differences between predicate nominals in TPs and those in DPs.

3.1.   Basic Assumptions

I discuss the simple structures first leaving the instances involving *als*-nominals for Section 3.4. 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 surfacing in the DP-level (16a). In keeping with the discussion in Chapter 6, the predicate nominal inside the DP always involves NumP (where REL maps an element of type <e> to type <e,t>). TPs are different: while they all involve a subject DP, a copular verb, and a predicate nominal, the latter may vary in size. As in Chapter 6, I assume that NumP is syntactically optional in predicate nominals following a copular auxiliary. Specifically, a non-plural nominal involves NP (16b), a plural nominal consists of NumP (16c), and a singular nominal projects ArtP (16d) (Aux = stands for the auxiliary *sein* 'to be'):

(16)   a.   DP$_{<e>}$: [$_{DP}$ [$_{NumP}$ [$_{NP}$]]]$_{<e>}$

        b.   TP$_{<t>}$: [$_{DP}$ [$_{NumP}$ [$_{NP}$]]]$_{<e>}$ Aux [$_{NP}$]$_{<e,t>}$

---

[8] 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 element:
      (i)   *Hemden habe ich {kein-e   / ?kein-es}   getragen.*
               shirts   have I   none-PL/ none-SGL worn
               'As for shirts, I have worn none.'
I argued in Chapter 4, Section 3 that the source and the split-off involve two separately base-generated nominals. Furthermore, Ott & Nicolae (2010) suggest that the plural in the split-off presumably has to do with frame-setting in topicalization, and as such the "dis-agreement" here is a different phenomenon.

c. TP$_{<t>}$: [$_{DP}$ [$_{NumP}$ [$_{NP}$]]]$_{<e>}$ Aux [$_{NumP}$ Num$_{[+PL]}$ [$_{NP}$]]$_{<e,t>}$

d. TP$_{<t>}$: [$_{DP}$ [$_{NumP}$ [$_{NP}$]]]$_{<e>}$ Aux [$_{ArtP}$ *ein* [$_{NumP}$ Num$_{[-PL]}$ [$_{NP}$]]]$_{<e,t>}$

These are the basic assumptions about the syntax.

As for the semantics, I again follow de Swart *et al.*'s (2007) discussion of the clause in (16b-d) and assume that the predicate nominal must be of type <e,t> to combine with the subject DP (type <e>). Recalling that the copular auxiliary is semantically vacuous, this means that NP, NumP, and ArtP must all be of type <e,t>. 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 holds for (16b); the second option applies to plural (16c) and to singular (16d), with singular involving an additional structural layer (ArtP). To be clear, these types of predicate nominals are all syntactically different but semantically the same (i.e., type <e,t>). As such, they can combine with the subject DP to yield a truth value (type <t>). Note again that *ein* indicates the presence of a certain amount of structure on top of NP (Hypothesis 3a) and that it flags the presence of the operator REL (Hypothesis 3b).

As for the DP in (16a), I assumed that NumP (and thus REL) is always present. I argue in more detail below that this is so for cartographic reasons – higher, obligatory phrases entail the presence of lower ones. Semantically, combining the head noun and REL yields an element of type <e,t>. Assuming again that determiners, including pronominal determiners, are of type <<e,t>e>, predicate nominals and determiners can combine to return an entity (type <e>).

With these general points in place, I turn to the individual cases from the data section. First, I discuss DPs and TPs involving agreement and dis-agreement. Then, I turn to some special cases involving the pronoun *Sie* 'you(FORMAL)', identifying the parts of the structure where morphological and semantic number originate. In the final section, I address the more complex DPs and TPs involving *als*-nominals.

3.2. Agreement in Constructions Without als

First, I review some general facts about agreement in the TP. This is followed by proposing that NumP plays a crucial role in agreement. Finally, I detail the account of agreement as regards plural nouns, non-plural nouns, and singular nouns.

3.2.1. Agreement and Dis-agreement
To begin, consider the data involving copular TPs below. Recall from above that non-plural nouns are fine in all contexts (17). In contrast, singular nouns can only combine with singular pronouns (18) and plural nouns only with plural pronouns (19):

(17) a. *Du   bist Arzt.*
          you(SGL) are   doctor
          'You are a doctor.'

      b. *Ihr   seid alle Arzt.*
          you(PL) are all doctor
          'You are all doctors.'

(18)   a.   *Du   bist 'n Arzt.*
              you(SGL) are   a doctor
              'You are a doctor.'

       b. ?* *Ihr   seid alle 'n Arzt.*
              you(PL) are all   a doctor

(19)   a. *   *Du   bist Ärzte.*
              you(SGL) are   doctors

       b.   *Ihr   seid Ärzte.*
              you(PL) are doctors
              'You are doctors.'

To be clear, non-plural nouns can occur in both singular and plural contexts, but singular and plural nouns are in complementary distribution as regards number.

To see whether this is a morphological or semantic restriction, I consider *jeder* 'each' in this regard. This quantificational element is morphologically singular but semantically plural; that is, it takes a non-plural restriction but presupposes a plurality of entities. As might be expected, this element can combine with a non-plural noun via an auxiliary (20a). However, while *jeder* can also occur with a singular noun (20b), it cannot occur with a plural one (20c):[9]

(20)   a.   *Jeder (Mann hier) ist Arzt.*
              each   man   here is doctor
              'Each (man here) is a doctor.'

       b.   *Jeder (Mann hier) ist 'n Arzt.*
              each   man   here is a doctor
              'Each (man here) is a doctor.'

       c. *   *Jeder (Mann hier) ist Ärzte.*
              each   man   here is doctors

Considering that *jeder* is semantically plural, the incompatibility with a plural noun in (20c) is somewhat surprising. I make the strongest claim and propose that the number restrictions shown in (17) through (20) are morphological *and* semantic in nature. The lack of morphological agreement explains the ungrammaticality of the plural noun in (20c). As for the semantics of the non-plural and singular nouns in (20a-b), I suggest that the reason why *jeder* is compatible with such nouns has to do with the presence of a null distributivity operator (cf. de Swart *et al.* 2007: 218 for null distributivity operators in cases like *Jan and Sofie sind Arzt.* 'Jan and Sofie are

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[9] Other quantifiers also presuppose a plurality of entities, but they are morphologically plural and can combine with plural nouns:
       (i)   *Einige (Männer hier) sind Ärzte.*
              some   men   here are doctors
              'Some (men here) are doctors.'

(doctor =) doctors' in Dutch). In what follows, I focus on morphological number, but I return to semantic number in Section 3.3.

3.2.2. Agreement and NumP

Starting with the TP, recall that I assume that plural morphology on the noun indicates the presence of NumP and that 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, a non-plural noun does not project NumP – it is a predicate nominal involving NP. I propose that with NumP absent, such a predicate nominal does not have to undergo an agreement relation, and consequently its distribution is much freer (see also den Dikken 2006: 210). To repeat, predicate nominals in the clause are NP, NumP, or ArtP depending on the presence of plural morphology or *ein*.

DPs are different. I propose that NumP must be present for cartographic reasons: higher, obligatory phrases such as ArtP entail the presence of lower phrases such as NumP. Recall in this regard that determiners originate in ArtP and move to DP. Now, as is well known, elements in the DPs must exhibit concord in agreement features like case, number, and gender. I follow the literature in making the standard assumption that number features originate in NumP (e.g., de Swart *et al.* 2007, Julien 2005a, Ritter 1991, Roehrs 2006b). I assume that the values on Num are morphological (i.e., [αPL morph]) and that NumP mediates concord within the DP. For concreteness, I assume here that the value of the Num head "percolates" up the nominal tree by some concord mechanism.[10] As to the head noun, I proposed in Chapter 1, Section 4 that it moves to adjoin to Num (also Julien 2005a), where the head noun establishes an agreement relation with Num. To repeat, NumP is always present in the DP.

Taking stock thus far, there are two types of agreement: concord in agreement features within the DP, indicated below by subscript alphas (21a), and agreement between the subject and the predicate nominal within the copular TP, marked below by subscript betas (21b). The latter type of agreement only holds if NumP is present and if the morphological number of the predicate nominal agrees with that of the subject. Note that (21b) also involves concord in agreement features, just like (21a), if NumP and higher phrases are present in the predicate nominal:

(21) a. DP: [Det$_\alpha$ Num$_\alpha$ N$_\alpha$]

b. TP: Subj$_\beta$ Aux [… (Num$_\alpha$) N$_\alpha$]$_\beta$ (where $\beta = \alpha$ on Num)

It is clear that NumP is crucial in establishing agreement relations both within the nominal domain and the clausal domain (involving copulas). For the TP, I focus on the agreement relation between the subject and the predicate nominal.

With these points about NumP in mind, we can observe that there are two notions of dis-agreement. Starting with the DP, all ungrammatical cases in the nominal domain involve (true) morphological dis-agreement where the combination of singular and plural elements cannot establish an agreement relation (22). This failure to establish concord in agreement features is

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[10] As mentioned in Chapter 1, Section 4.1.1, there are different mechanisms that have been claimed to bring about concord. Note also that the obligatory presence of NumP is presumably not due to concord itself. This is so because I suggest below that mass nouns receive singular morphology by default (as [αPL morph] is proposed to be absent on Num in those cases).

due to the obligatory presence of NumP in the DP, which is either specified as singular or plural (for details, see Section 3.3):

(22)   a. *   *du*   *Ärzte*
                you(SGL) doctors

       b. *   *ihr*   *Arzt*
                you(PL) doctor

This is different for the TP. Given certain conditions, we may find instances of true dis-agreement (23a) but also cases of *apparent* dis-agreement (23b):

(23)   a. *   *Du*   *bist Ärzte.*
                you(SGL) are doctors

       b.   *Ihr*   *seid alle Arzt.*
                you(PL) are   all doctor
                'You are all doctors.'

Importantly, true dis-agreement in copular contexts also involves the fact that NumP is present, here in the plural predicate nominal in (23a). This leads to ungrammaticality as an agreement relation between the singular pronoun and the plural predicate nominal cannot be established. However, apparent dis-agreement does not yield an ungrammatical example. In (23b), NumP is absent with non-plural nominals, and no agreement relation has to be established. This allows the combination of a plural pronoun and a non-plural noun to surface. Consider the individual derivations involving the different types of nouns.

3.2.3. Plural Nouns
DPs involve structures where NumP is always present. Assuming again that determiners orginate in ArtP, the tree diagram for (24b) is given in (24c) (in the discussion, I abstract away from the traces/copies left by movement):

(24)   a. * *du*   *Schweine*
               you(SGL) pigs

       b.   *ihr*   *Schweine*
               you(PL) pigs
               'you idiots'

c. *Agreement in the DP*

```
                    DP<e>
                 /        \
        ihr<<e,t>e>k      ArtP
                        /      \
                      t_k      NumP<e,t>
                             /        \
              Num_REL<e<e,t>>          NP
                                    Schweine<e>
```
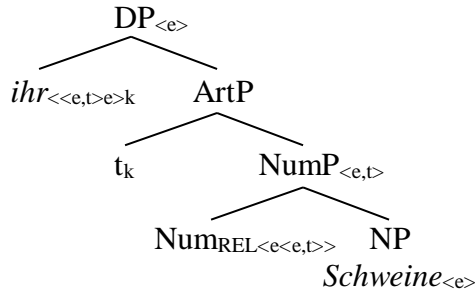
As mentioned in the previous subsection, I assume that all elements inside DP have to establish an agreement relation mediated by NumP. If so, it is easy to rule out (24a), where such a relation between the pronominal determiner, Num, and the noun cannot be successfully established. In contrast, (24b) is fine as the relevant elements can establish an agreement relation in number. I turn to the clausal domain.

As in Chapter 6, I follow Bowers (1993) in assuming that copular structures involve a Predication Phrase (PrP). The latter is embedded under a TP. I propose that the head Pr can take different elements as its complement. With plural morphology present on the nouns in (25a-b), I assume that Pr takes NumP as its predicative complement. I provide the tree diagram for (25b) in (25c):

(25) a. *   *Du   bist Ärzte.*
             you(SGL) are doctors

      b.   *Ihr   seid Ärzte.*
             you(PL) are doctors
             'You are doctors.'

c. *Agreement in the TP*

```
                    TP<t>
                 /        \
      [ihr REL e_N]<e>k    T'
                         /      \
                     seid_i     PrP
                              /      \
                            t_k      Pr'
                                   /      \
                                 t_i      NumP<e,t>
                                          Ärzte
```
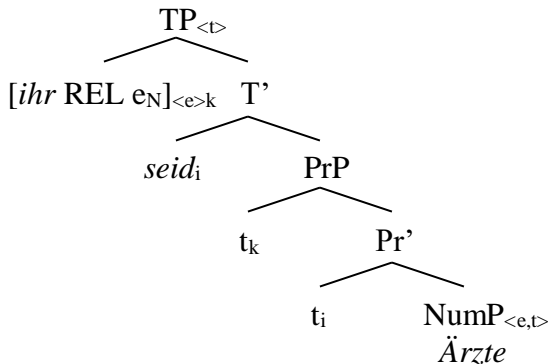
Recall from the previous chapter that pronominal determiners (*ihr*) are taken to be of type <<e,t>e> but that pronominal DPs as a whole (*ihr* REL e_N) are of type <e>. As regards morphological number, I proposed above that the NumP of the predicate nominal has to establish an agreement relation with the subject DP. As plural *Ärzte* 'doctors' can enter such a relation

with plural *ihr* but not singular *du*, the difference in grammaticality in (25a-b) is accounted for. As just seen, we can observe that the cases involving plural nouns are straightforward.

3.2.4. Non-plural Nouns
Again, all DPs contain NumP. As such, a singular pronoun is grammatical with a non-plural noun (26a), but a plural pronoun is not (26b). I derive (26a) as in (26c):

(26)   a.   *du   Schwein*
               you(SGL) pig
               'you (idiot)'

       b. *   *ihr   Schwein*
               you(PL) pig

       c. *Agreement in the DP*

```
                    DP<e>
                   /      \
        du<<e,t>e>k        ArtP
                          /     \
                        tk      NumP<e,t>
                               /        \
                    NumREL<e<e,t>>        NP
                                      Schwein<e>
```
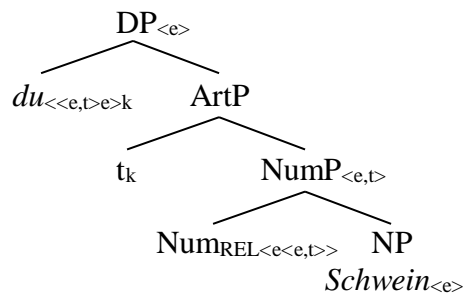
The ungrammaticality in (26b) is due to the failure of establishing the relevant agreement relation between the pronominal determiner, Num, and the noun. Note now that with NumP present, REL is present too, and we would expect *ein* to occur. In the next subsection, I discuss why singular nouns are not possible here.

As regards the TP, I followed de Swart *et al.* (2007) in that NumP is absent if no number-related elements are present in the predicate nominal. This is the case for (27a-b). I propose that the head Pr takes NP as its predicative complement here. Recall that bare role nouns combine with CAP. I derive (27a-b) as (27c):

(27)   a.   *Du   bist Arzt.*
               you(SGL) are doctor
               'You are a doctor.'

       b.   *Ihr   seid alle Arzt.*
               you(PL) are all   doctor
               'You are doctors.'

c. *Apparent (Dis-)Agreement in the TP*

$$TP_{<t>}$$

du/ihr$_{<e>k}$ T'

seid$_i$ PrP

t$_k$ Pr'$_{<e,t>}$

t$_i$ NP$_{CAP<e<e,t>>}$
Arzt$_{<e>}$
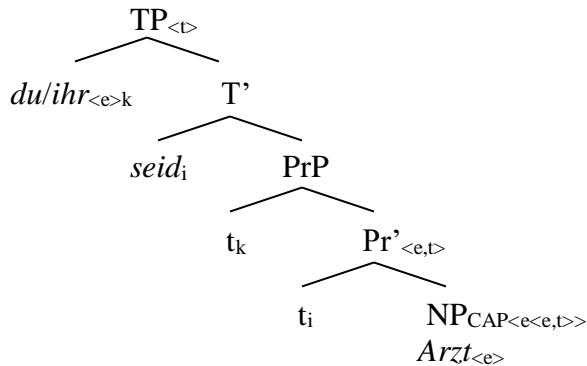
With NumP absent, the predicate nominal does not have to enter into an agreement relation. In other words, no agreement relation between the predicate nominal and the subject DP has to be established, and both singular and plural pronouns are grammatical here. (27b), then, is a case of apparent dis-agreement as no relevant agreement relation is established in the first place. In order to obtain a plural interpretation of the non-plural noun in (27b), I follow de Swart *et al.* (2007) in that NP may involve a distributivity operator. I take the floating quantifier in (27b) to be this element. This set of assumptions also explains the grammaticality of *jeder ist ('n) Arzt* 'everyone is a doctor', where singular or non-plural predicate nominals receive a plural interpretation. Presumably, here a null distributivity operator is present (more on this below).

This discussion makes an interesting prediction: if a predicate nominal in a copular TP does not involve NumP but just NP, then the head noun can only combine with CAP to yield an element of type <e,t> (see (27c) again). 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 (apparent) dis-agreement cases discussed here:

(28)   *Ihr   seid jeder Bauer.*
        you(PL) are   each farmer
        'You (each) are farmers.'
        #'You (each) are peasants.'

In the next section, I disucss singular nouns, and I provide an explanation as to why *ein* is not possible in pronominal DPs.

3.2.5. Singular Nouns
Starting with the DP, I return to the question left unanswered in the last subsection, namely why *ein* cannot occur in pronominal DPs despite the fact that REL is present. Note that this not only applies to pronominal DPs (29a) but also to ordinary DPs (29b):

(29)   a. *   *du   'n Schwein*
             you(SGL) a pig

b. * *das 'n Schwein*
the a pig

I proposed in the last chapter that REL is not only flagged by *ein* but also by other elements. Specifically, definite determiners, pronominal or ordinary, can also flag the presence of REL. Recall that this is consistent with de Swart *et al.*'s (2007) assumption about regular DPs like *the child*. 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 the cases in (29). Furthermore, if we assume that merging a contentful element precludes merging an expletive one, then the failure of *ein* to appear in definite DPs finds a natural explanation: *ein* is a semantically vacuous element, but other determiners are substantive elements. Finally, given the current analysis, the interaction between *ein* and personal pronouns provides evidence that the latter are indeed determiners. I turn to the TP.

In Chapter 6, I discussed in detail the proposal that for nouns to be predicates, kind nouns combine with REL directly, but role nouns do so indirectly (via kind coercion). REL triggers the presence of *ein* in singular contexts, which I explained by proposing that *ein* flags the presence of REL. Consider (30a-b). Given the absence of a feature for definiteness on *ein*, I also proposed that this element may surface in ArtP (and not necessarily in DP). Given that, I propose that besides NP and NumP, the head Pr can also take ArtP as its predicative complement. The tree diagram of (30a) is provided in (30c):

(30) a. *Du   bist 'n Arzt.*
          you(SGL) are   a doctor
          'You are a doctor.'

      b. ?* *Ihr   seid alle 'n Arzt.*
            you(PL) are alle a doctor

      c. *Agreement in the TP*

$$
\begin{array}{l}
\text{TP}_{<t>} \\
\quad du_{<e>k} \quad \text{T'} \\
\qquad\qquad bist_i \quad \text{PrP} \\
\qquad\qquad\qquad t_k \quad \text{Pr'} \\
\qquad\qquad\qquad\qquad t_i \quad \text{ArtP}_{<e,t>} \\
\qquad\qquad\qquad\qquad\qquad 'n \quad \text{NumP}_{\text{REL}<e<e,t>>} \\
\qquad\qquad\qquad\qquad\qquad\qquad\quad Arzt_{<e>}
\end{array}
$$
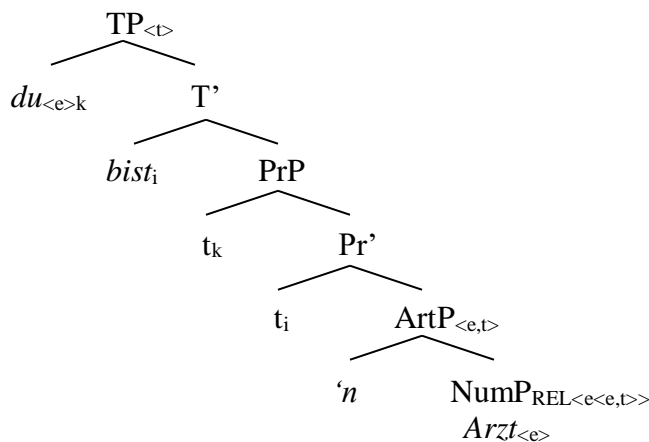
Observe that the subject pronoun *du* 'you' and *ein* in (30a) are part of different nominals – the pronominal one and the predicate one, where the former is separated from the latter by an auxiliary. As such, *du* and *ein* do not compete for insertion in the same ArtP, and they can co-

occur. Now, notice that with NumP present, a singular predicate nominal can establish an agreement relation with a singular, but not a plural, subject pronoun. As such, the latter case presents an instance of true dis-agreement, and the failure to establish an agreement relation explains the ungrammaticality of (30b). I return to the main focus of this book summarizing the discussion so far and drawing some conclusions.

Starting with the DP, I proposed that NumP is always present, and a relevant agreement relation between a determiner, Num, and a noun has to be established. Furthermore, although REL is always present in the DP, *ein* does not surface when another determiner occurs. As suggested above, elements other than *ein* can flag the presence of REL in singular contexts. As for the TP, I proposed that the head Pr can take NP, NumP, or ArtP as its predicative complement. Importantly, when NumP is present in the predicative complement, an agreement relation with the subject DP has to be established.

More generally, these assumptions allow me to account for the diverse agreement phenomena illustrated above while maintaining the claim that *ein* has no specifications for number. In keeping with Chapter 5, I provide more details in the next section that morphological number is not due to *ein* but due to the number specification on NumP.

3.3.   Morphological and Semantic Number

Considerations regarding number and the related mass/count distinction are notoriously complex and difficult. For convenience, I employ my own system developed in Roehrs (2006b).[11] My primary goal here is not to argue that this is the correct way to account for morphological and semantic number. Rather, I intend to show that elements other than *ein* can be held responsible for morphological and semantic number thus defending the claim that *ein* is not a reflex of number.

In the first subsection, I relate morphological and semantic number. With this in place, I return to cases of dis-agreement involving pronominal DPs containing *Sie* 'you(FORMAL)'. In the third subsection, I provide more details of the derivation of these cases as regards number. The discussion of these non-canonical structures reveals a number of interesting points.

3.3.1. Relating Morphological and Semantic Number
I begin by illustrating the relevant issues with an ordinary noun like *Schwein* 'pig'. As is well known, this type of noun has three readings. It can have a mass (31a), a singular count (31b), or a plural count (31c) interpretation:

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[11] There are many other proposals. To name just a few: Borer (2005), Eynde (2020), Ott (2011b), Watanabe (2006), and H. Wiese & Maling (2005) (see also references cited in these works). Also, Hachem (2015) and Rehn (2019: 181-86) argue that a simple dichotomy of count vs. mass nouns is not correct. On the basis of diachronic facts, Hachem (2015) proposes that grammatical gender functions as a mass quantifier; that is, gender is a semantically meaningful category that creates different types of mass distinctions (p. 100): neuter involves unbounded mass (e.g., *snow*), masculine forms individuative mass (e.g., *frost*), and feminine is collective mass (e.g., *winter*); plural is a separate category.

Rehn (2019) points out that these fine-grained distinctions present a problem for Borer (2005) (for other issues with Borer's work, see also Ott 2011b). To the extent that these finer distinctions are correct, the current analysis could break NumP into several phrases (as is done in Hachem 2015 and Rehn 2019). Having said that, Hachem states that this proposed correlation between gender of the noun and its interpretation is no longer obvious in Modern German – the correlation has been regrammaticalized. As such, I do not take it into consideration here.

(31) a.   *Schwein schmeckt gut.*
           pig   tastes   good
           'Pork tastes good.'

      b.   *du   Schwein*
           you(SGL) pig
           'you (idiot)'

      c.   *ihr   Schweine*
           you(PL) pigs
           'you idiots'

In order to account for these readings, I propose that there is an intricate interplay between the number specifications on the noun and the Number head (Num). Specifically, head nouns have a statement for semantic number, and the latter interacts with the morphological number on Num.

In more detail, I assume with Borer (2005: 94) that nouns are unmarked for the mass-count distinction. As such, I assume that all regular nouns involve two statements as regards number (to be collapsed into one statement below). The first consists of morphological and semantic number with unspecified values (32a); the second states that both of these values have to coincide (32b); that is, either both values for number are positive or both are negative.[12] As for NumP, its head has the morphological number feature [αPL morph], which enters the derivation specified as positive or negative. Syntactically, recall from Chapter 1, Section 4 that the head noun moves to adjoin to Num. With these points in mind, the lower part of the DP structure can be fleshed out as in (32c), where the two statements of the noun in (32a-b) are collapsed into one:

(32) *Noun*
      a.   [αPL morph; βPL sem]

      b.   (where α = β)

      c.

With the head noun and Num in a local relation, I assume that the morphological value for number on Num and that on the noun establish an agreement relation. After the morphological number of the noun has agreed with Num, the equality statement in (32b) brings about the

---

[12] It is not likely that these two statements are acquired for each and every noun. Rather, they are probably provided to all regular nouns by a default mechanism. Note in this regard that we will see below that there are certain elements where the specifications for morphological and semantic number can diverge. Presumably, these specifications have to be acquired individually and marked lexically on those elements.

semantic number of the noun. This means that there is an interplay between Num and the head noun as regards number, morphologically and consequently semantically.

Before providing some illustrative derivations, I assume the following vocabulary entries for second-person informal pronouns (see also Chapter 3, Section 5):

(33) a.   [+D; -AUTH, +PART; INFORMAL]   →   *ihr* / [+F, +N, -O, -S]

      b.   [+D; -AUTH, +PART; INFORMAL]   →   *du* / [-O, -S]

The formal pronoun of address (i.e., *Sie* 'you(FORMAL)') is discussed in the next subsection.

Returning to the data in (31), recall that *Schwein* can have three manifestations: it can be a mass, a singular count, or a plural count noun. I assume that the morphological feature [αPL morph] on NumP is syntactically optional. If it is absent, *Schwein* is interpreted as a mass noun, and it occurs with a null article. The subject DP in (31a) can be illustrated in the following simplified structure:

(34)

```
            DP
          /    \
        Ø_D     NumP
              /      \
            Num       NP
          /    \       t_k
    Schwein_k   Num
```
[αPL morph; βPL sem; α = β]
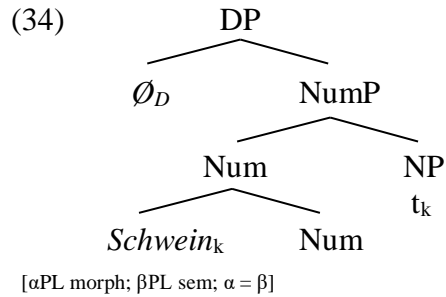
Note that the number values of the noun are not specified. I suggest that this yields a (number-neutral) mass interpretation. The apparent singularity of the mass nominal in (31a) is due to singular being a default value here.

If [αPL morph] on NumP is present, it can have two values. [-PL] results in a singular count noun, and [+PL] brings about a plural count noun. The singular pronominal DP in (31b) is illustrated as follows:

(35)

```
            DP
          /    \
        du      NumP
              /      \
            Num       NP
          /    \       t_k
    Schwein_k   Num
```
[-PL morph; -PL sem; α = β]   [-PL morph]
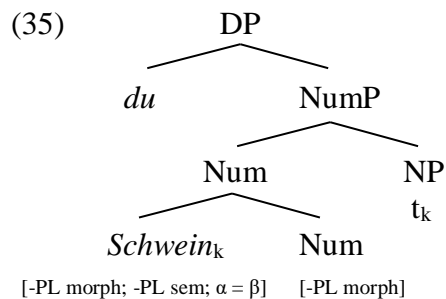
The plural counterpart in (31c) is similar, but has positive values for number. Observe that in the singular and plural cases, the morphological and semantic number coincide by (32b). Note that this yields countability as a side-effect and makes individuative or mass quantifiers (e.g.,

mehrere 'several' vs. *viel* 'much') compatible with individuative or mass nominals, respectively.[13]

  I argued in Chapter 6 that bare role nouns in copular clauses do not involve NumP. Now, if there is no NumP in these instances at all, then the number values on these types of head nouns do not get specified (cf. (32) above) resulting in a number neutral element (cf. also Munn & Schmitt 2005: 827). This makes bare role nouns and the mass nominals discussed above similar.[14]

  With these general remarks in mind, I continue illustrating the relevant issues with some special cases involving the pronoun *Sie* 'you(FORMAL)', an element rarely discussed in the literature in this respect. As before, I follow the idea that non-canonical cases may reveal the true nature of the phenomenon.

3.3.2. Dis-agreement Revisited
As detailed in Section 2, DPs involving *als*-nominals and TPs more generally may exhibit morphological dis-agreement in number. Extending this empirical discussion, it is clear from the verbal agreement in (36a) 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 individuals. It is interesting to note that when this pronoun occurs with a non-plural noun in a copular sentence, it can have both interpretations (36a). The presence of the floating quantifier disambiguates *Sie* as having plural semantics and makes the latter reading more easily available. The DP is different. Although both *Sie* and a non-plural noun can co-occur, this string only has a singular interpretation (36b). This interpretative difference is indicated in the respective translations (for other cases like (36b), see Roehrs 2006b):

(36) a. *Sie sind (alle) Arzt.*
    you are.PL all doctor
    'You are a doctor.'
    'You are (all) doctors.'

   b. *Sie Schwein*
    you pig
    'you (idiot)'
    #'you idiots'

---

[13] Notice in this regard that H. Wiese & Maling (2005: 8) claim that countability stems from the head noun but that Panagiotidis (2002: 58, 2003a: 421), developing ideas of Delfitto & Schroten (1991), suggests that it originates with Num, similar to what is claimed in the main text. Also, as far as I can see, the current discussion does not need to make use of the countability feature [±COUNT]. However, the adoption of such a feature makes the formulation of the vocabulary insertion rules of determiners more straightforward (see Chapter 8, Section 2.2.4).

[14] Presumably, the pragmatics will force a bare role noun to have a individuative (rather than mass) interpretation. Furthermore, 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 – the location of adjectives – high in the structure, NumP is also present. Notice though that the mass interpretation of the modified noun is not necessarily turned into a count interpretation (perhaps due to the mere presence of NumP). Thus, I continue to assume that with the exception of bare role nouns, NumP is present and that the number feature on Num is syntactically optional.

This difference in the semantics between (36a) and (36b) resembles the cases from Section 2. However, here *both* the TP and the DP involve morphological dis-agreement. This is of special interest for the nominal domain as (36b) does not involve an *als*-nominal.

In keeping with the discussion above, I suggest below that the semantic difference between (36a) and (36b) follows from the optional presence of NumP in the clausal domain but its obligatory presence in the nominal domain. Specifically, I proposed above that semantic number is due to an interaction between Num and the head noun. I propose that NumP is absent in (36a) – the predicative noun is number-neutral. In contrast, NumP is present in (36b), and the unexpected grammaticality is accounted for by a structure involving two separate nominals on a par with the discussion of cases like *ihr junges Gemüse* 'you young (vegetable =) folks' (Chapter 2, Section 3.5). Consider this in more detail.

Starting with the copular case in (36a), recall from above that if there is no number morphology on the noun, then there is no NumP in the predicate nominal. Consequently, no agreement relation is established, and there is no true dis-agreement. To derive the difference between the singular and plural interpretations of the predicate nominal, I assume that there is a null counterpart of the distributivity operator *alle* 'all' (de Swart et al. 2007: 218). I label it as DIST. I suggest that it is optionally present (when *alle* is absent):

(37)   *Sie sind*   (DIST) *Arzt.*
          you are.PL   doctor

If this operator is absent, we derive the singular interpretation; if the operator is present, we obtain the plural reading. Note in passing that this distributivity operator is incompatible with subjects that have singular semantics (i.e., the operator cannot distribute the relevant predicate over just one entity). 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 (36b), I argued above that DPs always contain NumP. At first glance, this then appears to be a case of true morphological dis-agreement between the plural pronoun and the singular nominal. In Section 3.2, similar cases were ruled out by suggesting that the singular nominal cannot establish an agreement relation with a plural pronominal determiner. Now, in order to explain the unexpected grammaticality of this example, I suggested in Roehrs (2006b) that these types of DPs have a structural analysis different from the canonical DPs discussed earlier.

Specifically, it is proposed in that paper that this construction involves two nominals, a matrix nominal containing the pronominal determiner and an embedded nominal containing the dis-agreeing predicate nominal. The latter is proposed to be located in a specifier inside the matrix pronominal DP. For lack of a better term, this position was labeled as specifier of a Disagreement Phrase (DisP) in Chapter 2, Section 3.5. Abstracting away from movement, the pronominal DP *Sie Schwein* 'you (pig =) idiot' in (36b) can be illustrated as a first approximation as follows:

(38)   *Apparent Dis-agreement in the DP*

```
                      DP<e>
                 ╱           ╲
               Sie            DisP
                          ╱         ╲
      [NumP Num[-PL] [NP Schwein]]<e,t>    Dis'
                                        ╱       ╲
                                     Dis        NumP<e,t>
                                              ╱        ╲
                                         Num[+PL]       NP
                                                        eN
```
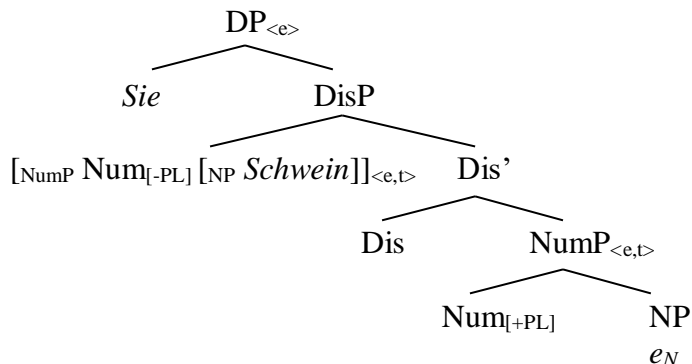
Having claimed above that NumP has a specification for morphological number, I propose that both the matrix and the embedded nominal have a NumP where the value of the former is plural, but the value of the latter is singular. In order to account for the absence of a featural clash between these two nominals in (38), I blame the lack of obligatory concord between these two nominals on the absence of a head (Mod) that mediates concord in agreement features between these nominals (for more details and other cases, see Chapter 8, Section 3.1). To be clear, then, both nominals in (38) form independent agreement domains, and consequently, there is no true morphological dis-agreement. These are the basic assumptions of pronominal DPs involving *Sie* 'you'. Next, I flesh out some of the details of the derivation in (38), specifically those about number.

3.3.3. Pronominal DPs Involving *Sie* in More Detail
As briefly alluded to above, the two number values, morphological and semantic, can also diverge; for instance, pluralia tantum nouns such as *Ferien* 'vacation/holidays' are morphologically plural but semantically singular (i.e., they involve one entity).[15] In other words, they are lexically specified such that they can only occur in the corresponding context in (39a). Furthermore, I assume that *Sie* 'you' has a specification for morphological number, but it does not have a fixed value for semantic number – it can be used to address one or several individuals (39b):[16]

(39)   a.   pluralia tantum noun
                [+PL morph; -PL sem]

        b.   *Sie*
                [+PL morph; βPL sem]

---

[15] For Pesetsky & Torrego (2007: 263), English pluralia tantum nouns like *scissors* are also taken to have a lexically valued feature for number (see also Borer 2005: 105).

[16] Note that since *Sie* can be merged in semantically singular or plural contexts, the specification for semantic number involving a variable in (39b) could presumably be left out. For reasons of parsimony, I continue with the statement in (39b). Interestingly, the Dutch counterpart *u* 'you(FORMAL)' is morphologically singular and semantically singular or plural. On current assumptions, its feature specification would be [-PL morph; βPL sem].

To be clear, compared to regular nouns (Section 3.3.1), these elements have different values for morphological and semantic number, and (consequently) they lack the equality statement "α = β". Furthermore, while both values are fixed with pluralia tantum nouns, the value for semantic number of *Sie* is unspecified. I assume that this value is determined by the head noun in the complement position of *Sie* mediated by NumP as discussed in Section 3.3.1. To be clear, these lexically specified elements can only be inserted in contexts that are compatible with the featural specification of their vocabulary entries. Before I return to the intriguing case of *Sie* occurring with a non-plural noun, I discuss the derivation of *Sie* in the environment of a plural noun (where both elements agree in morphological number). This lays the groundwork for the remaining discussion.

Considering (40a), note that all number values of *Sie* in (40b) are positive. The morphological number [+PL morph] on *Sie* is compatible with the morphological number on Num. The semantic number [βPL sem] on *Sie* is positive – due to the interaction of the head noun and Num, the semantic number on the noun is positive and only a semantically plural number on *Sie* is compatible with a semantically plural number on the noun:

(40) a. *Sie   Schweine*
          you(PL) pigs
          'you idiots'

      b.   DP
              ╱   ╲
          Sie   NumP
    [+PL morph; +PL sem] ╱   ╲
                     Num   NP
                   ╱   ╲   t_k
            Schweine_k   Num
    [+PL morph; +PL sem; α = β] [+PL morph]
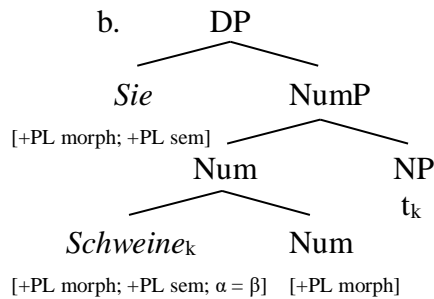
This derivation involving formal *Sie* 'you' is similar to informal *ihr Schweine* 'you idiots', briefly discussed in Section 3.3.1. With this in place, I provide more details of the derivation in (38), where *Sie* occurs in the context of a non-plural noun.

For easier readability, I illustrate the pronominal DP in (41a) in two parts: (41b) shows the matrix nominal, and (42) further below illustrates the embedded part XP located in Spec,DisP in (41b). Starting with the matrix nominal, I assume that the complement of *Sie* in (41a) is not *Schwein* itself but involves a null pluralia tantum noun. Since both *Sie* and this type of noun are lexically specified for [+PL morph], both elements are morphologically compatible. However, a pluralia tantum noun is only compatible with a negative value on *Sie*'s [βPL sem] statement. This leads to singular semantics of *Sie*:[17]

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[17] This is different from the copular case *Sie sind Arzt* '(you are doctor =) you (all) are doctors' discussed earlier. Here, *Sie*, the subject DP, has an ordinary null noun as part of its complement structure. This null noun has the familiar specification [αPL morph; βPL sem; α = β]. Mediated by NumP, the subject DP (i.e., *Sie* Num e_N) gets plural semantics (note also that given the null elements, this makes *Sie* structurally similar to *Sie Schweine* 'you idiots'). The subject DP is then combined with the non-plural predicate noun *Arzt* 'doctor' via the head Pr and the auxiliary (Chapter 6). An assumed null distributivity operator accounts for the plural interpretation of the non-plural noun (cf. (37)).

(41) a.   *Sie Schwein*
             you pig
             'you (idiot)'

      b.   DP$_{<e>}$
              /   \
      Sie$_{<<e,t>e>}$ DisP$_{<e,t>}$
  [+PL morph; -PL sem]   /   \
                        XP$_{<e,t>}$ Dis'
                                      /   \
                                   Dis   NumP$_{<e,t>}$
                                            /   \
                                          Num   NP
                                        /   \   t$_i$
                                    e_{Ni} Num
                          [+PL morph; -PL sem] [+PL morph]
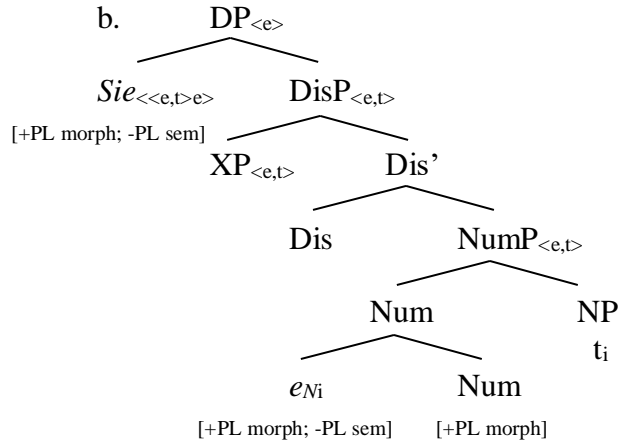
As for the embedded nominal, this NumP – distinguished by the subscript 2 below – is specified as [-PL morph], and the ordinary noun *Schwein* comes out as a singular count element:

(42)   NumP$_2$ (= XP)
                  /   \
                          Num'$_2$
                        /   \
                   Num$_2$ NP
                  /   \   t$_k$
          Schwein$_k$ Num$_2$
    [-PL morph; -PL sem; α = β]   [-PL morph]
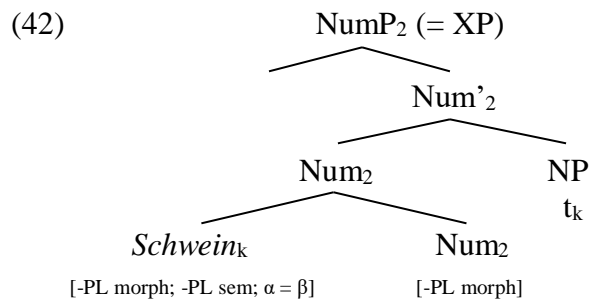
To recapitulate, the matrix nominal involves a plural NumP and a (null) pluralia tantum head noun, and the embedded nominal contains a singular NumP and an (overt) ordinary head noun. In other words, although there are two NumPs in (41b) and (42) with different (morphological) specifications for number, both nominals are semantically singular. I now turn to the question as to how the two nominals in (41b) and (42) are semantically combined.

I assume that the null noun in the matrix nominal is of the kind type. For this element to function as a predicate, it must combine with REL in NumP. Suppose now that the matrix nominal and the embedded nominal in (41b) and (42) are combined by Predicate Modification, which conjoins two elements of the same semantic type (i.e., <e,t>). In order to avoid type mismatch, the embedded predicate nominal must be of the same type. With the kind noun *Schwein* present there, this means that the latter must also involve REL in NumP, which is in line with the assumptions of Chapter 6. Thus, we have justification for the assumption of two NumPs, one in the matrix nominal and one in the embedded one. Furthermore, assuming that Predicate Modification only combines two nominals with the same general semantics, I 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 a plural reading in *Sie Schwein* 'you (pig =) idiot'.

301

To sum up, following the literature, I suggested that morphological number originates with NumP. Furthermore, I proposed that semantic number is the result of an interplay between Num and the head noun. In addition, I considered some non-canonical cases in copular TPs and pronominal DPs, where *Sie* occurs in the context of a non-plural noun. I explained the grammaticality of *Sie* in the copular cases in the same fashion as in Section 3.2, namely by the syntactic optionality of NumP in the clause: in this particular instance, NumP is absent. As for the pronominal DPs, I accounted for the grammaticality of *Sie* here by proposing a different structure where the pronominal determiner is in the matrix DP, but the non-plural noun forms a complex specifier embedded in the matrix DP.

More generally, I proposed that NumP is present for cartographic reasons in noun phrases bigger than NP. This means that all noun phrases (except those with mass and bare role nouns) involve morphological number. Semantic number may come about in one of three ways: (i) it is lexically specified on the head noun (pluralia tantum), (ii) it originates with the (regular) kind noun if [αPL morph; βPL sem] is specified via the morphological value of Num and the equality statement "α = β", or (iii) semantic number of bare role nouns in copular sentences stems from the pragmatics (for the singular cases, see Footnote 14) or the distributivity operator (for the plural cases, see (37) above).

If correct, this discussion leads to some interesting issues.[18] I will not pursue these questions here. My main goal in this section was to show that elements other than *ein* can be held responsible for morphological and semantic number. If this is tenable, then I can continue claiming that *ein* is not a reflex of number, be it morphological or semantic – it is a semantically vacuous element (Hypothesis 1a). Next, I consider constructions involving *als*-nominals in more detail. While these instances have certain similarities to the dis-agreement cases above, they are different in a number of ways.

3.4.   Agreement in Constructions Involving *als*-nominals

Finally, I discuss *als*-constructions, nominal and clausal constructions involving *als* 'as' and a following noun, the latter two elements labeled as *als*-nominals. I begin by showing how *als*-nominals combine with the preceding part of their structures. This includes a brief discussion of the semantic types and *als* as a realization operator. Then I address the agreement facts with regard to number.

3.4.1. Structure and Semantics
In Chapter 6, I offered the tentative claim that *als* 'as' in the DP is a generalized capacity operator that combines with a noun, be it a role or a kind noun, to return an element of type <e,t>. I suggested that the *als*-nominal is right-adjoined to its preceding structure. I assume now that this *als*-nominal combines with another element by Predicate Modification. As illustrated

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[18] I mention just one issue in this context. As pointed out in the main text, the kind noun in the embedded nominal in (42) requires the presence of REL to supply a predicate. REL, in turn, should trigger *ein*. However, this yields an ungrammatical example:

> (i) *   *Sie* [ArtP *'n Schwein*] e_N
>   you   a pig

Notice 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 =) idiot' (see Section 3.2.5). Without going into too much detail, I suggest that *ein* is deleted in the presence of the adjacent pronominal determiner. Note in this regard that the latter is presumably retained as it has semantics unlike vacuous *ein*.

above, this operation combines two elements of type <e,t>. As such, I assume that the *als*-nominal is adjoined to an element of type <e,t>. Recalling that *du* 'you' itself is assumed to have internal structure, NumP is such an element. I also suggested in Chapter 6 that *als* is the head of ModP. I propose then that ModP is adjoined to NumP of the pronominal DP. (43a) is derived as in (43b):

(43)   a.   *du*   *als Arzt*
          you(SGL) as doctor
          'you as a doctor'

      b.

```
                        DP
              ┌─────────┴─────────┐
             du              NumP<e,t>
                        ┌────────┴────────┐
                   NumP<e,t>        [ModP als Arzt]<e,t>
                 ┌─────┴─────┐
               Num          NP
            ┌───┴───┐        ti
          eNi      Num
```
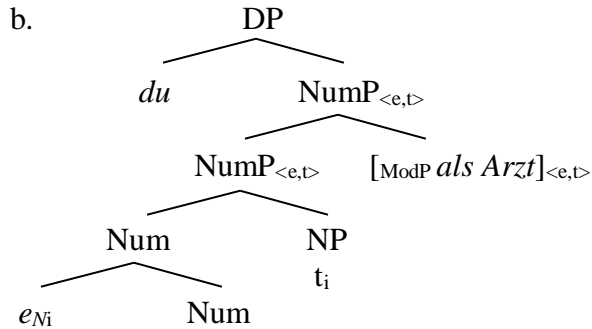
As for the non-copular TP, de Swart *et al.* (2007: 218) assume that *als*-nominals are verb modifiers. I propose that the *als*-nominal in the clausal cases is adjoined to the VP. Note that intransitive verbal predicates are of type <e,t>. Semantically, this is the same type as *als*-nominals. The simplified structure of (44a) is provided in (44b):

(44)   a.   *Du*   *sprichst als Arzt.*
          you(SGL) speak   as doctor
          'You speak as a doctors.'

      b.

```
          TP
     ┌────┴────┐
   duk         T'
          ┌────┴────┐
      sprichsti     vP
               ┌────┴────┐
              tk       VP<e,t>
                   ┌─────┴─────┐
                 VP<e,t>   [ModP als Arzt]<e,t>
                  ti
```
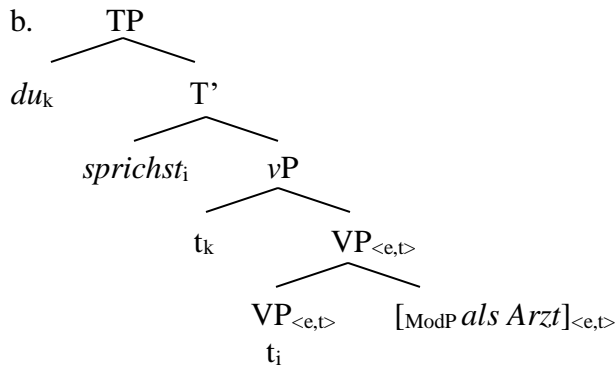
These are the basic assumptions about the syntax and semantics. Before moving on to the agreement facts, I specify the role of *als* in more detail.

In Chapter 6, we saw that CAP and REL are both possible with role nouns. However, these realization operators are mutually exclusive – only one is needed to supply a predicate, and the presence of a second would lead to type mismatch. Recall that with role 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. I 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.

As tentatively suggested in Chapter 6, Section 3.4.2, I take *als* to be such an element. Similar to the other two elements, if *als* is present, both CAP and REL cannot be. I reiterate the proposal that *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 other words, *als* is a general(ized) capacity operator of type <e,<e,t>>. While of the same semantic type, this makes this element different from CAP and REL.

3.4.2. Agreement

Starting with the TP, I assume that agreement in morphological number between the subject and the *als*-nominal is established independently of the presence of the verb. In a way, this makes the adjunction of the *als*-nominal in the clause similar to displaced relative clauses – in both instances, the two related elements are separated by a verb.[19] Note that this parallel pattern fits well with Chapter 6, Section 3.4.1, where I argued that *als*-nominals in the DP are similar to relative clauses. Consequently, I treat the *als*-nominals in the non-copular sentences and the ones in the pronominal DPs in a related way. Below, I put the verb in parentheses discussing both the TP and the DP at the same time.

We saw in Section 3.1 that plural morphology on the noun indicates the presence of NumP. Assuming that the number specification of the predicate nominal inside the *als*-nominals has to establish an agreement relation with the pronominal element, this rules out (45a) but allows (45b):

(45)   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 (46a) and (46b) are fine:

(46)   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'

---

[19] Below is an example of a displaced relative clause:
       (i)   *Er hat das Haus gekauft, das nicht so teuer   war.*
               he has the house bought that not   so expensive was
               'He bought the house that was not so expensive.'

I assume that the plural interpretation in (46b) follows from a null distributivity operator just like in the copular cases. So far, the agreement facts are similar to what we saw above.

Turning to singular nouns, I observed in Section 2.3 that the presence of *ein* leads to awkwardness in singular contexts (47a). As also pointed out in that section, a singular *als*-nominal is ungrammatical with a plural pronominal (47b), where the presence of a non-copular verb and quantifier yields a somewhat better result than the counterpart without those two elements (this correlation in (47b) is indicated by two sets of parentheses):

(47)   a. ?   *du   (sprichst) als 'n Arzt*
              you(SGL) speak   as   a doctor
              'you (speak) as a doctor'

       b.(??)?* *ihr   (sprecht alle) als 'n Arzt*
              you(PL) speak   all   as   a doctor

The agreement facts above are similar to the copular constructions discussed above (cf. also Tables 1 and 2). There is only one exception: the presence of *ein* in copular constructions such as *Du bist 'n Arzt* 'You are a doctor' is completely fine for many speakers, but the presence of *ein* in *als*-nominals like (47a) leads to a certain degree of awkwardness. Note though that the latter cases involve *als* 'as'.

I suggest that syntactically, *als* has intermediate characteristics as regards CAP and REL. Briefly returning to (45) and (46), I assume that *als* is in NumP with plural nouns (cf. REL) but that it is in NP with non-plural nouns (cf. CAP) – the first case will force morphological agreement, the second will not.[20] This rules out the plural noun in (45a) but allows the non-plural noun in (46b). As to singular nouns (47), I suggest that *als* does not trigger *ein*. This makes *als* similar to CAP and explains the markedness of (47a). As to the more marked (47b), *als* does not bring about *ein* either, and additionally, no agreement relation between the pronominal element and the *als*-nominal can be established.

To sum up the entire section, the preceding discussion revealed an interesting syntax-semantics correlation: cases of morphological agreement are very restricted in their interpretations, but instances of apparent morphological dis-agreement (copular cases and *als*-nominals) are fairly free. Given the proposed interaction between Num and the head noun, this difference follows from the presence of NumP in the first cases but its absence in the second. 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 (i.e., REL). As seen throughout this section, *ein* does not specify number morphologically or semantically.

4.   Conclusion

This chapter provided the second and final consequence of the proposals involving *ein*, here focusing on number. Continuing the investigation from the previous chapter, I provided a survey of the data and discussed issues pertaining to morphological and semantic number in the nominal and clausal domains. I showed that the DP is more restricted in this regard than the TP. I

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[20] This means that Mod takes different complements and that *als* might move to Mod.

proposed that this is accounted for by the obligatory presence of NumP in the DP (a reflex of the cartography of the DP) and its optional syntactic presence in the TP.

Specifically, I proposed that morphological number resides in Num and semantic number is a result of an intricate interaction between Num and the head noun. With current purposes in mind, I can conclude that *ein* itself does not determine number, neither morphologically nor semantically. Rather, we have seen that *ein* indicates the presence of a certain amount of structure on top of NP (Hypothesis 3a) and that it flags the presence of the operator REL (Hypothesis 3b). I 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 (Hypothesis 1a); that is, *ein* is an element that can be absent without a loss in meaning.

More generally, to the extent that the discussion here proves tenable, it provides further support for de Swart *et al.*'s (2007) proposal, and more generally, it strengthens the parallels between the DP and TP.

Chapter 8: Discussion and Concluding Remarks

1. The Bigger Picture

Focusing on German, one goal of this book was to provide a more comprehensive discussion of adjectival inflections and *ein* compared to that which exists in the literature. Beside an overview of these important empirical subdomains of the noun phrase, 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.

Providing an overview aims 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 in one domain tends to move the focus away from traits shared by the different domains. In this final chapter, I 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, I discuss some further consequences of the current analysis, show avenues for future research, and draw some more general conclusions. Before I compare adjectival inflections and *ein* in more detail, recall the general contents of the previous chapters.

In Chapter 1, I laid out my general assumptions and formulated the main claims of this book. Chapter 2 focused on adjectival inflections and included a detailed investigation of the special role of *ein*-words in this regard. In Chapter 3, variation was discussed leading to the postulation of two secondary mechanisms that regulate adjectival endings, and in Chapter 4, some consequences of the analysis for other accounts were addressed. Chapter 5 provided an overview of the different types of *ein*. This was followed by *ein* being discussed with regard to emotiveness and number in Chapters 6 and 7, respectively. The analysis of adjectival inflections developed earlier helped narrow down the choices of plausible analyses.

Contrasting these phenomena, we observed that the analysis of adjectival inflections and that of *ein* are closely connected. In fact, I argued that adjectival inflections and *ein* are similar in certain aspects but different in others. I review the main hypotheses discussed throughout this book starting with the similarities followed by the differences. Besides providing a summary and drawing some conclusions, I add a few other details.

1.1. *Commonalities of Adjectival Inflections and* ein

I formulated the following two claims:

(1)   *Hypothesis 1*
        Adjectival inflections and *ein*:
            a.   are expletive elements and
            b.   indicate abstract structure in the noun phrase.

Beginning with Hypothesis 1a, we have seen that both adjectival endings and *ein* are not a reflex of (in-)definiteness. While both elements share this characteristic, evidence for Hypothesis 1a has also come from other, different empirical domains. Specifically, adjectival inflections have

nothing to do with the restrictiveness of the interpretation of modifiers or "referentiality", and *ein* is not an exponent of emotiveness and number. These points were summarized in the statement that adjectival inflections and *ein* are semantically vacuous.

As for Hypothesis 1b, both adjectival inflections and *ein* indicate abstract structure. However, they do so in different ways. Compare Hypothesis 2a to Hypothesis 3a:

(2)   *Hypothesis 2*
      Adjectival inflections:
      a.   indicate abstract structure in the higher layers of the noun phrase (DP vs. LPP), [and] they provide clues about structures involving various degrees of embedding of adjectives (simple vs. complex DPs).

(3)   *Hypothesis 3*
      Ein:
      a.   indicates abstract structure in the lower layers of the noun phrase (NP vs. ArtP).

While both adjectival inflections and *ein* indicate certain sizes of abstract structure, the former also provides clues about different types of embeddings. I briefly review some of the evidence for Hypotheses 1, 2a, and 3a below. Hypotheses 2b (adjectival endings make features visible) and 3b (*ein* supports or flags operators), which deal with differences between adjectival inflections and *ein*, are discussed in Section 1.2.

I begin with the intersecting semantic concept of (in-)definiteness, where both types of elements not only show a similar lack of semantic import but also directly interact with one another. Following that, I repeat one more argument from the other, different empirical domains showing that both types of elements are semantically vacuous: adjectival inflections do not indicate the restrictiveness of the interpretation of modifiers, and *ein* is not related to number. Finally, I review the main facts that show that both types of elements provide clues about abstract structure (the indication of different types of embeddings by adjectival inflections is left for the section dedicated to the differences – Section 1.2).

1.1.1. Some Evidence for Hypothesis 1a
Starting with (in-)definiteness, consider again cases in the nominative, the (a)-examples, and in the dative, the (b)-examples:

(4)   a.   *ein gut-er   Wein*
           a   good-ST wine
           'a good wine'

      b.   *mit ein-em gut-en   Wein*
           with a-ST   good-WK wine
           'with a good wine'

(5)   a.   *sein gut-er   Wein*
           his   good-ST wine
           'his good wine'

b. *mit sein-em gut-en Wein*
with his-ST good-WK wine
'with his good wine'

Traditionally, the article *ein* 'a' is taken to be an indefinite element, but the possessive article *sein* 'his' is a definite one. With that in mind, compare the (a)-examples to their (b)-counterparts. We observe that indefinite contexts exhibit strong and weak adjectives (4) but that definite environments also show strong and weak adjectives (5). Put differently and contrasting the (a)-examples to each other and the (b)-examples to each other, strong adjectives occur in both indefinite and definite contexts, and weak adjectives also surface in both indefinite and definite environments.

Furthermore, what is often left unmentioned in this context is that determiners can have the exact same inflections as adjectives (and that is why I referred to these inflections as adjectival, rather than adjective, endings). Considering the (b)-examples, we note that both the (indefinite) article and the (definite) possessive article have strong inflections as their own endings. Indeed, I discussed one case in Chapter 3, Section 4, where certain (definite) *der*-words may optionally have a strong or a weak ending. Considering the distributions of these inflections, we can observe again that these are clearly contradictory patterns as regards the association of adjectival inflections and their relation to (in-)definiteness.

Recall though that I proposed in Chapter 5 that possessive articles consist of a possessive component and *ein* (e.g., *s-ein* 'his'). If we assume that *ein* itself determines the adjectival inflections, then we can observe that *ein* occurs with a strong adjective in the nominative but with a weak adjective in the dative. This would be consistent with the claim that *ein* itself is indefinite, and the inflections on adjectives would vary according to morphological case. However, weak adjectives are also possible in the nominative (6a), and strong adjectives can also appear in the dative (6b):

(6) a. *seine gut-en Weine*
his good-WK wines
'his good wines'

b. *mit gut-em Wein*
with good-ST wine
'with good wine'

Thus, there is no correlation between case and the strong/weak alternation on the adjective either.

These contradictory points disappear once we claim that neither *ein* nor adjectival inflections are tied to (in-)definiteness (or case). Rather, both of these elements are semantically vacuous and interact with each other morpho-syntactically. I proposed in Chapter 2 that determiners including *ein* trigger Impoverishment on the adjective yielding the weak endings. There is one exception: instances of *ein* specified as [-N, -O] are special – in this featural context [+D] does not trigger Impoverishment. It is clear that adjectival inflections and *ein* are directly related albeit not by the semantics.

Turning to the other, differing empirical domains, I point out again that adjectival endings do not indicate the restrictiveness of the interpretation of modifiers. Considering (7), notice that both a restrictive and a non-restrictive adjective can have a weak ending:

(7) a. *der alt-e Mann*
         the old-WK man
         'the man that is old'

     b. *der (übrigens) alt-e Mann*
         the incidentally old-WK man
         'the man, who is (by the way) old'

Recalling that determiners move from ArtP to DP, I proposed in Chapter 4 that the determiner is interpreted above the adjective in (7a) but below the adjective in (7b). The latter also involves a coindexed *pro*. The weak endings on the adjectives are the result of Impoverishment applying in a canonical DP structure. This analysis is consistent with the fact that adjectival endings involve no semantics.

As for *ein*, I claimed that this element is not associated with number (and related countability). To illustrate this claim again, notice that the example in (8a) denotes a singularity, and the one in (8b), taken from the Appendix, involves a plurality:

(8) a. *Nur EINE Katze war auf dem Hof!*
         only one   cat   was in the yard
         'Only one cat was in the yard!'

     b. % *Och so n-e süssen Katzis... :-)*
         oh, so a-PL cute   kittens
         'Oh, such cute kittens!'

Contrasting these two examples, we observe that *ein* can appear in very diverse semantic contexts. Again, given that *ein* appears to be associated with different, contradictory semantics, I proposed that this element is also semantically vacuous. I suggested in Chapter 5 that *EIN* in (8a) consists of *ein* and the null operator $\emptyset_{[-PL]}$ inducing singularity, that *ein* makes null operators visible (for more discussion of (8b), see Section 2.2.3 below), and more generally that number is due to an interaction between the head noun and Num (Chapter 7).

Given these facts, we expect that the two types of elements can be left out without a change in meaning. I showed that this is indeed the case in certain lexical contexts, with role nouns in predicate nominals (9a) and with specific sets of adjectives (9b):

(9) a. *Er ist (ein) Lehrer.*
         he is   a   teacher
         'He is a teacher.'

     b. *Das ist ein lila(nes)   Buch.*
         this is a   purple-INFL book
         'This is a purple book.'

Furthermore, the suggestion that both types of elements are semantically vacuous also allows us to avoid the conclusion that certain semantic features are redundantly present when

these elements do co-occur. Again, this holds for both *ein* and adjectival inflections (I return to (10a) in Section 2.2.2):

(10) a. % *k-eine so'ne Autos*
            NEG-a so a   cars
            'no such cars'

       b.   *gut-e   teur-e   Autos*
              good-INFL expensive-INFL cars
              'good expensive cars'

If these elements are indeed semantically vacuous, then the actual semantics involved is brought about in a different way. Discussing the various cases, I made remarks to such effect in the previous chapters.

1.1.2. Some Evidence for Hypothesis 1b: Hypothesis 2a vs. 3a

Hypothesis 1b, the indication of abstract structure, consists of two subclaims: Hypothesis 2a and Hypothesis 3a. Specifically, I proposed that adjectival inflections and *ein* indicate differences in nominal structures with regard to size. For instance, the strong/weak alternation supports the claim that synactic arguments are not only DPs (11a) but also LPPs (11b). Note in this regard that *alle* 'all' is followed by an element with a weak inflection in (11a) but by an element with a strong ending in (11b):

(11) a.   [DP *all-e nett-en Studenten*]
              all-ST nice-WK students
              'all nice students'

       b.   [LPP *all-e* [DP *dies-e   nett-en Studenten*]]
              all-ST   these-ST nice-WK students
              'all these nice students'

I argued in Chapter 2 that Impoverishment only occurs in simple, canonical DPs (11a), the domain in which the determiner undergoes movement. The strong ending on *diese* 'these' in (11b) followed from the assumption that this nominal involves a non-canonical structure.

Turning to structural differences indicated by *ein*, I sided with de Swart *et al.* (2007) in arguing that predicate nominals without *ein* involve NPs (12a) and that those with *ein* are bigger – under my assumptions (at least) ArtPs (12b):

(12) a.   *Er ist* [NP *Lehrer*].
              he is   teacher
              'He is a teacher.'

       b.   *Er ist* [ArtP *ein Mann*].
              he is   a   man
              'He is a man.'

I followed the above-mentioned authors in that (12a) involves a role noun with CAP in NP but that (12b) contains a kind noun with REL in NumP, the latter being flagged by *ein* in ArtP. More generally, 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. This is consistent with another fact.

As just seen, role nouns can appear in predicative contexts without an article. Importantly, role nouns require a determiner when they appear in argument position:

(13)   *(Ein) Lehrer braucht Unterstützung.*
            a   teacher needs   support
        'A teacher needs support.'

Considering (13), it could be claimed that *ein* brings about the semantic change from a predicate nominal (12a) to an argumental expression (13) and that *ein* would then be tied to the semantics after all. However, there is an independent explanation for the occurrence of *ein* in (13).

Longobardi (1994) proposed that argumental nominals project DPs (also Borer 2005: 65f, Stowell 1989). For role nouns to occur in argumental expressions, more structure beyond NP must be projected. As discussed in Chapter 6, part of this structure is NumP which involves REL. The latter is flagged by *ein*. We can point out that it is not *ein* itself that turns a predicate nominal into an argumental expression – it is more structure. Having said that, *ein* does not indicate the presence of the DP-level either: many speakers allow *ein* to appear with role nouns in predicative contexts, and kind nouns appear with *ein* in such contexts more generally. As discussed above, both of the latter nominals only involve ArtP (not DP) and yet, they contain *ein* (due to REL). This means that *ein* does not necessarily indicate a DP. The reason why argumental noun phrases require a DP-level is that this phrasal layer involves a person feature (Longobardi 1994). In other words, it is structure that involves the person feature (and not *ein*) that brings about an argumental noun phrase.

Finally, I restate the observation that adjectival inflections and *ein* interact morpho-syntactically calling into question certain structural claims of other proposals. In Chapter 4, Section 2, I pointed out that *ein* is possible in certain *wh*-exclamatives (14a) and in exclamative constructions involving *so* 'such' (14b). Now, while not all speakers of German allow *ein* to occur in these contexts, those who do have a weak ending on the adjective as shown in the following attested examples:

(14)   a. % *NFU und NFSU2 (was für n-e dumm-en Abkürzungen)*
               NFU and NFSU2 what for a-PL stupid-WK abbreviations
               'NFU and NFSU2 (what stupid abbreviations!)'

        b. % *So n-e süß-en   klein-en Pfoten*
               so a-PL cute-WK little-WK paws
               'Such cute little paws!'

I demonstrated in the preceding chapters that a simple, surface-oriented account of the strong/weak alternation cannot explain all the cases. Rather, determiners including *ein* bring about a weak ending on the adjective in a specific structural constellation; that is, *ein* interacts with the inflection on the adjective morpho-syntactically. If this is so, then the weak adjectival

inflections above raise issues for a Predicate Inversion analysis of (14a) as discussed in Bennis *et al*. (1998), and they argue against the assumption of a null noun in (14b), either after *ein* or after the adjectives (cf. van Riemsdijk 2005). In Chapter 4, Section 3, I also discussed cases of split topicalization showing that strong inflections on adjectives in the split-off are only consistent with these constructions being analyzed as involving two separately base-generated nominals (e.g., Fanselow 1988). Furthermore, I argued there that *ein* (i.e., its feature bundles) cannot be inserted late in split topicalizations involving indefinite pronouns.

It is interesting to observe that *ein* in (14) does not only determine the inflection on the adjectives, but *ein* also seems to have semantic impact there. For instance, van Riemsdijk (2005) points out for Dutch that these exclamative constructions can express some relatively excessive property of the entities under discussion. These cases were not accounted for in Chapter 4. In Section 2.2.3 below, I suggest again that *ein* itself does not have an influence on the interpretation in these cases. Rather, an operator is held responsible for this effect, and this operator is flagged by *ein*.

Given these shared properties and the interwoven argumentation, I reiterate my proposal that adjectival inflections and *ein* deserve to be discussed in tandem. Importantly, these elements also differ in certain ways.

1.2.   Differences between Adjectival Inflections and ein

In the previous section, I reviewed the claim that adjectival inflections and *ein* indicate abstract structure. I left open there that the former also provides clues about the different types of embeddings, namely clues that indicate simple vs. complex DPs. To illustrate this again, consider (15). The example in (15a) involves a simple, canonical DP where the adjective is in Spec,AgrP. In contrast, the example in (15b) is a case of morphological dis-agreement. I argued in Chapter 2, Section 3.5 that it involves a different structure where both the adjective and the noun are in Spec,DisP, and the head noun of the larger structure is a null element. This yields a non-canonical structure (see also the discussion of pronominal DPs involving *Sie* 'you' and non-plural nouns):

(15)   a.   *ihr* [_AgrP_ *blöd-en* [_NP_ *Schweine*]]
             you   stupid-WK pigs
             'you stupid idiots'

        b.   *ihr* [_DisP_ [_AgrP_ *blöd-e* [_NP_ *Bande*]] [_NP_ *e_N*]]
             you   stupid-ST gang
             'you stupid gang'

Importantly, although the adjectives in both (15a) and (15b) are in Spec,AgrP, the one in (15b) is more deeply embedded – Impoverishment cannot apply bringing about a strong ending on the adjective. In addition to complex specifiers, it was also shown in Chapter 2 that strong adjectival endings surface in several other non-canonical structures, for instance, in different kinds of adjunction. In each case, Impoverishment does not occur, and I concluded that weak inflections only surface in simple, regular DPs. More generally, the strong/weak alternation on the adjective was employed throughout the book as a means to find plausible structures for related

constructions (many containing *ein*) and as briefly mentioned just above, to evaluate other proposals as regards their structural claims.

Both adjectival inflections and *ein* also make contributions in their own right. While both types of elements indicate the precense of certain elements, they differ in that adjectival endings make morphological features visible but that *ein* supports or flags semantic operators. Consider the remaining claims of Hypotheses 2 and 3.

1.2.1. Some Evidence for Hypothesis 2b
I put forth the following hypothesis for adjectival inflections:

(16)   *Hypothesis 2*
        Adjectival inflections:
           b.   […] make nominal features like case, number, and gender visible.

To briefly illustrate, this claim receives credence from the comparison of a regular noun phrase as in (17a) and its discontinuous counterpart as in (17b):

(17)   a.   *ein lila-(n-es)   Kleid*
              a   purple-n-ST dress.NEUT
              'a purple dress'

        b.   *Kleid   habe ich ein lila-*(n-es).*
              dress.NEUT have I   a   purple-n-ST
              'As for dresses, I have a purple one'

I proposed that the adjectival ending in (17b) makes the features of the displaced noun visible; that is, the adjectival inflection is an exponent of case, number, and gender (specifically for (17b): nominative, singular, neuter). In fact, due to concord inside the noun phrase, adjectival inflections make features of the entire DP visible. The same holds for the inflection on *ein*:

(18)   a.   *ein Kleid*
              a   dress.NEUT
              'a dress'

        b.   *Kleid   habe ich nur   ein-*(es).*
              dress.NEUT have I   only one-ST
              'As for dresses, I have only one.'

Comparing (17b) and (18b), note again that adjectival inflections and *ein* interact in that *ein* determines the ending on the following adjective (17b) but that this very ending may also appear on *ein* itself if the adjective (and noun) is absent (18b). Recall from Chapter 1 that the additional adjectival ending in (18b) is only possible on *ein* (but not on other determiners). This was made formal in Chapter 2, Section 2.2 postulating certain vocabulary insertion rules for *ein*.

1.2.2. Some Evidence for Hypothesis 3b

The element *ein* also makes certain elements visible. Unlike adjectival inflections, *ein* indicates the presence of semantic operators.[1] I formulated the following general claim:

(19)   *Hypothesis 3*
        Ein:
        b.   […] supports overt semantic operators (e.g., NEG *k-*) and flags the presence of covert semantic operators (e.g., REL).

I argued above that the possessive articles, the negative article, and the singularity numeral are composite forms. These complex elements involve possessor, negator, or singularity components that, if supported by *ein*, receive the following spell-outs in a noun phrase:

(20)   a.   *m-eine Frau*
              POSS-a woman
              'my woman'

        b.   *k-eine Frau*
              NEG-a woman
              'no woman'

        c.   *EINE   Frau*
              $\emptyset_{[-PL]}$+a woman
              'one woman'

Note again that supporting involves overt operators. Overtness of the operator is a convenient shorthand for stating that the relevant semantic components have a detectible manifestation: possessors and negation have an overt segmentable element (e.g., *m-*, *k-*), but the singularity numeral involves a non-segmentable element, namely stress. I suggested above that these three components are operators. This not only allows me to relate the three instances to each other but also to other cases.

In particular, basically following de Swart *et al*. (2007), I proposed that *ein* indicates the presence of the realization operator REL, an element that does not have an independent overt manifestation (21). With *ein* appearing in this context, this is what I referred to as flagging. Notice also that the flagging of an operator and the indication of a certain amount of structure are

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[1] It may turn out that adjectival inflections are similar to *ein* here as well. Specifically, they might also be able to flag the presence of an operator in certain contexts. In this regard, Merchant (1996:183) points out that uninflected *all* 'all' tends to induce a collective reading (ia) but that its inflected counterpart seems to yield a distributive reading (ib):
  (i)   a.   *all diese guten Freunde*
              all these good friends
              'all these good friends'
        b.   *all-e   diese guten Freunde*
              all-INFL these good friends
              'all these good friends'
Taking this at face value, the presence or absence of the inflection seems to correlate with different readings. Rather than suggesting that adjectival inflections are associated with the semantics after all (e.g., Roehrs 2015: 264), we might tentatively suggest that they make a distributivity operator visible.

related here. Assuming with de Swart *et al*. (2007) that REL is in NumP, *ein* indicates the presence of REL and a certain abstract structure in singular contexts (i.e., ArtP):

(21)   [ArtP *eine* [NumP REL$_{<e<e,t>>}$ [NP *Frau*$_{<e>}$]]]$_{<e,t>}$
              a   woman
         'a woman'

Finally, it is worth pointing out that the cases in (20) above also involve REL – the head nouns (type <e>) must be mapped to sets of individuals (type <e,t>). In other words, *ein* does not only support an overt operator here, but it also flags a covert one at the same time. In Sections 2.2.2 and 2.2.3 below, I list more cases involving supporting and flagging and discuss some of the related issues in more detail.

1.3.   Summary of the Main Claims

In this last subsection, I provide a convenient summary of the main insights in bullet-point form:

Adjectival inflections are not a reflex of:

- (in-)definiteness
- (non-)restrictiveness of interpretation of modifiers
- referentiality

The article *ein* is not a reflex of:

- indefiniteness
- emotiveness
- singular number/countability

Both adjectival inflections and *ein* are semantically vacuous and can:

- appear in contradictory semantic contexts
- be left out in certain, well-defined contexts without loss of meaning
- have multiple occurrences without leading to semantic redundancy

Furthermore, both adjectival inflections and *ein* can each be in different positions:

- strong endings are in AgrP, CardP, DP, and LPP; weak endings are in AgrP, CardP, and DP
- *ein* is in Art, Card, and D

Abstracting away from adjectival inflections indicating different degrees of embedding, these two types of elements indicate abstract structure:

- adjectival inflections: DP vs. LPP
- *ein*:   NP vs. ArtP

These two types of items make other elements visible:

- adjectival inflections: morphological features
- *ein*:   semantic operators

Miscellaneous for adjectival inflections:

- concord is a necessary (but not sufficient) condition for weak endings
- Impoverishment occurs locally and in a bottom-up fashion

Miscellaneous for *ein*:

- it is the least specified determiner[2]
- it is not inserted late[3]
- it is triggered by REL (but not by CAP or *als* 'as')

Overall, I conclude that although semantically vacuous, these two types of elements provide clues about the abstract structure and the presence of covert elements (features and operators) in the German noun phrase.

2.   Some Extensions and Further Consequences

In this section, I consider some possible extensions and more consequences. Given the current state of the investigation, I only briefly discuss the relevant issues and tentatively hint at some solutions. A full-blown account of all the relevant aspects must await another occasion. I start with adjectival inflections and then move on to *ein*.

2.1.   Extensions and Consequences of Adjectival Inflections: German Dialects

In Chapter 3, Section 7, I provided my account of adjectival inflections in one dialectal variety – Mannheim German. I have not investigated and analyzed other regional forms of German in this regard. In what follows, I make some brief remarks about adjectival inflections in one well-studied dialect, Alemannic German, showing how this type of dialect could be accommodated in the current discussion.

Rehn (2019) provides an interesting overview and in-depth analysis of prenominal adjectives in Alemannic (for different subdialects of Alemannic, see Baechler 2017).[4] She

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[2] Besides having no semantics, there are some other advantages of assuming that *ein* has no feature for definiteness. On the one hand, *ein* does not have to move to the DP-level allowing us to claim that predicates can be of a smaller structure; on the other hand, if *ein* can stay low in the structure, we can propose that *ein* always surfaces on the right side of the operator it supports (Section 2.2.5). This, in turn, allows us to use the same mechanism (Local Dislocation) to instantiate this support.

[3] With Vocabulary Items inserted late in DM, this statement actually has to do with the feature bundles that make up *ein(-er)* where the stem involves [+D] and its adjectival inflection contains features for case, number, and gender. In other words, both the stem and the inflection are treated in the same way – no features are inserted late.

observes that they can appear without an inflection in both indefinite and definite contexts. Rehn (2019: 114) points out that this cannot be a continuation of ENHG as uninflected adjectives in Alemannic occur in more contexts than in ENHG. Rather than involving a null ending, she argues that these adjectives are truly uninflected. Note that in her structures (e.g., on page 194), Ø under Mod, in the current system Agr, stands for an empty Mod head. Rehn (2019: 103f) argues that uninflected adjectives and nouns could be analyzed as compound-like elements in some instances but crucially not in all cases and dialects. The distribution of the inflections on adjectives (and other elements in the noun phrase) is proposed to follow from certain features that Alemannic (and German more generally) must mark overtly. In what follows, I briefly summarize some of the main aspects of Rehn's work (but I am not able here to do full justice to all the intricacies of her multi-faceted proposal).

Rehn (2019) observes that inflections on adjectives are basically optional. This is shown with examples in the nominative/accusative in (22a-b). There is no difference in the interpretation that corelates with the presence or absence of the inflections, and there are no morpho-syntactic restrictions. There is one exception. In the absence of a determiner, the inflection on the adjective is obligatory illustrating this with an example in the nominative in (22c) (examples are from Rehn 2019: 133, 121):

(22)   a.   *des lang(-e) Soil*   (Alemannic German)
            the long-WK rope
            'the long rope'

       b.   *a guat(-s) Buach*
            a good-ST book
            'a good book'

       c.   *guad*(-er) Wei*
            good-ST   wine
            'good wine'

In order to explain the distribution of the adjectival inflections in (22), Rehn (2019: 122-26) proposes that German DPs must mark features for number and oblique case overtly.

Considering the distribution of the indefinite and definite articles, Rehn observes that certain features are consistently marked overtly (as different). To exemplify with Standard German, number is marked differently with the indefinite article in the singular (*ein*) and plural (*Ø_D*). Similarly, the definite article involves *der*, *das*, *die* in the singular and *die* in the plural (NB: feminine singular and plural forms are not entirely straightforward as the nominative/accusative forms are all *die*, and the dative forms are both *der*). Turning to case, Rehn points out that there is syncretism in the nominative and accusative in both the singular and plural. In fact, only the oblique cases are consistently different, for instance, nominative/accusative neuter *das* vs. dative neuter *dem* and genitive neuter *des* (NB: feminine singular has the form *der* in both the dative and genitive). As for gender, this category is not consistently different. Masculine and neuter are the same with *ein* in the nominative, and

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[4] Baechler (2017) provides convenient paradigms of adjectival inflections (pp. 305-313) and definite articles and demonstratives (339-344) in a number of different Alemannic subdialects (note though that unlike the current analysis, she does not consider definite articles and demonstratives as bipartite forms).

318

masculine and neuter are the same more generally with *einem/dem* in the dative and *eines/des* in the genitive. Rehn draws the conclusion that only number and oblique case must be marked overtly in German DPs.[5]

Rehn (2019: 125) formulates the following principle:

(23)   *Feature Specification in German DPs:*
        Within a DP in German, number and oblique case must be marked overtly either
        a) on an article,
        b) through inflection realized in Mod^0 [here Agr, DR] when no article is realized,
        c) or on the noun itself when neither of the above is realized.

This principle is meant to hold for both Standard German and the regional dialects alike. Note that the obligatory inflections in Standard German are, in Rehn's (2019: 135-39) view, due to a standardization process in the 18th and early 19th centuries. For Rehn, inflections on adjectives are generally optional in German, and the obligatory inflections in Standard German are "a mere PF-phenomenon".[6]

Returning to Alemannic, the principle in (23) accounts for the data in (22). In the non-oblique cases provided in (22), only number must be marked overtly. This marking is supplied by the articles in (22a-b), and as a consequence, the inflections on the adjectives are optional. As for the obligatory inflection on the adjective in (22c), there is no article, and the inflection on the adjective itself is the only way to mark number (Rehn 2019: 124).[7]

While the principle in (23) may account for the data in (22), it raises questions about DPs involving bare mass nouns. In the non-oblique cases as in (24a), number must be overtly marked; in the oblique cases as in (24b), both number and the oblique case must be overtly marked. As far as I am aware, there is no overt marking in (24a-b), and yet, the DPs are grammatical:

(24)   a.   *Wei*   (Alemannic German)
                wine
                'wine'

        b.   *mit   Wei*
                with wine
                'with wine'

In my view, the grammaticality of these cases is telling. To explain their status, we have to assume that features for case, number, and gender are only spelled out by adjectival inflections

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[5] Given the *nota bene* remarks in the main text, the difference between number and oblique case vs. non-oblique case and gender is not entirely clearcut. I put this potential issue aside here.

[6] Rehn (2019: 133) observes that inflections on adjectives are also optional in other dialectal varieties of German. Note though that this does not hold for all dialects. Berlin German has obligatory inflections.

[7] Later in her dissertation, Rehn (2019: 178-95) follows work by Hachem (2015) and others suggesting that the mass-count dichotomy is not as simple as often assumed. Although these more fine-grained distinctions are not reflected by differences in the inflections on adjectives, it has consequences for the lower structure of the DP and her account of adjectival inflections. In order to explain (22c), Rehn (2019: 195-96) proposes that the adjective moves to Spec,AgrDP, a phrase below DP and above ModP (here AgrP), to support the strong inflection in AgrD. Note that the principle in (23) still holds, and I focus on its workings here.

(and not endings on nouns). An alternative to Rehn's proposal could be to extend the current analysis to Alemannic German.

In the current system, null articles and nouns have no feature bundles for case, number, and gender – only overt determiners and adjectives do (I follow Rehn 2019: 155 in that case inflections on nouns are under Cl, in the current system Num, signaling case and number at the same time). I assume the following feature realization rule for German DPs, for both the standard and regional varieties:

(25)   *Feature Specification of German DPs:*
        If CNG bundles are present, at least one of them must be made overt.

Note that this is a stronger claim than Hypothesis 2b (i.e., adjectival inflections make nominal features like case, number, and gender visible) in that this conditional is meant to help explain the distribution of adjectival inflections. Consider how Standard and Alemantic German can be accounted for by (25).

As discussed above, overt determiners have CNG features as part of their structures. Furthermore, (regular) adjectives project InflP as part of their extended projection. As such, the rule in (25) is adhered to in all cases involving overt determiners and/or adjectives in the counterparts of (22) in Standard German – CNG features are present and made overt (I comment on the obligatory presence of the inflection below). Bare mass nominals as in (24) are predicted to be fine too as they do not involve CNG bundles in the first place. As for Alemannic, recall that there is no difference in the interpretation that corelates with the presence or absence of the inflections on adjectives (for such a case in Dutch, see Evans 2021). As such, I agree with Rehn (2019: 194) that there is no difference in the syntactic position of inflected vs. uninflected adjectives. One way to account for the obligatory presence of inflections on adjectives in Standard German and the optional absence of inflections on adjectives in Alemannic German is to assume that like in Standard German, InflP is projected with (regular) adjectives in Alemannic German. Unlike in Standard German, the inflections on the adjectives are optionally deleted in Alemannic German unless the deletion violates the rule in (25) – the latter case involves the presence of only one CNG feature bundle.

Finally, I make some remarks on the indefinite article. Note that DPs like *ein Buch* or *a Buach* 'a book' are grammatical in both Standard and Alemannic German. Recall that I claimed in Chapter 2, Section 2.2.2 that the indefinite article spells out CNG features. This includes the non-oblique instances where this element has no overt inflections in three feature combinations. Given the vocabulary insertion rules provided in that section, the uninflected indefinite article *ein* spells out both [+D] and [CNG] at the same time. If this is so, then this means that the oblique cases are not special. Rather, we can maintain that all features inside the CNG bundles must be spelled out equally. In other words, non-oblique case features are on a par with oblique case features making the account of the inflectional distribution more general. If the sketch above turns out to be a viable alternative of the Alemannic data, it supports the current analysis of the indefinite article.

To sum up, while I have not examined adjectival inflections in dialectal varieties of German in much detail here, I believe the current system can be extended to those cases. Admittedly, the details of such an extension still need to be worked out more carefully. This goes beyond the scope of this book. Besides certain theoretical questions that arise, there are also empirical points that need to be clarified. For instance, it is important to determine the

distribution of inflections on multiple adjectives in cases where determiners are absent. Such data will help narrow down the analytical options. Next, I consider *ein* in more detail.

2.2.   *Extensions and Consequences Involving* ein

In this section, I turn to some extensions and consequences of the discussion of *ein*. At the end, I provide the updated vocabulary insertion rules of the main types of determiners. I begin by reviewing certain parts of the previous discussion.

2.2.1. Reviewing Cases of Supporting and Flagging

As argued in Chapter 5, *ein* can support POSS of the possessive articles, NEG of the negative article, and $\emptyset_{[-PL]}$ of the singularity numeral:

(26)   a.   *m-eine Frau*
              POSS-a woman
              'my woman'

         b.   *k-eine Frau*
              NEG-a woman
              'no woman'

         c.   *EINE   Frau*
              $\emptyset_{[-PL]}$+a woman
              'one woman'

In Chapter 6, I followed work by de Swart *et al*. (2007) such that kind nouns like *Frau* 'woman' combine with the realization operator REL returning predicate nominals. Predicate nominals such as REL(*Frau*) can occur by themselves (27a) or as part of argumental expressions (27b). In either case, REL is flagged by *ein*:

(27)   a.   *Die Person da   hinten ist eine Frau.*
              the person there back   is a   woman
              'The person back there is a woman.'

         b.   *Eine Frau   kam   durch   die Tür.*
              a   woman came through the door
              'A woman came through the door.'

Indeed, as briefly 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 (28a). Having added an adjective, it is clear that the kind noun *Frau* 'woman' must combine with REL in NumP to yield a predicate. With both elements of type <e,t>, Predicate Modification can combine the predicate nominal and its adjectival modifier. REL triggers the presence of *ein*. Furthermore, the singularity operator must be supported by *ein*. Thus, (28a) has the more abstract representation in (28b):

(28) a. *EINE blonde Frau*
           one   blonde woman
           'one blonde woman'

      b. Ø[-PL] Adjective REL Noun

To be clear, *ein* flags the presence of REL and supports the singularity operator at the same time. The same applies to *mein* 'my' and *kein* 'no' discussed above. This means that cases of supporting also involve flagging. In fact, cases of supporting seem to entail instances of flagging in that all overt operators occur with REL:[8]

(29) Supporting and Flagging:
      a. (*m-eine*)   REL
      b. (*k-eine*)   REL
      c. (Ø[-PL]+*eine*) REL

Before moving on, consider some other points about REL.
      I proposed in Chapter 7 that other determiners can also flag REL. Besides regular definite determiners like *der* 'the' as in de Swart *et al.* (2007), I proposed that pronominal determiners like *du* 'you' can do so as well (e.g., *der Wagen* 'the car'; *du Schwein* 'you (pig =) idiot'). This means that *ein* surfaces in indefinite contexts but *der* or *du* in definite environments. Given that only one determiner can be merged in ArtP, the distinction followed from the different vocabulary entries where *ein* is not marked for (in-)definiteness but *der* has a definiteness feature and *du* has features for author and participant (entailing definiteness). More generally, it seems clear that different elements can flag the same operator and that the presence of REL is not a sufficient condition for the occurrence of *ein* (we see in Section 2.2.3 below that the presence of REL is not a necessary condition for the occurrence of *ein* either). With this brief review in place, consider more complex cases.

2.2.2. Nominals with Two Overt Operators
As just seen again, there are two ways for *ein* to make operators visible: supporting and flagging. Interestingly, the cases discussed above can be more complex – they can involve two overt operators in one nominal, both supported by *ein*. To set the stage, recall that we saw above that *so* 'such' can precede *ein* where both unreduced and reduced forms of *ein* are possible (for (30b), cf. Elmentaler & Rosenberg 2015: 389):[9]

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[8] Currently, I am not aware of cases where *ein* only supports an operator but does not flag a covert operator at the same time. In other words, all nouns in strings involving "… *ein* … Noun" seem to involve REL (or another covert operator, see below).
[9] Hole & Klumpp (2000) propose that *son*, that is, *so'n* in (30), is an article that simultaneously expresses definite type reference and indefinite token reference. One of their main arguments is that since *son* can appear in plural contexts but the indefinite article *ein* cannot, *son* must be an atomic element. They wind up suggesting that German has three articles: the definite article, the indefinite article, and *son*. Note, however, that German allows the following strings:
      (i) a. *so jemand*
               so somebody
               'somebody like that'
           b. *so (et)was*
               so something

(30) a. *so (ei)ne (nette) Frau*
          so a   nice woman
          'such a nice woman'

      b. *irgend so (ei)ne Frau*
          any   so a   woman
          'some woman or other'

The element *so* can roughly be rendered as 'such' or 'of that type'. If we interpret this element as an overt type of operator, then a number of other interesting points can be made.

    Putting the possessive articles aside for a moment (but see below), we have seen that *ein* can support NEG and Ø$_{[-PL]}$. I assume that this also holds for *so* 'such'. Considering (31a) and (31b), note that there are two operators in each case and that *ein* follows both yielding two instances of the indefinite article (the example in (31b) is adapted from Hole & Klumpp 2000: 238, also Elmentaler & Rosenberg 2015: 383, 389; for Dutch, see Barbiers 2008: 6). Notice that the example in (31b) is parallel to an example from the Appendix, (31c), where a numeral other than *EIN* 'one' precedes *so* suggesting that *EIN* is the regular singularity numeral here. Indeed, *so'n* can follow another article and a numeral as in the constructed example in (31d):

(31) a. *k-eine so'ne Frau*
          NEG-a so.a woman
          'no such woman'

      b. *EINE   so'ne Frau*
          Ø$_{[-PL]}$+a so.a   woman
          'one such woman'

      c. % *drei so ne geilen   Mädels*
             three so.a   awesome girls
             'three such awesome girls'

      d. % *Es gibt   keine   drei so'ne Frauen auf der Welt.*
             it gives NEG-a three so.a   women in the world
             'There are not three such women in the world.'

'something like that'

There are different kinds of *so* (Heusinger 2011: 20f). Taking into consideration the different semantic contributions of *jemand* 'somebody' and *(et)was* 'something' (and abstracting away from the independent non-reducibility of *jemand* and *(et)was*), the element *so* in (i) appears to be, as far as I can tell, the same as in (30) (admittedly, this intuition has to be investigated in more detail). More importantly, *ein* can surface as an unreduced form (also in the plural, Chapter 1, Section 2.2), and *so'n* can follow another article and/or a numeral in the same noun phrase (as shown in (31) below). The occurrenc of two instances of *'n*, one after *k-* and one after *so*, and the low position of *so'n* indicates that *son* is not an atomic article but a bipartite form (as indicated in the alternative spelling). Finally, as shown in Chapter 1, Section 2.2, plural *ein* can also appear in *was-für* contexts, both in reduced and unreduced form. As far as I know, there are no claims that *(was) für* and *ein* form an atomic article. For cross-linguistic discussion of *so* and the indefinite article, see Wood & Vikner (2011).

The current account is able to throw some light on these multiple occurrences of *ein*. Before I provide the derivations, I identify some restrictions.

First, unlike (30), (31) cannot involve an unreduced form of *ein* as a second instance. This is particularly clear with the singularity numeral (32a). Furthermore, the first instance of *ein* cannot be a reduced form either (32b-c) ((32a) is based on Elmentaler & Rosenberg 2015: 383):

(32)   a. *   *EINE so eine Frau*
              one so a   woman

       b. *   *'ne so eine Frau*
               a so a   woman

       c. *   *'ne so'ne Frau*
               a so.a woman

Second, *so* 'such' cannot be left out:

(33)   a. *   *keine'ne Frau*
               no.a   woman

       b. *   *EINE'ne Frau*
               one.a   woman

Third, the second instance of *ein* cannot be left out:

(34)   a. *   *keine so Frau*
               no   so woman

       b. *   *EINE so Frau*
               one   so woman

Fourth, *so'n* is not possible in definite contexts such as possessives (35a-b) or definite determiners (35c-d):

(35)   a. *   *meine so'ne Frau*
               my   so.a woman

       b. *   *Peters so'ne Frau*
               Peter's so.a woman

       c. *   *die so'ne Frau*
               the so.a   woman

       d. *   *diese so'ne Frau*
               this so.a   woman

Summarizing these sets of data, note that these multiple occurrences only surface in indefinite contexts where one instance of *ein* occurs before *so* and one after it. Furthermore, when both instances of *ein* are present, *so* cannot be left out; that is, both instances of *ein* cannot be adjacent. When the first instance of *ein* and *so* are present, the second instance of *ein* must be present as well. Finally, the first instance of *ein* involves an unreduced form, but the second instance of *ein* is a reduced form. To repeat, this is different when the first instance of *ein* is missing as in (30). In the latter case, *ein* can appear in both reduced or unreduced forms.

I argued in Chapter 1, Section 4 that determiners are base-generated in ArtP and move successive cyclically up the tree. I propose that the multiple occurrences of *ein* above are also related by movement such that two copies of *ein* are pronounced. For concreteness, I assume that the operator *so* is in the specifier position of a Type Phrase (TypeP). Deriving (36a) as in (36b), I suggest that $\emptyset_{[-PL]}$ and *so* each get supported by *ein*. The relevant elements are linearly adjacent:[10]

(36) a. *EINE   so'ne Frau*
          $\emptyset_{[-PL]}$+a so.a   woman
          'one such woman'

  b. CardP

      $\emptyset_{[-PL]}$ Card'

          eine$_i$ TypeP

              so   Type'

                  'ne$_i$ ArtP

                      ~~*eine*$_i$~~   [*Frau*]

Some remarks are in order here.

I argued in Chapter 2, Section 2.1.6 that *ein* involves a complex head consisting of the categorial feature [+D] and a separate feature bundle for case, number, and gender. Notice that this complex head undergoing movement immediately explains that the second instance of *ein* is inflected and that it is inflected in the same way as the first instance. More tentatively, I assume that the operator *so* is a deficient element (i.e., a bound stem) in that it must be supported by *ein*. This accounts for the fact that *ein* must follow *so* – just like with the other overt operators. There are two kinds of derivation. Starting with (30), where only one overt operator is present, either an unreduced or a reduced form of *ein* follows *so*. I assume that in the reduced instances, *ein* has encliticized to the operator.

Unlike (30), (31a-b) involve two instances of *ein*, and the *ein* following *so* is a reduced form. Nunes (2001) argues that Move is not a primitive operation but rather the output of Copy, Merge, Form Chain, and Copy Reduction (Chapter 1). Assuming that Copy Reduction applies to free, unbound copies, unreduced forms of lower copies are deleted. Extending this discussion, if

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[10] For the counterpart in Dutch, Barbiers (2005: 171) suggests that NumP (CardP in the current system) is base-generated above DP. Such a strong (non-standard) claim does not have to be made in the current account.

ein is an unreduced copy, it gets deleted by Copy Reduction. This explains the ungrammaticality of (34) as *so* is not supported. However, *ein* can also encliticize to *so*. This reduced form of *ein* is a bound copy and becomes invisible to Copy Reduction (cf. Nunes 2001: 311f). This derivation allows a second *ein* to surface, and this lower copy can support *so*.

Finally, consider the data in (35) again. I assume that *mein* 'my' is not possible in these constructions (35a) as this type of *so* is incompatible with definiteness (more on this in Section 2.2.5). This also rules out the cases of the other definite determiner(-like) elements in (35b-d) in addition to the fact that they do not involve (a higher instance of) *ein* to begin with; that is, the cases in (35b-d) are also ungrammatical as there are two independent determiners in the noun phrase at the same time (e.g., $\emptyset_D$/*der*/*dieser* and *ein*).[11]

To sum up thus far, *ein* appears to be able to support multiple instances of overt operators, and it can flag a single instance of a covert one:

(37)   Supporting and Flagging:
    a.   (*m-eine*)   REL
    b.   (*k-eine*)   (*so-ne*) REL
    c.   ($\emptyset_{[-PL]}$+*eine*) (*so-ne*) REL

Considering (37), we observe that *ein* can support (at least) four different kinds of overt operators. The question arises if *ein* can also flag different kinds of covert operators. I tentatively suggest in the next section that besides REL, *ein* can also indicate the presence of EXIST, QUAL, QUANT, SORT, and CONT. However, so far, I have not been able to identify a reliable case indicating that *ein* can flag multiple instances of covert operators at the same time.

2.2.3. Flagging of Other Covert Operators

There are some other well-known cases where *ein* seems to make a semantic contribution, at least at first glance. I discuss split-scope phenomena, I return to exclamatives, and I briefly discuss *ein* in mass nominals. For each of these cases, I suggest that it is not *ein* that brings about the different interpretations. Rather, different covert operators are taken to be responsible, and *ein* flags the presence of these null elements. One result of this discussion is that I identify more cases involving flagging. Furthermore, as already stated above, I point out that there do not seem to be cases where *ein* flags multiple covert operators at the same time.

I argued above that *ein* is not a reflex of indefiniteness. It could be suggested that the absence of definite elements such as *der* 'the' or *dieser* 'this' leads to indefiniteness, perhaps as a

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[11] The question arises as to why the negative article followed by unreduced *ein* as in (i) sounds better than its counterparts involving the singularity numeral or the possessive articles followed by unreduced *ein* (which are fully ungrammatical):

    (i) ?   *keine so eine Frau*
               no   so a   woman
               'no such woman'

Note that an informal *google* search retrieved hits such as (i), but it probably should be mentioned that the tendency to use unreduced forms in writing might interfere here. Be that as it may, the fairly good status of this example is surprising as regards the previous discussion. While I do not have a definite answer here, there appears to be a tension between the need to support *so* and the requirement to delete lower unreduced copies of *ein* (as discussed in the text). This presumably accounts for the markedness of this type of example. While this tension also holds for the singularity numeral and the possessive articles, there are additional factors that make the latter two cases worse: the singularity numeral involves two (almost) homophonous instances of *ein* and the possessive articles induce definite contexts.

default option. However, this is, most likely, not correct. There is evidence that indefiniteness is not a default option but rather that it involves an actual element. This evidence comes from split-scope phenomena (e.g., Bech 1955/57, Jacobs 1980, data taken from Zeijlstra 2011: 113):

(38) *Du must keine Krawatte tragen.*
      you must no tie   wear

      a.   'It is not required that you wear a tie.'   (¬ > must > ∃)

      b.   'There is no tie that you are required to wear.'   (¬ > ∃ > must)

      c.   'It is required that you don't wear a tie.'   (must > ¬ > ∃)

The most salient reading is paraphrased in (38a), 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. Note first that split scope provides more evidence for the composite analysis of the negative article. Now, given that the different scope options are derived from the various positions of the existential operator in (38a-c), I conclude that this operator involves an actual element. In keeping with the claims made thus far, I suggest that this existential operator is a null element and that it is responsible for indefiniteness. For convenience, I relabel ∃ as EXIST(ence). I assume that the presence of this covert operator is flagged by *ein*.

   Second, as briefly discussed in Chapter 4, Section 2 special contexts such as exclamatives license the presence of *ein* with plural nouns as in the (constructed) example in (39a). To repeat, 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. Mass nouns can also occur with *ein* (39b). Note that both examples have a clear quality reading expressed in the translation as 'great'. While the latter reading may be dominant, a quantity interpretation also seems possible rendered as 'a lot of' in the translation:

(39) a. % *Was für (ei)ne Autos!*
              what for a   cars
              'Such great cars!'
              'Such a lot of cars!'

      b.   *Was für (ei)n Bier!*
              what for a   beer
              'Such great beer!'
              'Such a lot of beer!'

The presence of *ein* is unexpected with plural nouns in indefinite contexts and with mass nouns more generally. I argued in Chapter 4, Section 2.2 that cases like (39a) cannot involve a null noun between the article and the overt noun; that is, *ein* cannot be due to the presence of a null noun. I assume the same for (39b). While *was für* 'what kind' is an (interrogative) operator in questions, the examples in (39) involve exclamatives. Thus, it seems less likely that *was für* is the operator here (cf. Chapter 4, Section 2, where Bennis *et al*. 1998 and van Riemsdijk 2005 also claimed null operators, their [+EXCL] and !!!, respectively, to be present in the related

constructions in Dutch). I suggest that there are two covert semantic operators at work, QUAL(ity) and QUANT(ity).[12] Depending on which operator is present, a different interpretation obtains. The presence of these operators is flagged by *ein*.

Third, mass nouns are interesting in other ways. When they occur with an indefinite article, they can also have an effect different from (39b) above. Specifically, (40a) has a sortal reading, and (40b) has a container reading as is clear from the translation involving *loaf*:

(40) a. *Pumpernickel ist (ei)n Brot.*
          pumpernickel is   a   bread
          'Pumpernickel is a bread (= certain kind of that substance).'

      b. *Ich möchte   (ei)n Brot.*
          I   would.like a   bread
          'I would like a loaf of bread (= a certain quantity of that substance).'

Notice that unlike (39b), these instances involve non-exclamative contexts. I suggest that semantic operators also account for these data. To be concrete, I simply label these elements as SORT(er) and CONT(ainer) (cf. 'univeral sorter' and 'universal packer', respectively; see H. Wiese & Maling 2005 for discussion). Again, I take it that *ein* flags the presence of the operators that bring about the different readings.

To sum up, I 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, I extended this claim to split-scope phenomena (EXIST), to plural indefinite nouns in exclamatives (QUAL, QUANT), and to mass nouns (QUAL, QUANT, SORT, CONT). This means that besides REL, other covert operators appear to be flagged by *ein*:

(41) Flagging:
          a. *(ei)n*   REL
          b. *(ei)n*   EXIST
          c. *(ei)n*   QUAL
          d. *(ei)n*   QUANT
          e. *(ei)n*   SORT
          f. *(ei)n*   CONT

Thus far, I have not identified any cases where *ein* flags two covert operators at the same time.[13] More generally, if the interpretation of the above empirical observations is tenable, then I can

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[12] Note that the cases in (39) are also possible with *so* 'such'. It might be claimed though that *so* is the operator here (similar to Section 2.2.2 above).

[13] A case with two covert operators might involve the complex determiner *ein jeder* '(an every =) each', where Roehrs (2012) suggests that *ein* intensifies the distributive reading of *jeder*. Accepting the proposal that *ein* itself is not responsible for the semantics, a null distributivity operator (DIST) could be postulated. The example in (ia) could then be schematically analyzed as in (ib):

(i) a. *ein jeder nette Student*
         an every nice student
         'each nice student'
     b. *ein* DIST *jeder* Adjective REL Noun

state again that the traditional term indefinite article is a misnomer. The fact though that one covert operator (CAP) is not indicated by *ein*, but the operators of the rather long list in (41) are is not very satisfying. Some more remarks are in order.

That CAP is not flagged by *ein* but that the types of operator in (41) are should, ideally, be related to an independent factor. If possible, we might like to claim that the respective operators have something in common. Pending further investigation, I think it is not impossible to make such a claim. In particular, we could suggest that the position the operator appears in is related to it being flagged by *ein*. De Swart *et al*. (2007) proposed that CAP is in NP and that REL is in NumP, the latter being indicated in singular contexts by *ein*. Note that NumP is closer to the base-position of *ein* (ArtP) than NP. Assuming that locality plays a role here, this could explain why REL (but not CAP) is flagged by *ein*. If so, we could suggest further that all covert operators in (41) are in NumP. This, in turn, might open another avenue of research.

It is linguistically neither very interesting nor very elegant to postulate a different operator for every different reading. This is basically what I did at the beginning of this subsection. In my view, it is desirable to pursue the idea that these operators can be related or even collapsed into fewer elements. While I have to leave the ultimate solution of this issue to semanticists, there are a couple of morpho-syntactic observations worth making here.

REL and EXIST typically occur with count nouns (but see also below). While REL was originally motivated for predicative contexts, EXIST (or ∃) is postulated for argumental expressions. At the very least, these cases seem structurally related in that predicative NumP (REL) is part of argumental DP (EXIST). At best, these two operators could be collapsed into one if the syntax of predicate vs. argumental nominals could explain the remaining properties (e.g., figurative extension, scope, etc.).

By contrast, QUAL, QUANT, SORT, and CONT typically occur with mass nouns. If these four covert operators are indeed all in NumP as tentatively suggested above, they could be collapsed into one more general operator that gets specified in a given context. In fact, it might turn out that the pragmatics specifies this general operator as regards the different readings. While I have to leave a more robust discussion of these issues for future research, it does not seem impossible to simplify the account above. Pending a solution of these issues, I continue with the operators as presented in (41).

The result of the discussion above is that we can observe that all nominals containing *ein* involve at least one operator. I believe this is an interesting claim. Crucially though, *ein* occurs with a number of different operators. This means that stating the vocabulary insertion rule for *ein* and accounting for all its occurrences is not trivial. A number of complications arise. The discussion below is, admittedly, somewhat involved. However, I think that it serves well to highlight the complexities that arise. Indeed, as should be clear, any account espousing the composite analysis of complex *ein*-words has to deal with these complications. First, I address *ein* in the context of covert operators, and then I add overt operators to the discussion.

This presents a case of multiple covert operators in one nominal. However, it is unlikely that *ein* flags both DIST and REL at the same time as the definite determiner *jeder* is present; that is, *jeder* presumably flags REL on par with *der* 'the' or *du* 'you' as discussed above. Notice also that DIST is different from the other covert operators above in that it intensifies the reading of a specific determiner (rather than determines the reading of a nominal as a whole). As such, I do not add it to the list in (41).

2.2.4. Contexts of Vocabulary Insertion for *ein*: Covert Operators

In the previous chapters, I argued that the indefinite article does not have semantic import. Rather, it supports and flags operators. I proposed that *ein* involves the categorial feature [+D] and a separate feature bundle for case, number, and gender. I took [+D] to be the semantically vacuous element that is spelled out as the stem *ein*; the features for case, number, and gender are spelled out as its inflection. If features in addition to [+D], case, number, and gender are present, different elements are spelled out. To give some examples: if [+DEF] is present, the definite article *der* 'the' is spelled out; if [+DEF; +DEIX] is present, the demonstrative *dieser* 'this' is realized; if features for [AUTH] and [PART] are present, pronominal determiners surface. Note though that the distribution of determiners is more complicated when we consider indefinite articles in the context of operators.

For instance, if *ein* flags REL, it only occurs in singular contexts. However, if *ein* supports an overt operator (in addition to flagging REL), it can occur in mass, singular, and plural contexts. Leaving the discussion of overt operators to the next subsection, note that all covert operators flagged by *ein* involve indefinite contexts (see previous subsection). Before I turn to a more detailed discussion of the vocabulary insertion rules of the articles in indefinite contexts, I review the cases above and add a few minor points to the investigation. This lays the foundation for the account of Vocabulary Insertion of determiners. The discussion is summarized in Tables 1 through 3 below.

Nouns become instantiated as mass, singular count, or plural count nominals during the derivation. I proposed in Chapter 7 that the interplay between the head noun and Num as regards morphological and consequently semantic number leads to the three manifestations. Importantly, independent of number (and thus manifestation of the noun), all types of nominals involve an operator. Focusing on kind nouns, recall that they are of type <e>. In order to become predicates (type <e,t>), they combine with REL. This step is clearly needed so that these nominals can combine with adjectival modifiers (type <e,t>) by Predicate Modification. De Swart *et al.* (2007) did not discuss mass nouns in this regard. However, since they can also be modified, I assume that they also involve REL. Furthermore, mass nouns can also occur in the context of existential operators. As such, they involve EXIST – just like count nouns.[14] In indefinite, non-exclamative contexts, mass and plural count nominals involve null articles, and singular count nominals contain *ein*. This is summarized in Table 1:

Table 1: Covert Operators in Indefinite, Non-exlamative Contexts

Type of nominal	Non-exclamative
mass (Num)	$\emptyset_D$ (REL/EXIST)
singular (Num$_{[-PL]}$)	*ein* (REL/EXIST)
plural (Num$_{[+PL]}$)	$\emptyset_D$ (REL/EXIST)

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[14] While existential operators are often discussed with count nouns, mass nouns are also possible:

(i)   *Jeder Student trank etwas Tee.*
          every student drank some tea
          'Every student drank some (different) subpart of the tea.' ($\forall\exists$)
          'A certain (same) subpart of the tea was drunk from by every student.' ($\exists\forall$)

Above, I relabeled $\exists$ as EXIST.

More needs to be said about mass nouns.

Mass nouns on their sortal (SORT) and container (CONT) reading occur in non-exclamative contexts and most likely involve nominals where Num is specified as [-PL morph]. This is so as these nominals can be pluralized (e.g., *zwei verschiedene Zucker* 'two different sugars'; *zwei Brote* 'two loaves of bread'). As such, I put the singular instances of these readings with singular nominals in Table 2 below. The distinction between the ordinary count reading of *ein Schwein* 'a pig' and the special sortal reading of *ein Zucker* 'a (type of) sugar' presumably follows from the different lexical items and their preferred respective interpretation (Borer 2005: 102, see also H. Wiese & Maling 2005: 8). In Table 2, the singular sortal and container readings are put in a different row from the ordinary reading involving REL/EXIST.

As to exclamative contexts (see column three of Table 2), it is not obvious if the quantity (QUANT) or quality (QUAL) readings of mass nouns involving *ein* are singular. The pluralization (i.e., *Was für eine Biere!* 'Such beers!') seems a bit marked and has a different, sortal reading. Furthermore, it does not seem plausible to relate the unspecific quantity reading rendered in (39b) above as 'a lot of' to semantic singularity and countability. Rather, it seems more straightforward to interpret these cases as actual mass nominals; that is, as nominals that involve Num with no morphological specification at all. If so, these nominals are number neutral and can be interpreted in different ways. These nominals are put in the row of mass nominals in Table 2. Plural count nominals involving *ein* are put with the plural instances. Perhaps unsurprisingly, singular cases also occur in exclamative contexts. Given the singular context, they only have a quality reading (e.g., *Was für ein Auto!* 'Such a great car!').

The remarks above including the content of Table 1 can be summarized in the following table:

Table 2: Covert Operators in Indefinite Contexts

Type of nominal	Non-exclamative	Exclamative
mass (Num)	$\emptyset_D$ (REL/EXIST)	*ein* (QUANT, QUAL)
singular (Num$_{[-PL]}$)	*ein* (REL/EXIST)	*ein* (QUAL)
	ein (SORT, CONT)	
plural (Num$_{[+PL]}$)	$\emptyset_D$ (REL/EXIST)	*ein* (QUANT, QUAL)

Considering Table 2, note again that the articles occur in the context of certain operators. To repeat, articles in non-exclamative contexts are inserted in their usual contexts: the null articles are inserted in mass and plural contexts, and *ein* in singular environments. Exclamative contexts are different. Here, *ein* occurs in all number contexts. The vocabulary insertion rules for the indefinite articles $\emptyset_D$ and *ein* are developed in two steps, the first step in the remaining part of this subsection and the second step in the next subsection.

All determiners including articles involve the categorial feature [+D]. *Ein* is the least specified determiner – it only has the categorial feature (abstracting away from the inflection). As mentioned above, other determiners including the null articles have more features. In order to restrict the null articles to non-exlamative contexts, I assume for now that these contexts involve an exclamative feature [+EXCL(amative)] (but see the next subsection where this feature is made unnecessary). Postulating that the null articles have the negative counterpart of [+EXCL] as part of their vocabulary insertion rules, this feature will block the occurrence of the null

articles in exclamative contexts. With these general remarks in place, I make this discussion more formal.

I argued above that countability is a side-effect of Num being specified for singular or plural. While the feature [±COUNT] has not done any work in the current system so far, I make use of it here as it allows me to state the vocabulary insertion rules for determiners more straightforwardly.[15] In order to restrict the occurrence of the articles to their usual contexts (i.e., the non-exclamative cases in Table 1), I assume a special type of feature for all indefinite articles. I label this specification restriction feature. This restriction feature can be of two types: [±COUNT] and [±PL]. This special feature restricts the occurrence of the articles to contexts as regards morphological number so that the mass article only occurs in mass contexts, the singular article only in singular contexts, and the plural article only in plural contexts. I assume that this specification is on the categorial feature [+D] – it is provided after the colon following the categorial feature (i.e. [+D:___]). Note that this feature is not a regular concord feature (the latter being spelled out by the inflection) – it is a compatibility feature (see also the discussion of uninflected *dies* 'this' in Chapter 4, Section 5).

I assume that the mass article $\emptyset_D$ involves [+D: -COUNT] and that the plural article $\emptyset_D$ has [+D: +PL]. The above-mentioned feature [-EXCL] restricts the null articles to non-exclamative contexts (42a-b). The singular article *ein* involves the feature [+D: -PL] (NB: this specification is neither on Num nor on N and will not lead to semantic singularity). The vocabulary insertion rule for *ein* is provided in (42c) with an added [-PL] specification on [+D]:[16]

(42) a.   [+D: -COUNT; -DEF; -EXCL]   → $\emptyset_D$

      b.   [+D: +PL; -DEF; -EXCL]   → $\emptyset_D$

      c.   [+D: -PL]   →   *ein-*

Returning to the co-occurrence of the operators and articles (Table 2), the null articles $\emptyset_D$ and *ein* are inserted if the features of their vocabulary entries in (42) are present in the syntactic representation, provided their restriction feature on [+D] is compatible with the concord feature on Num of the noun phrase as a whole. I assume that [-COUNT] is only compatible with the absence of [αPL morph] on Num. This accounts for the different articles that can occur with REL/EXIST in the three number contexts (mass, singular, plural) in non-exclamative contexts. SORT, CONT, QUANT, and QUAL are different. They only occur with *ein*. SORT and CONT occur with *ein* in singular contexts; that is, they occur with *ein* when Num is specified as [-PL morph] – note that only *ein* is compatible with this number specification on Num.[17]

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[15] Note that with features having only two values (e.g., [±PL]), a three way distinction such as mass/singular/plural cannot be expressed by just one feature. As will become clear, underspecification does not work in these cases – the relevant feature has to be present.

[16] Recall from Chapter 2, Section 2.2.2 that the vocabulary insertion rules for *ein* consisted of three entries. (42c) presents the elsewhere case. The remaining two rules are repeated here for convenience and updated with the restriction feature [-PL]:

   (i)   a.   [+D: -PL]   →   *ein-* / [-F, -N, -O, +S]
         b.   [+D: -PL][-F, -O]   →   *ein* / __ word]$_\Phi$

[17] As mentioned above, SORT and CONT also occur in plural contexts. Here, Num is specified as [+PL morph] leading to the insertion of different determiners, which are compatible with this number specification.

As to QUANT and QUAL, they occur in mass, singular, and plural contexts in [+EXCL] environments. This means that null articles cannot be inserted – they have the feature [-EXCL]. Note though that *ein* cannot be inserted in mass and plural contexts either as it is restricted to singular environments by [-PL] on [+D]. The question arises how *ein* can appear in mass and plural contexts with these two operators (but not the other operators just discussed). In the next subsection, I propose that certain operators can delete the restriction feature on [+D]. This allows *ein* (and $\emptyset_D$) to occur in other number contexts.

2.2.5. Contexts of Vocabulary Insertion for *ein*: Covert and Overt Operators
As discussed above, in non-exclamative contexts, the null articles are restricted to mass and plural contexts, and *ein* is restricted to singular contexts. Note again that these articles can be used in other environments when certain operators are present, operators that occur in exclamative contexts (e.g., QUANT), but also operators that occur more generally (e.g., POSS). This means that certain combinations of operators and articles have to be allowed and others have to be excluded. Table 3 below repeats the covert operators occurring in exclamative contexts (i.e., QUANT, QUAL), and it also contains the overt operators and their co-occurring articles. Note that POSS (*m-*) and POSS (*-s*) stand for possessive articles and Saxon Genitives, respectively:

Table 3: Certain Operators and Their Co-occurring Articles

	QUANT/QUAL	*so*	$\emptyset_{[-PL]}$	POSS (*m-*)	POSS (*-s*)	NEG (*k-*)	NEG (*nicht*)
mass	*ein*	*ein*	-	*ein*	$\emptyset_D$	*ein*	*der*
singular	*ein*	*ein*	*ein*	*ein*	$\emptyset_D$	*ein*	*der*
plural	*ein*	*ein*	-	*ein*	$\emptyset_D$	*ein*	*der*

These are the main combinations of operators and articles. This means that the following account has to rule out strings with combinations like **so-$\emptyset_D$ Milch/Autos* 'such milk/cars', **m-der Freund* 'my friend', **Peters der Freund* 'Peter's friend', **k-$\emptyset_D$ Milch/Autos* 'no milk/cars', and others.

I propose that the deletion of features under Art in the syntactic representation may widen and narrow the distribution of determiners.[18] Specifically, deleting the restriction feature on [+D] will allow all relevant articles to occur in the three number contexts (i.e., mass, singular, plural). To narrow the distribution of articles, another feature under Art can also be deleted. Specifically, deleting the categorial feature [+D] in certain contexts will prevent $\emptyset_D$ and *der* from surfacing but not *ein*. Note that this deletion of features will make the use of the feature [EXCL] unnecessary.

The account of REL/EXIST, SORT and CONT is as above – no features are deleted. However, the analysis for QUANT and QUAL is different. Given the suggestion just made, this alternative will account not only for the occurrence of *ein* with these two operators but also for the distribution of determiners with the overt operators more generally. Before I turn to the details, I lay out my assumptions.

All argument DPs have determiners. All these determiners are inserted freely. The compatibility of the determiner with the larger nominal is later checked, and incompatible

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[18] This deletion could be instantiated by Impoverishment.

combinations lead to bad derivations. I focus on the discussion of the three articles in (43-45) below: the null articles, *ein*, and the definite article. They are all merged in ArtP and move to DP (triggering Impoverishment as discussed in Chapter 2). Consistent with the general assumptions of DM, there is a difference between the syntactic representation and subsequent Vocabulary Insertion. Specifically, Art with its varying feature bundles is in the derivation at the beginning, but the corresponding vocabulary insertion rules of the articles supply the spellout forms later. As proposed in Chapter 2, Section 2.1.6, the three types of articles have different structures and features (see the (a)-examples below). Each article has its own corresponding vocabulary insertion rule (see the (b)-examples below). I comment on the feature bundles under Art and in the vocabulary insertion rules.

Recall that the definiteness feature [DEF] is not a concord feature of the noun phrase as a whole. Rather, it is part of specific determiners: the null indefinite articles involve [-DEF] (43), *ein* lack such a feature (44), and the definite article has [+DEF] (45). Furthermore, unlike the two types of indefinite articles ($\emptyset_D$, *ein-*), there is only one definite article (*d-*). The latter element can be inserted in all number contexts. Consequently, I assume that there is no restriction feature on [+D] with the definite article. For convenience, I provide the two null articles in (43), but it should be kept in mind that they differ in their restriction feature on [+D] (the two are distinguished by the different restriction feature separated by a forward slash sign in (43b)). Note that none of the vocabulary insertion rules involve restriction features. Other than that, the features of the vocabulary insertion rules are identical to the features of their corresponding determiner stems under Art. Finally, recall that CNG stands for the inflectional feature bundle involving case, number, and gender (for the vocabulary insertion rules of adjectival inflections, see Chapter 2, Section 2.1.5):

(43) a.   Art
         |
    [+D: -COUNT/+PL; -DEF]

  b. [+D; -DEF] $\rightarrow$ $\emptyset_D$

(44) a.   Art
        ⌒
   [+D: -PL] [CNG]

  b. [+D] $\rightarrow$ *ein-*

(45) a.   Art
        ⌒
   [+D; +DEF] [CNG]

  b. [+D; +DEF] $\rightarrow$ *d-*

I assume that all features of a determiner structure must be spelled out or supported. This means that the categorial feature [+D] and, if present, the definiteness feature must be spelled out by a determiner stem. Furthermore, the CNG feature bundle, if present, must be supported by an (overt) determiner stem. In other words, every nominal that involves ArtP has a determiner.

In addition, I assume that all operators surface in the left periphery of the noun phrase: either they are base-generated there (e.g., NEG), or they move there (e.g., POSS).[19] As a consequence, all operators precede the determiner. This can schematically be illustrated as follows where OP stands for operator, and α may be XP in case the operator is adjoined (e.g., NEG) or X' in case the operator is in a specifier position (e.g., POSS):

(46)
```
              XP
           /      \
        OP          α
                  /    \
               Art      …
```
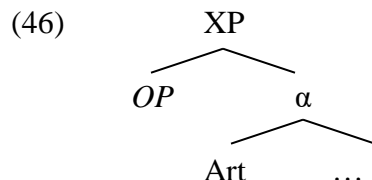
In order to widen the distribution of articles in certain contexts, I assume that all operators (except REL/EXIST, SORT and CONT) delete the restriction feature on [+D] under Art before the determiner structure is checked for compatibility with Num of the larger noun phrase and before Vocabulary Insertion occurs. While this does not affect the distribution of the definite article in (45), this allows the indefinite articles in (43) and (44) to occur in other number contexts with these specific operators: the null article(s) with POSS (Saxon Genitives), and *ein* in most of the other cases. With this in place, I continue the discussion of covert QUANT and QUAL and extend it to the overt operators.

There are several options to narrow the distribution of the articles. As far as I can see, the most straightforward option to prevent the least specified element *ein* in (44b) from being inserted in the null article structure in (43a) or in the definite article structure in (45a) is to assume that the categorial feature [+D] is deleted in certain featural contexts by specific operators. For instance, QUANT and QUAL trigger the deletion of [+D] in the context of a definiteness feature, where [DEF] includes [-DEF] and [+DEF]. This is shown in (47a), along with the other operators that work the same way. (47b-c) show the remaining cases (deletion of a feature is marked below by strikethrough):

(47)   *Deletion of [+D] in the Contexts of [...]:*
   a.   [+D] / [DEF] triggered by QUANT, QUAL, *so*, $\emptyset_{[-PL]}$, POSS (*m-*)
   b.   [+D] / [CNG] triggered by POSS (*-s*)
   c.   [+D] / [-DEF] triggered by NEG

As explicated in more detail below, (47a) only allows *ein* to be inserted, (47b) only allows $\emptyset_D$, and (47c) allows both *ein* and *d-* to be inserted. The articles that cannot be inserted into their corresponding structure will lead to bad derivations as the undeleted features of their corresponding structure will not be spelled out or supported. Also, note that each of the "surviving" determiners in (47) still has the feature [+D] in tact under Art. This means that Impoverishment will not be affected (by this feature deletion on the other determiners).

QUANT and QUAL delete the restriction feature on [+D]. Consequently, all three articles in (43-45) can, at least in principle, occur in the three morphological contexts as regards number (mass, singular, plural). In addition, I suggest that these two operators delete the categorial feature [+D] in the context of [DEF], which includes [-DEF] and [+DEF]. This allows (44a) to

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[19] This high position also licenses the occurrence of adjectival inflections and *ein* as expletive elements (see Section 3.2 below).

be spelled out, but not (43a) and (45a). Specifically, if Art in the syntactic representation involves [+~~D: -COUNT~~; -DEF] or [+~~D: +PL~~; -DEF] as in (43a) above, then $\emptyset_D$ cannot be inserted by (43b) as [+D] was deleted by the operator. Similar assumptions hold for the definite article where Art involves [+~~D;~~ +DEF] [CNG] as in (45a) above. Note that these two cases lead to bad derivations as the remaining definiteness feature cannot be spelled out by a determiner. This is different for *ein*, where Art involves [+D: ~~PL~~] [CNG] as in (44a). Here, there is no definiteness feature in Art and in the corresponding vocabulary insertion rule. Consequently, *ein* can be inserted. This type of account carries over to the overt operators and their co-occuring determiners.

Unless independently ruled out (e.g., $\emptyset_{[-PL]}$), all operators occur in all three number contexts (Tables 2 and 3). Like QUANT and QUAL, I suggest that *so*, POSS, and NEG also delete the restriction feature on [+D]. Like above, this allows all three articles to occur in the three number contexts with these operators as well. Furthermore, similar to QUANT and QUAL just discussed, overt operators also delete [+D] in certain contexts narrowing the distribution of the articles.

In more detail, *so* 'such' also deletes the categorial feature [+D] under Art in the context of [DEF]. As with QUANT and QUAL, if (43a) or (45a) is merged in ArtP and moves to DP, their corresponding vocabulary items cannot be inserted. As the definiteness feature cannot be spelled out, this leads to bad derivations. By contrast, if (44a) is merged in ArtP and moves to DP, *ein* can be inserted by (44b), and all the features under Art are spelled out. This results in a good derivation. Similar considerations hold for $\emptyset_{[-PL]}$, with the proviso that this element itself is restricted to occur in singular contexts (Chapter 5). There are two types of derivations for POSS and NEG each.

Like *so* above, the possessive component (POSS) of the possessive articles deletes [+D] in the context of [DEF]. This allows (44a) to be spelled out, but not (43a) and (45a). The latter two lead to bad derivations as the definiteness features cannot be spelled out. In contrast, I suggest that the possessive marker *-s* (POSS) of Saxon Genitives deletes [+D] in the context of the [CNG] feature bundle. This allows (43a) to be spelled out (NB: there is no deletion of [+D] here – the null articles have no CNG features; only the restriction feature on [+D] is deleted). In contrast, the articles in (44b) and (45b) cannot be inserted – [+D] has been deleted under Art. These derivations are bad as the [CNG] feature bundles of (44a) and (45a) cannot be supported by the Saxon Genitive (e.g., **Peters-er*). In addition, the definiteness feature in (45a) cannot be spelled out.[20]

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[20] Recall from Chapter 1, Footnote 43 that definiteness spread, if instantiated by Spec-head agreement, leads to incompatibility between definite Saxon Genitives and the null articles (which are specified as [-DEF]). There are two possible solutions. First, similar to the head D (which involves [uDEF]; see Chapter 1, Section 4.1.1), we could assume that the null articles do not have an inherent feature for definiteness, but rather that they get specified in this regard during the derivation. Note though that if the definiteness feature of the null articles gets specified as positive, this presumably turns $\emptyset_D$ into triggers for Impoverishment, resulting in weak adjectives also in nominative/accusative/dative contexts, contrary to fact (see again Chapter 2, Section 2.2.2). Clearly, such a specification process must be prevented. Alternatively, the feature [DEF] on $\emptyset_D$ could be of a different kind. Similar to some vocabulary insertion rules discussed above, this feature could involve an (unvalued) variable (i.e., [αDEF]), which is compatible with both a positive or a negative value of definiteness. In other words, $\emptyset_D$ could occur in either indefinite or definite contexts (similar to *ein*, the (in-)definiteness of the larger noun phrase would depend on the presence of possessors and other elements). Since this type of feature does not get specified, Impovishment would not be triggered. I do not attempt here to decide between these two solutions. Note though that either solution involves a definiteness feature on $\emptyset_D$, and the structures of the null articles, their vocabulary insertion rules, and the relevant deletion rules above would only have to be changed from [-DEF] to [uDEF] or [αDEF].

Finally, I assume that NEG deletes [+D] in the context of [-DEF]. This allows both (44a) and (45a) to be spelled out. Note that (45b) is more specific than (44b). This means that (45a) is spelled out by (45b) and (44a) by (44b). The null articles in (43a) lead to bad derivations. In the latter cases, the definiteness feature cannot be spelled out by (43b). The vocabulary insertion rules from Chapter 5, Section 4.1.2, repeated below for convenience, account for the overt realization of NEG depending on the context: if (44a) is merged, then NEG is realized as *k-*; if (45a) is merged, then NEG is spelled out as *nicht*:

(48) NEG →   *k-*   / __ (unstressed) *ein*
          →   *nicht*   (elsewhere)

To sum up, this section reviewed the combinations of operators and articles and accounted for them. It is probably fair to state that this discussion provided a somewhat involved solution.[21] Having said that, I hope that it makes clear what complexities arise in the discussion. As already mentioned above, any account adopting a composite analysis of complex *ein*-words such as *kein* '(NEG+a =) no' has to come to terms with these issues.

Given the discussion above, it appears that determiners are not only inserted to support and flag operators. Rather, Art in the syntactic representation involves features, and these features must be spelled out by a determiner to yield a good derivation. All determiners including *ein* have [+D] as part of their vocabulary entries. Consequently, if Art is present in the noun phrase, [+D] is spelled out yielding the fact that all nominals bigger than NumP have a determiner.

As to *ein* itself, this element is usually inserted in singular contexts given the restriction feature [-PL] on [+D]. However, when certain operators are present, the restriction feature is deleted, and *ein* can occur in other number contexts. The side-effect is that *ein* can not only support and flag operators in singular but also in mass and plural environments. This means that *ein* is not due to a simple Last-Resort operation – its occurrence (and that of other determiners) follows from the specific features present under Art depending on the presence of certain operators.

To review the entire section, I addressed some further consequences of the current proposal. Specifically, I briefly discussed how the current analysis could be extended to the distribution of adjectival inflections in Alemannic German. Furthermore, I briefly examined more cases of supporting and flagging. Thus far, I have identified cases that only involve flagging, but there do not seem to be instances that only show supporting. Furthermore, I have found instances where overt and covert operators are supported and flagged by *ein* at the same time. This included cases where two overt operators are supported (and a covert operator is flagged) by *ein*. However, two covert operators do not seem to be flagged by *ein* at the same time. Finally, I provided an account of the insertion of *ein* (and other articles) in the contexts of overt and covert operators. The postulation of a restriction feature and the deletion of it and that

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[21] As far as I can see, one potential issue remains. If mass nominals in exclamative contexts are also due to the absence of [αPL morph] on Num, then it is not clear how the vocabulary insertion rules for *ein* that involve features for [F] and [N] (see Footnote 16) can apply (recall that I replaced [F, N] by [PL] in Chapter 5). Note though that mass nouns still have gender (e.g., *der Wein* 'the wine'). This presumably means that gender features are still present and spread by the relevant concord mechanism. This allows the different rules of *ein* to apply. However, this also means that gender features on the noun and number features on Num must involve separate bundles that, if present, are checked for compatibility during the derivation. I leave the details of this idea for future research.

of [+D] accounted for the varying distribution of *ein* (and other articles) as regards the presence of different operators.

3. More General Considerations

In this final section, I return to complex nominals in the context of concord in agreement features, and I make suggestions as to what all expletives, clausal and nominal, may have in common.

3.1. *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:

(49)   [LPP [D [Card [Agr [Art [Num [N]]]]]]]

I note two things about this structure: I assumed that nouns move to Num and that articles merged in Art also undergo movement to higher positions in certain cases. With minor differences, this is consistent with the proposals by Julien (2005a), Roehrs (2009a), and others. Importantly, the structure in (49) received further application in this book. I take this to indicate that this structure shows good promise for future investigations. I turn to some issues related to agreement in non-canonical noun phrases.

As is well known, elements in the noun phrase are subject to concord in agreement features. For example, determiners, adjectives, and nouns in structures like (49) agree in case, number, and gender. In the course of this book, I also discussed a number of more complex cases where a second nominal is combined with the matrix DP by way of an embedded complex specifier or right adjunction. In the literature, these non-canonical nominals have not received much attention. I return to some of them briefly here focusing on agreement. We will see that all these constructions agree in semantic number but not necessarily in morphological number. The relevant structures are illustrated here again but in a simplified way.

In the context of capacity readings, I discussed DPs that involve *als* 'as' and its null counterpart ALS. To recapitulate, the *als*-nominal in (50a) involves adjunction to the pronoun where *als* is the head of ModP, and the role noun *Arzt* 'doctor' is an NP complement of that head. 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 as postulated by de Swart *et al.* 2007: 218). In contrast, while the ALS-nominal in (50b) also contains ModP, this contruction does exhibit concord. I suggested that the ALS-nominal must contain NumP and that it is located in the specifier of AgrP:

(50)   a.   *ihr* [ModP *als*Mod *Arzt*]
             you(PL) as   doctor
             'you as doctors'

b. (*vielleicht*) *ein* [ModP ALS_Mod *Landwirt*] Agr *e_N*
really   a   farmer
'(really) some farmer'

Two other nominals should be discussed in this context.

Indefinite pronoun constructions also involve complex structures (51a). As in the first two cases, these structures also involve ModP. Like (50a), this ModP was also argued to involve adjunction. However, unlike (50a), this nominal exhibits concord. In view of the presence of an inflected adjective and a null noun, I argued that REL and thus NumP must be in the structure. Finally, I discussed a case of morphological dis-agreement but semantic agreement (51b). Given the figuratively extended meaning of the noun, I concluded that REL and thus NumP must be present. I proposed that the dis-agreeing nominal is embedded in the specifier of DisP:

(51) a. *jemand* [ModP Ø_Mod *ander-er e_N*]
somebody   different-ST
'somebody different'

b. *Sie* [NumP *Bauer*] Dis *e_N*
you   peasant
'you peasant'

I summarize the properties of these different cases in Table 4:

Table 4: Summary of the Constructions and Their Properties

Construction	Structure	Agreement b/w nominals	NumP	Head
als-capacity	adjunction	apparent morphological and semantic dis-agreement	no NumP (but distributivity OP)[a]	*als*_Mod
ALS-capacity	specifier	morphological and semantic agreement	NumP	ALS_Mod
Indefinite pronoun construction	adjunction	morphological and semantic agreement	NumP	Ø_Mod
DisP	specifier	morphological dis-agreement but semantic agreement	NumP	-

[a] The *als*-capacity construction involves NumP in the plural cases (e.g., *ihr als Ärzte* 'you as doctors').

It is interesting to note that all four constructions agree in semantic number, either mediated through NumP or a distributivity operator. As for concord, agreement in phi-features is not an issue if NumP is absent in the embedding (*als*-capacity).[22] Such agreement holds though if NumP is present (ALS-capacity, indefinite pronoun construction). The only true exception is DisP. The latter involves NumP but does not show concord in agreement features. I briefly explore why this might be so.

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[22] Recall from Chapter 7 that this is similar to clausal structures involving copular verbs and non-plural role nouns (e.g., *Ihr seid alle Arzt.* 'You are all (doctor =) doctors.') where NumP is also absent.

It is clear that the position of the embedded nominal *per se* cannot account for these agreement patterns as both adjuncts and specifiers may exhibit concord (indefinite pronoun construction, ALS-capacity) or not (*als*-capacity, DisP). Rather, it seems to be a property of the head of the embedded nominal that determines the agreement possibilities. In particular, ALS_{Mod} and $Ø_{Mod}$ could be taken to mediate concord. I also argued that als_{Mod} is an operator that may take an NP complement, as in the case in (50a), but it may also embed a NumP complement, as in the case of plural nouns (see superscript a in Table 4). With NumP present in the plural, the *als*-capacity construction also shows agreement. All these three constructions involve the head Mod.

Unlike the first three cases, the nominal embedded in Spec,DisP does not contain the head Mod. Given this distinction, I would like to suggest that all three Mod heads mediate concord between the two nominals provided NumP is present.[23] 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. Currently, it is not clear to me how to implement this idea. As such, I have to leave the details of this suggestion for future research.

3.2.   *Expletive Elements more Generally*

As mentioned at the beginning, this book is not meant to contribute to the theory of expletive elements *per se*, but rather it seeks to identify more elements that share some of the properties of generally accepted expletives. *There* in existential constructions and, to a lesser degree, definite articles in the context of proper names seem to be such established elements. This book argued that adjectival inflections and *ein* are also expletive elements. In this final section, I compare these four elements in a bit more detail with the goal of identifying more common properties.

Recall that Chomsky (1995) pointed out that expletive elements seem to violate the Principle of Full Interpretation. He proposed that the associate noun phrase in existential constructions moves at LF to license *there*. In other words, a substantive element moves to license a vacuous one. Longobardi (1994) suggested something similar for proper names and proprial articles. To motivate the movement of the proper name to the article, I follow Chomsky by claiming that all expletives are deficient elements (note that Chomsky takes *there* to be a LF-affix).

Making this more general, this means that adjectival inflections and *ein* also need to be licensed by a contentful element. For adjectives, I proposed in Chapter 2, Section 2.4 that the adjective stem moves to provide a host for the inflection. As to *ein*, I tentatively suggested in Section 2.2.5 that operators surface in the left periphery: either they are base-generated there, or they move to precede *ein*. I assume that this local relation licenses *ein*. In other words, *ein* makes an operator visible but gets licensed by it at the same time. To repeat from Chapter 1, there is a division of labor: syntactically, the expletive indicates the substantive element; semantically, the substantive element identifies the expletive. These relations are shown below before movement of the licenser:

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[23] I briefly discussed in Chapter 2, Section 3.2 that Mod is instantiated by the prepositional element *de* 'of' in certain Romance languages. As suggested in Roehrs (2008: 21-23), this element mediates concord between different nominals, for instance, in French indefinite pronoun constructions of the type *quelque chose*$_{MASC}$ *de grand*$_{MASC}$ 'something big'.

(52) EXPL $\xrightarrow[\text{Identify (semantics)}]{\text{Indicate (syntax)}}$ SUBST

There is a second point worth making.

Recall also that one of the conclusions of this book is that adjectival inflections and *ein* make different abstract structures visible. Again, I 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. Consider this point in more detail.

Above, I made a distinction between supporting and flagging. Starting with the latter, this mechanisms seems to exhibit certain similarities to what is involved in existential constructions and proper names preceded by articles. Specifically, in all these cases, the expletive element is a free, unbound morpheme (at least in the overt component of the derivation). I observe now that the expletives and the contentful elements involve two different positions where the expletives are higher in the structure than the substantive elements:

(53)

```
                        α
              _____/ _____
             /                   \
          EXPL                    β
           |                  ___/ \___
           |                 /         \
           |              SUBST
           |                |
         there          associate
         prop. art.     proper name
          ein           operator
```

The contentful licensers are merged lower in the structure due to semantico-syntactic factors; that is, they are base-generated low for independent reasons. In more detail, associates are at the bottom of existential constructions given local theta-role assignment (54a); nouns including proper names form the bottom of their extended projections (54b); and semantic operators like REL turn nouns into predicates before these nominals can combine with other elements (54c). Notice that the expletives and their licensers are not linearly adjacent in their positions as other elements can intervene:

(54) a. [There] is [a man] in the garden.

      b. [*der*] *alte* [*Peter*]
         the old Peter
        'Peter, who is old'

      c. [*ein*] *netter* [REL] *Freund*
         a   nice   friend
        'a nice friend'

Given these data, I reiterate the claim that these expletives and their licensers are related by movement. Recall that expletives are deficient elements and that the substantive elements are in

a lower position for independent reasons. Now, as syntactic movement only proceeds upwards, we have an explanation as to why the expletives must be in the higher position (and not the lower one) – they are licensed by the movement of the substantive elements. Being in a high position, expletives indicate abstract structure. This includes *there* and proprial articles.

The mechanism of supporting is partially different. It, too, makes operators visible but forms overt composite forms of the two relevant elements under linear adjacency. This involves the complex *ein*-words and inflected adjectives. Like flagging, the substantive element is base-generated low in the structure and undergoes movement to the left periphery. This is true of the possessive component. After movement, it combines with expletive *ein* (55a). Similarly, the adjective stem is base-generated below its inflection and moves to combine with it (55b):

(55) a. [$_{DP}$ m_i-*ein* *Auto* t_i]
           POSS-a car
           'my car'

      b. *das* [$_{InflP}$ *groß$_i$-e* t_i] *Auto*
           the   big-INFL   car
           'the big car'

In each case, the substantive part originates low in the structure, and the expletive element is located higher in the structure.

This leaves the three overt operators in the negative article *kein* 'no', the singularity numeral *EIN* 'one', and *so'n* 'such a' to be discussed. Unlike the cases above, these three operators are base-generated higher in the structure than *ein*: NEG is outside the DP proper, $\emptyset_{[-PL]}$ is in Spec,CardP, and *so* is in Spec,TypeP. Recall from Section 2.2.2 though that I have, thus far, not been able to identity cases that only involve supporting. In other words, all cases involve flagging and may, additionally, also show supporting. If this turns out to be correct, then we can claim that flagging is the primary mechanism to indicate operators, and supporting is a secondary, additional mechanism.[24] Consequently, I take flagging to manifest the typical properties of the relationship between expletives and their licensers.

With this in mind, I summarize the discussion of all expletives. I start by providing a list of properties of *there*, an established expletive discussed in some detail in introduction of this book. Lasnik & Uriagereka with Boeckx (2005: 134, 150f) point out the following traits in their overview discussion of the relevant construction:[25] (i) *there* does not have a meaning and has to be licensed, (ii) *there* and the associate are in two different positions, (iii) *there* is in the highest site and the associate is (usually) in the lowest site, (iv) *there* stands in a certain formal relation with the associate such that both sites are related by movement, and (v) the higher position is made visible, either by *there* or the associate indicating the abstract subject position.

Comparing these properties to those of adjectival inflections and *ein*, we notice that they are basically identical. I would like to point out though that the last point, indicating abstract structure, is often mentioned but does not seem to have attracted much attention (unlike Hypothesis 1b in the current discussion). It is possible that this property can ultimately be related

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[24] This could mean that flagging is a universal process but supporting is not.

[25] There are other properties of *there* that are not relevant to the discussion of adjectival inflections and *ein* (nor are they relevant to proprial articles); for instance, the agreement of verbs is not with *there*, but with the associate.

to other phenomena.[26] Be that as it may, there are also some other, different characteristics: (vi) unlike the current cases, the associate moves at LF to license the expletive, (vii) unlike the current cases, the expletive can be null in some languages (e.g., Italian), and (viii) unlike the current cases, there is an alternative construction whereby the associate occupies the higher position and the expletive does not appear at all.

Of particular interest here is the last property in (viii). As far as I am aware, adjectival inflections or *ein* are never in complementary distribution with their licensers as regards the higher position. In my view, this is a difference that might indicate that there are two types of expletives after all: *there* and proprial articles vs. adjectival inflections and *ein*. Having said that, it might turn out that independent factors such as the requirement to spell out CNG features or to overtly indicate operators could explain the obligatory presence of the latter two elements. I leave a more detailed exploration of these ideas for future research.

Finally, the main empirical goal of this book was to provide a more comprehensive discussion of adjectival inflections and *ein*. I believe this pursuit has lead to some interesting theoretical proposals. At this point, I cannot claim to have resolved all issues surrounding adjectival inflections and *ein*. However, I hope to have made a good argument for the main hypothesis of this book – these two elements are semantically vacuous in German. Undoubtedly, further investigations and the detailed discussion of other languages will yield new insights into these empirical domains.

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[26] One possible avenue of research might be to relate the indication of abstract structure to language acquisition.

Appendix: Examples of Plural *ein*

The examples are presented in the following order: *so (ei)ne*, *so (ei)ne* with adjective, *was für (ei)ne*, and *was für (ei)ne* with adjective. First, examples retrieved by google are presented, next examples from Twitter are provided, and finally examples from Facebook are given.

1.1.   *Googled:* so (ei)ne *without adjective*

So eine Ferien könnten darauf deuten, dass sie wünscht, sich selbst zu erholen.

Das Personal war sehr unfreundlich. Ich hatte noch nie **so eine Ferien**.

Nich schön, **so ne Ferien**.

ich hab mal **so'ne ferien** in den alpen mit ner jugendgruppe gemacht

1.2.   *Googled:* so (ei)ne *with adjective*

und denn kommen dir **so ne geilen Typen** entgegnen gestolpert

ihr macht **so ne geilen lieder**

Hahahahah **so ne geilen vids** hahahah.

So ne geilen Leute echt jeder auf seiner Art so sympathisch!!

drei so ne geilen Mädels

Wie kommt man auf **so ne geilen Ideen**?

Hi,wie kriegen die **so ne geilen Lichteffekte** hin?

Dass es hier auf dieser Seite **so ne geilen Schlampen** wie mich gibt?

Ich hoffe die TranX macht dann auch **so ne geilen Geräusche**.

warum die Phiole Rechts im Bild nicht **so ne geilen Reflection Effekte** hat wie die in der Mitte

Herzlichen Glückwunsch und macht weiter **so ne geilen Videos**!

Neue Sounddesigner und dann **so'ne geilen Kisten**?

ich finde ihr solltet **so ne geilen partys** mal am samstag machen

Und nur **so ne geilen Antworten**

textlich hat der **so ne geilen dinger** dabei das ich manchmal mit grinsendem gesicht dasitze und denke "geil".

wieso gibts **so'ne geilen typen** nur in japan

Mushido hat immer **so ne geilen Beats** :D

So ne geilen Geländewagen find ich richig geil

es gibt ja im BC bei den ganzen objekten **so ne geilen schilder** wie "berlin Gasthof"

die hat **so ne geilen Beine**

wenn da **so ne geilen Sachen** Rauskommen

woher kriegsten du **so ne geilen witze**?

jetzt nutze ich **so ne geilen dinger** für den PC

Man würd' **so 'ne süßen Sachen** natürlich niemals tun.

Och **so ne süssen Katzis**... :-)

So'ne süßen Dreckspätze und selbst bei so einem. Mistwetter macht Doris noch ne tolle Geschichte draus.

Unsere Sabine macht immer **so ne süßen Geschenke**.

Ihr seid doch alles **so ne süßen Krümels**

das sind **so ne süßen hundewelpen**

So ne süßen kleinen Pfoten

Ja, ja, **so'ne süßen kleinen Löckenwölfe** sind schon entzückend!

mit ihm **so 'ne süßen Momente** zu haben

als ich schwanger war (was ja auch noch nicht sooo lang her ist) gabs **so ne süßen teile** leider nicht

1.3.   Googled: was für (ei)ne *without adjective*

"**Was für eine Idioten**" sagte Liam

"**Was für eine Arschlöcher**." waren meine letzten worte und somit verschwand ich auch.

WAS FÜR NE VÖGEL ALTER SCHWEDE !!!!

Was für ne Vögel...aber Glück für dich eben. 😡

Was für ne Vögel habts denn da aufgetrieben?

Was für'ne Idioten...!!!

Oh gott, **was für ne idioten**, es gibt klar ne menge websiten,

So nun rief er beim Freundlichen an, **was für ne Idioten** sie sind, den Ölkühler zu wechseln und kein Öl nachzufüllen,

wenn du da bist dann würde ich denen (besser nach dem kauf der siebchen) sagen **was für ne idioten** das sind

Da fragte ich mich auch, **was für ne Idioten**, vorallem hatte ich immer Luft in der Anlage.

Also beim MM in Lübeck gabs gestern noch genug laptops von Samsung... liegt wohl auch daran das die das ding falsch ausgeschildert haben, denn dort steht 1,8 Ghz auf dem Schild vom Despina. Und das Devin verkaufen sie zum gleichen Preis.... **was für ne idioten**

Gute Idee aber du beschimpfst jeden und flames **was für ne Idioten** sie sind da machts kein Spaß dir zuzuckuken

die wollten das wir die Linke oder die NPD wählen,aber sie sagten die Linke währe für sie besser…lol **was für ne Idioten**…

Was für ne Spinner bei Lyon,

Was für ne Spinner gibts hier eigentlich?

Die zwei hab' ich auch gesehen. **Was für ne Spinner**. Der Typ der das mamor im Auto hatte

...ach gott wie lustig, **was für ne Typen** es hier so gibt .... :-) o.T.

Dass muss man sich mal überlegen, **was für ne Schweine** dass sind.

hm ...**was für ne zicken**... !!! 😊

1.4.   *Googled:* was für (ei)ne *with adjective*

Auf **was für ne' coolen Ideen** kommt ihr denn noch! LG

NFU und NFSU2 (**was für ne dummen Abkürzungen**)

Ich empfand dieses ignorante Verhalten als sehr unverschämt und beleidigend auf meine Person bezogen und bin gegangen!!! **Was für eine dummen Hühner** dort ;).

Was für eine hübschen Jungs kennst du? Namen?

Woow **was für eine schönen Beine** hast du wirklich Frau 😃

Was für eine geilen Bilder wer hat die bloß gemacht

Was für ne geilen Threads ey!

was hast du immer **für ne krassen anfälle** im voice :d

Was mach ich heut **für ne krassen Fehler** LOL

was meine Unachtsamkeit **für ne krassen Folgen** hat

Wow heftig dass ist voll komisch zu sehen **was für ne krassen Menschen** albanische Wurzeln haben

Was denn **für ne verdammten Ringe**?

2.1.   *Twitter:* so (ei)ne *without adjective (but with numeral)*

ach man wir sind schon **so ne zwei wärmflaschen**

und **so ne zwei Kämpfer** die alles umpflügen,

So 'ne zwei Bubis... Denken auch ich halt mein maul ...

2.2.   *Twitter:* so (ei)ne *with adjective*

Selten **so ne geilen Livebands** gehört.

"wir sind **so ne geilen Socken**"

Wir haben hier **so 'ne geilen Lehrer-Praktikanten**.

So ne geilen Bilder...

Ich bins als Dorfkind ja nicht gewohnt **so ne geilen läden** zu habn

aber als ich in meiner emo-phase war hab ich mir immer **so'ne geilen stories** ausgedacht und muss heute noch dran denken 8)

Ich will **so ne geilen smileys** BEI DER TASTATUR DABEI

und dann noch **so'ne geilen schuhe**!!

wie kommt man sonst auf **so'ne geilen Ideen**?!

Aber wie können die **so ne geilen Tänzer** rauswerfen???

woa cheng **so ne geilen weißen schuhe** hab ich ja noch nie gesehen xd das strahlt richtig

Kann ja nicht jeder **so ne geilen Videos** machen wie du :D

Aber du hast doch auch ohne den Anzug ein Sixpack und **so'ne geilen Muskeln**!

wo bekommt man den **so ne geilen Lollys**?

Doch, der Tag war okay. Nur hatte ich bisher nicht **so ne geilen Nachrichten** gehört

Das kommt jetzt mega weird..aber so'n Stripper als Freund......also weil die machen immer **so ne geilen Bewegungen**,weißt du...

Du machst immer **so ne geilen Verlosungen** !

so'ne geilen Tage muss es auch mal geben

uf **so ne geilen ideen** kommst auch nur du!

ey ich schwör Dir Freitag und Montag werden **so 'ne geilen Tage** !!

und immer **so ne geilen sachen** ;)

hör auf hier **so'ne geilen Bands** aufzuzählen,sonst muss ich leider kurz ausflippen,verdammte Axxxt.

Und dann auch immer **so ne geilen Argumente** bringen, wie "FRÜHER war das auch nicht so"

Alter **irgend so ne dummen Hunde** haben direkt neben mir n Böller gezündet

so ne dummen aufgaben kann sich auch nur klaas ausdenken

als ob brendon jetzt ernsthaft VON DER QUEERCOMMUNITY **so'ne dummen kommentare** dafür abbekommt dass er sich als pan geouted hat

komm jetzt noch mehr **so ne dummen machosprüche** von dir?

"Selbst schuld, wenn du immer **so'ne dummen Kommentare** gibst."

Ich war eben kurz davor **so 'ne dummen Kinder** zu fragen,

Warum passieren mir immer **so ne dummen Sachen**?!

Klar, streut noch **so 'ne dummen Gerüchte**. :O

Da waren heute **2 so'ne dummen Weiber** beim Zumba-Kurs, die schrien ständig wie **so'ne Fangirls** [NB: this token was not counted at all, DR]. -_____- Das hat genervt!

Gestern so um 23 Uhr waren **so'ne dummen Jugendlichen** vor meinem Febster und haben laut Musik gespielt + laut geredet.

Sollte ich öfter machen, dann krieg ich auch nicht **so 'ne dummen Nachrichten** von Mitschülern.

ich hab ja früher **so ne dummen Digitalzeichnungen** gemacht

komm jetzt nicht noch auf **so'ne dummen Ideen**... ;o)

Boa. **So ne dummen Eltern** hätte ich auch gern.

ich schon **so ne dummen Vögel** von der CDU können mir gestohlen bleiben

Ich wer dir **so ne dummen Sprüche** noch austreiben !

so'ne dummen Menschen!

Wieso gibt es **so ne dummen, bescheuerten Leute** die sowas machen?? D:

hahaha und **so ne dummen leute** am tisch ehy

es gibt halt **so ne dummen und abgehobenen leute**

ach **so 'ne dummen** gibt es öfter. xD

2.3. *Twitter:* was für (ei)ne *without adjective*

Wasfür eine Idioten leben hier? Wahnsinn!

Was glaubst Du denn, **was** da **für eine Leute** wohnen?

was das **für eine Leute** sind, mit denen sich die Polizei auseinandersetzen muss.

Was sind das denn jetzt **für ne Leute**, die

Was waren denn das **für ne Leute** eben auf Periscope. Schlimm.

man man man **was für ne idioten** es dich gibt

Was für ne Idioten und danke

Was für ne idioten seit ihr eigentlich habt ihr noch alle tassen im schrank

Was für eine Idioten wohnen nur in Sachsen-Anhalt? Ich explodiere.

was für eine Idioten! Die Bude aber noch an den größeren Deppen Fratzenbuch für 16Milliarden zu verkaufen,ist Realsatire

Gerade gesehen... **was für eine Idioten**, die so Aufmerksamkeit wollen

Was für eine Idioten , wir können in Deutschland gar keine Schraube drehen.

Was sind denn das **für ne vögel** am alex? Oo [Berlin]

wat für ne spinner

was für ne spinner

Lateline man **was für eine spinner** von Anrufer

Was für eine spinner er hätte sich lieber ne andere Sportart suchen sollen

DPA, **was für eine Arschlöcher** seid ihr denn?

Was sind das **für ne Arschlöcher**, die IMMER NOCH megalaute Böller zünden?

Wat für ne Kunden

Die sind ja picky. **Was für ne Säcke**. :D

Was für ne Säcke sind das denn bitte? WTF? D:

viel spass mit deiner Familie, yaaa. **was fuer eine Ferien**! Hier habe ich auch schoene Ferien. :D

Ferien????????????????????? **Was für ne Ferien**????????????????????

was für ne ferien habt ihr!? :o

was für ne ferien ?

wat fuer ne spasten. das ergibt doch keinen sinn xd

echt jetzt?? **Was für ne spasten** sind das bitte -.- arghhh

2.4.   Twitter: was für (ei)ne *with adjective*

Ich wurde auf Twitch gebannt weil ich geschrieben hab: Schöne achseln diggah!? **was für eine dummen mods**?!

Community schrumpft 60%...lol...**was für ne verdammten idioten**...

Wat für ne furchtbaren Trikots

Was für eine bescheuerten Haufen sitzen in unsere Ministerien.

3.1.   Facebook: so (ei)ne *with adjective*

so ne dummen Schweine !!! wie kann man so bloß mit den Tieren umgehen !!!! HASS !!!!!!!!!

Hey Schnitzel, hoffe du bist bald wieder wohl auf. **So ne dummen idioten** ey.....

Wie kann man nur **so ne dummen Idioten** wählen.....

Bitte blockiert endlich **so ne blöden Tussen**!!! Wir sind hier nicht beim Werbe-Flohmarkt! [Hamburg]

Ich treffe täglich auf **so ne ekelhaften Leute** ohne Achtung...

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