The Internal Syntax of Determiners

by

Thomas Leu

A dissertation submitted in partial fulfillment

of the requirements for the degree of

Doctor of Philosophy

Department of Linguistics

New York University

September, 2008

Richard S. Kayne —Advisor

Dedication

I dedicate this thesis to my parents Liselotte and Josef.

Acknowledgments

It's been a long and complex process that brought me to this intermediary stage of my career, with chance guiding me on many of the important crossroads. There's been a lot of ploughing, and a lot of sowing, but now I can reap a degree, a job, and a sense of achievement. Different factors have played important roles on the way: being born into a time, place, society, and family with opportunities galore; naively making the right choices in picking college, town, and major/minor, entirely unaware of why they were right; and last but not least, being surrounded by people who've allowed me to pursue what my heart asked for, who've supported me in making and being myself. To you people who've been with me along the way I want to express my thankfulness in the following few paragraphs.

In the beginning were my parents, Liselotte and Josef. I'm extraordinarily lucky to have such wonderful parents. They have always given me tons of love and immense support from (before my) birth through this doctoral day. I wanted to make music? They let me (in the sense both of allow and encourage to) play the recorder, the trumpet, the piano, the electric guitar (in the house!), and the drums. - I wanted to join clubs and such? They let me join the Jungwacht (a kind of scouts), chess club, judo club, gymnastics club, and the youth branch of the local social-democrats;-) - And very importantly, they let me go to school (way) beyond the obligatory school years, despite my imperfect grades. My parents, together with my beloved sisters Karin and Silvia, cultivated an atmosphere that was very conducive to pursuing higher education. My parents have always fully supported my scholarly ambitions, even though it's taken many years, and it put, first a few mountains, and later the Atlantic Ocean between us. I'm indefinitely grateful to you, Mami und Dädi, for your love, trust, and support, which I cannot make up to you, but by trying to be as good a parent to my son, as you've been to me. To you I dedicate this thesis.

In a sense I got into linguistics pretty much by doing whatever I thought was fun. And I consider it an enormous privilege to be given the chance to make this enthralling pursuit of fun my job, i.e. to have fun professionally! Of course, it's been hard work (but that is at least half of the fun, isn't it), there's been existential fears, frustration, anger, temporary regret, and mental and physical exhaustion. But the fun aspect triumphed after all.

Early on, the curiosity driven quest for fun led through school. I first have to thank my high school German (and History) teacher Urs Kälin, whose appreciation for my writing was (not only a novelty among high school teachers, but also) very empowering to me, giving me the self-confidence I needed to choose language (in the broad sense) for my future academic career.

The decision to go to Geneva for college, rather than e.g. Zürich, had undreamt-of consequences (one of which was that I finally learned to speak a little French). Not only did I leave a lot behind, and in fact leave a lot of potential options elsewhere entirely untouched, I discovered a new world, or new worlds.[1] The seven years during which I could make Geneva my second home form an integral

[1]Yes, okay, Switzerland is small. But moving from (high school in) Altdorf to (University in) Geneva was as much of a change as subsequently from Geneva to New York.

part of who I am. The people I got to know (including myself), the friends I made, the lake, theater, parks, streets, foods, sounds etc, and of course the language, have stayed an important part of me. Of particular relevance to this thesis, of course, is the fact that I encountered linguistics. I was told it was an easy minor, but I discovered that rather than easy it was really fun. In retrospect I realize that my approach to the field (partly determined by the structure of the institution) was a little chaotic. Kirsten Adamzik, Helen Christen, and Gottfried Kolde did linguistics in German; Liliane Haegeman, Eric Haeberli, Genoveva Puskas, and Manuela Schönenberger did linguistics in English; and Luigi Rizzi, Ur Shlonsky, Michal Starke, and Luis Prieto did linguistics in French. Some of them mentioned Chomsky fairly often, others mentioned Saussure more often, and yet others Grimm. - What I liked best was the morphemes.[2] And I guess I still do.

The existence of linguistics outside of Geneva became real as I started going to invited talks, e.g. when Richie Kayne came to talk about *á*, (which my then flat mate and dear friend Stanka Radovič and freshman me found entirely baffling and amusing), or when Jean Lowenstamm gave a mini lecture series on Government Phonology (which was the one moment when I semi-considered perhaps doing phonology). But more important, perhaps, was the opportunity to complement my early Geneva experience by encountering linguistics elsewhere. I spent one Erasmus year in Bangor, North Wales, where I got to know the beautiful Welsh landscape and Dirk Bury[3], perhaps the first person I met to talk syntax with outside the class room. Now that was fun! And later I got to visit Berlin during GLOW, where I met Anne Breitbarth.[4] *Herzlichen Dank euch beiden für eure Besuche, Gastfreundschaft, Musik, Gespräche und überhaupt alles!*

Back from Wales, I found that in Geneva too, there are people who talk syntax over a coffee or beer. Apparently they called us *le trio Infernal*, Léna Baunaz, Gabriel Lobos, and me. *Mille mercis, Lenouille et Gab, pour ces moments merveilleux! Et un grand merci, Léna, pour ton amitié et soutien continus, qui me valent bien cher!* The classes with Enoch Aboh, Maya Arad, Genoveva Puskas, and Michal Starke were great, but even greater was Michal's luring me into going to the EGG summer school, where I met way more linguists than I can list here. But I should thankfully mention Klaus Abels, Øystein Nilsen, Peter Svenonius, Annalena Wiklund, and Hedde Zeijlstra who have given me lots of very valuable input over the years.

The moment came when I left for grad school, leaving behind more than I realized at the time, and leaving Europe for longer than I thought I would. The move to the US marked more than the beginning of a new chapter in my life. In retrospect I realize that it marked the beginning of part II, so to speak.[5] An important secondary decision was where to go, within the US. My options were UC Santa Cruz and New York University. I admit I did not have much of a clue. New York was closer to Europe, had a subway, and (crucially) had Richie Kayne. All three factors did indeed prove extremely beneficial. For my linguistics career most relevantly the third, of course.

[2] In my first year, I remember, I once had a dream, where morphemes flew through the air, like snowflakes or legos, combining in the way I thought molecules did in physics/chemistry.

[3] I'm still waiting for your (next) visit!

[4] Thanks again, Momo, for proofreading my *mémoire de licence*, which must not have been the funnest thing ever...

[5] They're telling you that basic training turns boys into men. Nope. (It doesn't.) - In my case, it seems, it took the grad school years.

The first most important encounters in New York were the ones with some of the staff at NYU which I learned to appreciate so very much: The department secretary Sheryl Estrada, and the department administrator Lorraine Jerome, and following them Teresa Leung and most recently Aura Holguin; and at the OISS Jacqueline Chin and Heather Finn and their colleagues. *Thank you all for helping me survive!*

The events of and following September 11th 2001 made everything difficult. My first year in New York was predominantly disorienting and enervating. Coping with life and its facets is what life is about, I guess. The beginning in New York seemed more like a non-starter. But there were a few seeds that would eventually grow, rooting me in this new world: I thank Michal Starke (who graduated from being "my TA" in Geneva to being my professor in New York) for pushing me to submit that term paper abstract on *Something strange* to a student conference in Texas.[6] It got me a citation in LI, and thereby made me realize that in linguistics the Heavens are actually on Earth. Michal was my first advisor at NYU, which was very lucky for me! His classes were fantastic, and his attention and comments, and the discussions with him gave me some continuity, kept me going and have since marked my thinking about syntax. - I also found myself in a cohort with an utterly eclectic small collection of very nice class mates: Sonja Fix, Simanique Moody, Jen Nycz, and Laura Rimell. *Hey guys: It is possible!* Laura and I were the syntax-semantics "crowd," very fortunately reinforced by Erika Troseth from 26 blocks uptown at CUNY. *Thanks Laura and Erika for being there, for being great colleagues and friends!* - Finally, I met the (in my experience) world's best syntactician guitar player singer songwriter, Vlad Rapoport,[7] whose energy and creativity I admire and whose friendship I cherish dearly.

In the following year I met my dear friends and most immediate peers among my colleagues: Lisa Levinson, Oana Săvescu Ciucivara, and Eytan Zweig. I'm very fortunate to have had such smart and kind office mates and friends through most of my grad school years. There is hardly a piece of work of mine that they didn't help improve in one way or another. *Thank you guys so much for all your friendship, support, time, empathy, feedback on talks, on papers, and on abstracts, for discussions and beers etc!*

My world of peer linguistics grads (and post-grads) got extended beyond syntax-semantics to my long time room mate Paul De Decker (*Maybe we should have looked a little longer... but the kitchen was great!*); and beyond my year and the one right after mine to Rahul Balusu, Jon Brennan, Andrea Cattaneo, Suzanne Dikker (*Thanks for lending me Kester's book, for years...!*), Bill Haddican, Patricia Irwin, Dan Lassiter, Peter Liem (*I'm looking forward to our common commute!*), Jason Shaw, Jim Wood (and more); and beyond NYU to CUNY's Alexia Ioannidou, Rachel Szekely, and Chris Warnasch; and beyond New York City to Stony Brook's Carlos de Cuba, Susana Huidobro, Richard Larson, and Lanko Marušič (*Thanks for that citation;-)*); and beyond New York State to MA's Rajesh Bhatt, Martina Gracanin-Yuksek, Roni Katzir, Andrew Nevins, and Michael Wagner; and beyond New England to Máire Noonan, Dorian Roehrs (who I share my taste in topics with), and Susi Wurmbrand; and beyond the American continent to Øystein Vangsnes and Terje Lohndal who have been of tremendous help with my thesis writing with regard to Scandinavian and beyond. (*A loud* Takk! *for your interest and all your help!*); and

[6] My only talk (so far) after which I got neither a comment nor a question.

[7] Vlad is actually exceptional at all of these!

beyond the Western hemisphere to Yuji Takano. He and Hiroko Yamakido deserve many thanks for their help with some sections on Japanese most of which unfortunately didn't make it into the final version of the thesis. *Domo arigato!*

But back to New York, in the course of my grad school career I have been able to benefit from formidable and generous faculty at NYU (and CUNY). For fascinating, fun, or just plain hands-on useful and often spontaneous comments, conversations, and advice I am immensely grateful to Chris Barker, Chris Collins, John Costello, Paul Elbourne, Paul Postal, Liina Pylkkänen, and Tanya Reinhart (who I had the wonderful opportunity to TA for, before she tragically left us, all too early). Many big bunches of thanks go to CUNY's Marcel the incredible Den Dikken, who has been an instrumental source of encouragement and advice. *Thank you, Marcel, for your always most efficient yet detailed reading and commenting, as well as great and fun classes!* - This brings us to the dissertation. I am very grateful to Mark Baltin, Alec Marantz, and Anna Szabolcsi, who, in addition to offering interesting classes, giving invaluable comments at practice talks and on drafts, and being available for conversations and advice etc, agreed to guide and assist me on the thesis project. *Thank you all for serving on the dissertation committee, for taking your time and energy to help me make the thesis stronger!* A special thank goes to the outside committee member Henk Van Riemsdijk. Henk gave me prompt and detailed feedback on draft chapters, pointed out very relevant data, and raised very important issues and questions which, indeed, had a substantial and highly beneficial impact on this thesis. *Rächt härzlichä dank, Henk! Und ich weiss, ich ha nu lang nid firabig.*

Very special gratitude I owe to my advisor and committee chair, Richard Kayne. His classes were always most engrossing, inspiring, and enjoyable, and it was mostly in those classes that I learned the craft of doing syntax. Richie's comments on my work have always been right on target, often more so than I would realize at first. He has never stopped impressing me with his sense for important questions, insightful answers, and his attention to detail. His interest in my work has been a major source of motivation and encouragement, and I consider myself extremely fortunate to have had the chance to be his student during my grad school years! *Thank you, Richie, for teaching me to do syntax and for believing in me!*

But the world is not only a world of peers and linguistics, but - who would have thought - extends beyond linguistics! I'm very grateful also to the immensely important moral support that I have been able to enjoy over these years from my dear friends Carmen Martinez Miera and Yekaterina Aglitsky, who have been incredibly patient open ears and wise sources of advice. *Muchas muchas gracias!* and *Spasibo bolshoe!*

While the grad school years marked the beginning of it, the defining component of part II of my life is also beyond linguistics. Even though she first met me as a "syntactician," linguistics was soon and heavily complemented, as Sarah, my wonderful wife, gave me a new family, in which I am the husband and father. *Sarah, thank you for your love and patience, for your support and endurance in those tough times during which we both wrote our respective dissertations, and simultaneously learned to be partners and parents! - I think we've accomplished quite something,*

and survived!;-) Thank you! - And most of all, thank you for giving me such an incredibly precious son! Niko has changed everything! He's a little miracle keeping me both mesmerized and alert;-) *Niko, chlinä schatz, bitte nimmers nid übl, dass ich mängisch ghofft ha, du würsch es äxtra langs nickerli machä, damit ich ächli cha schaffä. Ich ha dich usinnig gärn!* Now we're ready for the second chapter of part II![8]

Although the content and form of this thesis have benefited immensely from the help of the people mentioned (and others), the remaining flaws and errors are all mine.

[8]And thanks (and apologies) also to all the great people not explicitly mentioned here, but who made me laugh or learn something on the way!

Contents

List of Tables

Chapter 1

Introduction

1.1 General remarks

1.1.1 Background

This thesis is a comparative study of determiners (mostly) in Germanic, with an emphasis on Swiss German. A distinction is made between determiners (e.g. *that, both, which, such, my, no*) and articles (the definite marker and the indefinite article). Such a distinction has previously been argued for (see Szabolcsi (1994); Giusti (1997); Matthewson (2001)) and will in the present work be taken to syntactically be one between phrasal constituents (determiners) and heads (the articles).[1] I'm particularly interested in the structural regularities across the class of (phrasal) determiners.

In some of the syntactic literature it is by now standard to assume that at least some of the above mentioned determiners are phrasal categories. But it is, in my view, important to go beyond this and look inside these phrases. This leads to the central questions that I'm addressing in this dissertation:

- What is the internal structure of a given determiner?
- What are the elements this structure consists of?
- How is this structure derived?

In trying to answer these questions, I have come to understand a fact that should perhaps be entirely unsurprising[2], yet caused me much excitement and pleasure, namely that the answers to

[1] Inflectional suffixes that co-occur adjacent to articles are assumed to be separate morpheme(s) corresponding to separate syntactic heads.

[2] Whether something is surprising or not has more to do with the observer than with the thing observed of course. The similarity between different determiners is "unsurprising" with the traditional notion in mind that they are all "determiners." But the notion "determiner" is, in my view, a pre-theoretic one rather than a category label (contrary to earlier beliefs). Saying that determiners are phrasal, is equivalent to claiming that they contain smaller pieces that are independently represented in the syntax. These pieces may have their own phonetic realization. Take for instance *this*, *both*, *which*, and *my*. *This* shares *th-* with *that* and *the* etc, hence it may plausibly decompose

these questions are close to identical both across determiners and across Germanic. Put another way, different determiners, when looked at the right way, share a lot of internal syntax in common. It is my goal in this dissertation to explore the major regularities in the structure of determiners.

1.1.2 Main claims and purpose

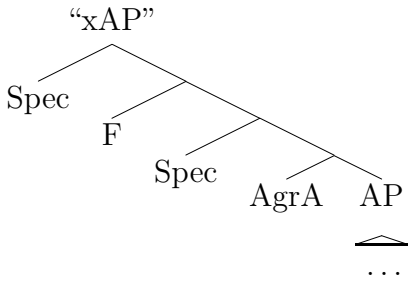
The main claims I am making at a general level can be summarized in a simplified fashion as follows:

- All determiners (other than the articles) consist of an extended adjectival projection, xAP (for the most part)[3]).

  The AP node in (1) may dominate a range of functional projections, including DegP. The F head stands in for a left peripheral head. xAP is not a label, but a informal flexible notion, in the sense that different xAPs can be of different sizes.

  xAP stands for *extended projection of A*, following the convention in Matushansky (2002). Analogously I will use xNP and xVP. AgrA is mnemonic for *adjectival agreement* and corresponds to the head that hosts the so-called "strong" adjectival agreement in Germanic.[4]

(1)



- Determiners (i.e. the relevant xAPs) feature an adjectival stem[5] and a left peripheral (deictic or quantificational) component. The left-peripheral component can either be the head/projection of F in (1), which is sometimes realized as a definite marker, or e.g. a quantificational or deictic element generated within AP in (1) and moved to the xAP left

into *th-* and *-is*. Similarly for *wh-ich*, *m-y*, and plausibly *bo-th*. - But now we end up with the set of morphemes *wh-, -is, m-, -th, th-, -y, bo-, -ich*, every one of which can combine with exactly one other one in a specified order, and no other combinations are possible. This is unlike a set of phrases like *the funny joke*, *a strange story*, *some long song*, but more like *the long song* and *He listen-ed* relative to one another. Putting it this way, the determiners would appear to be rather distinct from each other. Yet, a comparative perspective on Germanic determiners reveals a set of pervasive regularities, importantly both across determiners and across Germanic.

[3]Sometimes what one might call the "determiner" may also includes additional morphemes that are not within the xAP, see note 6.

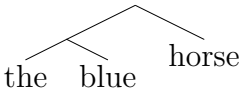
[4]In German, adnominal adjectives exhibit inflectional suffixal morphology whose form is sensitive to the grammatical gender of the noun, to number, Case, and approximately definiteness. The traditional notion "strong" refers to one out of two paradigms, the one in which more overt distinctions are made. The choice of paradigm is determined by a combination of the Case and the (approximately) definiteness properties of the relevant DP.

[5]The notion *stem* here does not refer to a lexical entity but is meant (informally) as the part of structure which suffixes can "attach" to.

periphery.

- Sometimes, (what we perceive as) the "determiner" consists of an xAP and (or: followed by) an indefinite article with which it does not form a constituent, as in e.g. German *m-ein 'my'*.[6]
- The internal structure of determiners is complex but highly regular across (sets of) determiners and across (Germanic) languages.
- Beyond determiners: the pre-adjectival definite marker (unlike the indefinite article) and the adjective are part of a constituent that excludes the noun (on the surface).

(2)



- German oblique (i.e. dative and genitive) case morphology (*-m, -r, -s*) must be syntactically distinguished from strong adjectival/determiner agreement.
- And finally, the bulk of what is traditionally analyzed as syncretism in German adjectival declension is syntactically determined, in the sense that the identity in form reflects the featural identity of the syntactic terminal in the relevant syntactic contexts.

Some of these claims may sound surprising at first blush (but see note 2). I happily admit that at times I have been surprised myself by what I found.

Much of the interest of this work lies, I think, in the individual case studies presented throughout the dissertation. (See section 1.2 for an overview.) The dissertation is not intended as the "final word" on the aspects discussed, but rather as a snap shot of on-going research. Several of the empirical observations and analytical ideas presented in this work still await further study, elaboration and refinement.

My hope is that the dissertation will provide a solid empirical coverage and insight, trigger some gut reaction whether anger or joy, and last but not least, spark some good amount of curiosity and inspiration.

1.1.3 General assumptions and theoretical orientation

The dissertation continues a familiar trend in the generative tradition, which is the experience that upon closer inspection of certain phenomena one finds that there is more syntax than is commonly thought. There are (at least) two aspects to "more syntax." On the one hand, syntactic trees may be larger as a consequence of a more fine-grained syntactic representation (Pollock, 1989; Rizzi, 1997; Cinque, 1999). On the other hand, syntactic derivations may be more complex (Kayne, 2000a, 2005a; Koopman and Szabolcsi, 2000; Koopman, 2003; Julien, 2005). The two traditions often go hand in hand (Cinque, 2005a). In the former tradition, the focus is on syntactic representations, on what exactly the fine-grained heads and projections are, and what their basic order is. In the latter tradition, the focus is on syntactic derivations, on how phrases and words

[6]Note that if one chooses to apply the term "determiner" to *mein*, then determiners do not always form a constituent. See Julien (2002b); Vicente (2007) for discussion on the notion of *word* and constituency.

(Julien, 2002b; Vicente, 2007) are assembled, on the one hand, and what the restrictions and bounds on derivations/movements are on the other (see for instance Kayne (1994); Koopman and Szabolcsi (2000); Abels (2008)). The focus of the present work lies in exploring the derivational patterns that underly morphosyntactic regularities in the domain of Germanic determiners.

I will assume that movement can be remnant movement. Movement is exclusively to the left and to a c-commanding position at the root of the tree, respecting antisymmetry (Kayne, 1994) and the extension condition (Chomsky, 1995). Both principles are assumed to hold throughout the syntactic derivation. Syntactic structures are strictly binary branching (Kayne, 1984). I will not employ head-head adjunction in the syntax proper. Such adjunction is limited to a post-syntactic component, where it may affect pronunciation (see below).

Regarding the trigger of movement I will assume something along the lines of Koopman's (1996) *Principle of Projection Activation* in certain cases.

(3) *Principle of Projection Activation*:
A projection is interpretable iff it contains phonologically realized material at some point in the derivation.
(Koopman and Szabolcsi, 2000, p.189)

There are presumably other triggers for movement, to do with properties/needs of a head in the constituent that moves, or of an attracting head. I will leave the trigger of movement largely implicit.

I will assume a distinction between heads and phrases, whereby heads are terminal nodes and phrases are non-terminal nodes.

With regard to morphology, this dissertation is situated in the tradition begun in Chomsky's (1957) affix hopping analysis of English Tense suffixes and championed by Baker (1988) in the sense that morphological composition is argued to be part of syntax. I will go beyond Chomsky (1957) (and against the lexicalistic standard minimalist view of Chomsky (1995, 1999, 2000)) and push the intuition (shared with the Distributed Morphology tradition (Halle and Marantz, 1993; Marantz, 1997; Harley and Noyer, 1999; Embick and Halle, 2008), and much other recent "micro-comparative" or "nanosyntactic" work by Richard Kayne, Hilda Koopman, Michal Starke, Øystein Vangsnes and others) that the syntax operates on very small pieces, below the "word" level (Julien, 2002b), or to put it dramatically that morphology is part of syntax.

In accordance with this, agreement morphemes are viewed as realizing syntactic Agr heads. There are two prominent ideas regarding the configuration under which an agreement relation is established: Agree (Chomsky, 2000) and Spec-Head (Kayne, 1989; Koopman, 2005). An important difference between the two notions is a matter of locality. Both notions involve the concept of c-command. Under Agree, the agreeing head (the Probe, or "target" of agreement (Kester, 1996b)) needs to c-command the constituent it agrees with (the Goal, or "controller" of agreement (Kester, 1996b)). In Spec-Head, the specifier (controller) c-commands the head (target).[7]

[7]The Spec-Head relation is (typically) geometrically more local in the general sense that nothing can possibly intervene between the two elements. However, the relevant notion of locality in the Probe-Goal relation being relativized (Rizzi, 1990; Chomsky, 1995; Starke, 2001; Jouitteau and Rezac, 2006), a presumably more crucial difference between the two views is a matter of who c-commands whom.

The claims in this dissertation are compatible with either view. In all the instances of agreement that I discuss, either configuration between the Agr head and its controller obtains at some point in the derivation. What is important is the c-command idea, i.e. the (traditional) idea that a c-command relationship is a necessary condition for the target and the controller to enter into an agreement relation. I will assume that morphological agreement in the noun phrase is established in the same way as in the clause, namely between a head and a phrase under c-command. I.e. there is no grammatically relevant notion of "concord" (distinct from agreement).[8,9]

This thesis adopts a strongly comparative perspective, a perspective that has become prominent and proven very insightful in the recent years (Haegeman, 1997; Cinque, 1999; Kayne, 2000a, 2005a; Cinque and Kayne, 2005). Part of the beauty and importance of comparative syntax lies in its capacity to often reveal (given standard assumptions regarding the existence and relevance of a highly constrained universal language faculty) a sizeable amount of structure and inner workings of derivations that would be difficult to detect when looking only at one language.[10] Different languages make different "choices" of what is overtly expressed and what remains silent. Unearthing this unpronounced structure and identifying non-obvious syntactic processes in the domain of determiners is what I'm setting out to do. The question of how the parametric surface differences are to be captured is necessarily a subsequent one, and remains to be addressed in future work.

To give a concrete example, if Colloquial Norwegian (4a) and Swiss German (4b) are good counterparts of each other, then (4c) with silent *HERE* is a better representation of the morphosyntax of (4b) than (4b) itself.

(4) a. det herre huset — Coll. Norwegian
the here house
'this house'

b. di rosä — Swiss German
the rose
'this rose'

c. di HERE rosä

In other words, not all elements in the syntax (atomic or complex) receive a phonetic realization. Some remain silent.

1.1.4 A note on non-pronunciation

The concept of phonetically unrealized elements is a familiar one. The existence of e.g. PRO, VP-ellipsis, Topic drop, are widely recognized as instances in which a piece of syntactic structure

[8] See Kester (1996b); Carstens (2000); Boeckx (2006, among others) for relevant discussion on the issue.

[9] Case (nominative versus accusative) may be a different matter.

[10] A possible heuristic (perhaps a true statement about UG) may be the following:
For any elements α and β, if α and β are syntactically separate (atomic or complex) elements in one language, then α and β are syntactically separate elements in every language.

fails to receive a phonetic realization.[11] But as recent work has shown there may be more silent elements/structure than has been thought, including silent elements without an overt antecedent (Katz and Postal, 1964; Kayne, 2005a, 2006, 2008b; Van Riemsdijk, 2002, 2005; Leu, 2008, among others).

At this point it is not clear whether non-pronunciation of syntactically active material is a unified phenomenon or not. It may well be that non-pronunciation has more than one source, including what might be called a lexical, a positional, a geometric, and a relational one. For concreteness, I will briefly spell out a few candidates. However, it is my impression that we have just begun to appreciate the depth and complexity of syntactic structure, above and especially below the "word" level, and that statements about precise constraints of (non-)pronunciation are, at this point, necessarily highly speculative. A better understanding of the conditions on non-pronunciation will require a better grasp of the extent and kind of unpronounced structure in syntax. The present dissertation is, in this sense, a contribution to the latter. Concretely, while I will argue for the existence of certain unpronounced elements in the syntax, I will remain partly agnostic with regard to the source of non-pronunciation.

Lexical silence Elements may be lexically specified to be silent or, perhaps equivalently, fail to be specified for a pronunciation (Katz and Postal, 1964; Inkelas, 1993; Kayne, 2005a; Van Riemsdijk, 2005). These may well include (perhaps mostly) lexical elements that do not, within the same language, have an exact overt counterpart. In fact, Van Riemsdijk (2005, section 5) argues that silent motion verbs which crucially differ from any overt motion verbs beyond pronunciation must be assumed for Germanic .

Positional silence There are languages, e.g. German, that allow sentence-initial topics to remain unpronounced. This is called *Topic drop* (Rizzi, 1994, 2005). Given that German is V2 (i.e. the finite verb follows a sentence-initial constituent in the matrix clause), and given that German does not generally allow object drop, there is strong evidence that in examples like (5b), the topic is not only pragmatically inferred, but is syntactically present in the sentence-initial topic position. But it receives no phonetic realization.

(5) a. A: Hast du Lust auf *Heidi*? German
have you lust for *Heidi*
'Do you feel like watching *Heidi*?'

b. B: Hab ich schon gesehen.
have I already seen

Hence it is possible that languages have certain positions which (can or perhaps must) remain unpronounced. Kayne (2006) makes a specific proposal to this effect, which is not confined to a certain interpretation of the unpronounced constituent e.g. (as a topic). Concretely Kayne proposes that spell-out systematically fails to see the edge of a phase. On such a view, non-pronunciation is an "automatic consequence of the architecture of derivations." The proposal is attractive in that it provides a partial reason for the existence of non-pronunciation.

[11] See Baltin (2007) for relevant recent discussion.

It remains to be seen whether and how, exactly, the notion of *phase* that is relevant for (non-)pronunciation on Kayne's proposal matches a notion of phase that is relevant in other respects (e.g. semantic interpretation, locality, spell-out/transfer more generally etc.).[12]

Geometric silence A familiar restriction on pronunciation is the so-called *Doubly-Filled-(Comp)* Filter (Chomsky and Lasnik, 1977; Koopman, 1997a).[13] Given the large fine-grained structures of the cartographic tradition (Cinque, 2002; Rizzi, 2004; Belletti, 2004), it may be possible to generalize the DFC to all projections.

(6) *Generalized "Doubly Filled Comp Filter"*:
No projection has both an overt specifier and an overt head at the end of the derivation.
(Koopman and Szabolcsi, 2000, p.4)

A central phenomenon in this dissertation is the case in which the presence of an overt definite marker is responsible for the phonetic absence of a (hypothesized) second definite marker further to the right. (Silent elements are represented in capital letters, following the usage in recent work by Kayne.)

(7) a. the blue car
b. the blue THE car

I will argue that *the blue* in (7) is a constituent that sits in a specifier of the extended projection of the noun (xNP). This invites, at first view, a DFC analysis of the phonetic absence of the second definite marker, which is in D.[14] But this may be misleading. In section 3.4 I will present an argument that the DFC cannot be responsible for these cases.

Another configuration in which the pronunciation of a head is at issue is that of head-head adjunction. Koopman (1996) proposes that under head-head adjunction only one head can be pronounced. This is strongly supported in this thesis. But while I will not make use of head-to-head movement in the syntax, the non-pronunciation of a head under head-head adjunction is a post-syntactic effect. A possible example of such a constraint at work is a restriction on German agreement suffixes. The German dative marker *-m* is suffixed to the first constituent in its phrase (spell-out domain). In (8a) *-m* is suffixed to the definite article, and the following adjective has the agreement suffix *-en*. When there is no definite article however, the dative marker *-m* suffixes to the adjective, which is now the first element in the phrase (8b). (More on this in chapter 7.)

(8) a. mit d-em gut-en Wein German
with the-DAT good-WEAK wine

[12]Lohndal (2008) argues that an adoption of Kayne's proposal combined with the assumption that Force is a phase head accounts for a contrast between exclamatives and *wh*-questions in Norwegian with regard to the overtness of the *wh*-component.

[13]See Starke (2004) for some critical discussion of the Generalized Doubly Filled Comp Filter and possible theoretical consequences.

[14]This is especially tempting if D is regarded as the nominal counterpart of C as in Szabolcsi (1994) and other work, including this thesis.

b. mit gut-em Wein
with good-DAT wine

Notice that the form of the adjective in (8b) is not *gut-en-em* or *gut-em-en* as would be expected. A possible interpretation of this fact is that the presence of the *-m* suffix forces the *-en* suffix to remain unpronounced.

Relational silence The notion of non-pronunciation is, of course, omni-present under the copy theory of movement. If movement involves copying and merger of a copy in one position (typically c-commanding the lower copy) and deletion (effectively including PF-deletion) of the lower copy, then non-pronunciation is extremely pervasive, and one route to licensing it would involve c-command by an identical element.[15,16]

If c-command by an identical element (perhaps within a certain locality domain) is a possible licensor of non-pronunciation, the question arises of what counts as identical, and simultaneously the possibility arises that a c-commanding element can be identical in the relevant respects without being a movement copy.[17] Something of the sort seems to be what prevents the general overt existence of "determiner spreading" (or "polydefiniteness"). Concretely, I will argue (in chapter 3) that definite modified noun phrases like (9a) contain two definite articles. Hence (9a) receives the partial representation in (9b), with silent *THE*.

(9) a. the blue car
b. the blue THE car

The non-overtness of the lower definite article (and in effect every lower definite article within a certain domain, e.g. *the funny THE blue THE car*) is licensed by the highest definite article, under c-command. If either c-command does not obtain, or locality is not respected, the appearance of multiple definite markers is predicated. This is indeed possible, e.g. in Greek (Androutsopoulou, 1996), where the appearance of an additional definite marker is related to a certain interpretive difference with regard to the adjective (concretely *megalo* receives a contrastive focus interpretation in (10b)).

(10) a. to megalo piano Greek
the big piano
b. to megalo to piano
the big the book

The appearance of the additional definite marker and the difference in interpretation should be related, and are related, if we assume that both are due to movement of *to megalo* to a left peripheral focus position, which (by assumption) is outside of the licensing domain for non-pronunciation of the lower definite article.

[15]See Gulli (2003) for discussion of overt doubling of phrasal material, which Gulli argues is related to the failure of c-command by the moved antecedent, i.e. failure to license the non-pronunciation.

[16]Notice that in the case of phrasal movement, the c-command requirement is far from trivial, given that strictly speaking no head in the moved phrase c-commands the lower copy of the phrase.

[17]See Katzir (2007) for relevant discussion.

Mixture route Further possibilities have been proposed that do not directly fit into the categories above but involve some combination. For instance it is thinkable that there are lexical elements which, in addition perhaps to being silent themselves, contain instructions to the phonology such as 'do not pronounce my complement' (Merchant, 2001; Corver and Van Koppen, 2007b).

If prosody is partly based on instructions linked to functional heads, such suprasegmental PF-instructions may be independently motivated.

If, on the other hand, the existence of such instructions on syntactic heads / lexical items, is considered problematic, the relevant effect could be rethought without reference to such PF-instructions, but instead in terms of licensing (or forcing) of extraction of the complement of the relevant head to a silent position of the sort proposed by Kayne (2006).

1.1.5 A note on "Swiss German"

The notion "Swiss German" is really a cover term for an Alemannic dialect conglomerate.[18] There is not one Swiss German, instead there is a large number of dialects which share basic properties, but differ also in many ways on all levels of linguistic description. The variation is probably of a magnitude familiar from micro-comparative work on Northern Italian dialects, Dutch dialects, varieties of Scandinavian and others (see e.g. Poletto (2000); Cinque and Kayne (2005); Corver and Van Koppen (2007a); Vangsnes (2008a)).

There is no standard Swiss German. The language is not usually written. German speaking Switzerland is characterized by a medial diglossia (Kolde, 1981).[19] The spoken medium is Swiss German, the written medium is Standard German. Swiss German speakers (unlike Germans) commonly consider Standard German (especially the variety spoken in Germany) an L2.[20]

Swiss German and Standard German are not immediately mutually intelligible. And whether Swiss German dialects among one another are generally immediately mutually intelligible is not clear either. Rather there is a sort of an intelligibility spectrum. The dialects of the major urban dialect centers (Zürich, Basel, Bern, and St.Gallen) are strongly present in the media (radio and television), furthermore the country is small and people get around, such that these major dialects seem readily intelligible to (presumably) everyone. On the other hand there are dialects (some on the verge of extinction) which speakers of other dialects often find a little harder to understand. A good example are the dialects spoken in the North-Eastern valleys of the Canton of Wallis, which are often found to be more difficult to understand by speakers of other Swiss German dialects.

The Swiss German described in this thesis is that spoken by me, which is (I believe) the typical

[18] A map with linked sound examples of regional variants can be found at http://www.dialekt.ch/default.htm .

[19] The situation of present day German speaking Switzerland differs importantly from the classic diglossia model of Ferguson (1959) in that the spoken varieties, the "dialects," have a high prestige. The sociolinguistic situation of German speaking Switzerland is excitingly complex. For some recent discussion see the literature cited in note 20.

[20] The accurate characterization of the status of Standard German and the linguistic situation in German speaking Switzerland (as *diglossia* or *(social) bilingualism*) is the matter of some debate. For relevant discussion of the (socio-)linguistic profile of German speaking Switzerland see Ammon (1995); Siebenhaar and Wyler (1997); Scharloth (2004); Hägi and Scharloth (2005) and the literature cited therein.

late 20th century variety of the Swiss German of Altdorf, capitol of the Canton of Uri.[21] Uri, with a population of 33'000 citizens, located in the Pre-Alps of Central Switzerland, one hour South of Zürich, is one of the three founding cantons of Switzerland, which swore an oath of brotherhood in 1291. Altdorf, the place where William Tell famously shot the apple off his son Walterli's head (according to the legend, immortalized in Friedrich Schiller's classic play *Wilhelm Tell*), constitutes the socio-economic, cultural, and political center of the canton.

(My) Altdorf Swiss German is a rather unmarked/neutralized variety of Swiss German. The phenomena and judgments I am representing and using in this thesis should be largely shared across most varieties of Swiss German. Therefore I will boldly call them "Swiss German" rather than giving an obscure label. In the instances in which I am aware of relevant dialectal variation (which for the most part I gratefully owe to comments from Henk Van Riemsdijk p.c.) I will signal this in the usual way.[22]

1.2 Organization of the dissertation

1.2.1 Chapter 2: *D*-determiners

Chapter 2 discusses definite demonstratives and the dual quantifier *both*. I refer to these as *d*-determiners, since they feature the definite morpheme *d-*.[23]

(11) a. d-er Hund (with stress on *der*) German
that dog

b. d-ie beiden Hunde
the both dogs

I argue, on comparative grounds that (definite) demonstrative determiners are composed of a definite marker and a deictic component (often a sometimes silent counterpart of English *here* or *there*). In the typical case, the combination exhibits adjectival agreement. In part following the traditional view that *th-* and *-is* in *this house* are part of a constituent that excludes the noun, and in part on the grounds that in some languages demonstrative determiners, containing a definite marker morpheme, co-occur with yet another definite marker morpheme, I propose the

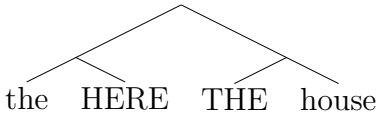
[21] My dialect is distinct from the traditional dialect of Uri, which has been loosing much of its earlier prominence in the capitol. Hence the Swiss German in this thesis is not *Ürnertitsch* ('Uri dialect').

[22] Henk is a speaker of a variety of Zürich German.

[23] While *d-/th-* will be called definite marker (pace Bernstein (2008)), the distinction between *d*-determiners and non-*d*-determiners does not fall together with that between definite and indefinite determiners. Instead the definiteness of a "noun phrase" can be different toward the inside (i.e. within the c-command domain of the determiner) and toward the outside (i.e. with regard to referential properties, (in)definiteness effects). This may be at issue in the very interesting indefinite use of English *this* as in *There's this guy I was telling you about.*, which Mark Baltin p.c. reminded me of. A plausible proposal would be that the phrase *this guy* in the example is embedded in a silent layer of syntactic structure that makes it seem indefinite toward the outside for certain purposes, perhaps not unlike French *Niko boit de l'eau. 'Niko drinks water'* but "literally": *'Niko drinks of the water'*.

structure in (12), with silent *HERE* and a silent definite marker as the typical structure for definite demonstratives.[24]

(12)

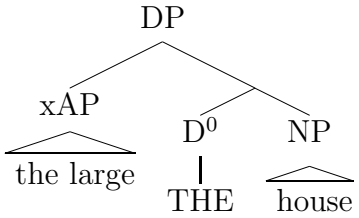


The dual quantifier *beid-* can surface DP-initially or preceded by a definite marker. This "dual nature" provides insight into the structure of noun phrase modification/ determination. The properties of the dual quantifier *beid-* in Swiss German and German will be shown to strongly support the proposal in (12).

1.2.2 Chapter 3: Determiners, adjectives, and adjectival agreement

In chapter 3 I extend the structural claim in (12) to adnominal adjectives in definite DPs more generally.[25] The pre-adjectival definite marker is part of the extended projection of the adjective (xAP) and licenses the non-pronunciation of the definite article in D^0.

(13)



This part will include some discussion of so-called Scandinavian "double definiteness," and Greek "determiner spreading."

The claim that the pre-adjectival definite marker is part of the xAP (1) is strongly supported by the distribution of adjectival agreement in German and Swiss German (and more generally in Germanic). The concrete proposal I will make, in part based on the insightful discussion in Milner and Milner (1972), is schematized in (14).

(14) a. Def: $[_{xAP}$ *d-* ... AgrA ... Adj ...]

b. Indef: $[_{xAP}$ Adj ... AgrA ... Adj ...]

The left periphery of the xAP can be lexicalized in one of two ways. Either a *d-* morpheme is merged there (14a), or the AP moves to the left periphery of the xAP (14b). The effect is, of course, that when *d-* is merged, the adjective will follow the AgrA morpheme, and when *d-* is not merged, it will precede it, as desired.

(15) a. d-er gut-e Wein German
the-AGRA good-WK wine

[24]The first part of this chapter is an elaboration on Leu (2007c).

[25]This chapter elaborates on ideas in Leu (to appear).

b. (ein) gut-er Wein
(a) good-AGRA wine

This, I claim, is the basic mechanism behind the weak/strong adjectival declension alternation in Swiss German, German, and beyond.

1.2.3 Chapter 4: Determiners as relatives

The proposal in chapter 3 has the implication that adjectival modification involves a relativization structure. Chapter 4 discusses some of the issues that may arise. The idea that adnominal adjectives derive from relative clauses is a traditional one that goes back at least to Chomsky (1957) and was formalized in Smith (1961) in terms of *whiz*-deletion. The proposal was later revived in Kayne (1994) and was extended to account for Greek determiner spreading by Alexiadou and Wilder (1998). A stumbling block (in the literature) for a generalization of this idea to all adnominal adjectives is the partial mismatch between the set of adjectives that occur in predicate position in a copular sentence and the set of adjectives that occur in adnominal position. Concretely, there are adjectives like *former* that cannot occur in predicate position. Hence relativization out of a copular sentence followed by *whiz*-deletion is most likely not the right analysis of e.g. *the former president*. I conclude that the structure that the modified noun relativizes out of is not a copular sentence.

Toward the end of chapter 4 I illustrate how the relativization approach I'm advocating may feed into a cartographic representation of the Cinquean sort.

1.2.4 Chapter 5: *Was für* a determiner

Chapter 5 takes us back to determiners with a detailed discussion of the basic structure of the Germanic *what for* construction (17).[26] *What for* is argued to be a syntactically complex modifier featuring a silent functional nominal and a *wh* component. The functional nominal is sometimes silent (represented as *SORT* in (16)).

(16) $[_{QP}$ what] for $[_{fN}$ SORT]

There are two variants of *what for*. Both are available in Swiss German, as represented in (17).

(17) a. **adj variant**
was für ig s auto — Swiss German
what for ADJ AGR car
b. **inv variant**
was für əs auto
what for a car

The INVersion variant (17b) involves movement of the *what for* phrase to the left of an indefinite article, akin to English type degree fronting, as in e.g. *How big a book?*. The ADJective variant

[26] The discussion is an elaboration on Leu (2008) and departs from that paper in certain respects, while keeping to what I think of as the core insights in the paper.

(17a) does not involve this movement step, but instead exhibits adjectival morphology *-ig* and AgrA.

These two variants are attested across Germanic. (In some languages, e.g. German, *what for* only allows one of the variants.)

The derivation of either variant involves movement of a constituent containing *what* and *for* (and presumably silent *SORT*), but not the noun (*auto* in (17)). These components are part of the xAP, but they are syntactically independent, which is witnessed by the fact that they can be separated from each other by sentential material (18b).

(18) a. Was für ein Buch hast du gelesen? German
what for a book have you read
'What kind of book did you read?'

b. Was hast du für ein Buch gelesen?
what have you for a book read
'What kind of book did you read?'

The derivation of so-called *what for* split (exemplified in (18b)) involves extraction of *what* from the xAP.

1.2.5 Chapter 6: Non-*d*-determiners

What for is an example of a non-*d*-determiner. It is a particularly good example in that it manifests an unusually high number of morphosyntactic properties overtly that provide clues with regard to its internal syntax. In chapter 6 I review a number of other non-*d*-determiners, arguing that they have largely the same internal syntax as that observed for *what for*. This set of non-*d*-determiners includes (but is not limited to) *welch- 'which', solch- 'such'* possessive determiners (e.g. *mein- 'my'*), and the negative determiner *kein- 'no'*.

These share with *what for* the property of featuring a functional nominal and a quantificational or deictic component. In the case of negative *kein 'no'* and the possessive determiners, there is some evidence that, as with *what for*, the quantificational/deictic component can extract from the modified xNP. That means that the components of determiners are accessible to further syntactic operations, and hence that the derivation of determiners, as discussed here, is syntactic.

Secondly, they are also xAPs, and they too exhibit an ADJ variant and an INV variant, both within languages and across languages.[27] As in *what for*, the ADJ variant is never morphologically richer (though often poorer) than the INV variant. This seems to be a valid descriptive generalization (a tentative rationale for which is sketched at the end of chapter 5).

1.2.6 Chapter 7: Mixed declension and syntactically determined syncretism

An important issue that arises from the treatment of the weak/strong adjectival declension alternation proposed in chapter 3 is that of the "mixed declension" with so-called *ein*-words. This

[27] An exception is the negative determiner, for which I have not found a convincing example of the ADJ variant.

will be addressed in chapter 7, after having discussed the non-*d*-determiners and derivation of *ein*-words in chapters 5 and 6.

The issue is this: The dative and genitive marker morphemes *-m, -r, -s* do not have the distribution predicted for AgrA in chapter 3 (cf. (14b)). Hence either the proposal in (14) is incorrect, or these morphemes are not instances of AgrA and their distribution is governed by independent principles.

In chapter 7 I will motivate the idea that indeed the dative and genitive markers are not instances of AgrA, and hence do not belong in the strong adjective/determiner declension paradigm (contrary to the standard view). I will attempt an answer to the question of what they are and discuss some consequences for the treatment of the syncretism patterns observed in German adjectival and determiner declension.

The discussion will remain sketchy. If the sketch is on the right track, the bulk of purported syncretism in the (traditional) German and Swiss German adjectival/determiner declension paradigm is not syncretism.[28]

1.2.7 Conclusion

Chapter 8 summarizes the main findings, discusses some consequences, and concludes the dissertation.

[28]Syncretism is a *situation where several abstract morphemes have the same exponent* (Embick and Halle, 2008). My claim in chapter 7 is that in the relevant cases there is only one abstract morpheme where the traditional view posits several (different) abstract morphemes with the same exponent.

Chapter 2

Definite determiners

2.1 Introduction

I will begin by discussing two *d*-determiners, i.e. determiners featuring the definite marker morpheme *d-/th-*, namely definite demonstratives[1] and the dual determiner *beid- 'both'*. (Non-*d*-determiners are the subject of chapter 6.) The discussion of *d*-determiners will lead beyond the realm of determiners and into the structure of adjectival modification and the syntax of adjectival agreement, discussed in subsequent chapters.

I will start out with the standard assumption that demonstratives are phrasal and occupy Spec,DP. Observing that such demonstratives contain a definite marker morpheme *d-/th-*, it is clear that the *d-/th-* morpheme is not restricted to occurring in D^0. Instead *d-/th-* can be part of a phrase that sits in Spec,DP. While this is uncontroversial, the consequences are far reaching, as we will see. I propose that such demonstratives have the structure and elements bracketed in (1) (where xAP stands for *extended projection of A*, AGRA stands for (strong) adjectival agreement, and capitalization as in *HERE* indicates non-pronunciation, following the practice in Kayne's recent work).

(1) $[_{xAP}$ the-AGRA HERE] N

Part of this proposal echoes another wide spread consensus, which is that demonstratives are adjectival in some sense. Taking this seriously means that there is an adjectival structure involved in (1), hence the adjectival agreement. Evidence from a number of languages suggests that the modifier involved in demonstratives is (or can be) a counterpart of English *here* or *there*. Hence *d*-demonstratives exemplify a structure in which an adjective and the definite marker are part of one constituent which sits in Spec,DP.[2]

In section 2.3 the dual quantifier *beid- 'both'* is discussed. It will be shown that significant parts of the proposal for demonstratives, notably the structure in (1), extend to *beid-*. *Beid-* is

[1] I primarily discuss demonstratives that are segmentally homonymous with the definite article(s). These are sometimes referred to as "strong articles." Morphologically more complex demonstratives such as German *dies-* involve a more complex structure.

[2] *HERE* may subsequently move out of that constituent.

especially interesting for having three distinct surface positions: either low in the xAP (under a *d-*), or in the left periphery of xAP still preceding the noun, or Q-floated. Since *beid-* is scopally active, this provides important clues for understanding the structure of adjectival phrases.

2.2 Demonstratives

2.2.1 Background and proposal

Demonstratives[3] have been suggested to be complex/phrasal and to involve an adjectival component and a definite marker morpheme (Dryer (1992, p.120ff), Delsing (1993, chapter 4.3), Chomsky (1995, p.338), Bernstein (1997, p.93), Elbourne (2005)[4], Julien (2005) among others). It has also been proposed that demonstratives are generated low and move to the left periphery of the DP (Giusti (1994, 1997), Brugè (1996), Bernstein (1997), Vangsnes (1999), Ihsane and Puskás (2001), Roehrs (2006)). I will come back to this movement aspect in chapter 4.

I agree with all of this (while disagreeing with some details of the individual proposals). In fact, I propose that demonstratives are morphosyntactically complex, spelling out different heads in an extended adjectival projection. The elements are minimally a deictic/anaphoric modifier, an agreement head (AgrA), and a definite marker.[5]

The structure I argue for is given in (2), with some aspects set aside until chapter 3.[6] A definite adjectival modification structure, xAP in (2), sits in Spec,DP where it licenses the non-pronunciation of the head of DP, D^0, host of the overt definite marker in unmodified definite DPs in e.g. Swiss German.[7] The deictic modifier *HERE* moves (across the inflected definite marker *d-i*) to a higher specifier in the xAP where it is licensed to be unpronounced.

(2) a. d-i rosä — Swiss German
the-AGRA rose ("this rose")

[3]I refer here to definite adnominal demonstratives. For a typological overview of different kinds of demonstratives see Diessel (1999).

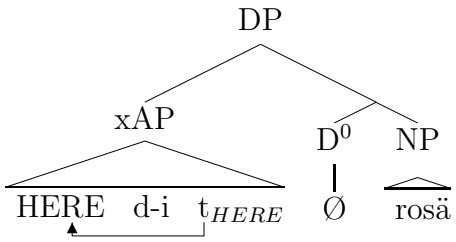
[4]Elbourne proposes a semantics for *this* in which the denotation of *this* differs from that of *the* only in having an additional index and a proximal feature (see also Giusti, 1997; Vangsnes, 1999, part 1). In the spirit of the present paper, these additional components are suggested to be contributed by a demonstrative modifier counterpart of *here/there*.

[5]I refer to the Germanic *d-/th-* morpheme as definite marker. See Bernstein (2008) for an alternative view. For relevant discussion see also recent work by Michael Putnam on Pennsylvania German demonstratives.

[6]In chapter 4 I will argue that adjectives involve a relativization structure, hence there is a trace/copy/double of the noun inside the xAP.

[7]The demonstrative xAP may also sit in a higher specifier in the xNP, from where it licenses the non-pronunciation of the definite marker in D^0, see section 3.4

b.



This opens the door for the possibility of having "imitation demonstratives," i.e. xAPs whose modifier stem is not a counterpart of *HERE/THERE*, but some other semi-functional lexical element whose contribution to the overall meaning comes close to a demonstrative of the *HERE/THERE* sort. In section 2.2.8 I will discuss Swiss German *säb 'same/that'* which is a case in point. The conclusions to be drawn from the discussion of *säb* are entirely in tune with the overall conclusions in this chapter.

2.2.2 A silent deictic adjective

German: the basic issue

German has the following pair (underlining indicates stress):

(3) a. der Tisch German
the table

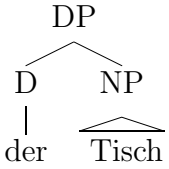
b. der Tisch
this table

(3a) is a plain definite DP. (3b), with stress on *der*, has a demonstrative interpretation. The only overt formal difference is the stress pattern. Segmentally the two DPs are identical.

The question I will address in this section is whether this is an instance of lexical ambiguity or structural ambiguity, i.e. assuming a structure like (4b) for (3a), does (3b) have the same structure?

(4) a. der Tisch
the table

b.



Evidence from Scandinavian and Swiss German strongly suggests that (3b) is structurally more complex than (3a).[8]

[8]Presumably the different stress pattern is, at least in part, due to the structural difference.

Scandinavian

Vangsnes (1999, part 2) and Julien (2005, chapter 4) note that prenominal determiners in Scandinavian are formally identical to demonstratives.[9] In plain definites, Swedish and Norwegian (and Danish) do not have a DP-initial definite marker[10], but only a nominal suffix which is usually glossed *DEF* (5a). In the presence of an adjectival modifier, on the other hand, these languages exhibit a DP-initial definite marker (followed by inflection[11]), as in (5b).[12] Note that the example is not (necessarily) demonstrative. In (5c) a prenominal definite marker (followed by inflection) is present, just as in (5b), but without an overt adjective. The example is acceptable, but its interpretation is obligatorily demonstrative (examples from Vangsnes (1999, p.120)).

(5) a. hus-et — Norwegian
house-DEF

b. de-t svarte huset
that/the black house-DEF

c. de-t huset
that house-DEF

There are different ways of analyzing this description. One possibility is to say that Norwegian has two quasi-homophonous[13] lexical items *de-(t)*: one a plain definite marker (restricted to occurring in modified DPs) and the other a demonstrative (Julien, 2005).

Another way of thinking about (5), which I will pursue, is to assimilate (5c) to (5b). Considering that (5b) is not (necessarily) demonstrative, and further that DP-initial *det* is legitimate only in the presence of an adjectival modifier, I propose that in (5c), there is an unpronounced adjectival modifier present which contributes deicticity, which in composition with the definite marker returns a demonstrative (Giusti, 1997; Vangsnes, 1999; Rooryck, 2003; Elbourne, 2005).

The (segmental) ambiguity of *det* in (5b) between a demonstrative reading and a plain definite reading is akin to the facts in (3) from German. I propose that on the demonstrative reading of (5b) there are two adjectival modifiers, one of which is silent and contributes deicticity. (The other one is *svarte*.)[14]

[9]For indispensable help with Scandinavian I am very grateful to Terje Lohndal, Øystein Nilsen, and Øystein Vangsnes.

[10]But see Vangsnes (1999, part 1, 6.2.) for discussion of intensifying noun phrases.

[11]In present day Norwegian, the inflection *-t* on the definite marker is only orthographic.

[12]In Danish (unlike Swedish and Norwegian) when an initial definite marker is present, the DEF suffix on the noun obligatorily disappears.

[13]They are phonetically distinct in that the demonstrative is stressed and has a full vowel, whereas the article has an unstressed schwa.

[14]Note that there is also a more complex looking (proximal) demonstrative determiner. Consider the Swedish examples (Delsing, 1993; Vangsnes, 1999; Hughes, 2003).

i. denna bil — Swedish

ii. detta hus

In written Swedish this kind of demonstrative does not co-occur with the definite N-suffix (Vangsnes, 1999, p.122 note 19). In Colloquial Swedish and in Norwegian it does.

Swiss German

The argument from Norwegian (5) can be developed in a parallel fashion on the basis of Swiss German. Swiss German has a prenominal definite marker, independently of whether or not an adjectival modifier is present (6a). In the (feminine) plain definite DP in (6a) the definite marker is not followed by overt inflection. In the presence of an adjective however, the definite marker is obligatorily followed by overt inflection (6b). In Leu (2001) I called the contrast in (6a) versus (b) the "d/di-alternation".[15]

(6) a. d rosä — Swiss German
the rose

b. d-i rot rosä
the red rose

c. d-i rosä
'this rose'

If the definite marker is followed by this inflection in the absence of an overt adjectival modifier, as in (6c), the DP receives a demonstrative interpretation.[16]

I conclude that (A) in (6c) there is an adjective present, albeit unpronounced, accounting for the presence of *-i*, and (B) this adjective is demonstrative (i.e. it contributes the deictic component), accounting for the interpretation. This is of course exactly parallel to the situation in Norwegian as described above.

---

iii. denne bilen — Norwegian

iv. dette huset

It may be conceivable that the middle consonant reflects (strong) agreement with the head noun, whereas the final vowel is weak agreement. If so, the internal structure of these is presumably *[$_{xAP}$ den ADJ-*WK*]* and *[$_{xAP}$ det ADJ-*WK*]* respectively. However, Øystein Vangsnes p.c. points out to me that the ending on the proximal demonstrative and the weak adjectival agreement are not always identical across Swedish and Norwegian dialects. Hence an analysis would have to be more involved.

[15]Penner and Schönenberger (1995) discuss the alternation in terms of "*expletive* determiner" versus "*substantive* determiner."

[16]In some dialects (6c) is not acceptable. Instead the demonstrative must have a strong form *diä 'this.*FEM*'* (Henk Van Riemsdijk p.c.). In my dialect both forms co-exist, and both are compatible with both a proximal and a distal interpretation. The two variants differ with regard to emphasis.
It should be noted that the parallel between (6b) and (6c) obtains in the feminine singular and in the plural, but not in the masculine or neuter singular. In the masculine and neuter singular only the strong demonstrative is possible.

	plain def.	pre-adj. def.	weak dem.	strong dem
mas	də/dr	də/dr	-	dɛ
neu	(t)s	(t)s	-	das
fem	d	di	di	diä
pl	d	di	di	diä

Colloquial Slovenian

Very similar is Colloquial Slovenian (henceforth CS).[17] CS has an invariant pre-adjectival definite marker *ta* (Marušič and Žaucer, 2006). CS, like Mld Scandinavian, has no DP-initial definite article in non-adjectival contexts.[18]

(7) a. ta nov pes — Coll. Slovenian
the new dog (nominative)

b. ta frišn pofarban bicikl
the freshly painted bike (nominative)

c. * ta svinčnik
the pencil

Ta is restricted to occurring in adnominal contexts, i.e. it cannot precede adjectives in predicate position.[19] (Hence it has partially the distribution of adjectival agreement in (most of) West Germanic.[20])

CS also has a demonstrative determiner which (in the nominative) is homophonous with the pre-adjectival definite marker *ta*, modulo stress (cf. Mld Scandinavian and German, discussed above). Hence while a plain definite DP is not introduced by *ta* (8a), *ta* can be directly followed by the noun in which case it must be stressed and receives a demonstrative interpretation (8b).

(8) a. * ta svinčnik — Coll. Slovenian
the pencil

b. tá svinčnik
this pencil

The true nature of demonstrative *tá* is revealed once we switch to non-nominative DPs. CS adjectives inflect for case, while the pre-adjectival definite marker *ta* does not.[21]

(9) a. ta nov pes — Coll. Slovenian
the new dog (NOM)

b. ta nov-ega psa
the new-GEN dog.GEN

[17] I'm grateful to Lanko Marušič for clarification on certain points. All CS examples are from Marušič and Žaucer (2006) and Lanko Marušič p.c.

[18] Marušič and Žaucer (2006) note that Scandinavian has a DEF suffix, and argue that this indicates that the two phenomena are distinct. I don't think this is an argument against a unified approach. (Note that "definite marker" in the present work is largely identified with the Germanic *d-/th-* morpheme, which is conspicuously missing in the definite suffix in Scandinavian.)

[19] More precisely, when it precedes an adjective in predicate position, then the adjective is modifying a (possibly null) noun (cf. Marušič and Žaucer (2006, section 1.2)), hence the adjective is not in predicate position but instead the DP containing it is.

[20] Or more strongly put, it seems to occur in the same set of adjectival phrases as the weak adjective agreement in Germanic, i.e. in definite adnominal contexts.

[21] This contrasts with German and Greek where the pre-adjectival definite marker is inflected.

c. ta nov-emu psu
the new-DAT dog.DAT

Comparing the case inflection on adjectives with that on demonstrative *tá*, we discover that they are identical.

(10) a. tá pes — Coll. Slovenian
this dog (NOM)

b. t-ega psa
this-GEN dog.GEN

c. t-emu psu
this-DAT dog.DAT

This strongly suggests an analysis along the lines of (11), where demonstrative *tá* is really the preadjectival definite marker *ta* combined with a silent adjective, which contributes deicticity, akin to what we saw for Germanic above. The representation of the silent deictic adjective as *HERE* will be motivated shortly (where I will also argue that silent *HERE* is in a higher position than that represented in (11)).

(11) a. tá-HERE pes — Coll. Slovenian
this dog (NOM)

b. t-HERE-ega psa
this-GEN dog.GEN

c. t-HERE-emu psu
this-DAT dog.DAT

Hence the situation in CS strongly supports the present proposal.

In sum, morphologically, the DPs in (5c), (6c), and (11) look as if there were an adjective present. Yet there is no overt adjective there. Semantically, these DPs differ from plain definites in being demonstrative. I conclude that (5c), (6c), and (11) feature a silent adjective which has a deictic interpretation.

2.2.3 Silent *HERE/THERE*

In this section I will address the question of what lexical item the silent deictic/demonstrative modifier corresponds to.

Scandinavian *den her*

Colloquial and dialectal varieties of Mainland Scandinavian have demonstratives that are overtly composed of the pre-adjectival definite marker and a counterpart of English *here/there* (Holmes and Hinchliffe, 1994).

(12) a. det här — b. det där — Swedish
the here "this one" — the there "that one"

In some varieties this demonstrative *here/there* carries adjective-like inflection (Bernstein (1997, p.90), Vangsnes (2004) and Øystein Vangsnes p.c., Julien (2005)):[22]

(13) a. den her(r)-e klokka — Coll. Norwegian
the here-INFL watch-DEF

b. det der(r)-e huset
the there-INFL house-DEF

Hence in these varieties of Scandinavian, the definite demonstrative is overtly composed of a pre-adjectival definite marker and an adjectival variant of a counterpart of English *here/there*.[23]

Afrikaans *hier-die*

Afrikaans has demonstratives composed of counterparts of the same elements, but in a different order (Donaldson, 1993, and Levi Namaseb p.c.).

(14) a. Ek het hier-die huis gebou. — Afrikaans
I have here-the house built "I built this house."

b. Ek het daar-die man gesien.
I have there-the man seen "I saw that man."

In (12) through (14) the deictic component of the demonstrative is contributed by the counterparts of *here/there*.

Recall the contrast between plain definites and demonstrative DPs in Swiss German and Norwegian repeated in (15) and (16) respectively.

(15) a. di rosä — 'this/that rose'
b. d rosä — the rose
c. di rot rosä — the red rose

(16) a. det hus-et — the house-DEF — 'that house'
b. hus-et — house-DEF — 'the house'
c. det svarte hus-et — the black house-DEF — 'the black house'

[22]Fischer 1960 p.226ff gives the following example from the Entlebuch dialect of Swiss German (my glosses, TL):

i. die daa Fròu
this here woman

ii. das daanege Hüüsli daa
this here.ADJ.AGR house.DIM here

These are not readily acceptable to me. Henk Van Riemsdijk (p.c.) reminds me that Swiss German also allows

iii. das da daa
that here here

with noun ellipsis, which is fully acceptable to me.

[23]Øystein Vangsnes p.c. clarifies that the gemination of the consonant in (13) is likely phonological, hence the segmentation in (13) which differs from that in Leu (2007c) and the sources used there.

The definite marker in the demonstrative (a) examples is identical to the one in the (c) examples (modulo stress), which contain an overt adjectival modifier, and distinct from the ones in the (b) examples, which lack an adjectival modifier.

While in (12) through (14) deicticity is contributed by an overt counterpart of *here/there*, I propose that in (15a) and (16a) deicticity is also contributed by a counterpart of *here/there*, albeit a silent one *HERE/THERE*

Swiss German *änä*

According to Weber (1964) there used to be demonstrative *äne* in Zürich German, related to German *jen-*.[24] *Äne* exhibits strong adjectival inflection (i.e. determiner inflection) (17).

(17) % än-es Bächli Old Zürich German
LOC-AGRA stream.DIM
'that little stream'

Note that there is no (overt) definite marker morpheme present.[25] The example is interesting also in that it provides an example from Swiss German in which a locative component part of a demonstrative is overt. The absence of overt *d* here will be taken up in section 2.2.8 on the identity demonstrative *säb 'same'* and in some more detail in section 2.3 on the dual quantifier *beid- 'both'*. In my Swiss German, only the comparative (18a) and superlative (18b) forms exist as adnominal modifiers.[26]

(18) a. ts änn-er-ä bächli Swiss German
the LOC-COMP-WK stream.DIM
'the little stream that's further away' (out of two little streams)

b. ts änn-er-scht-ä bächli
the LOC-COMP-SUP-WK stream.DIM
'the little stream that's furthest away' (out of a number of little streams)

[24] See also Fischer (1960) and Studler (2001).

[25] This is similarly possible in the Trøndersk dialect spoken in Central Norway. (Examples gratefully due to Kristin Eide p.c.)

i. herre filmen Trøndersk Norwegian
here film.DEF 'this film'

ii. derre kartet
there map.DEF 'that map'

[26] It is noteworthy also that the superlative (18b) overtly features the comparative morpheme as a component. This is of course well known for Romance, yet in Germanic it overtly obtains only in a small subset of superlative configurations/items, including German *äusserst 'most/outward-most'*.

Änä exists as a locative reinforcer (19a-c), perhaps comparable to French *-bas* in *là-bas*.[27] It also exists as part of a locative preposition (19d) (where the final *-t* may be a definite marker).[28]

(19) a. det änä — Swiss German
there over-there

b. dänä
'over there / on the other side'

c. im hüttli änä
in.the.DAT shed.DIM over-there
'over there in the shed' (notice the scope!)

d. änet əm fluss
across the.DAT river

The use of (basically) locative morphemes in demonstratives, and their compositional complexity is evident beyond Indo-European.

[27]The meaning of *änä* is hard to pinpoint down. When it combines with *d*, which I assume is the definite marker, to *dänä*, a good translation into English would be *over there*. Assuming compositionality, the meaning of *änä* could well be a combination of *-ere* in *there* with *over*, but crucially without *th-*. This combination is ruled out syntactically in English, but not, it seems, in Swiss German. Mainland Scandinavian seems to have the same construct: *dänna 'over-there'* (Lilley, 2000).

[28]Interesting is the following pair.

i. dänä im hüttli — Swiss German
there-over-there in-the shed

ii. im hüttli (%d)änä
in-the shed over-there

dänä is presumably really *det änä 'there over-there'*. Possibly *[im hüttli]* moves to the left of *dänä* licensing the non-pronunciation of *d-*, obligatorily so for some speakers (e.g. me), "optionally" for others (e.g. Henk van Riemsdijk p.c.). NB *änä* does not modify *hüttli*, but rather vice versa, i.e. both (i) and (ii) are better matched by English *'over there in the shed'* than by *'in the shed over there'*.

Japanese *ko-no*

Important aspects of the present proposal seem to generalize beyond Germanic[29], even beyond Indo-European. Consider for instance Japanese.[30,31]

Japanese has the following locative expressions.

(20) a. ko-ko — Japanese
here

b. so-ko
there

c. a-so-ko
there$_{far}$

d. do-ko
where

The suggested morphological decomposition should not be controversial. Hence *ko* is a morpheme. Transposing Kayne's (2004) proposal that the location component of English locative *here* is due to a (silent) nominal *PLACE*, let me suggest that *ko* is a reasonable match for some of the content of *PLACE*. Hence we get the following decomposition:[32]

(21) a. ko-ko — Japanese
here-place

b. so-ko
there-place

c. a-so-ko
far-there-place

[29]Welsh and Irish form demonstrative noun phrases by means of a pre-nominal definite article and a post-nominal reduced form of a counterpart of *here* (Amanda Michelle Dye and Jon Brennan p.c.)

i. an fear seo — Irish
the man.SG here
'this man'

ii. an fear sin
the man.SG there
'that man'

[30]For indispensable help with Japanese I am grateful to Sarah Nakamaru, Jason Shaw, Yuji Takano, and Hiroko Yamakido.

[31]A counterpart of *here/there* as building block of demonstratives is also attested in Australian languages (Julie Legate p.c.), and in the native American language Kiowa (Harbour, 2007) for instance.

[32]Let me set aside two questions: (i) the problem of *ko* being glossed both *here* and *place*, and (ii) the fact that English has *-re* in all of these, suggesting that *-re* is a separate morpheme, plausibly a genitive marker cf. other work on possession and locatives Aboh (to appear); Terzi (to appear). See also chapter 7 for relevant discussion. Further discussion of this morpheme *-re* may want to take into account the *-r* in English *yonder* and *hither*, pointed out to me by Henk van Riemsdijk p.c.

d. do-ko
where-place

Consider now Japanese demonstratives. A morpheme *no* (plausibly a genitive marker, cf. footnote 32) is suffixed to *ko* etc. (cf. German *die-s-*, and English *thi-s*).[33]

(22) Japanese

a. ko-no hon
this book

b. so-no hon
that book

c. a-no hon
that$_{far}$ book

d. do-no hon
which book

If the decomposition in (21) is on the right track, then the Japanese demonstratives contain the counterpart of English *here/there* etc. (22) then suggests that the Japanese way of saying "this book" is something like "book of here."

The situation found in Japanese hence strongly supports the present analysis which decomposes demonstratives such that one component is an adjectival counterpart of deictic *here/there*.

2.2.4 The position of silent *HERE*

In this section I will tackle the question of where silent *HERE* is. When *HERE* is silent, we do not have direct access to its position relative to other elements. One possibility is to assume that it is in the same position as its overt counterpart in (12), (13), i.e. to the right of the definite article. However, it is possible that non-pronunciation is in part syntactically determined (Kayne, 2006), in which case silent *HERE* would not be in the canonical position of attributive adjectives.

[33]Interestingly, the forms are different depending on whether they are accompanied by a noun (i.e. used as determiners) or whether they are used as pronouns.

i. Japanese

a. ko-re
this

b. so-re
that

c. a-re
that$_{far}$

d. do-re
which

It is not immediately clear what *-re* is. The contrast is reminiscent of English *your book - yours* ; *her book - hers*. Cf. also the discussion of N-ellipsis in Corver and Van Koppen (2007a). I will leave a more detailed investigation for future work.

Topic Drop A case in point is German Topic Drop (Rizzi, 1994, 2005). In Colloquial German it is possible to not pronounce a topic, but only when it is syntactically topicalized, i.e. moved into the pre-V2 position.

(23) a. Das/_ hab ich schon gelesen. German
TOPIC have I already read

b. Ich hab das/ *_ schon gelesen.
I have this/ _ already read

German is verb second in main clauses. Hence, the idea that the topicalized direct object in (23a) is syntactically present is strongly suggested by the fact that the finite verb is sentence initial as far as overt material goes.

MUCH enough $\mathbf{t}_{MUCH}$ Another example is discussed in Kayne (2006). Kayne notes that there is a correlation between two properties with regard to the English degree word *enough*. *Enough* is exceptional among English degree words in the following respects. Firstly, *enough* follows the adjective it modifies, rather than preceding it.

(24) a. This is good enough /*enough good.

b. This is too/so/how good /*good too/so/how...

The second property is that *enough* does not co-occur with overt *much*, while other degree words do.[34]

(25) a. They have too/so/how/as much money...

b. They have *enough much/*much enough money...

Kayne proposes that there is a silent adjective *MUCH* in (26a), which, like other adjectives, precedes *enough*.[35] This *MUCH* is not possible in (26b) however.

(26) a. MUCH enough money

b. * too/so/how money?

Assuming that *MUCH* is legitimate only if it precedes the degree word accounts for (26b), given that adjectives don't precede *too/so/how* (24b). Note that although it is movement of *MUCH* to the left of *enough* that legitimizes *MUCH*, the fact that it moves is not due to a specific property of *MUCH*, but instead is a general property of adjectives in the environment of *enough*.[36] In view of these and similar considerations, Kayne (2006) proposes that non-pronunciation is an automatic

[34]John Costello (p.c.) points out that there is evidence for considering *enough* bimorphemic, with *e-* (Germanic *ge-* in *genug 'enough'*) a perfective prefix, which would partly explain the non-initial stress of *enough* (and *genug*). If this is correct, then the syntax of *enough* may be closely related to the fact that the Germanic past participle prefix *ge-* is restricted to V-final contexts.

[35]See also Săvescu Ciucivara (2007) for strong evidence for a silent *MUCH* in Romanian and French.

[36]Ie. a property of *enough*, presumably.

consequence of the architecture of derivations. Therefore, if Kayne is right, it would be expected that silent *HERE/THERE* is in a different position from its overt counterpart.[37]

HERE the t_{HERE} We know from Afrikaans (14), (27) that demonstrative *here/there* can move to the left of the definite marker in (some) Germanic.

(27) a. hier-die *("this/these")* Afrikaans
b. daar-die *("that/those")*

It is possible then that Swiss German (15a) and Norwegian (16a), repeated below, are like Afrikaans in that *HERE* and *THERE* respectively moves to the left of the definite marker, differing from Afrikaans with regard to pronunciation (/exact landing site). Thus (15a) and (16a) receive the analysis in (28).

(28) a. HERE di t_{HERE} rosä *("this rose")* Swiss German
b. THERE det t_{THERE} huset *("that house")* Norwegian

Demonstrative *HERE* and article clipping

An independent piece of possible evidence for the presence of silent *HERE* to the left of the definite marker morpheme in (28a) comes from article clipping (Preposition-Article-contraction).

In Swiss German (and in German) the definite marker morpheme *d-* remains silent in a range of contexts involving P-DP complementation, as in (29a,b).[38,39]

(29) a. [$_P$ uf] (#d)ä tisch Swiss German
onto the table
b. [$_P$ uf] (#d)ä blau tisch
onto the blue table
c. [$_P$ uf] *(d)-e tisch
onto this table

However, with a demonstrative interpretation such clipping is impossible and the definite marker morpheme *d-* is obligatorily pronounced.[40] This suggests that there is a licensing configuration for non-pronunciation of the definite marker morpheme *d-* in P-DP complementation, which obtains in (29a,b), but is disrupted in (29c).

[37]On Kayne's reasoning this would make *HERE/THERE* different from ordinary adjectives (since the latter don't move to the left of D) which seems right. Indeed there is a class of special elements which do undergo a similar movement, namely the quantificational/deictic component of determiners, as discussed in chapter 6.

[38]The process is also sensitive to Case, the choice of P, and the phi-features of N, and arguably to phonology, see Van Riemsdijk (1998b).

[39]The diacritic # indicates stylistic markedness.

[40]Cf. on-going work by Florian Schwarz (UMass) on the more fine-grained semantics of this contrast.

A possible proposal is that it is *HERE* which, having moved to the left of the definite marker, intervenes between P and *d-* and thereby disrupts the licensing configuration for non-pronunciation of *d-*, as illustrated in (30).[41]

(30) [$_P$ uf] HERE *(d)-e tisch
onto this table

2.2.5 Demonstratives and polydefiniteness

So far I have argued that the right representation of demonstratives is *[the HERE]*, involving an adjectival component (inflection, pre-adjectival article). In this section, I present evidence that in demonstrative noun phrases there is a definite marker in D, but it is not the definite marker morpheme of the demonstrative. Instead *[the HERE]* forms a constituent (at some point), licensing (in some languages) the non-pronunciation of definite D.

English *that*

It has been proposed that demonstratives (e.g. *that*) are specifiers in the xNP (Giusti (1994, 1997); Ihsane and Puskás (2001) among others). If this is correct, the definite marker morpheme *th-* that is part of the demonstrative is not the realization of D. Hence, in a noun phrase like *that house*, D is either not present or not overt. While in English there is hardly any direct empirical evidence that would decide the issue, other languages provide strong evidence in favor of the presence of definite D in addition to the demonstrative specifier.

Greek

One such case is Greek where demonstratives are obligatorily poly-definite (Giusti, 1997), i.e. demonstratives both contain a definite marker morpheme and cooccur with yet another definite marker morpheme, *to* in (31).[42]

(31) afto to vivlio Greek
this the book

I propose that English and German differ from Greek in that the definite marker in D^0 is non-overt in the presence of a demonstrative. This is strongly reminiscent of poly-definiteness / Determiner spreading, as discussed in section 3.2.2.

[41] See chapter 7 note 21 for a suggestion regarding the sensitivity to Gender features. Whether and how the the proposal here and the suggestion there ultimately converge is as of now not entirely clear.

[42] Greek allows prenominal and postnominal demonstratives. The two positions correspond to a different semantics. By and large, prenominal demonstratives are typically deictic, while postnominal demonstratives are typically discourse-anaphoric. See Alexiadou et al. (2007, p.120ff.) and the literature cited there for discussion. In semanto-pragmatic terms the Greek prenominal demonstrative seems a little closer to the German *dies-* form, while the Greek postnominal demonstrative may be closer to the demonstratives in German that are segmentally homonymous with the definite article.

Colloquial Slovenian

We have seen above that CS has an invariant pre-adjectival definite marker *ta*, and that this definite combines with a silent adjective to form a demonstrative determiner.

CS does not have a definite article in plain definites however, similar to Scandinavian.

(32) a. * ta svinčnik — Coll. Slovenian
the pencil

b. tá svinčnik
this pencil

The fact that (32b) is not overtly polydefinite is, I claim, the same fact as (32a). I.e. CS has no definite marker pronouneable in D^0. If it did, it would possibly be overt under demonstratives, given that in DPs that contain both a demonstrative and an additional adjective CS exhibits obligatory polydefiniteness.

(33) a. tá ta nov pes — Coll. Slovenian
this the new dog (NOM)

b. tega ta novega psa
this.GEN the new.GEN dog.GEN

c. temu ta novemu psu
this.DAT the new.DAT dog.DAT

In this, CS is closer to Greek than to Germanic. In Germanic demonstratives allow another overt definite *d-* within the same DP only marginally. But some cases exist.

Mainland Scandinavian

A picture similar to that of Colloquial Slovenian demonstratives obtains in Scandinavian, exemplified by Danish ((34), in part from Julien (2005, p.114)). Danish (as well as Norwegian and Swedish, and Colloquial Slovenian) does not have a pre-N definite marker independently of adjectival modifiers (34a,b), but only in their presence (34c). It does not allow an overt definite marker preceded by an ordinary adjective (34d). However, Danish somewhat marginally allows an adjectival determiner to be overt after a demonstrative (34d).[43]

(34) a. hus-et — Danish
house-DEF

[43]The availability of the additional definite marker in (34d) is subject to pragmatic restrictions relating to discourse topicality. Also, it is particularly good with superlative adjectives. I'm grateful to Line Mikkelsen for discussion on this point. Julien (2005, p.109) notes that it is also possible and particularly felicitous with superlatives in Norwegian and Swedish. See also Delsing (1993, p.138) for Swedish. Such a correlation of polydefiniteness and superlative is, of course, familiar from Romance, e.g. French *la fille la plus petite 'the girl the most small'*, meaning *'the smallest girl'*. If (overt) polydefiniteness is indeed (sometimes) due to leftward movement of the adjectival constituent, as I'm proposing, then the greater ease of polydefinite structures with superlatives also recalls the facts mentioned in Kayne (2008a), that in Persian superlatives precede the noun while positive and comparative forms generally follow the noun.

b. dette (*det) hus
this (the) house

c. *(det) høje hus-(*et)
(the) tall house

d. dette (det) høje (*det) flotte hus
this (the) tall (the) stylish house

Beyond Indo-European: Bafut

The definite article and the demonstrative determiner can also overtly co-occur in the same DP in the Grassfields Bantu language Bafut (Tamanji, 2006).[44]

(35) a. fɨ̀ŋkóbí fiɨ́ fyâ Bafut
19-statue 19-that 19-the
''that statue (which we have mentioned)'

b. fɨ̀ŋkóbí fiɨ́
19-statue 19-that
'that statue'

As in Scandinavian, the overt co-occurrence is discourse-sensitive.

Proposal

I propose that the overt appearance of an additional definite marker under demonstratives is the result of movement of the demonstrative xAP to the higher left periphery of DP, into a position from which the demonstrative can no longer license the non-pronunciation of a lower definite marker (e.g. the adjectival determiner in the xAP of *høje*).

This movement is similar (if not identical) to the movement that leads to determiner spreading / polydefiniteness in e.g. Greek, as I will argue in section 3.2.2. The availability of such movement is parametrized. In Scandinavian, unlike Greek, it is not available to ordinary xAPs (34d).

2.2.6 Adjectival *here/there* and reinforcers

Non-standard English allows overt *here/there* to follow a demonstrative determiner. Bernstein (1997) calls the element *here* in the non-standard American English example (36) a reinforcer.

(36) this here book

I have been claiming that a demonstrative like *this* contains a silent *HERE*. It is important to realize that the overt *here* in (36) cannot be the very morpheme that is part of *this*. In other words there are two distinct instantiations of *here/HERE* in (36). The two have a distinct status. They differ morphosyntactically and semantically, as I will discuss instantly.[45]

[44] Their co-occurrence is restricted to post-nominal position.

[45] The discussion is based on Norwegian. How directly it transposes to English is not entirely obvious.

Licensing of reinforcer and demonstrative *here/there*

A reinforcer like *here* in (36) is only licensed in combination with a demonstrative (Bernstein, 1997, p. 91). But the demonstrative adjective *HERE* cannot be subject to such a constraint, since this would lead to a chicken and egg paradox. I propose the informal structure in (37).

(37) [[$_{Dem}$ THERE the] there N] => "that there book"

(I am giving the informal structure of *that* rather than *this*, because *this* has additional components which *that* may or may not have. *This* is plausibly close to German *dies-*.)

Morphosyntax of reinforcer and demonstrative *here/there*

Colloquial Norwegian (and Swedish) presents morphological evidence that the demonstrative *here/there* and the reinforcer are indeed distinct, in that only demonstrative *here/there* is introduced in an adjectival structure, as I have been arguing, whereas the reinforcer is not.

As noted in section 2.2.3 examples (13), repeated as (38), overt demonstrative *herre/ derre* features adjectival agreement in colloquial Norwegian.[46]

(38) a. den her(r)-e klokka — Coll. Norwegian
the here-INFL watch

b. det her(r)-e huset
the there-INFL house

It is also possible in Norwegian (and Swedish) to have an additional counterpart of *here/there*, a reinforcer. Vangsnes (2004, p.13) reports that in Eastern Norwegian up to three counterparts of *here* can surface within one noun phrase. In this case one of them must carry adjectival inflection. And only the first one can do so.[47]

(39) a. den herre her populære boka mi (her) — E-Norwegian
the here.ADJ here popular book-DEF my here

b. den (*her) her populære boka mi (her)
the here here popular book-DEF my here

c. * den her herre populære boka mi her
the here here.ADJ popular book-DEF my here

On the present proposal it is a counterpart of the inflected *herre* in (39a) which, in some languages, moves into a silent position to the left of *d-/th-*.

[46] Øystein Vangsnes p.c. informs me that in some dialects the inflection on the demonstrative *here/there* differs from ordinary weak adjectival inflection in making fewer gender distinctions.

[47] Examples from Vangsnes (2004). See also Julien (2005, section 4.2.4).

Interpretation of reinforcer and demonstrative *here/there*

The difference in the morphosyntax of demonstrative *here/there* and reinforcer has a semantic correlate. Among the readings available to demonstratives are a locative deictic reading (40a) and a discourse anaphoric reading (40b).

(40) a. This tree [POINTING AT TREE A] is taller than that one [POINTING AT TREE B].
b. Remember I told you about a position as a ballet dancer? Well, John said he was too old for the job. But I think that's absurd.

If I am right that demonstratives like *this/that* contain a counterpart of *here/there*, it follows from (40b) that this latter element is not obligatorily associated with locativeness. In Kayne's (2004) and (2005c) terms, the *here/there* in question may but does not have to involve a silent PLACE.

The same obtains with the overt (inflected) demonstrative *here/there* in colloquial Norwegian, which can be discourse anaphoric (41).

(41) a. den her-re klokka Coll. Norwegian
the here-INFL watch (*locative or discourse anaph.*)
b. det her-re huset
the there-INFL house (*locative or discourse anaph.*)

Interestingly, this is different for reinforcer *here/there*, which is obligatorily locative (42).[48]

(42) a. den her-re her klokka Coll. Norwegian
the here-INFL here watch (*only locative*)
b. det der-re der huset
the there-INFL there house (*only locative*)

Hence the adjectival *here/there* which combines with the definite marker to render a demonstrative determiner is distinct from the reinforcer both morpho-syntactically and semantically (though perhaps not lexically). [49]

[48] See also Julien (2005) chapter 4 pp.117, especially footnote 8.

[49] A still open question is what exactly the syntax of reinforcers is. They seem not unlike numerals (see section 3.4.2) in that they don't inflect and they surface either to the left of ordinary adjectives (i.e. relatively high in the DP) or in a right-peripheral position, e.g. numerals in Icelandic (from Vangsnes (1999, p.145)).

i. [fræg-u bœk-ur-nar mínar] þrjár Icelandic
famous-DEF.PL book-F.PL.NOM-DEF.F.PL.NOM my.F.PL.NOM three
'my three famous books'

The position of the reinforcer relative to the demonstrative and other adjectives e.g. *this here blue car* bears a challenge for a Double-Filled Comp approach to the non-pronunciation of D (or other lower definite marker positions), as pointed out to me by Omer Preminger p.c. Hence this is one argument for an alternative, perhaps a c-command based approach to licensing of non-pronunciation. This will be taken up again in section 3.4.2. See also Katzir (2006) for relevant discussion of Icelandic.

This can be partly replicated in Swiss German. Demonstrative determiners can have a locative, temporal, or discourse-anaphoric interpretation, but the post-nominal reinforcer is strongly locative (Henk van Riemsdijk p.c.).

(43) a. Das jahr firə-mər wiänachtä^{n} i dr Schwiz. Swiss German
this year celebrate-we Christmas in the Switzerland

b. das hus da / dettä
this/that house here / there

c. * das jahr da / dettä
this/that year here / there

Similarly in English, reinforcer *here* is preferably locative, rather than temporal.

(44) a. this here house

b. this (*here) year

This extends to the indefinite (and clearly non-locative) use of English *this* and *these*. Mark Baltin p.c. observes that the indefinite use of the demonstrative *this* and *these* in English does not allow a reinforcer.[50,51,52]

(45) a. There's this (*here) student in my class who always yawns.

b. This (*here) guy walks into a bar and asks for a drink.

Recalling that in Greek the postnominal demonstrative is (preferably) discourse-anaphoric while the DP-initial prenominal demonstrative is deictic, it is interesting to note that the latter can felicitously be accompanied by a reinforcer (46a), while the former cannot (46b) (Campos and Stavrou, 2004).

(46) a. afto edho to vilvio Greek
this here the book

b. ?? to vivlio afto edho
the book this here

In other words, it seems that the Greek reinforcer *edho 'here'* corresponds to the uninflected *her/der* in (42), while the inflected *her-re/der-re* may have a closer counterpart in the morpheme *af-* of *afto*.

[50]Baltin further observes that the *th-* morpheme can be absent in these contexts.

i. There's -is guy I met on the train the other day...

While on the surface this may look a little like the cases of the Swiss German demonstrative *säb* (literally *'same'*), which can sometimes lack the initial definite marker (see section 2.2.8), it is not clear to me that these phenomena should be assimilated to one another.

[51]In its indefinite use *this* may be embedded in an abstract indefinite layer.

[52]For some discussion on the indefinite use of *this* see Vangsnes (1999, part I, 6.1).

2.2.7 Intermediate conclusion

I conclude that (some) demonstratives in Germanic are built out of a definite marker *d-/th-* and a counterpart of *here/there* introduced in an adjectival structure. *Here/there* has the property of (A) being unpronounced (*HERE/THERE*) in some cases, and (B) moving to the left of the definite marker in some cases, with property (A) parasitic on (B).

The adjectival modification structure containing a definite marker and the demonstrative *here/ there/ HERE/ THERE* is argued to sit in Spec,DP from where it licenses the non-pronunciation of the definite marker in D^0.

This proposal assimilates to a greater degree than previous proposals (A) demonstrative determiners to ordinary adjectival modification within the DP, and (B) Germanic demonstratives to languages like e.g. Greek, in which a definite article overtly co-occurs with a demonstrative determiner.

2.2.8 More than one route to demonstrativity

The (metaphoric) recruitment of meaning structures of one domain for use in another domain is a common phenomenon in language. A standard example is the expression of temporal relations by means of (typically) spatial predicates (Boroditsky, 2000). Above, demonstratives were shown to involve a counterpart of *here/there* whose typical use is spatial/locative. But when part of a demonstrative, *here/there* do not need to have a locative interpretation. In terms of Kayne (2005c) we may conceptualize the locativity by means of a silent *PLACE*, which usually goes with *here/there*. In demonstratives however, *here/there* is not accompanied by *PLACE*. What is used are those aspect of the meaning of ordinary (locative) *here/there* that remain when the element is stripped of *PLACE*. Possibly a variable over coordinates.[53]

It has been proposed that the meaning of definite demonstratives is composed of a definite article and an index in the form of a predicate (Elbourne (2005) cf. also Vangsnes (1999)). In Elbourne's proposal, this index ranges over individuals. It seems desirable to identify Elbourne's index predicate with the *here/there* component. As I mentioned, it is crosslinguistically common that a typically locative element is recruited for construction of demonstratives. However, we may wonder whether locatives are the only source for (metaphoric) recruitment that language uses (can use) for the construction of demonstratives. The answer seems to be a clear no. The deicticity property can also be contributed in an alternative way. In this section I will discuss what I call "identity demonstratives," in which deicticity is contributed by elements akin to English *same* and *other*.

German *dies-*

Let me begin with pointing out the existence of demonstratives that are overtly more complex than the ones that are essentially homophonous to the definite article. German has the more

[53]Note though that silent elements and their overt counterparts may not necessarily have identical lexical properties, as is argued in Van Riemsdijk's (2002) discussion of silent motion verbs.

complex demonstrative *dies-*. *Dies-* is a proximal demonstrative, contrasting with the distal *jen-*.

(47) German

a. dieser / jener Tisch (m)
this / that table

b. dieses / jenes Haus (n)
this / that house

c. diese / jene Blume (f)
this / that flower

d. diese / jene Leute (pl)
these / those people

Dies- contains an initial definite marker *d-* and takes strong adjectival agreement.[54] What distinguishes demonstrative *dieser* from demonstrative *der* is *-ies-*. Hence, it is more complex in its overt form than the simpler demonstrative.[55] Part of the additional overt structure is an *-s-* in its stem. This is interesting from a comparative perspective. On the one hand it recalls English *this* (see right below), on the other hand (genitive) *-s* is also found as a morphological component in other determiners which involve a functional nominal (see the discussion of *what for* in chapter 5).[56]

English *this*

English has the definite proximal demonstrative *this*. Assuming that *th-* and *d-* are close matches, it is tempting to also take *-is* and *-ies* to be close matches. This extends to English *these*, where the plural is arguably formed on the same pattern as in *analysis - analyses* ; *hypothesis - hypotheses* etc. Hence, if correct, the *-s* in *these* (and by extension in *those*) is not per se a plural agreement marker (contrary to what was claimed in Leu (2007c)). If so, then English has no determiners (and adjectives) with a regular plural form in *-s*, with no exceptions. The question remains of why, in the realm of determiners/modifiers, only the demonstratives have an overt singular/plural distinction at all in English (see Kayne (2008b) for some discussion).

Swiss German *dis-*

Swiss German has *dis-*, which seems etymologically related to *dies-*. Interestingly, *dis-* seems to have a more complex meaning than the simpler definite demonstrative *diä, das, dɛ* (meaning *'this/that'*).

[54] Sharing with all determiners the exception of taking *-es* in the genitive.

[55] Henk van Riemsdijk p.c. makes the interesting observation that *-ies-* in *dies- 'this'* may be the same element as in *hies-ig 'from here'*, which is clearly related to *hier 'here'*, and further that this *-r/-s* alternation may be related to the *-r/-th* alternation in English *here-hither*. I'm hoping to pursue this line of thought in future work.

[56] A possibility to be explored in future work is that the *-s* in e.g. English *this, these, those*, Norwegian *hva for slags*, German *dies-, jeweils* etc. is the same *-s*, plausibly a genitives morpheme. Cf. the contrast with *that* (Kayne, 2008b).

(48) a. disä (m) Swiss German
the other one

b. dises (n)
the other one

c. disi (f)
the other one

d. disi (pl)
the others

Swiss German *dis-* necessarily has a meaning component that involves contrast. The referent of Swiss German *dis-* is identified deictically as being the one of a set of two relevant items where the other item is the immediately context/discourse salient one.[57]

Secondly, Swiss German *dis-* differs from German *dies-* in that it preferably co-occurs with NP-ellipsis. This second property is presumably related to the first, having to do with anaphoricity.

Let me take seriously the contrast factor in the meaning of Swiss German *dis-*, and propose that there is a silent *OTHER* in *dis-*. It is not entirely clear how the silent *OTHER* and the overt morphology *-i-* and *-s-* are related. But the proposal of a silent *OTHER* is strongly supported not only on interpretive grounds but also on the basis of the existence of German *derselbe* *'the.*MAS.NOM.*same'* and Swiss German *dəsäb*, which I turn to shortly.

Icelandic *hinn*

A similar identity demonstrative with an *'other'* interpretation is found in Icelandic.[58] Icelandic *hinn* is formally almost identical to the "free" definite article, with the exception of the neuter form which is *hitt* instead of *hið* (Julien, 2005, p.144ff.), plausibly the product of a phonological process applying to *hið+t* (*-t* being the neuter singular nominative and accusative form of the strong adjectival agreement morpheme).[59]

(49) a. hið gaml-a hús Icelandic
N.SG.NOM old-DEF house

b. hi-tt gaml-a hús-ið
other-N.SG.NOM old-DEF house-DEF.N.SG.NOM
(Julien, 2005, p.144ff.)

This suggests that *hinn/hitt* constitutes a syntactically complex form, more concretely an xAP. The meaning contribution of this demonstrative seems to be very similar to Swiss German *disä*

[57]There is also a slightly pejorative use restricted to animates, perhaps to humans, in which arguably the contrast is construed differently (or is not construed at all).

[58]This was pointed out to me by Jim Wood p.c.

[59]Øystein Vangsnes informs me that the demonstrative *(h)inn 'the other'* is the historical origin of the Scandinavian DEF suffix. In present day Icelandic (and some dialectal Norwegian) it co-occurs with the DEF suffix, unlike the "free" article, which does not co-occur with the DEF suffix.

'the other one'.[60] This is nicely evidenced in the example dialogue below, taken from a blog.[61,62]

(50)

Skrýtinn maður kemur og sest á milli mín og annars manns við nesti[s]borðin í 10/11.
'A weird man comes and sits between me and another man by the counter at 10/11'.
Skrýtinn maður: góðan dag
'Weird man: Good morning'
Hinn maðurinn: góðan dag
'The other man: Good morning'
ég: góðan dag.
'I: Good morning'

The Icelandic example here serves mainly to show that the *'other'* demonstrative in Swiss German is not an isolated case.

Swiss German *(də)säb '(the) same'*

Swiss German has a demonstrative that involves *säb-*, a cognate of English *self*, and German *selb-*. The meaning of *säb-* and also of German *selb-* (as an adnominal modifier) seems a little closer to English *same* (in a sense to be made more precise below).[63]

(51)	Swiss German:	də-säb	; di-säb
	German:	derselbe	; dieselbe
		the.MAS-same	; the.AGRA.FEM-same

Swiss German *dəsäb* contrasts with the etymologically related German *derselbe* with regard to its meaning (contribution), specifically, with regard to the type-token contrast. German *der-selbe 'the same'* has two readings. Both are identity demonstratives. They contrast with regard to whether the identity is established on the token or on the type level.[64] The type level identity reading is essentially the same as that of *das gleiche 'the same'*. In Swiss German *dəsäb* only has the token identity reading.

(52) a. Ich möchte diesselbe (Suppe). German
I would.like the.same (soup)
'I would like the same (kind of) soup.'

[60] Julien (2005) notes that, unlike the other demonstratives in Icelandic (*þessi 'this'* and *sá 'that'*), *hitt* co-occurs with a definite suffix on the noun.

[61] I am grateful to Jim Wood for finding, translating, and sharing this example.

[62] The original spelling in the blog included *nestidborðin. 10/11* is the name of a shop.

[63] Note the existence of English *selfsame*, meaning something like "the very same."

[64] Note the German locative demonstrative *da-selbst 'there samest'*, which is, according to the Duden old fashioned, for "at this place." It seems to me there is an emphasis component comparable to English *very* in *at this very spot*.

b. Ich wetti di säb (suppä). Swiss German
I would.like the same (soup)
'I would like that very (bowl of) soup there.'

An interesting feature of demonstrative *säb* is that it sometimes occur (without a noticeable effect on meaning) without an overt definite marker. In both languages there is a variant without an overt definite article preceding *säb-/selb*.

(53) a. i säbem momänt Swiss German
in same moment
'at that moment'

b. zu selber Zeit German
to same time
'at the same time'

In fact, the forms given in Weber (1964) p.141 at first blush suggests that in Zürich German, neuter singular contexts only allow the variant without an overt definite article preceding *säb*, while masculine and feminine as well as plural contexts allow either variant. Given the fact that in some Swiss German dialects, including Zürich German, the *d-* can be dropped in the neuter definite article (e.g. *s huus 'the house'*), it seems possible that in (54b) the initial definite marker *d-* is missing for the same reason (what ever this reason may be) and hence this contrast is not specific to *säb*.[65]

(54) a. desäb Bëërg
'that very mountain' (m)

b. säb Doorff
'that very village' (n)

c. disäb Stadt
'that very city' (f)

(Examples from Weber (1964), retaining Weber's spelling)

Another suggested restriction on the possibility of having an overt initial definite marker with *säb* is that under dative prepositions the variant without an overt definite marker is preferred.[66]

(55) a. uf säbem Bëërg
'on that very mountain' (m)

b. i säbem Doorff
'in that very village' (n)

c. i säbere Stadt
'in that very city' (f)

(Examples from Weber (1964), retaining Weber's spelling)

[65]Weber (1964, p.141) gives the dative forms *emsäbe*, *dersäbe*, and under the dative preposition *i 'in'* Weber gives *säbem*, *säbere*.

[66]My judgment agrees with this preference reported by Weber.

This is reminiscent of P-D contraction (cf. p. 28). However, the absence of a definite marker morpheme *d-* here cannot be reduced to P-D contraction for two reasons. First, P-D contraction does not apply in feminine DPs under the dative prepositions *i 'in'*, *uf 'on'* and others.[67]

(56) a. uf m gadä / huus — Swiss German
on DAT barn.MAS / house.NEU
'on the barn/house'

b. uf də/dr wisä
on the.DAT meadow.FEM

c. uf säberä wisä
'on that meadow'

Secondly, the result of P-D contraction is the surface adjacency of the preposition and the case morpheme. In (55) the adjectival stem still linearly intervenes. Hence there must be another reason for the definite marker morpheme *d-* to be silent in (55).[68]

Recall (old) Zürich German *änä*, a locative-based demonstrative which also allows "*d-* dropping" (p.23). The existence of this suggest that the pattern in (55) is not restricted to the lexical item *säb-*. In section 2.3 below, we will see that the dual quantifier *beid- 'both'* also exhibits such an alternation. The proposal I will make there is intended to extend to the demonstrative cases mentioned above.

2.2.9 Conclusion

Demonstratives are not atomic elements drawn from the lexicon, instead they are syntactically composed, i.e. they are semantically and syntactically complex. The derivation of demonstratives involves an adjectival structure. Furthermore, demonstrativity can be arrived at in more than one fashion. Demonstrative formation involves the combination of a definite marker morpheme and a functional adjective. There is a limited range of options with regard to the choice of adjectives such that a demonstrative reading results. I have identified two.

There are demonstratives that are composed of a typically locative element and a definite marker. Examples are Norwegian *herre, derre*, Swiss German *äne*. In some cases the definite marker may be non-overt, e.g. *äne-*. In some cases the "adjective" may be non-overt *HERE*.

There are demonstratives that are composed of an identity element and a definite marker. Examples are Swiss German *säb*, German *selb-*. In some cases the definite marker may be non-overt, e.g. *säb-*. In some cases the "adjective" may be non-overt, e.g. *OTHER*.

[67] With *uf* it is easier to exemplify than with *i*. The preposition *zu 'to'* is special in that it triggers P-D contraction also with feminine DPs.

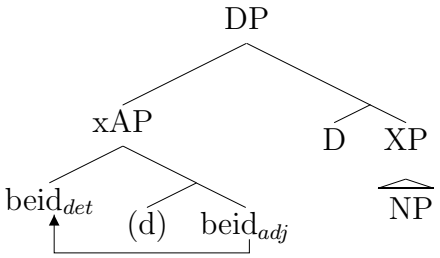
[68] While (55) cannot reduce to P-D contraction, it may be that the two phenomena share important parts of an explanation.

2.3 Distributive dual Q *bäid- 'both'*

2.3.1 Introduction

Swiss German *bäid-*, German *beid-*, are close counterparts of the transparently etymologically related English *both*.[69] I will argue that Swiss German *bäid-* (and German *beid-*) is an adjectival modifier, i.e. it is the realization of an xAP. It has two derivationally distinct options. Either it has the syntax of an adjective in a definite noun phrase, or it has the syntax of an adjective in a bare noun phrase. However, the noun phrase in which it operates is necessarily definite, i.e. *bäid-* is inherently definite. *Bäid-* will provide an interesting clue for the right analysis of adjectives in the noun phrase, based on scope and distributivity.

(57)



Terminologically, I will distinguish these two variants as the "adjectival" and the "determiner" variant of *both*. Not only does this proposal lend itself well to an explanation of the historical pattern, it will also have explanatory force synchronically.[70]

2.3.2 *Bäid-*: adjective or determiner? - Both.

German *beid- 'both'* and Swiss German *bäid- 'both'* can surface as an adjective or as a determiner.[71] Consider Swiss German *bäid- 'both'*.[72]

(58) a. D-i bäid-ä mäitli hend es piär trunkä. Swiss German
the-AGRA both-WK girls have a beer drunk

[69] See Lazorczyk and Pancheva (undated) for relevant historical discussion of the Slavic counterpart of *both*.

[70] The OED notes that up until the 14^{th} century, the forms *bo* and *both* coexisted in English, and refers to *-th* in *both* as a suffix and notes that it is believed to be the definite article, and relates the form to the same fact as the (modern English) possibility to say *both the girls*, in addition to *both girls*. Thanks to Dan Lassiter p.c. for pointing this out to me.

[71] This is somewhat similar to what Giusti (1997) discusses for Romanian.

i. amindoi baieti-i Romanian
both children-the 'both children'

ii. ambi-i baieti
both-the children 'the two children'

However, in Romanian, the source of the cardinality |2| component are clearly distinct morphemes (*doi 'two'* and *bi* related to English *bi-* as in *bi-lingual*).

[72] German *beid-* behaves the same. I use Swiss German because of its 'd/di-alternation' (cf. section 3.3.2), which identifies the presence of adjectival agreement.

b. Bäid-i mäitli hend es piär trunkä.
Both-AGRA girls have a beer drunk

In (58a) *bäid-* has the syntax and morphology of an ordinary adjective in a definite DP, cf. (59a). It surfaces to the right of the strong adjectival agreement morpheme (AgrA) and to the left of the weak adjectival agreement morpheme (glossed WK), or more globally, between the pre-adjectival definite marker and the noun.

Similarly in (58b) *bäid-* is syntactically and morphologically, at least on the surface, parallel to the modified bare noun phrase in (59b). It is not preceded by a definite marker and it precedes AgrA.

(59) a. D-i luschtig-ä mäitli hend es piär trunkä. Swiss German
the-AGRA funny-WK girls have a beer drunk

b. Luschtig-i mäitli hend es piär trunkä.
Funny-AGRA girls have a beer drunk

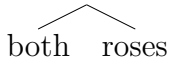
(58b) and (59b) differ sharply in their referential properties however. Whereas (59b) differs from (59a) in that it is felicitous "out of the blue," (58b) has the typical properties of a definite description and is felicitous in the same range of contexts as (58a) is (as far as definiteness is concerned). In other words, the DP *bäidi mäitli* in (58b) is definite.

This suggests that *bäid-* is inherently definite and that its xAP will be definite independently of whether *bäid-* is preceded by a definite marker *d-* or not. This is related to the fact that the coda consonant in the stem *bäid-/both* historically derives from the same morpheme as the definite marker *-d/-th*. Whether a syntactic decomposition is synchronically warranted is not immediately clear.

The fact that *bäid-* can surface as an adjective to the right of the definite marker witnesses its origin lower than the definite marker.[73]

Restricting our attention to the relevant features of the analysis only, the determiner variant of *bäid-* has the representation in (60).[74] (I stick to English glosses in the trees here, standing in for a more general/abstract representation.)

(60) Determiner *both*:

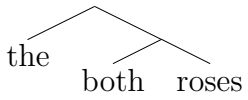


The constituency in the adjectival variant is more controversial. The standard view on adjective syntax would assign the structure in (61).

[73] According to the OED, English also allowed *bothe* to surface between the definite article and the noun (e.g. *Knyt the bothe endes with a threde*), between 1430 and 1830. In modern English some speakers allow the sequence *the both...* in partitive structures with a pronoun and no overt head noun, e.g. *the both of us/them/you*.

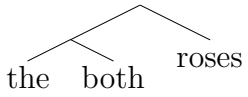
[74] The head versus XP status of *both* may be an issue of debate, but this debate is presently irrelevant.

(61) Adjectival *both* standard proposal:



However, the correctness of this analysis should not be taken for granted. Recalling the claim that the *th-* morpheme in demonstratives is not in D but part of a constituent in Spec,DP, the question arises whether there is independent evidence that such an analysis may extend to the definite marker preceding the adjectival variant of *bäid-*, as represented in (62).

(62) Adjectival *both*, present proposal:



The arguments in favor of this possibility are threefold. (A) we know from demonstratives that a DP-initial definite marker *d-/th-* can sometimes be in a specifier. (B) the analyses in (61) and (62) make distinct predictions for the scopal behavior of adjectival *both*. The empirical facts favor (62), as I will discuss instantly. And (C), this analysis will be shown to extend to adjectives more generally in chapter 3.

2.3.3 Scope properties of adjectival and determiner *bäid-*

The quantifier[75] *bäid-* is scopaly active and hence it is possible to compare the predictions made by the traditional and the present proposal. Consider the examples (58a) and (b), repeated below, and notice that they are truth-conditionally distinct in that they differ with regard to the scope of the quantifier *bäid-*.

(63) a. D-i bäid-ä mäitli hend es piär trunkä. Swiss German
the-AGRA both-WK girls have a beer drunk

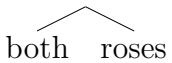
b. Bäid-i mäitli hend es piär trunkä.
Both-AGRA girls have a beer drunk

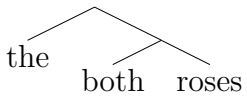
In (63a) *bäid-* does not distribute over the event (*drink a beer*). (63a) is true if the two girls share a beer.[76] In (63b) on the other hand, *bäid-* distributes over the event. For (63b) to be true there must be more than one beer involved. Both, the traditional and the present proposal make the right predictions, distinguishing syntactically the scopal possibilities of determiner *both* (64a,65a) and adjectival *both* (64b,65b) vis-à-vis material lower in the sentence.

[75]Ladusaw (1982); Roberts (1987); Landman (1989) analyze *both* as a distributive quantifier. The latter two as a universal quantifier like *every/each* but with a cardinality presupposition. Brisson (1998) on the other hand argues that *both* is a noun modifier that needs to be licensed by a distributive operator.

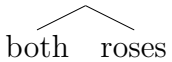
[76]This is the preferred reading, though a distributive reading seems possible, especially if it is strongly favored by the context. In that case, the distributive semantics should presumably be attributed to an element independent of *bäid*, a silent distributive operator.

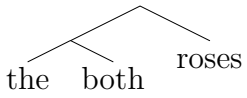
(64) Traditional analyses:

a. 

b. 

(65) Present proposal:

a. 

b. 

Determiner *bäid-* is able to scope out of the DP, since it is sitting on the left most branch (Brody and Szabolcsi, 2003).[77] The adjective *bäid-*, by contrast, is unable to scope out of the DP, since it is sitting too low. Hence both structures capture the contrast in (63).

Note that the contrast in (63) establishes the importance of the constituency with regard to the distributive scope of *both*.

It is with regard to DP-internal scope that the two proposals differ in their predictions. In the standard structure (64) *both* is predicted to scope over the NP, over any adjective closer to the NP, and over dependents of the NP whether it is a determiner or an adjective.

In the presently proposed structure (65), on the other hand, the determiner *both* (65a) is predicted to scope over the NP, adjectives, and dependents of the NP, but for the adjectival *both* (65b) the scopal possibilities may be expected to be different.

Consider the following examples.

(66) a. Di bäidä mäitli wo sich kännet — Swiss German
the both girls who self know
'The two girls who know each other'

b. * Bäidi mäitli wo sich kännet.
both girls who self know

(67) a. Di bäidä verwandtä spiler — Swiss German
the both related players

b. # Bäidi verwandtä spiler
both related players

[77] A challenge to this view on scope is presented by the following kind of examples, due to Richard Kayne p.c.

i. [The father of every four-year-old girl] thinks she's a genius.

ii. [His every word] has a meaning of its own.

where *every* takes scope over the VP. It is possible that the a priori surprising scope possibilities of *every* in these examples have to do with the fact in (i) that *father* is a relational noun, and in (ii) that a possessive determiner precedes *every*. Notice that, unlike non-edge *bäid* in the text examples, *every* in (i) and (ii) takes scope over the entire containing noun phrase too.

The examples show that determiner *both* and adjective *both* have distinct scope possibilities with regard to dependents or modifiers of the noun they quantify over, as predicted by the present proposal, but not by the standard view.

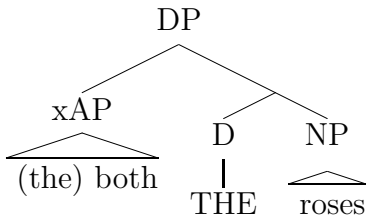
The contrast is fairly strong with anaphoric expressions in a relative clause (whether it is a post-nominal tensed relative (66)[78] or a pre-nominal reduced relative (67)).

The fact that there is an interpretive difference between the (a) and the (b) examples in (66) and (67) with regard to the scope of *bäid-* supports the present proposal, since it, unlike the traditional view, makes the right kind of structural distinction.

2.3.4 Q-float and Polydefiniteness

On the proposed structure *[the both]* and similarly determiner *[both]* form a specifier of a definite xNP. The question is whether they combine with the N(P) directly or whether they actually combine with a definite DP, in the spirit of Matthewson (2001) (cf. also Cardinaletti and Giusti (1992)). If it is legitimate to generalize the evidence from e.g. Greek demonstratives to Germanic demonstratives (as I suggested it is) and if the evidence from demonstratives can be generalized to *both*, then the structure is more like (68), with a silent definite marker in D.

(68)



In the context of German(ic), there is only any substance to such a proposal if it is assumed that it is the presence of the xAP that forces the definite marker in D to be silent. If it were possible now to have a derivation in which the xAP got removed from Spec,DP (or whatever precise position to the left of D it is in), and if doing so would require the presence of an overt pre-nominal definite marker, this, to my mind, would constitute strong evidence in favor of the proposal in (68).

This is indeed possible, since *both* allows quantifier float. Conceptualizing quantifier float as stranding, along the lines of Sportiche (1988) and Shlonsky (1991), floating *both* necessitates a prior step in which *both* is removed from Spec,DP.[79] The prediction is that under *both*-float the relevant DP has an overt *d-* morpheme in its left most position.[80] This is borne out.

Consider (69a). The xAP containing *bäid-* and the AgrA morpheme *-i* is stranded under quantifier float. The same is not possible, in Swiss German, with ordinary adjectives (69b).

[78](66b) marginally allows a presently irrelevant reading with *sich* interpreted as a reflexive.

[79]Hence I assume Q-float to proceed in two step: (i) Moving the quantifier to a higher projection of the extended projection of the noun, into Spec,QP (Puskás, 2002), which is higher than DP. And (ii) extracting DP from QP.

[80]More precisely, the re-emergence of *d-* is contingent on other material in the DP. There exists the possibility of an other determiner, e.g. possessive *mi-* to license the non-pronunciation of D, e.g. *Mini chind hend bäidi... 'My children have both...'*.

(69) a. *(D) mäitli hend **bäid**-i es piär trunkä. Swiss German
(the) girls have both-AGRA a beer drunk

b. D mäitli hend (*luschtig-i) es piär trunkä.
the girls have funny-AGRA a beer drunk

c. ? (*D) Mäitli hend luschtig-i es piär trunkä.
(the) girls have funny-AGRA a beer drunk

However, it is worth noting that, with a sort of contrastive pairlist reading, it is marginally possible to separate an ordinary adjective and the noun it modifies in a way that at least in terms of linear order strongly resembles (69b), though crucially differing from it in that the noun cannot be preceded by a definite marker (69c).[81,82]

Note two things about (69a). First, it is determiner *both* that floats, identified by the strong agreement *-i*.[83] And secondly, the pre-nominal definite marker is the "ordinary" pre-nominal definite marker and not the pre-adjectival one, as witnessed by the lack of *-i*.

(70) a. bäid-i mäitli Swiss German
both-AGRA girls

b. d-i bäid-ä mäitli
the-AGRA both-WK girls

2.3.5 Conclusion

Swiss German *bäid-*, German *beid-*, can surface either as adjectives or as determiners. The difference between the two variants is semantically a matter of scope. Morpho-syntactically, the determiner use of *bäid-, beid-* looks exactly like a bare noun modified by an adjective, yet it is a definite, referential DP.

I conclude that the determiner *bäid-, beid-* derives in an adjectival modification structure in which the quantificational morpheme of the adjectival stem has moved to the left periphery of xAP, pied-piping a larger constituent.

The differential scope of adjectival *bäid-* and determiner *bäid-* provides a strong piece of evidence in favor of the structure in which an adjective and the pre-adjectival definite marker form a constituent excluding the noun.

[81] The relevant reading is "as for girls, funny ones called, and as for boys, serious ones called." The example is an instance of split topicalization, discussed in Van Riemsdijk (1989); Roehrs (2006), see also Bianchi (1999)p.174ff for a proposal close in spirit to the present work.

[82] Van Riemsdijk (1989) notes the existence of ECP effects in split topicalization. Compare the question marked (69c) involving split topicalization of a subject and the example of split topicalization from a direct object in (i) (from Henk van Riemsdijk p.c.), which is unobjectionable.

i. Mäitli han i au scho luschtiger-i gseh. Swiss German
girls have I also already funnier-AGRA.ONES seen

The absence of such an effect in (69a) may be related to the definiteness / specificity of the subject DP.

[83] Assuming the analysis of adjectival agreement proposed in chapter 3, that means that it is the entire xAP that floats.

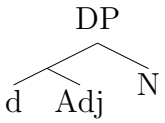
2.4 Summary

In this chapter I discussed the internal syntax of definite demonstratives and of the dual quantifier *'both'*. There is strong evidence that definite demonstratives are structurally complex and (in Germanic) are composed of a definite marker and a functional adjective. The adjectival component is commonly locative-based, i.e. a counterpart of English *here/there*. But we also saw an alternative possibility where the adjectival component in demonstratives is identity-based, i.e. counterparts of *same* and *other*.

In the discussion of *beid-* two variants have been identified, an adjectival variant and a determiner variant. It was argued that both variants are xAPs. The two variants differ with regard to the inflection of *beid-* and the presence of a pre-adjectival definite marker. These morphosyntactic differences were shown to correlate with a semantic contrast, in a way that allowed us to make inferences regarding the structure.

The two case studies importantly converge on the two contentions that (at least certain) determiners are syntactically complex and involve an extended adjectival projection xAP, and that the pre-adjectival definite marker, when one is present, forms a constituent with the adjective, excluding the noun, as illustrated in (71).

(71)



In the next chapter, I will make and discuss the claim that (71) generalizes across adnominal adjectival modification (in definite DPs).

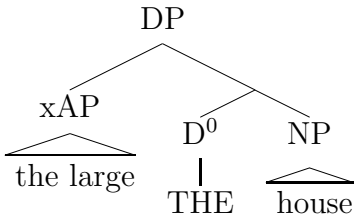
Chapter 3

The pre-adjectival definite marker and agreement

3.1 Introduction

In this chapter, I discuss the idea that the structure proposed for demonstratives and *beid-* in the previous chapter obtains generally in adjectival modification (in definite DPs). In other words, the pre-adjectival definite marker is part of the extended projection of the adjective (xAP), and (in the normal case) a definite xAP licenses the non-pronunciation of the definite article in D^0.

(1)



This proposal immediately accounts for the appearance of additional definite markers under adjectival modification, as e.g. in the so-called Scandinavian "double definiteness," and in Greek "determiner spreading."

Secondly, addressing German and Swiss German adjectival agreement, I show that the proposal in (1) is strongly supported by the fact that, granting two assumptions, it delivers a simple way of accounting for the basic pattern of the weak/strong adjectival declension alternation in Germanic in the syntax. The assumptions are (i) that there is an Agr projection between the lexical layer and the left periphery of the xAP, and (ii) that the left periphery of the xAP has to be lexicalized/activated (Koopman, 1997a) either by internal merge or by external merge. The concrete proposal is schematized in (2).[1]

(2) a. Def: $[_{xAP}$ *d-* ... AgrA ... Adj ...]

b. Indef: $[_{xAP}$ Adj ... AgrA ... Adj ...]

[1]See also Vangsnes (1999) for relevant discussion and a proposal regarding the identification of projections.

In words, the left periphery of the xAP can be lexicalized in one of two ways. Either a *d-* morpheme is merged there (2a), or the AP moves to the left periphery of the xAP (2b). The effect is, of course, that when *d-* is merged, the adjective will follow the AgrA morpheme, and when *d-* is not merged, it will precede it.

It is important to note that the proposal in (1) is not dependent on the proposal in (2). (1) could be right even if (2) turned out to be incorrect (but not vice versa).

The proposal for the distribution of strong adjectival agreement AgrA raises an important issue with regard to dative and genitive morphology. The issue is this: In the traditional view, there are dative and genitive forms of strong agreement, *-m, -r, (-s/-n)*[2]. These have a partly distinct syntagmatic distribution from the nominative and accusative strong agreement forms.[3] Hence, either my proposal for AgrA is insufficient, or the dative and genitive case markers are distinct from AgrA. In chapter 7 I will discuss dative and genitive morphology and present evidence from German and Swiss German that indeed *-m, -r, -s* are not instances of AgrA, but instead need a separate account.

3.2 Definite xAPs

There are languages in which an adnominal adjective occurs accompanied by an (additional) definite article in definite noun phrases. In some of these languages, an unmodified definite noun phrase does not have a definite article. I do not know of a language in which the possibility of having an indefinite article is contingent on the presence of a modifier.[4]

[2]See chapter 7 for details.

[3]Compare nominative (i) and dative (ii).

i. a. d-er gute Wein — German
the-AGRA good wine

b. ein gut-er Wein
a good-AGRA wine

c. gut-er Wein
good-AGRA wine

ii. a. d-em guten Wein
the-DAT good wine

b. ein-em guten wine
a-DAT good wine

c. gut-em Wein
good-DAT wine

The syntax of *-er* and of *-em* are clearly distinct.

[4]Roehrs (2006) discusses the example of predicate noun phrases in German, of the sort

i. Sie ist Lehrerin.
she is teacher.FEM

ii. Sie ist *(eine) gute Lehrerin.
she is (a) good teacher.FEM

Scandinavian double definiteness: In Mainland Scandinavian, adnominal adjectives in definite noun phrases are preceded by a definite marker *d-* (3b), while plain definites do not feature an overt pre-nominal definite marker (3a).

(3) a. huset
'the house'

b. det stora huset
'the big house'

Swiss German *d/di*-alternation: In Swiss German feminine and plural definite noun phrases, the DP-initial definite marker bears strong adjectival inflection when preceding an adjective (4b), but remains uninflected in the absence of a following adjective (4a).

(4) a. d rosä
'the rose'

b. di rot rosä
'the red rose'

Greek poly-definiteness: In Greek, adnominal adjectives in definite noun phrases can be accompanied by their own definite marker (5b), in addition to the directly prenominal definite marker.

(5) a. to vivlio
'the book'

b. to megalo (to) vivlio
'the big book'

Colloquial Slovenian *ta*: In Colloquial Slovenian, adnominal adjectives in definite noun phrases are preceded by a definite marker *d-* (6b), while plain definites do not feature an overt pre-nominal definite marker (6a).

(6) a. pes
'the dog'

b. ta nov pes
'the new dog'

In this section I will discuss the cases of Mainland Scandinavian and Greek, and claim that the pre-adjectival definite marker is the lexicalization of the left periphery of the xAP. This contrasts with non-definites, in which the left periphery of xAP is lexicalized by movement of the adjective

where it seems that the presence of *gute* requires the presence of an indefinite article. This is, of course, correct in the example at hand, but it is important to see the reason. The absence of an indefinite article is subject to certain licensing restrictions. These are fulfilled in (i) by the fact that *Lehrerin* is a profession, *gute Lehrerin 'good teacher'* on the other hand is not a profession. Imagining a world in which it is improves (ii) without overt *eine* significantly (to my ear).

AP. Crucially, the definite marker does not alternate with the indefinite article. This leads to the expectation of finding material that is followed by the adjective in the presence of a pre-adjectival definite article and preceded by the adjective in the absence of a pre-adjectival definite article. The expectation is borne out in Germanic. It is essentially a description of the weak/strong adjectival declension alternation, an important aspect of the present proposal, which I will turn to in section 3.3.

3.2.1 Scandinavian "double definiteness"

Strong evidence for the idea that the pre-adjectival definite marker is part of the xAP comes from so-called "double definiteness" in Scandinavian (Delsing, 1993; Svenonius, 1994; Vangsnes, 1999; Embick and Noyer, 2001; Hankamer and Mikkelsen, 2002; Holmberg and Platzack, 2005; Julien, 2005). In Norwegian (and Swedish and Danish) plain definite noun phrases do not feature a DP-initial definite article (7a). However, when the noun is modified by an adjective, the adjective is preceded by a definite marker (7b).[5] Singular indefinite noun phrases with a count noun feature an indefinite article independently of whether the noun is modified or not (7c).

(7) a. hus-et — Norwegian
house-DEF

b. de-t store hus-et
the-AGRA big house-DEF

c. et (stor-t) hus
a (big-AGRA) house

The term "double definiteness" suggests that there are two definite morphemes present in (7b). Indeed, in standard descriptions the noun suffix *-et* is taken to be a definite article, hence the gloss.

The structure I propose for (7b) is:[6]

(8) $[_{DP}[_{xAP}$ de-t stora] hus-et]
the-AGRA big house-DEF

The proposal in (8) is not strongly incompatible with the standard analysis (cf. Holmberg and Platzack, 2005) of (7a), that *hus-et* moves as a phrase (Julien, 2005) to Spec,DP.[7] For (7b) the standard analysis maintains that noun movement is blocked in the presence of an adjective, and hence D has to be lexicalized by merger of a definite article.

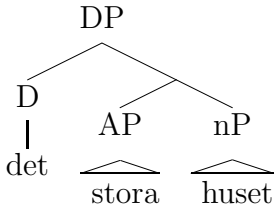
(9) a. det stora huset
the big house.DEF

[5]In present day Norwegian, the AgrA morpheme in *de-t* is only orthographic, while being pronounced when preceded by the adjective. (See Vangsnes (2007) for discussion and an (alternative) interpretation.)

[6]See Simpson (2000) for an analogous claim regarding Chinese *de*. See also Rubin (2002) for relevant discussion on Chinese, Romanian, and Tagalog.

[7]An earlier variant of the standard analysis is that of (Delsing, 1993) where the noun head-moves to D^0.

b.



It is here that my proposal (8) radically departs from the standard view. On my proposal *det* is not inserted due to failure of a constituent to move to Spec,DP, instead *det* is part of the constituent that does move to Spec,DP.[8]

The present proposal is compatible with the standard idea that the noun (as a phrase (Julien, 2002a, 2005)) movement to Spec,DP is blocked by the presence of an adjective. But rather than merging a definite article in D^0 to make up for the lack of noun movement, I pursue the possibility that the constituent that blocks noun movement - xAP - is in fact a possible Goal for the Probe in D and does in fact itself move to Spec,DP.[9]

The departure from the standard view on double definiteness can further be motivated on the grounds of broader crosslinguistic evidence, which includes Greek determiner spreading and the Swiss German *d/di*-alternation, and importantly a principled relation between these phenomena and the distribution of strong adjectival agreement in Germanic.

---

[8]Note that movement of the noun across an adjective is attested.

i. kristall-en den fin-a — Swedish
crystall-DEF.CG.SG DEF.SG fineDEF

ii. skog-en (?min/*denne) den grøn-e — Norwegian
forest-DEF.M.SG (my.M.SG/this.SG) DEF.SG green-DEF
Julien (2005, p.307)

Hence the standard approach would have to argue that the adjective blocks a specific kind of noun-movement, the kind that "checks" definiteness in D.

[9]Being more ambitious, it might be possible to integrate an account of the definite suffix, analyzing it as an independent head in the xNP, call it $Suff^0$ (see Julien (2002a, 2005) for a concrete proposal). This would readily allow an account of one basic contrast between Danish on the one hand, and Swedish and Norwegian on the other.

i. hus-et — Danish
house-DEF

ii. det stora hus(*-et)
the big house(-DEF)

iii. (det gula) hus-et — Swedish
(the yellow) house-DEF
'the (yellow) house' (from Julien (2005), glossing adapted)

A possible scenario would be that in Swedish (and Norwegian) definite xAP movement pied-pipes its dominating projection, and the noun along with it, to a position preceding $Suff^0$. In Danish, xAP fronting does not pied-pipe its dominating projection. This accounts for why in Danish, there is no DEF suffix on the noun in the context of adjectival modification. The question then is shifted to why in this case, in Danish, the $Suff^0$ head is not overt at all. This and other questions would need to be addressed.

3.2.2 Greek poly-(*in)-definiteness

Similarly compelling evidence for the proposal in (1) comes from the phenomenon in Greek that is sometimes referred to as "poly-definiteness" or "determiner spreading," short DS (Androutsopoulou, 1996; Alexiadou and Wilder, 1998; Kolliakou, 1999; Alexiadou, 2001a; Androutsopoulou, 2001; Campos and Stavrou, 2004).

Polydefiniteness

Greek can have additional definite markers in definite DPs under adjectival modification (one per adjective), even though Greek does have a definite marker in plain definite DPs, (10). The phenomenon of polydefiniteness means that in a modified definite DP more than one definite marker (*to* in (10)) are overtly present. DS correlates with relatively free constituent order (Alexiadou and Wilder, 1998).

(10) a. to megalo (to) vivlio — Greek
the big (the) book

b. to vivlio *(to) megalo
the book (the) big

In (10a) the adjective is prenominal, and a definite article can "optionally" surface between the noun and the adjective, in addition to the (obligatory) DP-initial definite article. In (10b) the adjective is post-nominal, and an overt definite article between the adjective and the noun is obligatory (in addition to the DP-initial definite article).[10]

Let us take (10) as suggesting that there is a pre-adjectival definite marker that is distinct from the directly pre-nominal definite marker. Greek also allows (11a), where only one overt definite marker is present. This is closer to what we find in Scandinavian/Germanic (11b) (abstracting away from the DEF-suffix).

(11) a. to megalo vivlio — Greek
the big book

b. det stora hus-et — Swedish
the big house-DEF

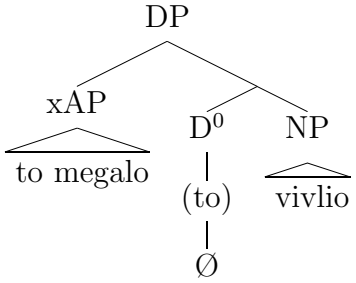
Let us take the elements in (11a) and (11b) to be structurally parallel, in the sense that the structural relations between the pre-adjectival definite marker and the adjective and the noun in (11a) is the same as that in (11b). Unlike Swedish, Greek does have an overt pre-nominal definite article in unmodifed DPs.

[10] Alexiadou and Wilder (1998) propose an underlying relative clause structure (akin to Kayne (1994)) for adjectives in polydefinite DPs. A&W argue that DS is available only with predicative adjectives (but see chapter 4 and Androutsopoulou (2001) for disagreeing judgments). Their proposal with a clausal origin for DS DPs and an NP-adjunction origin for non-DS DPs is intended to capture this. The present proposal displaces the locus of such contrasts. See below. In chapter 4 I will adopt aspects of the RC proposal by A&W, but I will argue that it generalizes to all adnominal adjectival modification.

(12) a. to vivlio — Greek
the book
b. huset
'the house' — Swedish

I propose for (11) the structure in (13).

(13) a.

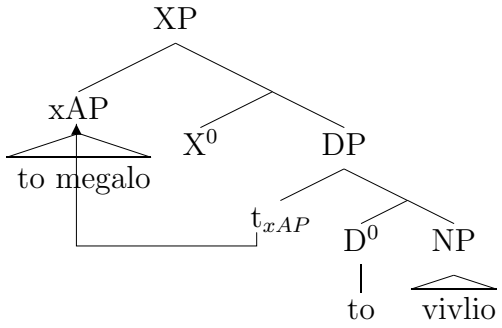


In other words, (11) structurally contains two definite markers. But only the left most one is overt. The one in D is licensed to be silent by the definite xAP in Spec,DP.

Observing with Melita Stavrou (reported in Cinque, 2005b, ft. 24) and Ioannidou and Dikken (2006) that the prenominal adjective in Greek polydefiniteness structures must be contrastively focused, I propose that the xAP can move to a DP-internal Focus position (cf. Aboh, 2004b).

By way of example, (14) is derived by movement of xAP out of Spec,DP to a higher left-peripheral position. On the semantic side, this movement is associated with contrastive focus.[11] On the PF side it has the effect of disrupting the licensing configuration for the non-pronunciation of the definite marker in D^0. The outcome is what is called "polydefiniteness."[12]

(14) a. to megalo to vivlio — Greek
the big the book
b.



[11] In Albanian as well, adjectives receive a focus interpretation when moved to the DP left-periphery (Androutsopoulou, 2001, p.164).

[12] As far as I am aware, Germanic has no "ordinary" instances of polydefinites like *the nice the house* or *the house the nice*, setting aside cases of *Restrictive Elliptical Appositives* (Van Riemsdijk, 1998a), which seems different, see below. However, Swiss German has *%dr vil dr bessr choch 'the much the better cook'*, where more than one definite article is present (see Penner and Schönenberger 1995 and Kallulli and Rothmayr (2008) and for some discussion). Notice that this is possible in the presence of a degree modifier of a comparative adjective. Possibly this is a case of overt poly-definiteness as analyzed here, depending on the structure of comparatives.

Hence Greek provides strong evidence for the structure that was independently motivated for Mainland Scandinavian.

Non-poly-in-definiteness

While Greek famously has DS with definite articles, in indefinite noun phrases no multiple articles are possible (15), even though the freedom of constituent order obtains. In other words Greek does not have "poly-in-definiteness."

(15) a. ena megalo (*ena) vivlio — Greek
a big (a) book

b. ena vivlio (*ena) megalo
a book (a) big

This is puzzling on the traditional view that the indefinite and the definite article are instantiations of the same head, realizing opposite feature values ([±def]). But it follows directly from the proposal, motivated on the grounds of Scandinavian, that the pre-adjectival definite marker is part of the xAP, while the DP-initial indefinite article is not. Let me therefore extend that proposal to Greek.[13]

(16) a. [ena [[$_{xAP}$ megalo] vivlio]]

b. [[$_{xAP}$ to megalo] vivlio]

3.2.3 German Restrictive Elliptic Appositives

German has, what Van Riemsdijk (1998a) calls "Restrictive Elliptic Appositives (REA)," exemplified in (17).

(17) a. Das Fahrrad, das blaue, hat er sich kaufen wollen. — German
the bicycle the blue has he self buy want
'He wanted to buy himself a light bicycle.'

b. Der Bundesrat, der ehemalige, hat eine gute Rede gehalten.
the minister the former has a good speech held

At first blush, these look very similar to the Greek examples. However, there are important differences.

Size and kind of doubled sequence

In Greek determiner spreading only the definite article can be doubled. In German REA also the indefinite article is doubled. Furthermore there are examples of PPs in which the preposition is doubled (from Van Riemsdijk (1998a)).

[13]Similarly in Maltese. Maltese exhibits definite article doubling (with restrictive readings). According to Plank and Moravcsik 1996,187 (as cited in Cinque (2005b, 4.3.2)) in indefinite noun phrases, the indefinite article is never repeated.

(18) a. Ein Auto ein rotes habe ich nicht gesehen. German
a car a red have I not seen

b. Auf einen Drink auf einen kurzen komme ich gern schnell hinüber.
for a drink for a quick come I gladly quickly over

Recursion

In Greek, determiner spreading is possible with more than one adjective (19a). In German on the other hand, only REA is possible per noun phrase.

(19) a. to piano to ghermaniko to megalo Greek
the piano the German the big

b. Das Auto, das rote, (*das Deutsche) ist mir zu teuer. German
the car the red the German is me too expensive

Prenominal spreading

In Greek, DS is possible also prenominally. German REA can only be postnominal.

(20) a. to megalo to ghermaniko to piano Greek
the big the German the piano

b. * das rote, das Auto German
the red the car

Extraposition

German REA allows extraposition, even without an intonational break (example from Henk van Riemsdijk p.c.).[14]

(21) Er hat sich ein Auto gekauft ein neues. German
he has himself a car bought a new.ONE

If Greek DS does not allow extraposition, this could constitute a further argument for distinguishing Greek DS and German REA.[15]

Intermediate conclusion

I conclude that REA have a number of distinct properties from Greek type DS, which makes a unified analysis not immediately plausible. Therefore I assume, for the time being, that REA and DS require distinct analyses.

[14] In my Swiss German I think I must have some sort of an intonational break there.

[15] Thanks to Henk van Riemsdijk for pointing this out to me. I have not yet been able to establish the relevant Greek facts.

3.2.4 Intermediate summary

There is strong evidence from Scandinavian double definiteness and from Greek determiner spreading that the pre-adjectival definite marker is within the extended projection of A, while a pre-adjectival indefinite article is not inside of xAP but a head in the extended projection of the noun.

(22) a. Def: $[_{xAP}$ to megalo] piano
b. Indef: ena $[_{xAP}$ megalo] piano

Let us next turn to the discussion of the weak/strong adjectival declension alternation in Germanic, which points to the exact same conclusion. We will find that Greek lacks "poly-indefiniteness" for the same reason that Germanic adjectives inflect strongly in indefinite DPs.

3.3 Adjectival agreement

The proposal that the pre-adjectival definite marker is part of the xAP, while a pre-adjectival indefinite article is outside of this domain, is strongly supported by the distribution of strong adjectival agreement in Germanic (which will be explained momentarily).

I assume that there is an agreement projection in the higher functional field of the xAP (Zamparelli, 2000; Julien, 2002a), which I will label AgrA (mnemonic for "adjectival agreement") and which is the locus of "strong agreement." The linear distribution of AgrA is illuminating. The following three general statements seem to be true to an insightful degree, and I shall take them very seriously.

(A) After a definite article the adjective bears weak inflection.

(23) d-er gut-e Wein German
the-AGRA good-WK wine

(B) In the absence of any determiner the adjective bears strong inflection (glossed AgrA).

(24) gut-er Wein German
good-AGRA wine

(C) There is a strong formal similarity between the inflection on the pre-adjectival definite article and the strong inflection on the adjective.

I will claim that always when a (regular[16] adnominal) adjective has weak inflection, there is a (strongly inflected) pre-adjectival definite marker in front of it, in an appropriately local relation. This local domain is the xAP.

Taking the formal similarity between the inflection on the (pre-adjectival) definite article and the strong inflection of an adjective seriously, and observing the impossibility of their co-occurrence, I claim (following Milner and Milner (1972)) that the inflectional morpheme on the pre-adjectival definite article **is** strong adjectival inflection AgrA. I propose that the linear order

[16]Regular here means one that in some other environments does take strong inflection.

of AgrA relative to the adjective is a function of AP movement across AgrA or absence of such movement.

3.3.1 German weak/strong adjectival declension

In German, adjectives have two paradigms, differing in their agreement suffix (Bierwisch, 1967; Milner and Milner, 1972; Zwicky, 1986; Kester, 1996b; Gallmann, 1996; Schlenker, 1999; Müller, 2002; Roehrs, 2006). The traditional terminology, going back to Jakob Grimm, distinguishes strong and weak adjectives. Paradigmatically speaking, the strong paradigm makes more distinctions than the weak one. The discussion in this chapter is limited to Nominative and Accusative (singular) noun phrases. Dative and genitive morphology obscures the picture which has led to unwarranted complications in previous accounts, as I will discuss in chapter 7.

The basic pattern is this. Prenominal adjectives exhibit strong agreement (AgrA) in bare noun phrases (25a). After the indefinite article adjectives inflect also strongly (25b). But after the definite article, adjectives inflect weakly (25c).

(25) German

a. gut-**er** Wein
good-AGRA wine

b. ein gut-**er** Wein
a good-AGRA wine

c. d-**er** gut-**e** Wein
the-AGRA good-WK wine

In other words, the presence of an indefinite article has no effect on the adjectival agreement, while the presence of a definite marker does.[17]

Milner and Milner (1972) observe that there is a strong degree of homonymy between non-definite adjectival inflection (i.e. strong inflection) and the inflectional suffix on the definite marker, which co-occurs with the absence of strong inflection on the adjective. Milner and Milner propose that the *-er* in (25a), in (25b), and in (25c) are the same morphosyntactic object, and that its linear order relative to the adjective is a function of movement.

In their proposal the definite marker *d-* and the adjective compete for the same position relative to the strong agreement. The strong agreement suffix affix-hops from the initial position across one element (constituent) to its right. The idea of their proposal is rendered in (26).[18]

[17]Note that *ein* has many faces (see Roehrs (2006, ch.4 part II)). In NP-ellipsis contexts, when no (other) adjective is present, *ein* is followed by strong adjectival inflection

i. Ich habe ein-s _ gekauft. German
I have one bought
'I bought one.'

The same holds for the other so-called "*ein*-words" (e.g. *mein 'my'* and *kein 'no'*). These seem to me instances in which substructures containing these elements are used as adjectives, i.e. used as input into an adjectival structure/cycle. That this must be allowed is witnessed by forms like *ein-ig-e 'some'* or *die mein-ig-en 'the mine'*. The requirement of an adjectival layer/cycle in N(P)-ellipsis contexts is reminiscent of Kester's (1996b) proposal that N(P)-ellipsis is licensed by adjectival inflection.

[18]Milner and Milner's (1972) downward movement of the affix is mimicked as "licensing" in Roehrs (2006).

(26) Milner and Milner's (1972) proposal:

a. AGR d- AGR adjective noun

b. AGR adjective AGR noun

Let me adopt that part of their idea that says that the *-er* in the three examples is the same morphosyntactic object, AgrA, and that the position of AgrA is determined by movement. But contrary to Milner and Milner (1972) I propose that it is the adjective that moves to the left of AgrA in (25a) and (25b).

(27) Present proposal:
... adjective ... AgrA ... adjective ...

Movement of the adjective to the left of AgrA results in the adjective's preceding AgrA, which is the state of affairs that traditional grammar describes as "strong agreement."

If movement of the adjective to the left of AgrA is blocked, the AgrA morpheme will precede the adjective. This is what is traditionally described as an instance of "weak agreement."[19] One such case is (25c). I propose that merger of *d-* blocks[20] movement of the adjective to the left of the strong inflection, and gives rise to a definite structure.

(28) ... d- ... AgrA ... adjective ...

The indefinite article does not block AP movement. This follows naturally from the conclusion from Mainland Scandinavian and Greek above that the indefinite article is not within the xAP.

(29) Indef: (INDEF.ART) $[_{xAP}$ Adj ... AgrA ... Adj ...]

(30) Def: $[_{xAP}$ *d-* ... AgrA ... Adj ...]

On this picture, the absence of poly-in-definiteness becomes perfectly parallel to the fact that Germanic adjectives inflect strongly in non-definite contexts.

Note that adjective movement across AgrA must be phrasal movement (see also Julien (2002a)).

(31) a. d-er sehr gute Wein German
the-AGRA very good wine

b. sehr gut-er Wein
very good-AGRA wine

I will call and represent this as AP movement, meaning that a phrasal constituent containing the adjective moves.[21]

[19] I will not say much about the weak agreement morpheme. Given that it has distinct forms it cannot simply be "default" agreement. Whenever it is adjacent to AgrA it will remain silent. However, I assume it to be present on the adjective, and closer to the stem that AgrA. Possibly weak agreement functions as a Relator, cf. Den Dikken (2006).

[20] Perhaps by merely rendering it unnecessary, cf. Koopman's (1997a) *Projection Activation*.

[21] In a more precise representation, the constituent that moves across AgrA would presumably be DegP which would contain in its complement a projection typically labeled AP.

3.3.2 The Swiss German *d/di*-alternation

The present proposal also immediately accounts for the "d/di-alternation" in Swiss German, which on the traditional view that the pre-adjectival definite marker is in D would remain puzzling.

While in German the definite article always has the same form whether it is followed by an adjective or not, Swiss German exhibits a phenomenon which I call the *d/di*-alternation (Weber, 1964; Leu, 2001). Consider (32).[22]

(32) a. d rosä — Swiss German
the rose

b. d-*(i) rot rosä
the-AGRA red rose

c. ä rot-i rosä
a red-AGRA rose

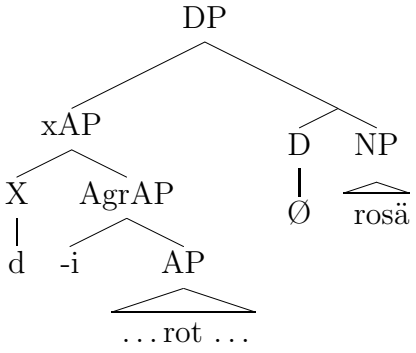
(32a) is a plain definite DP with a feminine head noun. The definite marker is *d-* and is not followed by an overt inflectional morpheme, which can mean it is followed either by no inflection or by a zero inflectional morpheme.

In (32b) an adjectival modifier has been added. The addition is obligatorily accompanied by the appearance of the inflectional morpheme *-i* following the definite marker. In the indefinite counterpart (32c), *-i* follows the adjective, which identifies it as an instance of the strong adjectival inflection, AgrA.

I propose that in both (32b) and (32c) the inflectional morpheme *-i* is adjectival agreement, i.e. it is the spell out of an element that is present only when adjectival modification is at hand.

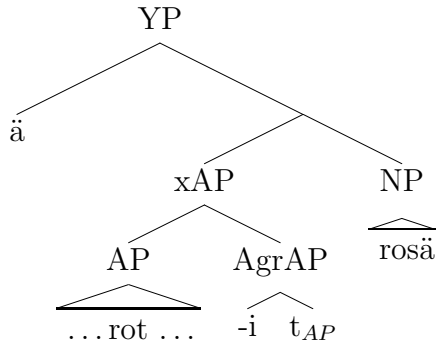
Notice that the pattern in (32) forms a strong argument for the claim that AgrA is part of the xAP, and for the syntactic nature of the distribution of AgrA. Hence in the structure associated with adjectival modification there is at least and adjective and an agreement head, and the adjective can follow the agreement head or precede it. The two scenarios are represented in (33) and (34) respectively.

(33) d-i rot rosä = (32b)
the-AGRA red rose



[22] The contrast observed in (32a) versus (32b) overtly holds in feminine and in plural DPs that are structurally Case-marked only (Weber, 1964; Leu, 2001). In all other cases, *d-* is always overtly inflected.

(34) ä rot-i rosä = (32c)
a red-AGRA rose



3.3.3 Emphasizing agreement

The pattern described above is the regular agreement pattern. There is a confounding factor that needs to be kept separate from that (as I have been doing), which is the following. Swiss German also allows (35).

(35) a. di alti brugg Swiss German
the old bridge.FEM

b. di alt brugg
the old bridge.FEM

In (35a) the adjective *alt 'old'* is followed by *-i* despite the *-i* on the preceding definite marker. The difference between (35a) and (b) is very hard to pinpoint down, but it seems to me that (35a) contains some notion of emphasis not present in (b). Let me therefore call the *-i* in *alti* in (35a) "emphasis-*i*." If *-i* on *alti* is the strong agreement morpheme AgrA, its appearance is a priori unexpected. However, there is reason to keep this *-i* distinct from that of AgrA. Consider (36).

(36) a. dr alti turm Swiss German
the old tower.MAS

b. di altä/*alti türm
the old/old tower.PL

The emphasis-*i* can also appear on adjectives in masculine noun phrases (36a), however, the masculine singular form of AgrA is *-ä*, not *-i*. The emphasis-*i* cannot appear on adjectives in plural noun phrases on the other hand (36b), even though the plural form of AgrA is *-i*.

I do not have an analysis for the emphasis-*i* to offer. But it seems to me to be justified to distinguish the *-i* in (35a) and (36a) from AgrA.

3.3.4 Poly(*-in-)definiteness and weak/strong adjectival declension

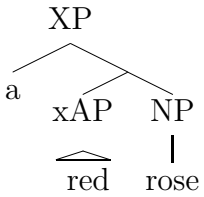
The present proposal unifies the absence of poly-in-definiteness in Greek and the fact that in Germanic non-definite DPs adjectives inflect strongly. Recall that for the account of Greek poly-(*in-)definiteness, there are two immediately relevant components. One is the proposal that the

pre-adjectival definite article is part of the modification clause xAP, and hence structurally distinct from the head of D. The second important claim is that the indefinite article is not an indefinite counterpart of the pre-adjectival definite article, specifically, it does not lexicalize the left periphery of xAP.

The same two claims have now been independently motivated to account for the basic distribution of strong adjectival agreement, AgrA, in German and Swiss German.

(37) a. a red rose

b.



In both Swiss German and Greek, indefinite xAPs do not feature an indefinite article. In other words there is no multiplication of indefinite articles that goes along with adjectival modification. There is one indefinite article whether or not the DP contains an adjectival modification structure.[23]

3.4 Non-pronunciation of *d-*

We have encountered the notion of silent definite marker in the previous discussion. In all the hypothesized instances a phrasal constituent, typically containing a definite morpheme, was immediately preceding the position in which the definite marker would (likely) surface if it were overt. This could suggest a treatment in terms of a Doubly-Filled-Comp effect (cf. Chomsky and Lasnik (1977); Koopman (1997a); Giusti (1997), for critical discussion of the notion see Starke (2004)).

In this section I will first present a further argument for the structural presence of silent definite markers and secondly I will present an argument that licensing of non-pronunciation must be possible at some distance, i.e. in a structural context that is less local than Spec-head.

3.4.1 Multiple adjectives, multiple definite markers, and AgrA

Recall the generalization (A) from the beginning of section 3.3 and consider the proposed stronger reformulation of it in (A').

(A') **Only** after a definite article within its xAP does the adjective bear weak inflection.

The account for (A) was the proposal that pre-adjectival *d-* and AP are competing or the same position to the left of AgrA. While (A') is fulfilled in DPs like (38), assuming that *der* is within the xAP of *frisch*, it is not always overtly observed (39).

[23] Multiple indefinite articles are possible, but in different environments and due to different mechanisms than multiple definite articles. See chapter 6.

(38) a. der frisch-e Wein — German
the fresh-WK wine

b. frisch-er Wein
fresh-AGRA wine

(39) a. der frisch-e süss-e Wein — German
the fresh-WK sweet-WK wine

b. welcher frisch-e Wein
which fresh-WK wine

In light of examples like (39), assumption (A') leads me to propose that there are non-overt pre-adjectival definite markers.

(40) der frisch-e DER süss-e DER Wein — German
the fresh-WK THE sweet-WK THE wine

This proposal is similar to the one I made and defended for some demonstrative and quantified DPs in chapter 2. I argued that in some instances there is a silent definite marker in D, which we see overtly in other cases/languages.

(41) a. this THE book

b. afto to vilvio — Greek

(42) a. Bäid-i THE mäitli... — Swiss German
both-AGRA THE girls...

b. d mäitli hend bäid-i es piär trunkä. — Swiss German
the girls have both-AGRA a beer drunk

The same argument can be made with multiple adjectives. Greek has (43), a definite noun phrase containing two adjectives and a total of three definite markers.

(43) to vivlio to kokkino to kalo — Greek
the book the red the good

Danish has noun phrases where an additional definite marker can appear with demonstratives if and only if an adjective is present (repeated from (34d) section 2.2).

(44) dette (det) høje (*det) flotte hus — Danish
this (the) tall (the) stylish house

So there is good evidence that (in definite noun phrases) adjectives structurally "license" definite markers. A question that remains is whether the definite marker in the left periphery of an xAP is structurally present, even if silent, or not. With this in mind let us return to the question of adjectival agreement.

In noun phrases with multiple adjectives, the adjectives always exhibit identical agreement.[24] Consider the examples below.

(45) a. gut-er alt-er Wein German
good-AGRA old-AGRA wine

b. d-er gute alte Wein
the-AGRA good.WK old.WK wine

(45a) witnesses the presence of one AgrA morpheme per adjective. Each adjective has moved to the left of its AgrA within its xAP. Recall the account of the lack of strong inflection on the adjective in definite DPs. I proposed that a definite marker is merged in the left periphery of the xAP blocking movement of AP across AgrA (schema repeated).

(46) Indef: $[_{xAP}$ Adj ... AgrA ... Adj ...]

(47) Def: $[_{xAP}$ *d-* ... AgrA ... Adj ...]

If this proposal for the distribution of AgrA is correct, then the form *alte* in (45b) suggests that there is a (silent) definite marker in the left periphery of the xAP headed by *alt*.[25]

(48) d-er gute DER alte DER Wein German
the-AGRA good.WK THE old.WK THE wine

The idea that enough structure must be available for each adjective is, of course, strongly supported by the existence of overt polydefiniteness as in e.g. Greek.

What is not immediately obvious is the question of how the non-pronunciation of the definite marker (plus AgrA) in the lower (i.e. the non-initial) xAP and the one in D^0 is licensed/required. For the licensing of silent *d* in D^0 it might seem possible to invoke a Doubly-Filled-Comp-filter-like effect. If this were the correct and only analysis, we would be forced to an analysis of multiple xAPs in which they would be stacked upon a left branch. However, such a stacking approach would weaken the argument from weak agreement for a silent definite marker between *gute* and *alte* in (48). The reason is one of analytic redundancy, so to speak. To see this, compare the following two scenarios. (A) *alte* inflects weakly because $[_{AP}$ alte] fronting to the left periphery of its xAP is blocked by merger of a definite marker which remains silent due to the presence of $[_{xAP}$ der gute] in its specifier. (B) *alte* inflects weakly because $[_{AP}$ alte] fronting to the left periphery of its xAP is blocked by the presence of $[_{xAP}$ der gute]. - Hence a Doubly-Filled-Comp approach may betray itself.

Another argument against the Doubly-Filled-Comp approach is the fact that in non-definite noun phrases with two adjectives, both inflect strongly. If it were the case that the left most adjective sat in the specifier of the xAP associated with the second adjective, that second adjective

[24]This generalization has been hypothesized to be a universal (Milner and Milner, 1972). The validity of the generalization is seemingly called into question by the distribution of masculine/neuter dative morphology in German. I will come back to this in some detail in chapter 7, where I will argue that the claim of universality is not impinged upon by the dative morphology.

[25]Note that both *d* and AgrA are silent. I.e. AgrA is overt in a non-highest xAP only in indefinites, not in definites. It is not immediately obvious what the correct account of this is.

would not be able to front, according to my earlier proposal. This would lead to the wrong prediction that only the first adjective is strongly inflected. The fact that both adjectives are strongly inflected strongly suggests that the adjectives are in separate specifiers in the xNP.[26]

There is furthermore independent evidence that the licensing configuration for non-pronunciation cannot be required to be as local as Spec-head. The evidence comes from non-inflectable modifiers that occur along the DP spine between the overt (licensing) definite marker and the (hypothesized) silent definite marker. This is the topic of the next subsection. Provided that the evidence in the next subsection is compelling, I conclude that the argument from (45) for the presence of silent definite markers as in (48) is valid.

3.4.2 Numerals

Numerals differ from ordinary adjectives in several respects (in German and Swiss German).

a They do not (generally) take AgrA.[27]

b They occur high in the noun phrase structure.[28]

c They do not combine with comparative or superlative morphology.[29]

These properties suggest that numerals are not adjectives, i.e. they do not project an xAP.[30] I will assume that numerals are phrasal (i.e. syntactically complex, see Zweig (2005) for some

[26]See also section 4.5.

[27]They can take a suffix *i-* in a restricted set of cases. This *i-* may well be the plural form of AgrA. The set of cases in which this is possible are instances of N(P)-ellipsis in some dialects. (i) answers a question like "how many doughnuts would he be able to eat?"

i. ja eppä fif-i ec_{NP} — Uri German
well about five-I

ii. am viertel ab füf-i — Swiss German
at quarter past five-I

iii. Im januar wird er füf-i.
in January becomes he five-I

Numerals obligatorily take an *i-* suffix (in all of Swiss German, as far as I am aware) in expressions of time as in (ii) and of age as in (iii). In (ii), *füf* must refer to the hour of the day (either AM or PM), and in (iii) it must refer to the number of years (even in a context where a months reading would be salient). In the light of (i), and thinking of Kester's (1996a) claim that it is adjectival inflection that licenses N(P)-ellipsis, (ii) and (iii) strongly support the proposal in Kayne (2003) that there are silent nominals *HOURS* and *YEARS* syntactically present in such examples.
Henk van Riemsdijk points out as a possible alternative that this *-i* may be the de-adjectival nominalizer found in e.g. *d höch-i 'the height', d leng-i 'the length', d bräit-i 'the width'*, as well as in e.g. *ds znün-i 'the nine o'clock snack'*. Against such an alternative may speak the fact that this nominalizer *-i* is a singular form (cf. plural *drü lengänä 'three lengths'*), whereas the *-i* in (i) is in a plural context.

[28]See also chapter 2 note 49.

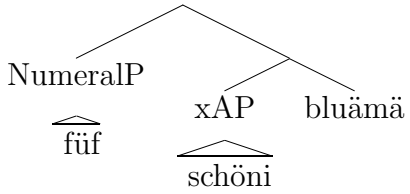
[29]This may be incorrect for the superlative morpheme, which may be homomorphic to the ordinal morpheme.

[30]There is some amount of crosslinguistic variation with regard to the treatment of numerals. In Germanic very low numerals often have a special status with regard to inflection. In some Bantu languages numerals up to 5 or 10 are treated as adjectives (Zweig (2005) citing Corbett (1978)).

discussion) and hence occupy a specifier in the xNP.[31]

(49) a. füf schön-i bluämä — Swiss German
five pretty-AGRA flowers

b.



The non-definite example looks entirely innocuous. The numeral precedes the xAP. Within the xAP, the AP precedes AgrA. An important question arises however in definites. Recall that in definites the definite morpheme *d-* is merged at the left edge of the xAP, the AP does therefore not front and hence ends up following the AgrA morpheme. Importantly this all happens within the xAP. Now consider the definite examples (50).[32]

(50) a. d-i schönä füf rosä — Swiss German
the-AGRA pretty five roses

b. d-i füf schönä rosä
the-AGRA five pretty roses

(50a) is unproblematic. The constituent *[$_{xAP}$ di schönä]* has moved across the numeral into a left peripheral position.

(50b), on the other hand, is in need of some explanation. The numeral *füf* linearly intervenes between *di* and *schönä*. If *di* in (50b) is part of the xAP projected by *schön*, and if the conjecture in (49) is correct, then (50b) must involve DP-internal splitting of the xAP.[33] This is a conceivable option even though not easy to implement.[34] However, there is some evidence suggesting an alternative view, namely that *di* in (50b) is not (and never was) in the left periphery of the xAP projected by *schön*, but constitutes a distinct xAP.

[31]Henk van Riemsdijk p.c. observes that with certain adjectives numerals can occur in both relative orders.

i. füf lausigi rosä — Swiss German
five lousy roses

ii. lausigi füf rosä / böim
lousy five roses / trees

In (i), the likely reading is that the roses are lousy (as opposed to, say lilies), whereas in (ii) roses are fine, but five is meager, as opposed to, say thirty. The same holds in English. What is interesting, from a comparative syntax perspective, is that in Swiss German, in both examples, *lausigi* has a plural form (cf. (ii), with the masculine noun *böim 'trees'*). English, on the other hand, allows an indefinite article to go with the evaluative modifiers in its counterpart of (ii): *a lousy five roses*. See Kayne (2005b); Solt (2006) for relevant discussion.

[32]I'm grateful to Anna Szabolcsi p.c. for pointing out to me this challenging issue.

[33]Setting aside an analysis of the numeral as a modifier inside the xAP of *schön*.

[34]This idea may be supported by Icelandic which exhibits the typical order *Adj N-Def Numeral*, see chapter 2 note 49.

The DP-initial definite marker is obligatorily followed by *-i* when preceding a numeral, independently of the presence of a descriptive adjective (51a).[35] If the *-i* of *di* in (51a) does not belong to *füf*, as suggested by the absence of a *-i* suffix on *füf* in (49), then (51b) is structurally similar to (51c), apart from the presence of a numeral in the former.

(51) a. d*(i) füf rosä. Swiss German
the(AGRA five roses)

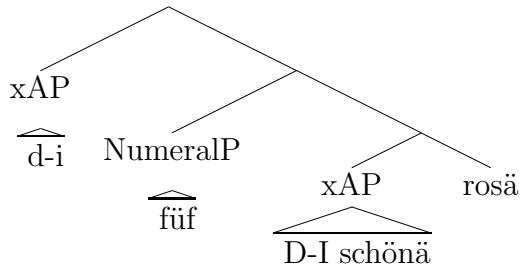
b. [$_{xAP}$ d-i] füf [$_{xAP}$ (*d-i) rotä] rosä
the-AGRA five (the-AGRA) red roses

c. [$_{xAP}$ d-i schönä] [$_{xAP}$ (*d-i) rotä] rosä
the-AGRA pretty (the-AGRA) red roses

Hence the constituency problem is solved, assigning to (50b) the structure in (52).

(52) a. d-i füf schönä rosä
the-AGRA five pretty roses

b.



The obligatory presence of AgrA in (51a) suggests the obligatory presence of an xAP of some sort in definite noun phrases that are modified by a numeral like *füf*. I propose to assimilate the *di* in (51a), repeated as (53a) to the *di* without a numeral (53b), which I have argued (in chapter 2) contains a silent anaphoric/deictic adjective *HERE/THERE*. This predicts that a definite noun phrase containing a numeral like *five* have an anaphoric semantics beyond that of the Swiss German definite article *d-*.

(53) a. d*(i) füf rosä. Swiss German
the(AGRA five roses)

b. d-i HERE rosä
the-AGRA rose
'this rose'

This is strongly supported by evidence from Northern Swedish. In Northern Swedish definite noun phrases, numerals are obligatorily preceded by a demonstrative of the sort that features an overt *"there"* (Vangsnes, 1999; Julien, 2005).

[35]Similarly in Mainland Scandinavian definite noun phrases, the presence of a numeral triggers a DP-initial definite marker. And as in Swiss German and German, numerals are not inflected, apart from a few very low numerals (Julien, 2005, ch.2).

(54) dem-derna trei grann-hest-a Northern Swedish
they-there three fine-horse-DEF.PL
(Vangsnes, 1999, p.138)

Also in English the presence of a numeral in a definite noun phrase imposes some anaphoricity requirement. Richard Kayne p.c. points out to me that (55a) is not as natural (without a relative clause) as (b) or (c).

(55) a. the 17 students #(that I was telling you about)
b. these 17 students
c. all 17 students

It is not entirely clear to me why numerals in a definite noun phrase require some additional anaphoric link, beyond the contribution of a definite article. This is likely a semantic requirement, and I will leave this question for future research. Importantly though, the conjecture in (52) of a higher xAP hosting *di* seems justified.

If so, this example clearly shows that silent *DI* in the lower xAP is licensed at some distance, i.e. not in a Doubly-Filled-Comp manner.[36]

3.5 Inflection balance sheet

Before concluding this chapter it may be useful to step back and check what the proposal so far has achieved and what it has not taken care of, regarding the distribution of adjectival inflection.

3.5.1 German adjectival declension

An analysis of adjectival declension must address the inflectional forms and their distribution. The forms of strong adjectival inflection in standard German are given in table 3.1.[37]

Table 3.1: German strong adjectival declension (traditional view)

	MASCULINE	NEUTER	FEMININE	PLURAL
NOMINATIVE	**-r**	**-s**	**-e**	-e
ACCUSATIVE	**-n**	**-s**	**-e**	-e
DATIVE	-m	-m	-r	-n
GENITIVE	-n	-n	-r	-r

[36] See Katzir (2006) for interesting relevant discussion.

[37] The strong agreement forms are identical to those of definite determiners with the exception of the masculine and neuter genitive, which are *-s* for determiners.

Syntagmatic distribution of AgrA Regarding the syntagmatic distribution of these forms, I have claimed they are realizations of a syntactic head AgrA which is followed by the AP if it is preceded by the definite marker *d-*, and preceded by the AP otherwise.

(56) a. d-er alte Wein German
the-AGRA old wine

b. alt-er Wein
old-AGRA wine

The proposal is correct if we limit ourselves to nominative and accusative noun phrases that begin with a definite article or are bare noun phrases. This is, I claim, the essence of what needs to be explained. All seemingly different cases reduce to one of these two (as far as adjectival inflection is concerned). This is a strong claim and immediately necessitates the discussion of two major issues. The next two subsections (3.5.2 and 3.5.3) will foreshadow the more detailed treatment of these issues in chapters 5-7.

Form of AgrA Regarding the form, there are two issue that I will address:

- the relation between AgrA and the noun it agrees with
- the mapping between feature content of the syntactic node and the spellout form (Vocabulary Item) it takes

The fact that AgrA is sensitive to the gender features of the head noun suggests a c-command relationship between AgrA and NP at some point in the derivation. The consequences for the structure of adjectival modification are the subject matter of chapter 4.

The second issue regarding the form of AgrA that I will address is that of syncretism (systematic homonymy). Regarding the spellout forms of a given syntactic head, a number of vocabulary items (correspondences between morphosyntactic features and phonological information) need to be stipulated.[38] But beyond that, an account of adjectival declension (or rather of adjective-related affixal morphology) must address regularities in the failure of making overt distinctions, i.e. the patterns of syncretism. This will be the main concern of section 7.4.

3.5.2 Determiners other than the articles

One important issue that needs to be addressed is that of noun phrases which, from a traditional perspective, are neither bare nor introduced by one of the articles (definite article or indefinite article). Such noun phrases, it seems, would make up a significant part of the noun phrases in the language (both in terms of type and token frequency in e.g. a corpus).

This is, however, somewhat misleading. In chapter 2 I discussed *d*-determiners (definite demonstratives and the dual quantifier *beid- 'both'*) and showed that these are modifiers of noun phrases with a definite article, (with some innocuous complications in the case of *beid-*). In chapters 5-6 the

[38] I will assume that this relation is arbitrary (in the Saussurian sense of).

idea will be developed that what we call determiners (other than the articles) are quite generally special cases of xAPs, also in non-*d*-determiners.

3.5.3 Dative and genitive or *ein*-words

Another important issue is that of knowing when exactly we are dealing with a realization of AgrA and when not. According to the (traditional) table (3.1) the dative and genitive morphemes *-m, -r, -s/-n* (and *-n*[39]) are instances of strong adjectival agreement (/determiner agreement) and, if so, are expected to have the distribution of AgrA. But this expectation is not borne out, as the dative examples in (57) illustrate. The morpheme *-m* precedes the adjective not only in the definite noun phrase but also after an indefinite article (57b), or more generally after the class of so-called "ein words," where AgrA is predicted to follow the adjective, cf. (57c).

(57) German

a. d-em alten Tisch
the-DAT old table

b. ein-em alten Tisch
an-DAT old table

c. * ein alt-em Tisch
an old-DAT table

This is one of the long standing issues in German adjectival declension. In chapter 7 I discuss this issue in some detail and conclude that the dative and genitive morphemes are not instances of AgrA. I will develop a (partial) account of these "case-markers," taking into consideration subtle and hitherto unexplained syntactic properties associated with these elements as well as the syncretism patterns that they exhibit and induce in other parts of the structure. Consider the forms in table 3.2 below exemplified with the adjective *gut- 'good'*. The discussion in chapter 7

Table 3.2: German singular adjectival declension (traditional view)

<table>
<tr><th></th><th colspan="3">STRONG PARADIGM</th><th colspan="3">WEAK PARADIGM</th></tr>
<tr><th>Singular</th><th>MAS</th><th>NEU</th><th>FEM</th><th>MAS</th><th>NEU</th><th>FEM</th></tr>
<tr><td>NOM</td><td>gut-er</td><td rowspan="2">gut-es</td><td rowspan="2">gut-e</td><td colspan="3" rowspan="2">gut-e</td></tr>
<tr><td>ACC</td><td>gut-en</td></tr>
<tr><td>DAT</td><td colspan="2">gut-em</td><td rowspan="2">gut-er</td><td colspan="3" rowspan="2">gut-en</td></tr>
<tr><td>GEN</td><td colspan="2">gut-en</td></tr>
</table>

involves a reanalysis of the dative and genitive rows of the weak paradigm (*guten*) as realizations of AgrA, i.e. in effect as belonging to the strong paradigm.[40]

[39] *-n* occurs in dative plural contexts. Plural morphology is being set aside in this thesis for the time being.

[40] The nominative and accusative rows of the weak paradigm remain to be accounted for. Possibly they are the spellout of a RELATOR-type head, in the sense of Den Dikken (2006). A (partial) alternative would be that they

3.6 Summary

In this chapter I extended the structure motivated in chapter 2 to adjectival modification in general. I propose that the pre-adjectival definite marker (unlike the indefinite article) is a head in the extended projection of the adjective, xAP. Definite xAP moves to Spec,DP (or some other specifier to the left of D^0), licensing the non-pronunciation of definite D^0. When no definite marker is merged in the xAP, AP moves to the left periphery of the xAP, crossing AgrA, host of strong adjectival inflection.

(58) Indef: $[_{xAP}$ Adj ... AgrA ... Adj ...]

(59) Def: $[_{xAP}$ *d-* ... AgrA ... Adj ...]

I discussed a number of advantages of the proposal. It immediately accounts for the appearance of an additional definite marker under adjectival modification, as observed in Mainland Scandinavian and in Greek. It simultaneously accounts for the basic pattern of the Germanic weak/strong adjectival declension alternation.

are the spell out of a lower Agr head (lower than AgrA), which happens to end up right adjacent to the adjective, and which fails to be pronounced when it is left-adjacent to AgrA. This is not very insightful, but it shall suffice for present purposes.

Chapter 4

xAP as RC

4.1 Introduction

The purpose of this chapter is twofold. On the one hand, it advocates the feasibility of the proposals in chapters 2 and 3. On the other, it sets it in a larger context.

I will start with some background discussion on the structure of adjectival modification and relative clauses. Then I will discuss the proposal that xAPs involve relativization, section 4.4. In that section I will discuss arguments from both morphosyntax and semantics supporting the proposal.

In the previous chapters I proposed that the pre-adjectival definite marker, the strong adjectival agreement morpheme (AgrA), and the adjective (AP) are all constituents in the xAP, and that this xAP is a specifier in the xNP. The question then arises of how the noun and the adjective are thematically related, and how the agreement relation between the noun and AgrA is established.

If the proposal in chapter 3, that *d-/th-* is a morpheme in the left periphery of the xAP, is correct, the adjective and the noun (NP) must enter into a thematic relation before this *d-/th-* morpheme is merged. Furthermore, AgrA and the noun (NP) must be in a c-command relationship at some point in order to agree. Hence a "representative" of the noun must be inside the xAP. This turns (1) into a relativization structure. Hence my proposal for the structure of adjectival modification shares properties with the tradition that regards adjectival modifiers as (reduced) relatives (Smith, 1961; Kayne, 1994). It is possible to subsequently ask the more specific question of what kind of relativization is involved. I will argue that a promotion analysis must be assumed at least in some cases, namely for adjectives that cannot occur as the predicate of a copular sentence.

In section 4.5 finally, I show how the present relativization proposal can feed into a cartographic representation of adjectives and determiners, familiar from work by Cinque and others.

4.2 Brief background on situating the adjective in the DP

Let us start with a brief overview of some proposals prominent in the literature.

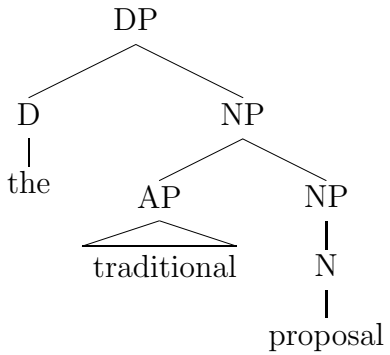
i. Adjectives as adjuncts
ii. Adjectives as heads
iii. Adjectives as specifiers
iv. Adjectives as relative clauses

I will propose a variant of (iv) that mixes elements of (ii) and (iii).

4.2.1 Adjectives as adjuncts

There is a fairly standard view of adjectives as being NP-adjoined.[1]

(1) a. the traditional proposal
b.



This view has been argued for by Olsen (1989a); Valois (1991); Bernstein (1993); Svenonius (1994); Hankamer and Mikkelsen (2002), among others.[2] It captures the (seeming) optionality and iterability of adjectives (Svenonius, 1994).

(2) a. the (red) telephone
b. das (rote) Telefon

It is true that often in English and German if a noun phrase with an adjective is acceptable then omission of the adjective is acceptable too, as illustrated in (2).[3] It is not clear, however, in what sense adjectives are "optional." Specifically, there are many cases which this optionality, seemingly obvious in (2), does not extend to e.g. Swiss German *d/di*-alternation (3.3.2), Scandinavian "double definiteness" (3.2.1), Slovenian *ta* (2.2.2) etc.[4] (The judgments refer to the interpretation in the glosses.)

[1] I am assuming the DP-hypothesis (Szabolcsi, 1983/84, 1994; Abney, 1987) without discussion.

[2] Bernstein proposes a hybrid analysis between head and adjunct, depending on the adjective. A closed class of functional adjectives, determiner-like, are heads, and are analogous to modals.

[3] Though see example (16) below.

[4] Similarly in Icelandic, the DP-initial (as opposed to the suffixal) definite article is never acceptable in the absence of an adjective, but is acceptable with "abstract nouns in formal written style" when preceding an adjective (Sigurðsson, 2006).

(3) a. d-i *(rot) rosä — Swiss German
the-AGRA (red) rose

b. de-t *(stora) hus-et — Swedish
the-AGRA (big) house-DEF

c. ta *(nov) pes — Coll. Slovenian
the (new) dog (nominative)

In (3) the adjective is not "optional." On the proposal developed in this thesis this non-optionality follows immediately. Saying that the adjective is optional is like saying that the verb of a relative clause is optional, which it isn't.[5]

As for iterability, if adjectives are NP adjoined phrases, the occurrence of multiple adjectives raises the concern of allowing multiple adjunction/multiple specifiers, which is incompatible with antisymmetry (Kayne, 1994).

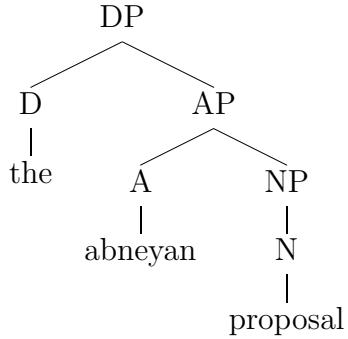
A final question that is not immediately obvious on this approach is how the adjective and the noun enter into a thematic relation. With non-intersective adjectives this issue is particularly salient.

4.2.2 Adjectives as heads

Another view is that adjectives are heads in the projection line between N and D (Abney, 1987; Bernstein, 1993, among others).

(4) a. the abneyan proposal

b.



This proposal has the property of allowing the adjective to select the noun thematically.[6] However, the fact that the noun remains in the complement of the adjective seems semantically

i. hina athyglisverðu hugmynd — Icelandic
the interesting idea

ii. * hina hugmynd

(Examples from Sigurðsson (2006))

[5]See in particular examples 16 from Kayne (1994) below.

[6]This may be correct for some cases and not for others. For instance in German *schwere Not* the noun is a more plausible selector than the adjective, as pointed out to me by Henk Van Riemsdijk p.c. Alternatively, it may never be correct, but instead the thematic relation between the noun and the adjective may always be mediated by a

problematic once we consider examples featuring degree modification.

(5) the very difficult issue

The interpretation of (5) is such that *very* modifies *difficult* rather than *difficult issue*. I will come back to this below.

The proposal in (4) has received some support in the literature on Mainland Scandinavian, where it is argued that the structure in (4) provides a simple account for double definiteness (Delsing, 1993; Santelmann, 1993; Vangsnes, 1999).[7,8] (See also section 3.2.1.)

(6) a. hus-et Swedish
house-DEF

b. det stora hus-et
the Adj house-DEF

The general idea is that in definite DPs, the noun head-moves to D, checking definiteness of D (6a). If an adjective is present, N-movement is blocked, and D has to be lexicalized by the free definite article.

The weaknesses of this are (i) that it does not extend to Greek determiner spreading, (ii) that it does not account for the Swiss German "d/di-alternation," and (iii) that the N-raising argument was used for essentially the opposite claim in the literature on Romance, as we will see shortly.[9]

Another important argument against an analysis of adjectives in which they are heads with the NP in their complement is that there are adnominal adjectives that must receive a syntactically more complex analysis.[10] German, for instance, (unlike English) allows adjectives that take an (additional) argument in prenominal position.

(7) a. die an seiner Arbeit interessierten Studenten German
the in his work interested students

b. eine auf ihren Sohn sehr stolze Mutter
an of her son very proud mother

Take (7b). *Mutter* is interpreted as the subject of the predicate *stolz auf ihren Sohn*, the PP *auf ihren Sohn* and the adjective *stolz* form a phrase before merger of *Mutter*. Subsequently the PP moves across the degree modifier *sehr*.

functional head. This head is likely different from Bowers's (1993) Pred^0 which takes DPs as subject, but instead a RELATOR of the sort discussed in Den Dikken (2006). I'm grateful to Mark Baltin for clarifying discussion on the matter.

[7]Santelmann (1993) makes this point for numerals and some quantifiers. Ordinary adjectives, she analyzes as N' daughters.

[8]Strictly speaking, Delsing (1993) proposes that the NP is a right-hand specifier of AP, a proposal that faces problems of its own, see Kester (1996b) for some discussion. For alternative approaches to double definiteness which dispense with N-movement see e.g. Julien 2002a, 2005.

[9]The weakness (iii) may a priori just as well be on the side of the Romanists' argument, of course.

[10]I am grateful to Henk Van Riemsdijk for reminding me of this fact.

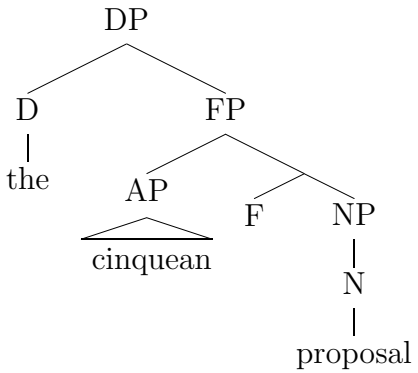
Hence at least for adjectives that either take a complement and for adjectives degree modification of which modifies only the adjective and not the adjective-noun combination the structure in (4) is inadequate.

4.2.3 Adjectives as Specifiers

A third view has adjectives (and similarly adverbs cf. Cinque 1999) be specifiers of dedicated functional projections (Crisma, 1993; Cinque, 1993; Giusti, 1994; Kester, 1996b; Leu, 2001; Scott, 2002; Laenzlinger, 2005).

(8) a. the cinquean proposal

b.



The primary arguments in favor of this view come from N-movement in Romance[11], Universal ordering restrictions among kinds/classes of adjectives, and the possibility of multiple adjectives (while respecting antisymmetry).
In Romance languages some adjectives precede the noun while others follow the noun.

(9) a. le petit ballon — French
the small ball

b. le ballon rouge
the ball red

c. le petit ballon rouge
the small ball red

The (unmarked) relative order of the adjectives in (9) is the same as in Germanic however, where both adjectives are pre-nominal.

(10) a. der kleine rote Ball — German

b. the small red ball

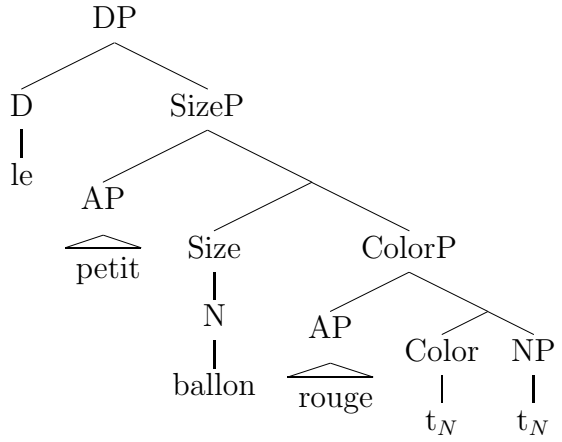
Considerations like these led to the influential proposal that adjectives occupy specifiers of functional projections and that the noun head-moves to a parametrically determined position (Crisma, 1993; Cinque, 1993).[12]

[11]Exactly the opposite state of affairs obtains in Mainland Scandinavian, on the analyses by Delsing (1993) etc. N-movement is said to be blocked by an intervening Adjective (a head), see above.

[12]Strictly speaking head movement is standardly assumed to involve head adjunction.

(11) a. le petit ballon rouge
the small ball red

b.



In subsequent work, Shlonsky 2004; Cinque 2005a,b; Laenzlinger 2005 and others have argued against an N^0-movement analysis of post-nominal adjectives, and in favor of phrasal movement to that effect.

Regarding ordering restrictions, Cinque (1999); Scott (2002); Laenzlinger (2005) and others propose large sets of semantically fine-grained, universally ordered functional heads. A very different stance is taken by Sproat and Shih 1988 who argue that the ordering restrictions might be due to an extra-grammatical cognitive hierarchy. Svenonius (2007) makes a proposal that integrates different hierarchies of functional projections motivated on diverse grounds (Ritter (1991); Vangsnes (1999); Julien (2005), as well as the above mentioned literature on adjectival ordering) and puts the resulting relatively modest hierarchical structure to task to derive ordering restrictions among adjective interpretations.

In section 4.5 I outline the way in which the present proposal fits with a cartographic approach to adjectival modification. However, adjective ordering restrictions are not a primary concern of this dissertation.

4.2.4 Adjectives as relative clauses

Finally, there is a long tradition of analyzing adnominal adjectives as deriving from a relative clause-like structure. The idea goes back at least to Chomsky 1957, and was formalized in Smith 1961, by means of *whiz*-deletion and adjective fronting.

(12) a. the man [who is tall]
1 2 3
i) *who is* deletion
ii) 1-2-3 → 1-3-2 transformation

b. the tall man
1 3 2

The proposal was argued against on the basis of the fact that there are adjectives that cannot function as the predicate of a copular sentence, but can occur adnominally (13). These so-called

attributive only adjectives include *former, mere* etc. (Bolinger, 1967). They could not be derived by (12), since they do not have a legitimate source (cf. Winter 1965; Bolinger 1967; Alexiadou and Wilder 1998; Yamakido 2005 etc). Hence (12) undergenerates.

(13) a. * The view which is smithian
b. The smithian view

On the other hand there are adjectives that occur as the predicate of a copular sentence, yet cannot occur prenominally (14), hence (12) also overgenerates.[13]

(14) a. The man who is alive
b. * The alive man

The arguments put forth in the literature against a relative clause approach are valid with regard to the proposal by Smith, but should not be mistaken for arguments against a relativization approach per se.

The idea of deriving adnominal adjectives from a relative clause source was revived by Kayne 1994 as a part of reviving the larger claim (cf. also Vergnaud 1974 Brame (1968); Schachter (1973)), that the "head" of a relative clause originates inside the relative clause and (XP)-moves out of the relative clause. Concretely, Kayne 1994 proposes that D selects a CP and that an XP containing the relativized noun moves to Spec,CP.

(15) RELATIVE CLAUSE
$[_{DP}$ the $[_{CP}$ $[_{NP}$ picture of John$]_j$ $[_{C'}$ that [Bill saw t_j]]]]

This analysis of RC structures was motivated, in part, by the prohibition against right-adjunction (imposed by the LCA).

Observing that prenominal modifiers and post-nominal relative clauses share a number of properties in common (e.g. (16)), Kayne (1994) proposes that they are derived in an analogous fashion.

(16) a. John wants the ones *(that are blue).
b. John wants the *(blue) ones.

The proposal is exemplified in (17).

(17) ADJECTIVAL MODIFICATION
a. the kaynian proposal
b. the $[_{CP}$ $[_{XP}$[e]$_i$ kaynian$]_j$ [C^0 $[_{IP}$ [proposal]$_i$ [I^0 [e]$_j$]]]]

A variant of Kayne's proposal has been argued to underlie Greek polydefiniteness (Alexiadou and Wilder, 1998).

[13]The *a*-prefix (perhaps of category P (Richard Kayne p.c.)) in *alive, abroad, asleep* etc. is plausibly the head of the phrase. Their unavailability in prenominal position then falls under Williams's (1981) Right-hand Head Rule, which itself awaits better understanding (Larson and Marušič, 2004, note 2). Such a proposal for *alive* etc implies that existing prenominal modifier that look prepositional, such as e.g. *my next door neighbor*, *the upstairs bathroom*, *the outside world*, are really embedded in a layer of silent structure, plausibly headed by a silent head otherwise similar to German *-ig*, which is in turn similar to English *-y*.

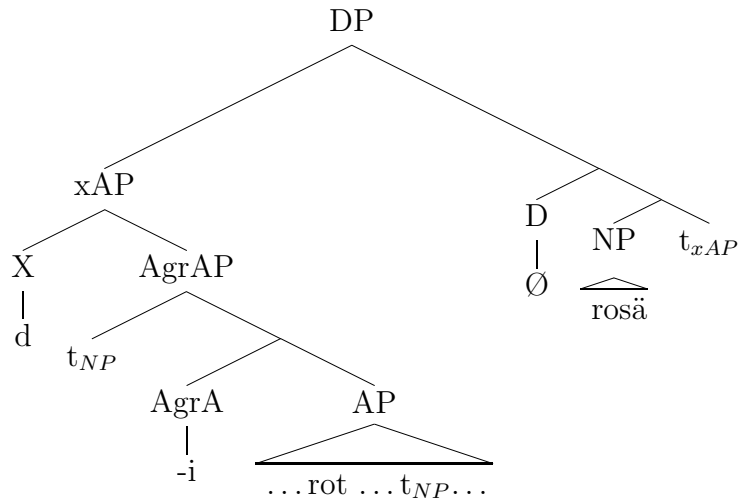
4.2.5 The present proposal

The present proposal shares aspects with Alexiadou and Wilder's (1998) variant of Kayne's (1994) proposal for a relative clause structure of adnominal adjectives. At the same time I assume that relativization feeds into a cartographic representation of the sort advocated in Cinque's work (see section 4.5).

I depart from Kayne (1994) in several ways. Specifically, in my proposal it is always the noun (NP) that moves out of the relative clause (cf. (17) where the adjective fronts and the noun remains within the relative). Secondly, the target of NP extraction is above / outside of xAP. Third, the left periphery of the relative clause is (under the right circumstances) realized by a definite "article." The A-N order is the result of subsequent movement of the xAP to Spec,DP (similar to Smith (1961)). A tree representation is given in (18).[14]

(18) a. d-i rot rosä — Swiss German
the-AGRA red rose

b.



I depart from Smith's (1961) proposal in that the relativization structure I am arguing for is not that of a copular sentence. The thematic relation into which the adjective and the noun (NP, not DP) enter is of whatever kind that allows them to combine without a copula *BE* (see also section 4.4.4).[15,16]

[14]The idea that the pre-adjectival definite marker is part of the xAP is supported by the observation in Selkirk (1977), pointed out to me by Mark Baltin p.c., that in phrases such as *the most convincingly* and *the fastest* the definite marker is clearly within the superlative xAP. See in particular Selkirk (1977, note 10).

[15]Alexiadou and Wilder 1998; Alexiadou 2001b argue that there are two sources for adnominal adjectival modifiers, a relative clause-like structure and an adjunction structure. Also Cinque 2005b argues for a dual source of adjectival modifiers, a relative clause-like structure and a specifier structure (see above) which map to semantic distinctions (of the sort discussed in Bolinger 1967). The distinction is motivated (at least in part) on the grounds of the idea that RC = predicative. On the present proposal this does not hold, however, hence the relevant proposals must be re-evaluated. In section 4.5 I discuss how the relativization view can feed into a cartographic representation.

[16]My claim is meant to include the possibility that the adjective-noun relation represents a sort of small clause

4.3 Relativization

Once we agree on the idea that adnominal adjectival modification involves a relativization structure, the question arises of what exactly we mean by relativization. A simple definition of "relative clause," is the following (from De Vries (2002, p.14)).

a. A relative clause is subordinated.

b. A relative clause is connected to surrounding material by a pivot constituent.

The *pivot*, de Vries notes, is a constituent semantically shared by the matrix clause and the relative clause. The question is, of course, how this sharing should be thought of. The question (which I will not attempt to resolve in this thesis) has been intensively debated in the literature on (fully fledged) relative clauses. There are three main competitor analyses of relative clauses: the "matching" analysis, the "promotion" analysis (also called "head raising analysis"), and the "head external" analysis.

There have been different versions proposed of each of these, hence they are really families of analyses.

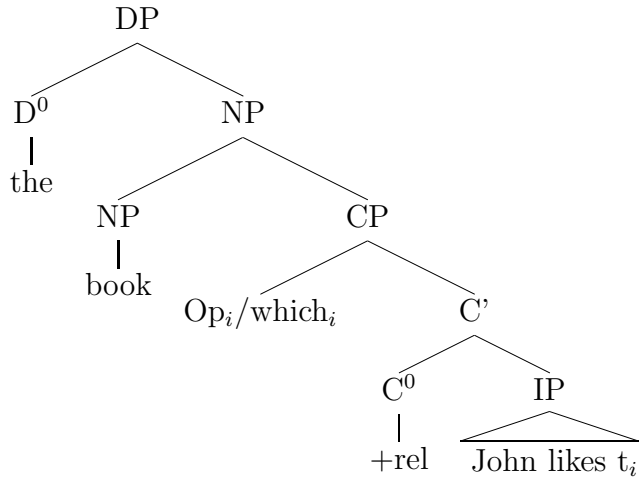
One important debate is about whether these are different proposals for the same thing, in which case only one is right, or whether these pick out distinct actual phenomena, in which case they can all be right. Opinions diverge in the literature. Let me briefly illustrate each kind of analysis, before returning to relativization out of xAP.

4.3.1 Head External analysis

On the head external analysis (Quine, 1960; Montague, 1974; Chomsky, 1977), the head of the relative clause originates outside of the relative clause. The relative clause is (usually assumed to be) adjoined to the NP, as illustrated in (19) taken from Bhatt (2002).

(19) a. the book [$_{CP}$ Op$_i$/which$_i$ John likes t$_i$]

b.



(cf. the notion of "small clause relative" in Burzio (1981)). The function-argument relation(s) in this small clause may involve a functional head, a RELATOR in the sense of Den Dikken (2006). This head is likely different from Pred^0 proposed by Bowers (1993) in that it relates an adjective and an NP rather than a DP.

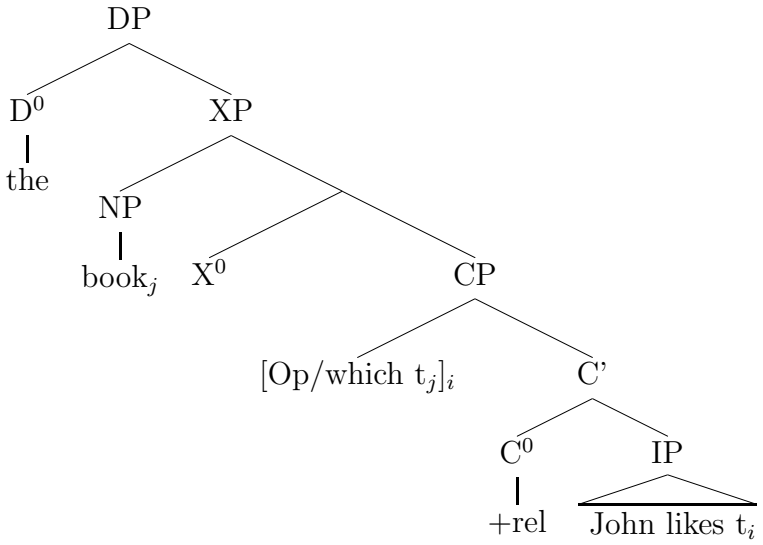
The two main objections to this approach are that the head NP (being external to the relative clause at every point in the derivation) cannot reconstruct in the familiar way.[17] Hence this analysis is incapable of accounting for (all) reconstruction effects (Vergnaud (1974); Sauerland (1998); De Vries (2002); Bhatt (2002) among many others). Secondly, the adjunction analysis is incompatible with antisymmetry (Kayne, 1994; Bianchi, 1999).

4.3.2 Promotion analysis

On the promotion analysis (Brame, 1968; Schachter, 1973; Vergnaud, 1974; Kayne, 1994; Bianchi, 1999), also called "head raising analysis," the head of the relative clause originates inside the relative and moves to an RC external position. This is exemplified in (20).[18]

(20) a. the [book]$_j$ [$_{CP}$ [Op/which t$_j$]$_i$ John likes t$_i$]

b.



The promotion analysis is compatible with the familiar way of accounting for reconstruction effects (which is the interpretation of a lower movement copy). Such effects obtain with regard to a number of phenomena. Brame (1968); Schachter (1973) proposed the promotion analysis on the basis of the relativizability of idiom chunks.

(21) a. [The headway he made <*headway*>] was amazing.

b. * The headway was amazing.

The evidence from idioms support the existence of a promotion derivation for relatives.[19] It does not, however, argue against the existence of alternative derivations of relativization, as pointed out

[17]Scope reconstruction effects could be expressed in terms of higher type variables (i.e. as so-called semantic reconstruction), (Cresti, 1995). However, this does not extend to idioms.

[18]The variant represented in (20) is close to that in Bhatt (2002). In Kayne's (1994) proposal, the NP *book* would be in Spec,*which*.

[19]Note however the critical discussion of this kind of evidence in Salzmann (2006, chapter 1.3).

by Bhatt (2002). There is further evidence from binding reconstruction, scope reconstruction, NPI licensing and other phenomena (see Bhatt (2002) for a good overview). For the present purposes, the evidence from idioms is most relevant.

Idioms also provide evidence in favor of a non-promotion analysis. There are cases where the idiomatic reading of the head of the relative obtains externally to the relative. (Example from Salzmann (2006, p. 40) who attributes it to McCawley (1981).)

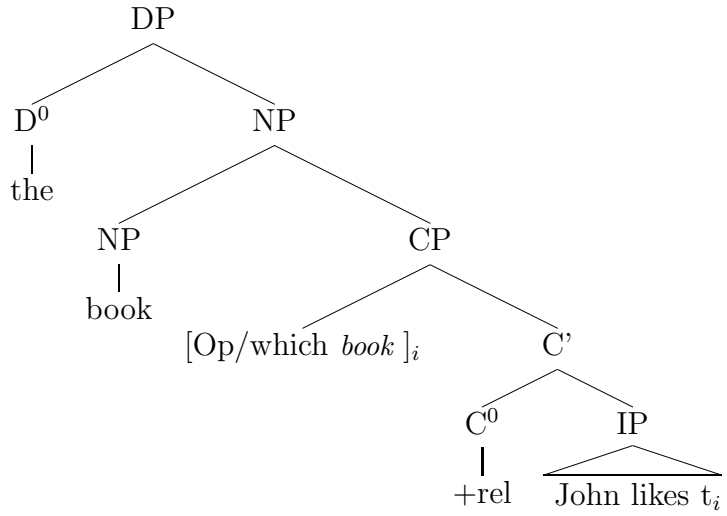
(22) John pulled the [strings] that ___ got Bill the job.

4.3.3 Matching analysis

The matching analysis is somewhere in between the head external and the promotion analyses. On this analysis, there is a full noun phrase within the relative clause. This noun phrase is identical to the head of the relative (modulo vehicle change (Salzmann, 2006)), and is therefore eligible for non-pronunciation. The crucial difference between the matching and the promotion analysis is that on the former, the head of the relative and the gap inside are not related via movement.

(23) a. the [book] $[_{CP}$ [Op/which *book*]$_i$ John likes t_i]

b.



Salzmann (2006), discussing resumption in relative clauses, with an empirical emphasis on German and Zürich German, concludes that only the matching analysis is available. Other authors have argued that both the matching and the promotion derivation must be available (Sauerland, 1998; Bhatt, 2002).

4.3.4 Conjunction analysis

A proposal that has received much less attention is that relative clauses derive from underlying conjunctions, as proposed by Thompson (1971), which was pointed out to me by Mark Baltin

(p.c.). The derivation she proposes is the following.[20]

"Given a near-surface-level conjunction in which part of the surface VP of the first conjunct matches part of the VP of the second conjunct" (24a), "[t]he repeated portion may be preposed" producing (b), "the preposed portion may be replaced by *that*" producing (c), "and [...] the connector may drop, with concomitant change of *that* to *which*."

(24) a. She promised to dance for us, and she did dance for us.
b. She promised to dance for us, and dance for us she did.
c. She promised to dance for us, and that she did.
d. She promised to dance for us, which she did.

With regard to connectivity, Thompson's analysis is identical to the matching analysis, in that she assumes there to be a noun identical to the head of the relative to be present inside the conjunct which turns into a relative. Thompson argues that conjunction underlies both restrictive and non-restrictive relatives.

4.3.5 Intermediate evaluation

There are different proposals for the derivation of relative clauses. There are strong arguments in favor of the availability of a promotion derivation. While a matching analysis allows for complex gaps within the relative, it is not well suited to account for certain needs of the head of the relative that are satisfied only relative clause internally.

It is possible that more than one derivation is allowed by UG (cf. Cinque (to appear)). De Vries (2002) presents a study in which he distinguishes a larger number of analyses, comparing them with regard to a substantial number of properties. He concludes that (a variant of) the promotion analysis fares best on average. We may, for present purposes, assume that UG allows more than one kind of derivation that involves the crucial properties associated with the (loosely understood) notion of "relativization."

4.4 Relativization analysis of adjectives

In this section I will discuss aspects of the relativization analysis of adjectival modification. I will present the discussion mainly in terms of the promotion analysis of relativization, keeping in mind, however, the conclusion of the previous section, that multiple derivations of relativization may be allowed by UG.[21]

[20] See also Hale (1976) on adjoined relative clauses in Warlpiri.

[21] Henk Van Riemsdijk p.c. points out that the availability of split antecedents with relative clauses is not replicated with adjectives, which might constitute an argument against the relativization origin of adjectives. Note however, that according to Cinque (to appear) there are different kinds of relatives, only some of which allow split antecedents. Concretely, Cinque distinguishes *integrated* and *non-integrated* relatives. Integrated relatives systematically disallow split antecedents. See also subsection 4.4.3.

4.4.1 Proposal

Spelling out the concrete proposal, I analyze adnominal adjectives as relativization structures on the promotion analysis of relatives. I give the derivation in English, omitting AgrA, for simplicity.

The derivation begins with building the AP (26a). This involves (but is not limited to) merger of the noun and the adjective, perhaps similar to the proposal in Abney (1987).[22] What I call AP here may contain further heads/projections, such as e.g. a DegP. The next step (omitted in (26)) is merger of AgrA, on top of AP. Subsequently, the noun *song* moves into Spec,AgrA, triggering Spec-Head agreement (26b). Then the "adjectival article" is merged with AgrAP (26c). This is followed by another (omitted) merger of a functional head into whose Spec the noun moves (26d). This is the relativization step. After that, the definite article (projecting D) is merged (26e).

(25) the good song

(26)
a. $[_{AP}$ good song] => mvt of *song*
b. song $[_{AP}$ good $t_{song}]$ => merger of *the*
c. $[_{xAP}$ the [song $[_{AP}$ good $t_{song}]]]$ => mvt of *song*
d. song $[_{xAP}$ the $[t_{song}$ $[_{AP}$ good $t_{song}]]]$ => merger of *the*
e. the [song $[_{xAP}$ the $[t_{song}$ $[_{AP}$ good $t_{song}]]]]$ => mvt of xAP
f. $[_{DP}$ $[_{xAP}$ the $[t_{song}$ $[_{AP}$ good $t_{song}]]]$ [the [song $t_{xAP}]]]$

The last step moves the definite xAP into Spec,*the* (26f). I stipulate that in this configuration the head *the* is not pronounced. (See section 3.4 for some discussion on the licensing of non-pronunciation of the relevant sort.)

In some languages the structure (26e) can be spelled out. This seems to be the case of Greek (27) for instance.[23]

(27) to piano to megalo Greek
the piano the big

Note that the label AP in (26) is a simplification. The relevant projection may be relatively large itself, containing a DegP in e.g. *the very nice song*, as well as room for additional arguments of the adjective in languages in which these are possible with pre-nominal adjectives, as in (28b,c).[24]

(28) a. Der Mann ist stolz auf seinen Sohn. German
the man is proud of his son

[22]Or perhaps a small clause, cf. note 16. The linear order of adjective and noun in (26) is not directly relevant. A subject-predicate structure may be likely, which possibly can obtain in either order (Den Dikken, 2006). Also, as far as the main discussion in this thesis is concerned, adjectives may differ with regard to whether they combine directly with the noun, or via a mediating head.

[23]The derivation is very close to Kayne's (1994) proposal for N-final relatives as in Amharic (p.93ff.), differing from it in that in (26) the noun moves out of the xAP, rather than into the specifier of the lower *the*. The Amharic relative clause precedes the definite article which in turn precedes the noun. A possibly important difference between Amharic relatives (on Kayne's analysis) and (26) is that in Amharic relatives it is IP that fronts into Spec,DP, not CP. The stranded C^0 (i.e. *"d-"*) cannot be overtly realized.

[24]English does not allow the counterpart of (28b,c) * *an of his son proud man*, possibly for the same reason that the verb does not follow the direct object in the basic word order.

b. d-er [auf seinen Sohn (sehr) stolze] Mann
the-AGRA of his son (very) proud man

c. ein [auf seinen Sohn sehr stolz]-er Mann
a of his son very proud-AGRA man

4.4.2 Adjective-noun agreement

Noun phrase internal agreement is often called *concord* and is technically distinguished from agreement of the kind that obtains between the verb and the subject in the clause (Kester, 1996a; Carstens, 2000). The theoretical and terminological distinction is meant to reflect a difference with regard to the number of formal dependents one "controller" can have. Kester (1996a, p.57) gives the following descriptions.

(29) a. *Concord* involves one *controller* (corresponding to N^0) and possibly multiple *targets* (corresponding to adnominal modifiers).

b. *Predicate-argument agreement* involves one *controller* (an argument corresponding to DP) and one *target*.

It is not so obvious that such a distinction is desirable (Koopman, 2005). And it is not obvious that the claim made in the descriptions above are correct. In relative clause structures for instance it appears that the relativized noun (phrase) may be the *controller* (to borrow Kester's term) of more than one *target*, as e.g. in the French relative in (30) where the feminine and plural features of *tartes 'tarts'* trigger agreement (at least orthographically) on three elements beyond the definite article: *faites*, *sont* and *bonnes*.

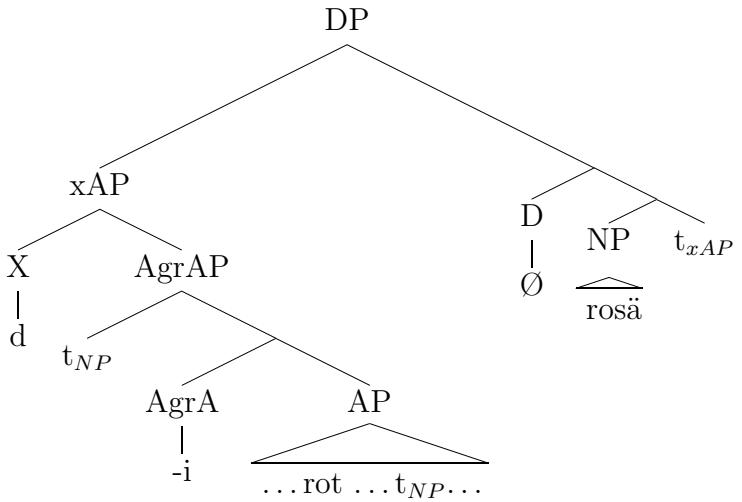
(30) Les tartes que tu as faites sont bonnes. French
the.PL tarts that you have are made.FEM.PL good.FEM.PL

It seems to me that an assimilation of noun phrase internal agreement and agreement in the clause is a priori desirable.

In chapter 3 I have argued that the strong adjectival agreement morpheme is a syntactic head, AgrA. The adjective sometimes follows and sometimes precedes that head. If it is correct that the pre-adjectival article and the adjective form part of a constituent excluding the noun, then AgrA must be part of that constituent too. This is part of the tree representation in (31), repeated below (which includes AgrA). But then the question arises of how the agreement relation between AgrA and the noun (NP) is established.

(31) a. d-i rot rosä Swiss German
the-AGRA red rose

b.



From (31) it is clear that on a relativization approach, adjectival agreement can straightforwardly be subsumed under an Agree (Chomsky, 2000) or a Spec-Head (Kayne, 1989; Koopman, 2005) analysis of agreement. This is highly desirable. Hence not only does the relativization approach give an answer to the question of how agreement is established, this answer is the most welcome one.

4.4.3 Restrictiveness

There is a traditional distinction between restrictive and non-restrictive modifiers. This is the case both for adjectives and for relatives. The question is whether and how this is syntactically represented.

In the head external RC tradition, the distinction between restrictive and non-restric- tive relative is structurally represented as adjunction to NP for restrictives, as opposed to adjunction to DP for non-restrictives (see De Vries (2002, ch.3), cf. also Jackendoff (1977)). However, keeping to antisymmetry, we will not employ adjunction.

Vergnaud (1974, p.181ff.) notes that restrictive and non-restrictive relatives have different properties with regard to the kind of material and relation to the outside they allow.[25] Hence Vergnaud advocates a derivational distinction between restrictive and non-restrictive relative clauses.

Thompson (1971) advocates the stance that both restrictive and non-restrictive relative clauses feature an underlying conjunction structure. Emonds (1979) on the other hand proposes that non-restrictive relatives derive from an underlying main clause coordination structure.

Cinque (to appear) argues that UG allows more than one route to non-restrictive modification, and that languages are parametrized as to whether they allow one or the other (or both, or neither). Cinque distinguishes *integrated* relatives, which can be restrictive or non-restrictive, and *non-integrated* relatives, which can only be non-restrictive. Integrated relatives are sentence

[25]Concretely he notes, for French, that non-restrictive RCs, unlike restrictive RCs, don't allow stacking, don't allow extraposition, don't allow relativization out of idioms, but may contain speaker-oriented adverbs (e.g. *franchement 'really'*).

grammar phenomena. Non-integrated relatives are discourse-level phenomena. In a language that has *integrated* restrictives and *integrated* non-restrictives, the two look alike.[26] English only has non-integrated non-restrictives (a fact that, as Cinque notes, has distorted the view on non-restrictive relatives, given the anglo-centricity of the field's history), Italian has both. Cinque base-generates integrated relatives in dedicated specifier positions, whereby the height of the position determines whether the relative receives a restrictive or a non-restrictive interpretation.[27] Cinque (section 6.1) suggests that in Germanic languages that employ both *d*-pronouns and *wh*-pronouns as relative pronouns, relatives with *d*-pronouns are plausibly the integrated ones, whereas relatives with *wh*-pronouns are the non-integrated ones.

In the case of German adjectives, noun phrases featuring ordinary adjectival modification do not show any formal distinction between restrictive and non-restrictive modification. However, there are differences with regard to the derivational options that allow a restrictive and non-restrictive interpretation, in the sense that certain "extra-ordinary" structures (specifically, structures involving ellipsis) with adjectival modification seem to require restrictive modification.

German adjectives and information structure

Restrictive and non-restrictive interpretation of adjectives is not segmentally distinguished (though the sequences can be disambiguated prosodically). The word order and the morphology are identical. Consider (32). Keeping the intonation stable, (32a) has a much more salient restrictive reading, whereas in (32b) the non-restrictive reading is clearly more salient.

(32) a. die vom Aussterben bedroht-en Walarten — German
the from extinction threatened-WK whale-kinds

b. die vom Aussterben bedroht-en Blauwale
the from extinction threatened-WK bluewhales

The prosodic disambiguation that is possible seems to me to involve a contrastive focus. If both adjective and noun are focused, the interpretation is (or at least can be) non-restrictive. However, if the adjective is contrastively focus, the interpretation must be restrictive. This is not surprising. In order for the modifier to be contrastive, it picks out a subset from the set denoted by the noun. Contrastive focus necessarily invokes an alternative set, the complement set relative to the subset picked out by the adjective. Hence restrictiveness is derived/imposed by focus.

This idea is not new. Göbbel (to appear) for instance argues that for English adverbs (and adjectives) that the restrictive / non-restrictive distinction is based on information-structure. This is supported by NP-ellipsis considerations.

[26] There are many languages (including Japanese, Basque, Malagasy, Samoan, and Jacaltec) for which it has been reported that they do not make a formal distinction between restrictive and non-restrictive relatives (Kayne, 1994, p.111). Kayne (1994) proposes that restrictive and non-restrictive relatives are surface structure equivalent, but differ only at LF.

[27] This is akin to the traditional distinction between NP-adjunction and DP-adjunction.

Adjectival modification and NP-ellipsis

The distinction between restrictive and non-restrictive modification is relevant to the analysis of NP-ellipsis structures, in that only restrictive modifiers can license ellipsis.[28] Consider the intriguing possibility, in German, of what is sometimes called *Split Topicalization* (Fanselow, 1988; Van Riemsdijk, 1989; Van Hoof, 2002, 2006; Roehrs, 2006).[29]

(33) a. Ich kann mir kein Auto leisten. German
I can me no car afford
'I can't afford a car.'

b. (Ein) Auto kann ich mir kein-es ___ leisten.
a car can I me no-AGRA afford

(33b) is an example of Split topicalization. In comparison to (33a), the restriction of the negative quantifier has been extracted and occurs in a sentence initial topic position.

Comparing the non-split object noun phrase in (33a) and the split object noun phrase in (b) two differences will be noticed beyond the contrast in linear order. In (33b), unlike (33a), the negative determiner *kein-s 'no-AgrA'* exhibits adjectival agreement, and secondly, (33b), as compared to (33a), features an additional indefinite article. In Van Riemsdijk (1989), the additional indefinite article is derived by a process of regeneration. The rationale behind the notion of regeneration is that topicalization of the noun involves N' extraction. The N' not being a maximal projection is not licit and hence a repair mechanism regenerates a specifier *ein* such that the topic is a full NP.

The crucial intuition behind regeneration involves a countercyclic instance of external merge, which should not be allowed. Therefore I consider it desirable to have an alternative analysis of (33b).

Recall that adjectival modification is derived by extraction of the NP out of the xAP and subsequent fronting of the xAP around the NP. The indefinite article is subsequently merged. In chapter 5 we will see that sometimes an xAP can be delayed with regard to fronting around the noun, such that it fronts only after merger of the indefinite article. This is common among determiners, which want to reach a left peripheral position. Secondly, we will see that in such cases a second, higher, indefinite article can be merged on top. Consider now (34).

(34) a. ein lustig-es Buch German
a funny book

b. Ein Buch habe ich ein lustiges ___ gekauft.
a book have I a funny bought

[28] See also the brief discussion of *Restrictive Elliptical Appositives* (Van Riemsdijk, 1998a) in section 3.2.3.

[29] I will assume that Split Topicalization is a special case of NP-ellipsis, in that ellipsis is viewed as involving extraction of the NP into a position in which it is unpronounced (possibly along the lines of Kayne (2006)). Split Topicalization is special in that the extracted NP moves (on) to a position in which it is pronounced (i.e. a position that is visible to PF). An assimilation of Split Topicalization and NP-ellipsis is supported by the fact that they behave identically with regard to both morphological and semantic properties (Fanselow, 1988; Van Hoof, 2002). For some recent discussion of the question of whether Split Topicalization involves movement or not see Roehrs (2006); Ott (2008).

It is conceivable that the derivation of NP-ellipsis (and Split Topicalization) involves delayed fronting. Hence the adjective in the remnant (*lustiges* in (34b)) is in a left peripheral position, presumably a focus position, as is required for NP-ellipsis (Corver and Van Koppen, 2007b).[30]

It seems that the availability of NP-ellipsis may require a combination of factors including at least the presence of an appropriate licensor of the ellipsis site (Kester, 1996a),[31] on the one hand, and a contrastive semantics on the remnant, on the other (Van Hoof, 2002; Corver and Van Koppen, 2007a).[32]

It looks like the condition that an adjective that licenses an NP-ellipsis site be interpreted restrictively may be derived from the requirement that it be focused.[33]

Greek DS

In Greek DS (with a prenominal adjective) the adjective receives a contrastive interpretation. According to Kolliakou (1999, 2004), polydefinites must be non-monotone anaphoric (i.e. restrictive, contrastive), (cf. also Campos and Stavrou, 2004; Ioannidou and Dikken, 2006).

(35) O diefthindis dilose oti **i** ikani erevnites tha apolithun.
the director declared$_{3sg}$ that the efficient researchers will fired$_{3pl-pass}$
ambiguous:
=> life is tough reading
=> insane reading

(36) O diefthindis dilose oti **i** ikani **i** erevnites (i ikani) tha apolithun.
the director declared$_{3sg}$ that the efficient the researchers (the efficient) will fired$_{3pl-pass}$
=> insane reading only

Notice that DS imposes a contrastive (and hence restrictive) reading on the adjective. The absence of DS does not impose any restriction in this respect, but instead is compatible with either a restrictive or a non-restrictive reading. The Greek facts suggest that restrictiveness is not a function of structural differences in the relativization part of the derivation, but may rather be located in a later stage of the derivation, involving left peripheral movement (to focus). Hence the necessity of a restrictive interpretation of the adjective in (36) is an effect of the contrastive

[30]In chapters 5 and 6 it will be suggested that such delayed xAP fronting is the mechanism by which *ein*-words are produced. NP-ellipsis / split topicalization structures differ from ordinary *ein*-word formation in that the relevant xAP is not truncated, i.e. it contains AgrA (see section 5.3).

[31]There is a long-standing debate whether the ellipsis is pronominal (opaque) or structured and PF-deleted. For recent discussion regarding the nature of the ellipsis site see Elbourne (2002); Baltin (2007). Baltin argues that the two traditional views are extremes of a continuum, and proposes that certain properties with regard to e.g. reconstruction may be thought of in terms of size of the deleted structure.

[32]There are a number of proposal in the literature on ellipsis that make this point in some fashion or another. See notably Merchant (2001) and the literature cited there.

[33]The short discussion in this subsection does, of course, not do justice to the complexity and interest of the relevant constructions and issues involved.

semantics.[34]

Definite markers and RCs in Scandinavian and Swiss German

Recall that in Scandinavian, plain unmodified definite noun phrases do not feature an overt prenominal definite article. A restrictive relative clause however may license the presence of a prenominal definite article, whereas a non-restrictive relative clause cannot (Julien, 2005, chapter 3).[35] Consider the Swedish examples below from Platzack (2000) (here taken from Julien (2005)).

(37) Det hus*(-et) som han för övrigt ville riva, är nu till salu.
that house-DEF RC he by the way wanted demolish is now for sale

Notice that the initial *det* is glossed as a demonstrative.

Danish allows either a suffixed or a prenominal definite marker with relatives. For most speakers, the two variants differ with regard to restrictiveness (Julien, 2005; Hankamer and Mikkelsen, 2002).

(38) a. den hest, der vandt løb-et Danish
the horse there won race-DEF

b. hest-en, der vandt løb-et
horse-DEF there won race-DEF

Example (38a) is restrictive, whereas (38b) is (for most speakers) non-restrictive.

Julien (2005, 3.2.2) makes the interesting discovery that the presence of a prenominal definite marker (in Norwegian) is related to certain properties regarding reference.[36] The prenominal definite article is nearly obligatory in restrictive relatives with no actual referent. Consider Julien's examples below ((39) from Nynorsk).[37]

(39) a. Vis meg *(den) bergensar(-en) som ikkje vart til på eit Arne-laken.
show me DEF Bergener-DEF RC not became to on IDF Arne-sheet
'Show me the Bergener who was not conceived on an Arne-sheet.'

b. Vis meg bergensar-en som ikkje vart til på eit Arne-laken.
show me Bergener-DEF RC not became to on IDF Arne-sheet

In (39b) the prenominal definite marker is left out with the strong semantic effect that the sentence now presupposes the existence of exactly one referent (presumably in a contextually restricted sense), hence the typical reading of plain definite descriptions.

[34]This argument goes against that in Kolliakou (2004, p.270) who maintains that "explicit contrast is not necessary for felicitously employing a polydefinite." According to Kolliakou it suffices that the polydefinite "narrows down a given pool of referents by picking out a proper subset of it." It is not clear to me how this is different from contrasting.

[35]There is variation among languages and speakers with regard to the relative frequency of the variant with and that without a prenominal definite article.

[36]Julien phrases the contrasts in terms of specificity. This being an extremely loaded term which is furthermore used in a variety of ways across authors, I will refrain from adopting it in the present context.

[37]Example (39a) clearly is a rhetorical question since all bed sheets in Bergen come from the Arne textile factory. Hence there is no actual referent.

The prenominal and the suffixal definite marker interact with the referentiality contrast in the following way. (40a) has a referent in the actual situation. (40b) has no referent in the actual situation.

(40) a. (Den) spiller-*(en) som sitter der borte jukser. Bokmål
(DEF) player-(DEF) RC sits there away cheats

b. *(Den) spiller-(en) som får høyest tall begynner.
(DEF) player-(DEF) RC gets highest number begins

Swiss German, once again, nicely parallels Scandinavian. Construing a necessarily nonspecific DP with a relative clause requires a demonstrative determiner (41c). The variant of the definite article featuring adjectival agreement (41b), which in chapter 2 was analyzed as a demonstrative, is not quite as good as a full (strong) demonstrative, in my judgment, but it is significantly better than the plain definite article.[38]

(41) a. * d bluämä wo am längschtä blüät... Swiss German
the flower RC on.the longest blooms

b. ? d-i bluämä wo am längschtä blüät...
the-AGRA flower RC on.the longest blooms

c. diä bluämä wo am längschtä blüät...
that flower RC on.the longest blooms

Penner and Schönenberger (1995, p.339) make a distinction between "substantive" (*di*) and "explitive" (*d*) definite article.[39] According to Penner and Schönenberger, the substantive article marks the nominal expression as [+referential], whereas the expletive article combines with nouns which are intrinsically definite nouns ("mass-generics, discourse and situative unica, proper names, geographical names, titles and roles, kinship terms etc."). By means of example Penner and Schönenberger propose that only the substantive article occurs with common nouns that are modified by either an adjective or a relative clause.
In my judgment, relative clause constructions do not automatically trigger *di*.

(42) a. d vinylversion won ich (übrigens) geschtr kauft ha...
the vinyl version RC I by the way yesterday bought have

b. d-i vinylversion won ich (#übrigens) geschtr kauft ha...
the-AGRA vinyl version RC I by the way yesterday bought have

(42a) suggests that there is one vinyl version (as opposed to a digital version).[40] (42b) on the other hand suggests that there are different vinyl versions, one of which I bought yesterday. (42b)

[38]Recall that I am mostly using feminine (or plural) noun phrases because the three way distinction *d/di/diä* is clearest in these. When it comes to the use without a following adjective though this seems to quite well correspond to neuter *ts/das/das* and masculine *də/dɛ/dɛ*.

[39]Penner and Schönenberger illustrate the contrast with feminine singular nouns, i.e. the featural context in which the *d/di*-alternation obtains.

[40]The fact that the noun, being a relational noun, has an implicit restriction is presumably a necessary component in explaining the contrast with (41a).

is preferably restrictive, as is illustrated by the deviance of *übrigens 'by the way'*. Hence there is at least a tendency that the ordinary definite marker goes with non-restrictive relatives, and the variant with adjectival agreement *di* goes with restrictive relatives.

It seems then that the prenominal definite marker in Scandinavian corresponds to Swiss German *di* (and/or *diä*) rather than *d* also with regard to the specificity of relative clause constructions.

Studler (2001, p.121) notes that the demonstrative is incompatible with restrictive RCs whereas the strong article is acceptable. (43) is Studler's example. (In this particular case, capitalization indicates stress rather than non-pronunciation.)

(43) Eg ha das/DAS Buech, wo du hesch wöüe, ned gchouft.
I have the/that book that you have wanted not bought
(Studler, 2001, p.121)

But it seems to me that a distinction should be made between a discourse anaphoric and a deictic demonstrative. On my judgment, a sentence like (44) (which is essentially like Studler's (43) but without a negation) is acceptable with a plain *d*, with a *di* ("strong article" in Studler's terminology), as well as with a demonstrative *diä*, if the demonstrative receives a discourse anaphoric contrastive reading.

(44) Ich ha diä/di/d plattä wo du miär empfolä hesch kauft.
I have that/that/the record that you me recommended have bought
'I bought the record that you recommended to me.'

What is not possible is the combination of a restrictive relative and a deictic demonstrative.[41]

Interpretation and demonstratives

It seems possible to interpret the above facts in connection with the discussion of demonstratives in chapter 2. The examples considered suggest that the syntactic correlate of restrictiveness in the interpretation of a relative clause may be the presence of a demonstrative-like modifier. This comes as no surprise, given the uniqueness semantics of the definite article. A (contextually) unique object cannot be further referentially restricted. A demonstrative on the other hand has, in addition to the uniqueness semantics, a (perhaps pragmatically driven) contrastive component, saying essentially: there is more than one object of a certain sort in a certain context/situation, and I want to zoom in on one. This zooming in on one is accomplished either deictically or by means of a modifier. Such a modifier is, by virtue of contributing to the zooming in, restrictive.

In chapter 2 I argued that demonstratives are composed of a definite marker and a not necessarily locative counterpart of English *here/there*. This element is an anaphoric predicate (see also Vangsnes (1999); Elbourne (2005)). Its antecedent can be picked up from the context or discourse, or it can be provided from within the sentence, as in the case of restrictive relatives.

[41] The three *d-* elements cooccur with distinct prosodic patterns, in that the demonstrative is obligatorily accompanied by a focus accent in the relative (either on the subject, object or verb).

Summary on restrictiveness

Restrictiveness seems related to contrast/focus, and hence to the left periphery. Whether or not a derivational difference between restrictive and non-restrictive modifiers beyond their final position must be assumed (for instance a promotion versus matching analysis) is not obvious.

4.4.4 (Non-)intersectivity

A prominent distinction in adjective interpretation is that between intersective and non-intersective adjectives.[42] The perhaps simplest kind of adjectival modification produces an intersective interpretation. An example is given in (45).

(45) a. Jumpy is a blue horse.
b. Jumpy is blue and Jumpy is a horse.
c. blue(j) & horse(j)

Sentence (45a) is true iff (45b) is true. In terms of set theory (45a) is true iff Jumpy is a member of the set of horses and a member of the set of blue things, i.e. if Jumpy is in the intersection of these two sets. There are however cases of adjectival modification that do not result in a simple intersective interpretation of the sort in (45). I will briefly discuss two major issues, that of comparison class and that of non-intersectivity. These issues should be kept separate and receive separate analyses. I will not attempt an analysis here.

Comparison class

The above picture needs to be complicated a little, in the face of context-sensitive adjectives like *small*.

(46) a. Jumbo is a small elephant.
b. Jumbo is a small animal.

The standard claim is that (46a) does not entail (46b), even though the set of elephants is a subset of the set of animals. It is possible to think, however, that adjectives like *small* come with an implicit comparison class argument, which can be context bound (see Heim and Kratzer (1998, section 4.3)). Typically, in adnominal position, the implicit argument is most easily bound by the noun which the adjective modifies. This is where the intuition that the entailment from (46a) to (46b) does not go through comes from.

(47) a. Jumbo is small for an elephant and Jumbo is an elephant.
b. Jumbo is small for an animal and Jumbo is an animal.

[42] Higginbotham (1985) proposes that intersective adjectives associate with their noun via *"theta identification"*, non-intersective adjectives combine with their noun through *"autonymous theta-marking"* (see also Kester (1996b), and the 1999 LOT class notes on Richard Larson's website for discussion).

However, if we keep the comparison class stable, the entailment clearly goes through. The comparison class may well correspond to a KIND variable, which can be bound by the noun or by an appropriate discourse antecedent. Correspondingly, the interpretation of (46) would be something like the following.

(48) a. Jumbo is an elephant and Jumbo is small FOR KIND K.
b. Jumbo is an animal and Jumbo is small FOR KIND K.

Jumbo is an element of the set of elephants (48a) and of the set of animals (48b). And Jumbo is an element of the set of things that are small for a certain kind. If the reference of *Jumbo* is kept stable across utterances of (46a) and (46b), and if the kind variable K is bound by the head noun in both cases, the (pragmatically based) unease with calling any elephant small for an animal results. However, if the kind variable in the utterance of (46b) is allowed to be contextually bound by *elephant*, utterance (46b) is pragmatically fine, and in fact the entailment does go through. Clearly, these interpretations are intersective.[43]

Non-intersective adjectives

There are, however, actual non-intersective adjectives. They provide, it seems to me, an argument in favor of a relativization approach, and, to the extend that they do and the approach generalizes, they provide an argument that a promotion analysis must be available. The argument involves degree modification.

I mentioned earlier that a property of an analysis of adjectives as heads in the xNP is that the adjective selects the noun (phrase) as its complement. This has the disadvantage of producing the wrong interpretation if the adjective is degree modified, as e.g. in (49), if nothing else happens.

(49) the very difficult issue

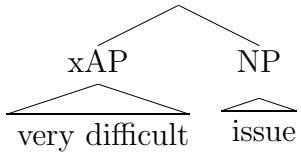
In (49), *very* modifies *difficult* rather than *difficult issue*. This is an argument for the *adjectives as specifiers* view.

[43]See also Larson (1998); Szabó (2001) and Den Dikken (2006, ch.2) for the idea that the apparently non-intersective reading of adjectives like *beautiful* in (i) should be analyzed as deriving from intersective modification.

i. Tania is a beautiful dancer.

In this example *beautiful* can be interpreted as pertaining to the looks of the dancer or to the dancing. Larson proposes that *beautiful* can be predicated of the dancing event. Szabó proposes a semantics of *beautiful* that contains a *"role"* variable, and an intersective relation between the set denoted by this predicate and the set denoted by the noun: *dancer(T) & (beautiful(R))(T)*. This, Den Dikken (2006, p.32) notes, can be paraphrased as "Tania is a dancer and she is beautiful (in her role) as a dancer." In Den Dikken's framework, the restrictive function of the noun *dancer* in the so called non-intersective reading of *beautiful dancer* is the result of *(a) dancer* being the complement of the relator R, and that therefore there is a two-way relationship between *beautiful* and *dancer*, one in which *dancer* restricts *beautiful* and one in which *beautiful* is predicated of *(a) dancer*. See Den Dikken (2006) for details.

(50)



Recall however, that on the present proposal, there is a copy/trace of the noun within the xAP. Such a syntax raises the expectation of finding cases of reconstruction, i.e. pairs of examples that contrast with regard to the position in which the noun is interpreted. Hence it may be possible to distinguish a reading of a modified DP in which the noun has reconstructed into the xAP and a reading in which the noun has not reconstructed. The non-reconstructed reading, I suggest, is equivalent to intersective modification. (51a) entails (51b).

(51) a. This is a very difficult issue.

b. This is an issue and it is very difficult *for kind K*.

This essentially corresponds to the proposed (surface) constituency of adjectival modification. Hence, in the simplest case, intersective modification corresponds to the interpretation of a structure in which the noun and D form a constituent and the adjective forms a constituent with the trace of the noun.

The reading in which the noun is reconstructed is one in which the adjectival modifier has/requires access to the noun in a more intimate way. Putting it another way, noun reconstruction obtains in cases in which the adjective is not an independent predicate. What such an adjective requires may be a *property abstract* (Platts, 1979), i.e. the *intension* (Siegel, 1976) of the noun. The interpretation that results is non-intersective.

Degree modification is also compatible with non-intersective adjectives, i.e. the kind of adjectives that require their argument (the noun) to reconstruct. The examples are taken from Cinque (2005b, p.39).[44]

(52) a. a very poor soul

b. [[how old] a friend] is he?

c. [[how big] an eater] is he?

d. [[how natural] a successor] will he be?

In the relevant reading, these require the degree modifier to modify not only the adjective, but a combination of the adjective and (at least aspects of) the noun. So for instance (52c) can be paraphrased as *To what degree is he a big eater?*, and (52d) perhaps as *How much of a natural choice as successor is he?*, where the adjective may modify an abstract noun, but importantly it is a complex predicate involving the combination of adjective+noun that the degree modifier scopes over.[45]

[44](52a) is attributed to Richard Kayne cited in Bernstein (1993, ch.2).

[45]Inspired by Cinque's lectures at the 2005 LSA Summer Institute, it could be argued that this is an argument for a matching approach, where noun inside the xAP is identical to the noun in NP. The problem with such a view is that NP may be syntactically complex , which in the spirit of the present work would involve multiple syntactic heads. It is, possibly, conceivable though that noun inside the xAP is an functional nominal (e.g. *THING*) that shares some basic feature(s) with the noun in NP.

If this is on the right track, then the adjective and the noun must form a constituent in the scope of the degree modifier at some point. At some other point however, the degree modifier and the adjective must be part of a constituent that excludes the noun, if (52b,c,d) involve movement of the bracketed constituent across the indefinite article (an analysis that I endorse in chapters 5 and 6).

Another interesting effect can be observed with the non-intersective adjective *former*.

(53) a. John is a former student of mine.

b. * John is former and John is a student of mine.

Dividing the adjective and the NP up into two conjuncts, as in (53b), the first conjunct is unacceptable[46], but perhaps more insightfully, the second conjunct is false (if (53a) is true). It seems that *student of mine* must be interpreted in the scope of *former* in (53a).

(54) $[_{xAP}$ the former] president

If the constituency in (54) is correct (as I argued it is), then the noun *president* needs to reconstruct into the xAP. This may constitute an argument in favor of a promotion analysis of relativization out of xAP.

The reconstructed reading is distinct from (53b). Crucially, on the reconstructed reading, the (unmodified) noun is not combined with a referential interpretation. Taking, for the sake of argument, D to be the locus of referentiality, reconstructed nouns do not form a constituent with D.

These considerations suggest that a promotion analysis must be available (at least as one possible option).

Notice incidentally that the assumption that non-intersective adjectives like *former* take an intensional predicate as their argument, while intersective adjectives like *blue* take a set of individuals, may also account for the fact that only the latter can occur in predicate position. In a sentence like (55), the color *blue* is predicated of an individual.

(55) This house is blue.

In such a sentence the noun *house* combines with *this* (and with D) prior to merger with (a constituent containing) the adjective. Hence the adjective never has access to the predicate *house*. This is possible with an adjective that takes an argument of type $< e >$, but it is not possible with an adjective like *former* that requires an (intensional) predicate.

Polydefiniteness and non-intersectivity

The discussion above leads to a prediction for Greek. If it is correct that the derivation of Greek DS (determiner spreading) structures involves an underlying relative clause (as argued by Alexiadou

[46]This is for the same reason that *He is a natural successor* does not imply *He is natural*. It has been argued that non-intersective adjectives like *former* modify the intension of the noun denotation (Siegel, 1976). This is substantiated by an observation by Mark Baltin p.c. that *a total idiot* essentially means "an idiot in all worlds."

and Wilder (1998) and in section 3.2.2), and if non-predicative adjectives also derive from a relative clause structure (as argued in the present thesis), it is predicted that, ceteris paribus, Greek non-predicative adjectives, e.g. *proighoumenos 'former'*, also allow DS.

This is indeed borne out for some speakers.[47,48]

(56) % Ohi, o proighoumenos o prothipourghos pethane. Greek
no, the former the prime minister died.

A similar (possibly the same) speaker variation obtains with regard to the additional movements in indefinites:

(57) a. enas proighoumenos prothipourghos Greek
a former prime minister

b. % enas prothipourghos proighoumenos
a prime minister former

Similarly for other non-predicative adjectives Androutsopoulou (2001, p.191).[49]

(58) a. % o kaimenos o mathitis Greek
the pitiable the student

b. * Aftos o mathitis ine kaimenos
this the students is pitiable

I conclude that Greek polydefinitness provides additional support for the claim that adnominal adjectives generally (including so-called non-predicative adjectives) derive from a relative clause structure. For speakers who do not accept (56), (57b) and (58a), something must be preventing left-peripheral movement in these cases. This may have to do with the contrastive semantics. It seems intuitively easier to contrast intersective predicates. But there may well be more to these contrasts in judgment.

4.4.5 Verb phrase based adjectives

Further evidence arguing for a high syntactic complexity within the adjectival stem comes from adjectives formed from verbal projections.

There are a number of different kinds/sizes of verb phrases that can be used adjectivally, as e.g. the present (59) and passive participles (60), as well as in the modal infinitive (61).

(59) das singend-e Kind
the singing-WK child

(60) die zerbrochen-e Vase
the broken-WK vase

[47] Example context: News story is that the former prime minister died. Someone misunderstands and says "what, the prime minister died?" You react: (56)

[48] See also Androutsopoulou (1996, p.24).

[49] Cf. also Cinque (2005b). I don't know whether there is speaker variation with respect to example (58).

(61) die zu vernichtend-en Dörfer
the to destroying-WK villages
'the villages that are to be destroyed'
(example due to Henk Van Riemsdijk p.c.)

Similarly with strong inflection, i.e. in non-definites.[50]

(62) a. ein zu vernichtend-es Dorf
a to destroying-ARGA village
'a village to be destroyed'

In example (59), the noun *Kind 'child'* is thematically associated with the subject role of *singend 'singing'*. In examples (60)-(62), the noun is interpreted as the object of the verb which is part of the stem of the adjective. Assuming uniformity of theta assignment[51] the relevant thematic position is between the verb stem and the adjectival agreement morpheme, i.e. the agreement suffix linearly intervenes between the overt noun and its thematic position.[52] This is accounted for if *Dorf* in (62) originates in the complement of *vernicht-*.[53]

4.4.6 The complementizer morpheme

So far we have noted that the extended projection of A, like the extended projection of V, allows relativization. Secondly, the left periphery of either can be lexicalized by a *d-/th-* morpheme. A further parallel is the interaction of merger of *d-/th-* and movement of (a lower projection of) the adjective/verb (and noun, in the DP).[54]

[50]Examples (61) and (62) can be shown to be passives. For instance reflexives are not tolerated.

i. Wir haben uns die Dokumente angeschaut. German
we have REFL the documents looked.at
'We looked at the documents.'

ii. Die Dokumente wurden (*uns) angeschaut.
the documents were (REFL) looked.at

iii. Wir haben die (*uns) anzuschauenden Dokumente verloren.
we have the (REFL) to.be.looked.at documents lost
'We lost the documents to be looked at.'

See Van Riemsdijk (1982) for relevant discussion on Dutch.

[51]*The Uniformity of Theta Assignment Hypothesis (UTAH)* proposed by Baker (1988), which says that *Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.*

[52]On the present analysis an XP containing the prepositional complementizer *zu*, the stem *vernichtend*, and the thematic position of the noun, moves to the left of AgrA. Strictly speaking, the thematic position of the noun is located between the stem *vernicht-* and the suffix *-d*.

[53]There is an issue with regard to type. *Dorf* is of type $< e, t >$, whereas the complement of *vernicht(en) 'destroy'* is an individual of type e. This type mismatch may be understood as one trigger of *Dorf* extraction. If so, it would be expected that in verb based adjectives the modified noun cannot reconstruct all the way.

[54]Cf. also Siloni (1995) who claims that in Hebrew the definite article can function as the relative complementizer of certain clausal participial relatives.

Recall that in the xAP either *d-* is merged in the left periphery or the AP moves to the left periphery. A relevant example from Swiss German is repeated below.

(63) a. [$_{xAP}$ **d** -i **rot**] rosä — Swiss German
the AGRA red rose

b. ä [$_{xAP}$ **rot** -i t_{rot}] rosä
a red AGRA rose

An intriguingly similar alternation obtains in the clause in Swiss German, German, and Dutch. Verb (phrase) movement to the left periphery alternates with merger of a (subordinating) complementizer (e.g. *dass*).

(64) a. **dass** Niko heute viel Haferbrei **isst** — German
that Niko today much oatmeal eats

b. heute **isst** Niko viel Haferbrei.
today eats Niko much oatmeal

When e.g. *dass* is merged, the verb (the verbal complex) will surface clause finally (64a).[55] The direct object (as well as the subject) precede the verb. However, when no subordinating complementizer is merged (e.g. in matrix clauses) the (finite) verb (i.e. the bottom layer of the relevant extended projection) will move to the left periphery and surface in second position (64b).[56,57]

Further revealing is complementizer agreement of the sort found in West Flemish (Haegeman, 1992).[58] West Flemish has obligatory complementizer agreement (in number and person) with finite clause complementizers. The form of the complementizer agreement is identical to the form of the finite verb agreement in subject-verb inversion structures. Consider (65) (adapted from Haegeman (1992, p. 49)).

(65) a. Kpeinzen **da-** me (wunder) morgen **goan** — West Flemish
I-think that AGR.1PL (we) tomorrow go
'I think we will go tomorrow'

b. **goa-** me (wunder)
go AGR.1PL (we)

The distribution of the agreement morpheme *-me* in (65) is strongly reminiscent of that of strong

[55] It can be followed by "extraposed" material.

[56] The way it is formulated, this means that periphrastic TMA constructions are bi-clausal.

[57] The parallel is particularly clear if we conceptualize V2 as derived by phrasal movement, i.e. as an instance of VP/vP-first, along the lines of Müller (2004); Nilsen (2002); Hróarsdóttir et al. (2006).

[58] I am grateful to Jaume Solá for pointing this out to me.

adjectival agreement, AgrA, in (63).[59,60]

For Germanic, the idea that the definite article and the complementizer share a morpheme is immediately plausible due to the fact that both contain *d-/th-*.

(66) a. **th**e/**th**at funny man — English
b. I know **th**at he's funny

(67) a. **d**as grosse Pferd — German
the.AGR big horse
b. Ich weiss **d**ass es gross ist.
I know that it big is

So English and German have *th-/d-* in the left periphery of xVP, xNP, and xAP. From German there is strong evidence that both in the xVP and in the xAP movement of (a projection of) VP and AP respectively to the left periphery alternates with the presence of *d-*. In the xNP such an alternation is well familiar from the treatment of proper names in Longobardi (1994).

Standard Swedish and standard Norwegian have retained *d-* only in the left periphery of xAP, it seems.

(68) a. bil-en — Swedish
car-DEF
'the car'
b. [**d**en stora] bil-en
the big car-DEF
c. Här är boken **som** jag läste.
here is book.DEF that I read
((68c) from Zaenen and Maling (1982, p.224))

In definite xAPs there is a *d-* morpheme in the left periphery of the xAP. Plain definite xNPs (i.e. DPs) do not have an overt *d-*, instead the noun has a DEF suffix, suggesting that (a projection of) NP has moved to Spec,DP (Julien, 2005).[61] Northern Swedish seems to have lost it completely (Delsing, 1993, p.91).

[59]Matters are in fact a little more complicated, given that with pre-verbal subjects in West Flemish the verb does not exhibit the mentioned inflection, but has a weaker conjugation.

i. wunder goan
we go

But the parallel is nevertheless striking and should be taken seriously.

[60]Note that the status of the agreement morpheme is not entirely clear. In general, there is some controversy in the field with regard to the distinction between inflection and clitic (see Alexiadou and Anagnostopoulou (1999); Ordóñez and Treviño (1999) among others). For a recent discussion of this issue with regard to Bavarian complementizer agreement see Gruber (2008).

[61]At this point I will not take a stance on what the so-called definite suffix in Scandinavian is. It seems clear that (comparatively speaking) there is some degree of negative correlation between its presence and that of the DP-initial definite marker (in Germanic). However, the suffixed article does not exhibit the typical Germanic definite marker morpheme *d-/th-* even in the languages that do have one (in xAPs). See Vangsnes (1999); Julien (2005) for discussion on the morphosyntax and semantics of the suffixed article in Scandinavian.

(69) stor-en Northern Swedish
big-DEF
'the big one'

Hence generalizing across this set of observations, there is a pattern in which the overt presence of a left peripheral head *d-* alternates with movement of (a projection of) the lexical layer to the left periphery.[62]

It must be noted that in the xNP, movement of (a projection of) NP to Spec,DP competes with the overt presence of *d-* only in definite DPs. If the trigger of this movement can be thought of as an instance of projection activation (Koopman, 1996), then the absence of such movement in non-definites may suggest the absence of the relevant projection. In other words, non-definite noun phrases may lack the projection that is headed by *the* in English and usually labeled DP.

In the xAP, unlike xNP, movement of AP strictly alternates with the presence of *d-* (usually overt *d-* but sometimes licensed to be silent by a higher when in non-initial position). Hence the relevant projection seems to be non-omissible. A possible reason is that the projection is a necessary component for extraction out of the constituent to be possible.[63,64]

This line of argument implies that (adnominal) xAPs are always being extracted out of, which in turn supports the claim that adnominal xAPs constitute relativization structures.

The analysis of Greek determiner spreading above raises the expectation that in Greek as well the complememtizer and the definite marker would share a morpheme.

Looking at table 4.1, it is not entirely obvious what the form of the definite marker morpheme (corresponding to German *d-*) is. But the complementizer *oti* certainly does look related to the forms in the table.[65] In fact it seems that *oti* combines a number of morphemes present in (different occurrences of) the definite article and demonstratives.[66,67]

[62]There are, in German and Swiss German, subordinating conjunctions which do not feature an (overt) *d-*morpheme. It is possible to think that these license a silent complementizer *d-as* (similar to certain determiners in the DP, such as inflected *welches 'which'*, discussed in chapter 6, which licenses a silent definite marker in a following xAP, if the proposal in chapter 3 is correct). This is strongly supported by the fact that in the presence of certain adjacent left peripheral elements the complememtizer is "optional:"

i. Ich weiss nid wo (das) dr Hans das vergässä het. Swiss German
I know not where (that) the Hans this forgot has

ii. Wäret dem (das) du dich gwäschä hesch...
during that.DAT (that) you yourself washed have

This highlights the necessity of an exploded left periphery (Rizzi, 1997; Aboh, 2004a), which also provides a way of harmonizing the otherwise contradictory ideas that D is the nominal counterpart of C, on the one hand, and that complementizers are essentially Ps (Emonds, 1985), on the other.

[63]This is not to be understood in the strict escape hatch sense, since the fronted AP occupies the specifier, which would be the actual hatch.)

[64]See de Cuba (2007) for the idea and argumentation (in the context of factive versus non-factive complements) that extraction necessitates more structure rather than less.

[65]Thanks to Alexia Ioannidou for discussion.

[66]This may prompt a re-thinking of the notion of "complementizer" in terms of its affinity with demonstratives and relative pronouns (cf. R. Kayne (Fall seminar 2006, NYU), Kayne (2007b, 2008b), also Bianchi (1999)).

[67]It may be objected that the (abundant) existence of languages that do not have a morpheme that prominently

Table 4.1: Forms of the Greek definite article

	MASCULINE	FEMININE	NEUTER
NOMINATIVE	o	i	to
GENITIVE	tou	tis	tou
ACCUSATIVE	tou	tin	to

4.5 Relativization and cartography

The relativization approach to adjectival modification, which I believe my proposal is a variant of, is prominently associated with Kayne (1994).[68] The arguably most influential work on adjective syntax over the past fifteen years is that of Guglielmo Cinque, who promotes a cartographic view on adjectival and adverbial modification (Cinque, 1993, 1999, 2005a,b).[69]

In the present work, the relativization kind of approach is motivated on morphological grounds and on the grounds of a close thematic relation between the noun and the adjective. An important question is that of whether and how a by and large kaynean view and the cinquean view harmonize.

In section 3.4 I have argued already that separate specifiers in the xNP must be assumed for the location of multiple xAPs. This, of course, is a core aspect of the Cinquean/cartographic proposal. In section 4.5.1 I briefly outline aspects of the cartographic view on DP structure and show that a Kaynean / relativization kind of approach is basically compatible with it. In section 4.5.2 I illustrate how the present proposal deals with the possibility of having multiple adjectives present within the same DP.

4.5.1 Functional structure in DP

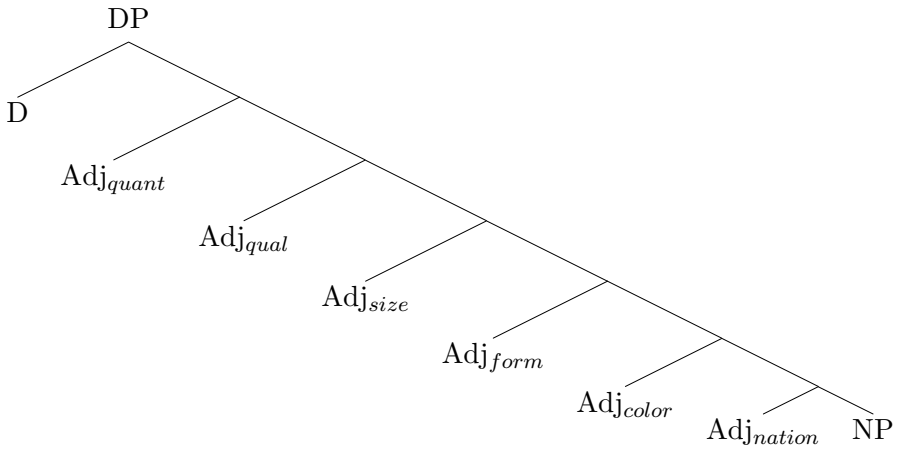
Svenonius (2007) provides an interesting and I believe largely successful attempt at integrating two traditions that have independently led to a proliferation of functional heads in the xNP. One tradition followed the cinquean lead of structurally representing a semantically motivated fine-grained hierarchy of adjectives. Consider the relatively small tree in (70), taken from Laenzlinger (2005, p.651).

lexicalizes the left periphery of DP, xAP, and CP should be given more weight in the evaluation of the present proposal. I disagree. The existence of the above mentioned parallels does not seem accidental and hence requires an account. The fact that more needs to be said above and beyond this account is not at issue (and is not controversial). Let us not forget that since Rizzi (1997); Aboh (1999) the left periphery of CP (and in subsequent work DP (Aboh, 2004a; Ihsane and Puskás, 2001; Ihsane, 2006) and PP Koopman (1997b); Noonan (2005); Terzi (to appear); Aboh (to appear)) has become a layer of diverse projections (cf. note 62). This may be a key in making the D-C parallelism compatible with arguments that assimilate complementizers more closely to the category P than to D (Emonds, 1985).

[68]The idea has roots in Chomsky (1957); Smith (1961). See also Langacker (1968) for the idea of deriving possessive determiners from a relative clause source.

[69]For relevant discussion see also Sproat and Shih (1988); Crisma (1993); Leu (2001); Scott (2002); Shlonsky (2004); Laenzlinger (2005) among others.

(70)



In (70), different semantic categories are syntactically distinguished. Scott (2002) and Laenzlinger (2005) actually go even finer-grained, distinguishing e.g. length, height, depth, and width in this way.

The other tradition that developed more or less simultaneously has grown a richly articulated hierarchical DP structure partly independently of considerations pertaining to adjective ordering (Vangsnes, 1999; Zamparelli, 2000; Giusti, 2002; Julien, 2005).

Svenonius (2007) asks whether it would be possible to let one of the hierarchies do the job of both. A relevant observation is that certain strict orderings that have been proposed to exist between fine-grained semantic distinctions are such that they do not generalize (71), and that in many instances both orderings of two adjectives are equally possible,

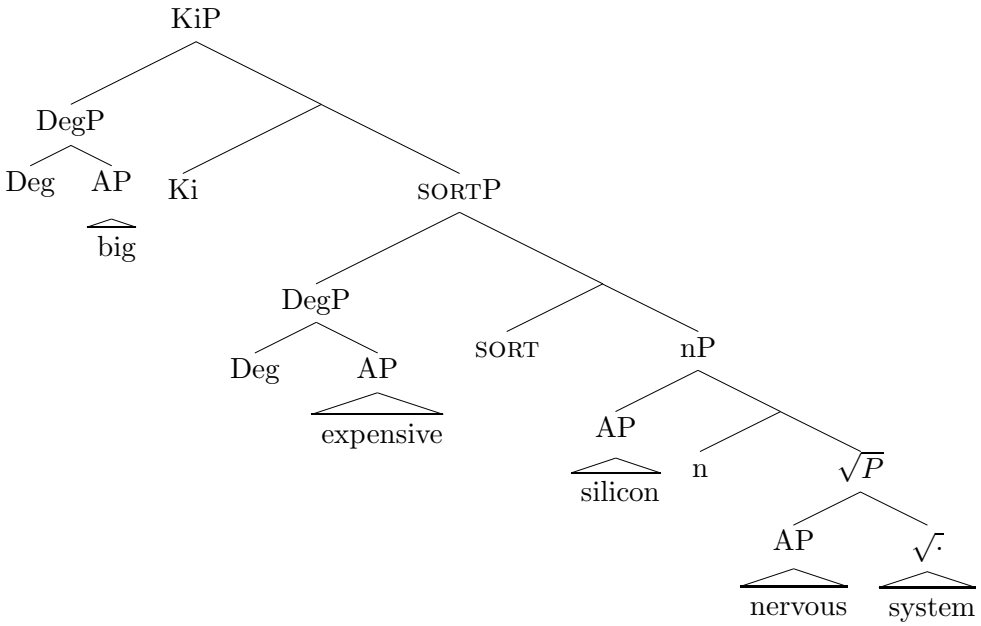
(71) a. a long thick rope
b. a thick long rope

Based on considerations like these Svenonius (2007) breaks with the cinquean tradition with regard to the presence of functional heads that are dedicated to the fine-grained distinction of adjectival subcategories. Instead he argues that the relevant syntactic differences should be captured on the basis of the structural hierarchy of independently motivated functional heads. The functional structure Svenonius arrives at exhibits a relatively modest number of functional heads (72b).[70] This articulation of the DP structure is based on a combination of lexical (Borer, 2005), cognitive (Rijkhoff, 2002), and model-theoretic (Zamparelli, 2000) arguments in conjunction with those of morpheme order (mentioned above).[71]

(72) a. big expensive silicon nervous system

[70]Some of the heads in (72b) may be conflations of more than one head. Ki stands for Kind (Zamparelli, 2000).
[71]See Svenonius's paper for details.

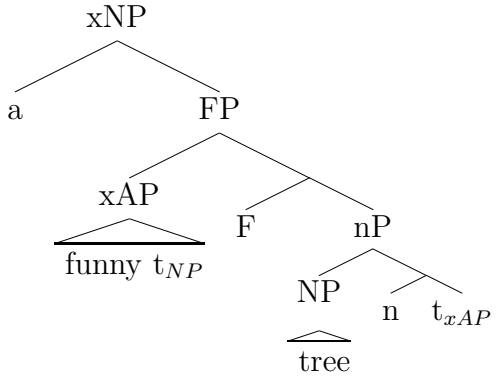
b.



The tree in (72b), as it stands, makes the claim that the thematic relation between an adjective, e.g. *expensive*, and the noun is not local, i.e. that DegP is closer to combining with the noun than AP (recall section 4.2). The relativization kind of approach overcomes this. Hence something like the tree in (72b) is to be derived. (73b) illustrates how the present proposal can straightforwardly feed into a representation close to that in (72b).[72]

(73) a. a funny tree

b.



Upon extraction of the NP (or root) from the xAP, an appropriate functional head F is merged whose specifier is the target of xAP fronting around the noun. The head F may, depending directly on the interpretation, and hence indirectly on the adjective that heads xAP, correspond to a number of relevant functional heads, e.g. KiP or SortP in (72b), or e.g. SizeP or QualP in (70). The main additional feature that is necessary to combine the Kaynean relativization and the Cinquean cartographic kinds of approach is the need of a head that takes xAP as a complement

[72]Notice that in Svenonius's tree, the root head oddly has a left-hand complement, but no specifier. Cf. the proposal by Kayne (2007a) with regard to the issue of breaking the initial symmetry in a derivation.

and provides a specifier for the relativized NP, such that NP effectively functions as the "head" of the extended projection, xNP in (73b). This issue is similar to that of the initial symmetry in a derivation (see Kayne (2007a) for recent relevant discussion).

Given these considerations, including the reservations mentioned, I take it that the present proposal is by and large compatible with the cartographic view on adjectival modification.[73]

4.5.2 Multiple adjectives

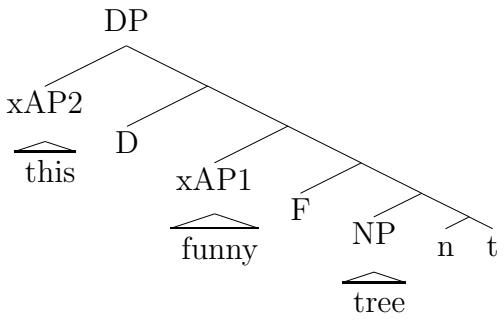
An aspect of noun modification which the cartographic view (in and of itself) is designed to capture, but which for the relativization view is challenging is the possibility of having more than one adjective in the DP. While noun phrases with four or more descriptive adjectives may not be very frequent and perhaps also not very natural, noun phrases with e.g. two adjectives or a determiner and a descriptive adjective are frequent and natural, hence the issue is a real one: multiple adjectival modification is possible.[74]

The questions we need to address are: What is the (surface) constituency of the determiner, adjectives, and noun in the multiply modified DP, and how is it derived?

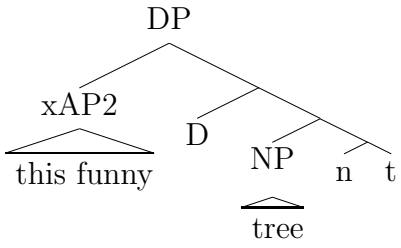
Regarding the first question, the two options to consider from the relativization perspective are (75) and (76).

(74) this funny tree

(75)



(76)



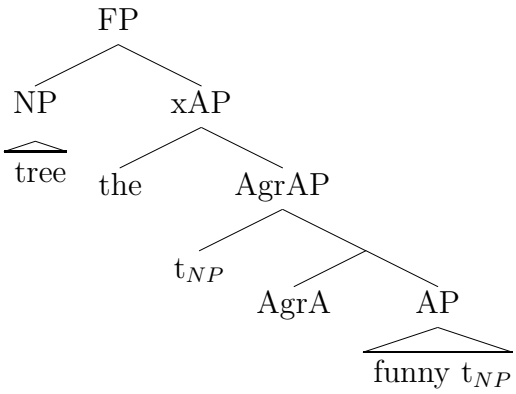
[73]Mark Baltin asks what assures that definite xAPs only occur in definite xNPs and non-definite xAPs only in non-definite xNPs. I will follow the proposal in Szabolcsi (1994, section 7.1) that the definite xAP ("DetP" in Szabolcsi's proposal) determines the definiteness of the xNP in a way akin to agreement.

[74]The issue is especially important to views like the present one, in which determiners are (special kinds of) xAPs.

On a cartographic view, where aspects of the interpretation of the different modifiers are determined by the nature of the functional head in the xNP spine, (76) is ruled out. If so, the structure we want to derive is that in (75).

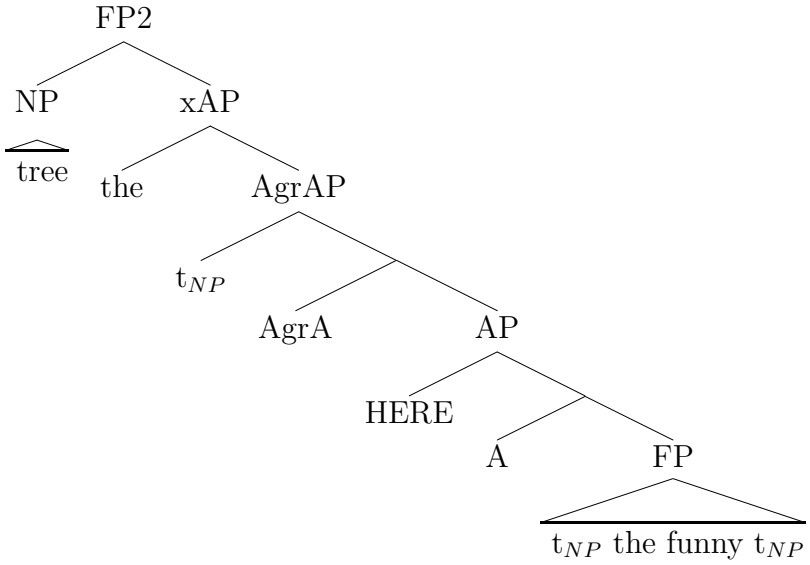
Let us start with the lower adjective. The derivation of *funny tree* involves the substructure (77).[75]

(77)



This structure is input to modification by *this*, i.e. by the abstract *HERE* (see section 2.2).

(78)



The representation in (78) claims that what is modified by *HERE* is the entire FP, i.e. the combination of *tree* and *funny*, and that what is attracted to the (higher) Spec,AgrAP is the NP rather than the modifyee of the adjective. This is an interesting claim.[76]

[75] I'm including AgrAP for concreteness, even though in English there is no evidence for its existence.

[76] Discrepancies between what is modified and what the modifier agrees with are empirically attested. One such instance is English (i), where the demonstrative modifies *kind* but inflects for plural in accordance with *books*.

i. these kind of books

Another instance, or rather series of instances, will play an important role in chapter 7.

With regard to the continuation of the derivation of (78) this means that the next steps involve merger of a functional projection other than D, say F3, and movement of a constituent containing *funny* but not *HERE* to Spec,FP3. Subsequently, definite D is merged and xAP containing *HERE* is moved into its specifier.

4.5.3 Cinque (2005b)

Let me finally address the comparative empirical generalization made by Cinque (2005b) regarding post-nominal and pre-nominal adjectives in Germanic and Romance.

For the pairs of interpretive properties:[77]

(79) a. restrictive versus non-restrictive
b. modal versus implicit relative
c. intersective versus non-intersective
d. relative versus absolute

the following holds: if an adjective is ambiguous between the two readings α and β, it is so ambiguous in pre-nominal position in English and in post-nominal position in Italian. And secondly, the reading that survives in the non-ambiguous position in English is the one that does not survive in Italian.

Furthermore, Cinque compares the relative interpretive options of multiple adjectives and notices that, in English, the reading that is possible post-nominally is possible with the leftmost of two prenominal adjectives. For Italian Cinque notices that the prenominal adjective corresponds with the rightmost of two post-nominal ones.

Putting all of this schematically and representing the two properties as α and β, Cinque's generalization has the following format

(80) English: $\beta\ \alpha$ NOUN β

(81) Italian: α NOUN $\alpha\ \beta$

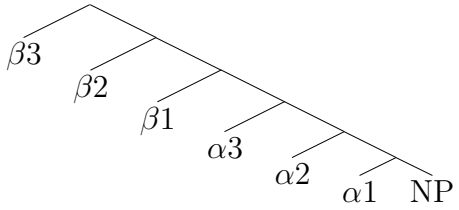
where, in Cinque's terms (p.16), α represents "direct modification" (a term borrowed from Sproat and Shih (1988)), and β is a "reduced relative."

The difference between Italian and English can be expressed in terms of movement. If (82) is the common underlying representation that English and Italian share, the distribution above can be explained by assuming that English only allows movement of a constituent containing the NP to the left of any higher projection if that movement pied-pipes at least all the projections of the type α.

[77] Cinque also discusses and includes:

i. specificity-inducing versus non-specificity-inducing
ii. evaluative versus propositional
iii. stage-level versus individual level

(82)



Italian on the other hand allows movement of NP to cross and pied-pipe α type projections, and it crucially requires NP (pied-piping α type projections in a roll-up fashion) to move to the left of β type projections.

As far as this comparative Germanic-Romance (English-Italian) pattern is concerned, the relativization proposal in this thesis feeds into a cartographic representation and is subsequently subject to the same kinds of options and limitations.[78]

4.5.4 Summary

In this section I have addressed the important question of whether the Kaynean (i.e. relativization) and the Cinquean (i.e. cartographic) view on adjectival modification are compatible and concluded that they are. The derivation postulated by the former feeds into the kind of representation advocated by the latter. I have then addressed the question of how multiple adjectives are accommodated in such a framework.

Finally, I have briefly addressed the recent comparative work by Cinque on Germanic and Romance adjectives in the DP and suggested that the comparative pattern can be derived by the same means as in Cinque's original proposal.

4.6 Summary

In this chapter I have presented different views on the structure of adjectival modification and argued that adnominal xAPs are relativization structures. The relativization approach is supported both by morphosyntactic and semantic arguments.

There are significant syntactic parallels between xVP, xNP, and xAP, which are morphologically and syntactically reflected. Notably, I observed that across xAP, xVP, and xNP a left peripheral projection can be activated either by merger of *d-* or by movement of (a projection of) the bottom layer of the respective extended projection.[79]

[78] Another important aspect of this work of Cinque's is the observations regarding the correlation between hight in the xNP and interpretation permitted (i.e. the distinction between α and β. Again, while Cinque base generates modifiers in the appropriate specifiers, this can straightforwardly be mimicked in the present approach by movement of the xAP into an appropriate specifier.)

[79] Instead of the bottom layer it is possible for another constituent to move into the relevant Spec, presumably with the provision that the constituent have some appropriate feature(s).

In the last section I showed how a relativization approach to adjectival modification feeds into a cartographic representation of modifiers and determiners.

Chapter 5

What for

5.1 Introduction

In this chapter I discuss the Germanic *was für* construction in some detail.[1] The main result will be the insight that *what for* is an adjectival modifier that is composed of a wh-quantificational component and a functional nominal component: *[[$_{QP}$ what] for [$_{fN}$ SORT]]*,[2] and that can surface across Germanic in two variants, an adjectival variant and a inverted variant (in a sense that will be made precise shortly). In chapter 6 this proposal will be extended to other determiners/quantifiers (beyond wh-determiners).

What for questions, as exemplified in (1), are usually glossed as '*what kind of NP...*', though they can be compatible with an interpretation closer to '*what NP ...*'. One famous property of *what for* is that it allows splitting, i.e. that *what for NP* can surface in a discontinuous fashion, as in example (1b).

(1) a. *what for*
Was für einen Hund hast du gesehen? German
what for a dog have you seen
'What kind of dog did you see?'

b. *what for* split
Was hast du **für einen Hund** gesehen?
what have you for a dog seen
'What kind of dog did you see?'

The *what for* construction is found in many Germanic languages including Danish[3], Dutch[4],

[1] The present discussion is an elaboration on Leu (2008, 2007b,a).

[2] Vangsnes (2006a, 2008a) reaches the conclusion that wh-determiners more generally have a structure similar to this.

[3] Vikner 1995.

[4] Bennis 1983, 1995; Den Besten 1985; Corver 1990, 1991; Bennis et al. 1998; Corver and Van Koppen 2005.

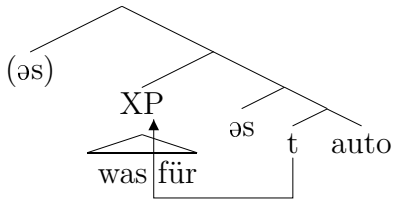
German[5], Norwegian[6], Swedish[7], Swiss German[8], and Yiddish[9]. Standard English and Icelandic seem to lack it (i.e. lack variants that would be uncontroversially analyzed as belonging to the "*what for* construction"). It is possible, however, that Icelandic and English do have *what for*, albeit less transparently so.[10]

I will argue that the *what for* construction exhibits two surface variants independently of the split/non-split distinction. Both variants are compatible with splitting, but neither requires it. Both variants are attested in Swiss German and in Norwegian. In some varieties of Germanic, notably in German, only one variant is possible. I will call one variant the ADJECTIVAL variant and the other the INVERSION variant, since they contrast in that the former exhibits adjectival suffixal morphology (including the adjectivalizing suffix *-ig* and AgrA in Swiss German, see section 5.2.3), and the latter precedes an indefinite article. The two variants are exemplified in (2). (2c) is a partial representation of the inversion variant (2b).

(2) a. **adj variant**
was für ig s auto — Swiss German
what for ADJ AGRA car
'what kind of car'

b. **inv variant**
was für əs auto
what for a car
'what kind of car'

c.



[5]Den Besten 1981, 1985; Pafel 1996; IJbema 1997; Abels 2003.
[6]Lie 1982.
[7]Börjars 1992; Delsing 1993.
[8]Leu 2003, 2004.
[9]Vikner 1995.
[10]The OED lists a few examples of *what for* in older varieties of English. Some speakers of present day American English quite readily accept *what for* sentences like

i. % What did you buy for books?
ii. % What is that for a building?

with a strong preference for splitting.
Icelandic has (iii), taken from Vangsnes (2008a).

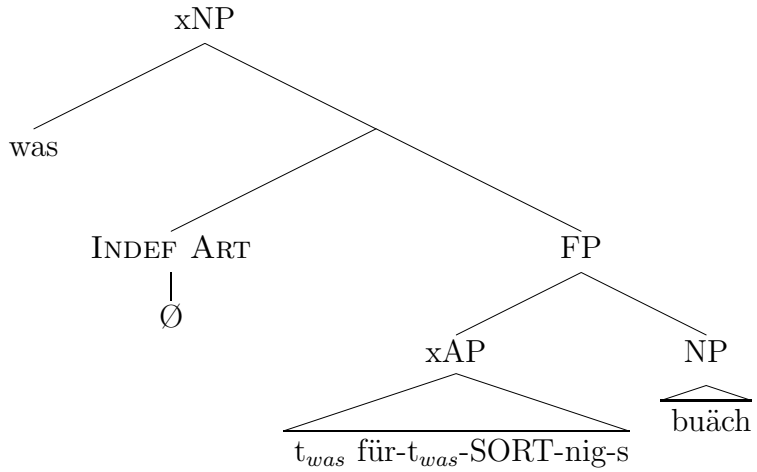
iii. [Hvers konar] bílum keyrir hann? — Icelandic
what.GEN type.GEN cars.DAT drives he

Considering the fact that Norwegian has instances of *what for* with no overt *for*, (iii) may be a good candidate for an Icelandic *what for* example.

I will propose the structure schematized and simplified in (3) for the adjectival variant. The INV variant may lack a large part of the higher functional structure, a possibility proposed in section 5.3.

(3) a. was fürnigs buäch — Swiss German
what for.ADJ.AGR book

b.



The discussion of *what for* lays the ground for chapter 6 in which a number of determiners are argued to have a morphosyntax that is largely identical to that of *what for*. In other words, I propose that *what for* is a very typical and linguist-friendly non-*d*-determiner.

5.2 The ADJ and INV variants of *what for*

The overarching purpose of this chapter is to show that *what for* exhibits an adjectival variant, with properties of ordinary adjectives, and an inversion variant, with properties reminiscent of degree fronting. Swiss German (unlike German) has both.

(4) a. **adj variant**:
was für ig s auto — Swiss German
what for ADJ AGR car

b. **inv variant**:
was für əs auto
what for a car

Assimilating this contrast to the one between English type degree fronting and its absence in languages that do not have its exact counterpart, I will begin by arguing that the derivation of (4b) contains a movement step of *[was für]* which that of (4a) does not contain.

5.2.1 *What for* and degree fronting

Germanic *what for* has a variant in which the constituent *[what for]* is subject to a movement operation that is highly reminiscent of English type degree fronting. I will advocate ann assimilation of the these phenomena.

English has what is called degree fronting (Bolinger, 1972; Bresnan, 1973; Hendrick, 1990; Kennedy and Merchant, 2000; Matushansky, 2002; Kallulli and Rothmayr, 2008; Troseth, to appear).[11]

(5) a. [too good]$_k$ a t$_k$ deal
b. [how good]$_k$ a t$_k$ deal
c. [so good]$_k$ a t$_k$ deal

In comparison, German does not allow the same syntax with the translation equivalents of (5). Compare (6a) and (6b,c).[12]

(6) a. [How big] a t$_{howbig}$ building did he buy?

b. * Wie gross ein Haus hat er gekauft? German
how big a house has he bought

c. Ein [wie gross-es] Haus hat er gekauft?
a how big-AGRA building has he bought

However, German does have (7).

(7) Was für eine Blume hat er gekauft? German
what for a flower has he bought

In (7) a wh-component and something else precede an indefinite article. Consider the possibility that the variant of *what for* that has a non-initial indefinite article (7) involves movement of the [wh+ADJ] constituent, akin to (6a).

[11] Later in the chapter the foot of the chain created by fronting movement will be argued to be in a post-nominal position, akin to the proposals in Troseth (to appear); Vangsnes (2008a).

[12] According to Delsing (1993, p.139) German has (i). Google search for *"so gross ein"* returns 743 hits. (Cf. a search for *"ein so grosses"* returns 147'000 hits, despite the restriction to neuter gender.) In the first 100 there are two examples of the relevant sort (ii) and (iii):

i. so gross ein Haus German
so big a house

ii. ... mittlerweile ist das gar nicht mehr so gro ein thema, ...
meanwhile is that PRT not anymore so big a topic
(www.suchtundselbsthilfe.de/ forum/archive/index.php?t-1286.html)

iii. Dann isses ja nicht mehr so gro ein Problem
then is.it PRT not anymore so big a problem
(www.lifeinjapan.de/toshokan-senso)

One more exhibited the right structure, however, the text was clearly not written by a native speaker. All other 97 examples receive a different analysis (mostly one in which *ein* is a verb particle).

(8) [was für]$_k$ ein t$_k$ Haus

In order to make this immediately plausible, compare the question answer pairs in (9) and (10).

(9) a. [how big] a house?
b. a [very big] house

(10) a. [was für] ein Haus? German
what for a house
'what kind of house'
b. ein [solches] Haus
a such house
'a house like this'

The intuition that I will attempt to make precise is that (10a) is to (10b) by and large what (9a) is to (9b). The argument will have the following components:

- *Was* and *für* form a constituent excluding the noun (5.2.2).
- *Was* and *für* are part of an xAP (5.2.3).

Before discussing these two components of the analysis, let me address a natural question/objection and an empirical reason for dismissing it. The contrast between English and German with regard to the availability of degree fronting in (11) is what syntacticians would typically call an instance of parametric variation.

(11) a. [How big] a t$_{howbig}$ building did he buy?
b. Ein [wie gross-es] Haus hat er gekauft? German
a how big-AGRA building has he bought

The relevant parameter might be something like (12).

(12) [+/- degree fronting]: a degree modifier +/- moves to the left of a preceding indefinite article, pied-piping the adjective it modifies.

If German is indeed [- degree fronting], it follows that the *what for* example (13) cannot be an instance of degree fronting in German. And strictly speaking "degree" fronting it plausibly isn't.

(13) was für ein Buch German
what for a book

But consider the examples in (14).

(14) a. too good a deal
b. * very good a deal
c. not very good (of) a philosophy
(Troseth, to appear)

Within English there are some degree modifiers that trigger degree fronting, and others (e.g. *very*) that do not (14b). In (14c) it is the NEG element that licenses "degree" fronting.

Furthermore, some degree modifiers can stay in-situ (15a), or move and pied-pipe the adjective (15b), or front without pied-piping the (overt) adjective (15c).

(15) a. a quite clever decision
b. quite annoying a job
c. quite a boring person
(Matushansky, 2002, p.60)

The variation we see within a single degree modifier, e.g. *quite*, within English in (15), is essentially mimicked in the three-way comparison in (16) between German, Swiss German, and English:[13]

(16) a. Ein **wie grosses** Haus hat er gekauft? German
a how big building has he bought
b. **How big** a building did he buy? English
c. (Es) **wi**^{n} es **grosses** Huus het er kauft? Swiss German
(a) how a big building has he bought

The pattern where we seem to get the same kind of parametric variation within single degree modifiers in one language and within translation equivalents across languages suggests, at the very least, that the kind of parameter in (12) is inadequate. Since the relevant movement does not seem to be all that directly tied to "degree," and since it has the effect of inverting a constituent with the indefinite article, I will henceforth refer to it simply as INV, or inversion.

Two conclusions that we can draw from this short discussion that are important for the subsequent discussion are the following: (A) From the absence of INV with degree-*wie 'how'* in German we cannot infer the absence of any such INV in German; and (B) it is possible that within a single language (seemingly) the same construction may have both the options of undergoing INV and of not undergoing INV. Indeed I will show that it is not uncommon for languages to exhibit some such (seeming) optionality.

[13]Henk Van Riemsdijk p.c. points out that alternatively, (15) may be assimilated to the distribution of adverbs like *genau 'exactly'* in German.

i. zu-r genau gleichen Zeit German
at-the.DAT exact same time

ii. zu genau der gleichen Zeit
at exactly the.DAT same time

iii. genau zu-r gleichen Zeit
exactly at the.DAT same time

It seems to me though that in these examples it is only *genau* that moves, and secondly, taking the morphology in the English glosses seriously, example (i) seems different from examples (ii) and (iii) in not having the suffix *-ly*. Interestingly, this is, morphologically speaking, the opposite, of what happens in the kind of syntactic contrast that obtains between (16a) and (16b), as we will see below.

5.2.2 *What for* elements and structure

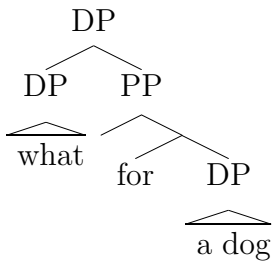
If the movement indicated in (17) is the right analysis, *was* and *für* must be part of a constituent that excludes the noun.

(17) [was für]$_k$ ein t$_k$ Haus

In the standard analyses of *what for* in the 1990s, however, they do not form a constituent (Corver, 1991; Pafel, 1996; Bennis et al., 1998). It will be argued though, that the right analysis must treat *what* and *for* as being part of a constituent that excludes the noun (at some stage in the derivation).

The standard view on the structure of *what for* phrases in the 1990s was the one proposed in Corver (1991) and Pafel (1996) (minor differences between the two are omitted here) in which a [$_{PP}$ *for NP*] is right-adjoined to (a maximal projection containing) *what*.

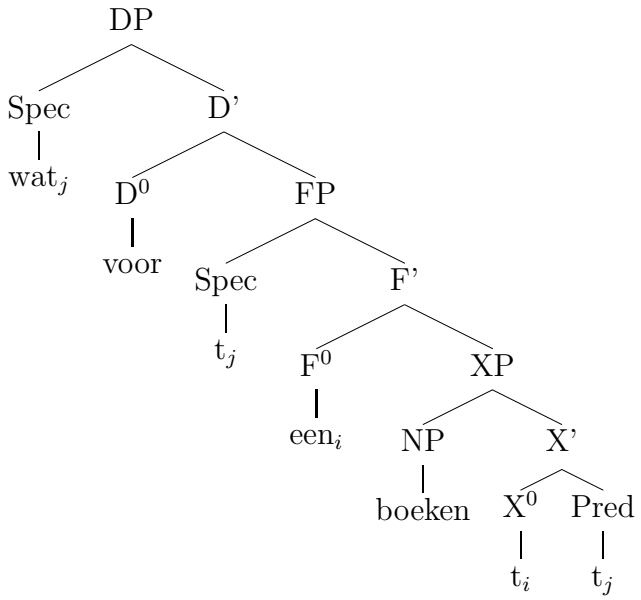
(18)



The structure proposed in Bennis et al. (1998) (henceforth BCD) does not provide the right constituency either (19b).

(19) a. wat voor een boeken — Dutch
what for a books

b.



The proposal by BCD was motivated mainly by the appearance of what BCD call a "spurious" article, i.e. an indefinite article that can be overt in environments in which it would a priori be

unexpected, namely before plural nouns, mass nouns, and proper names.[14]

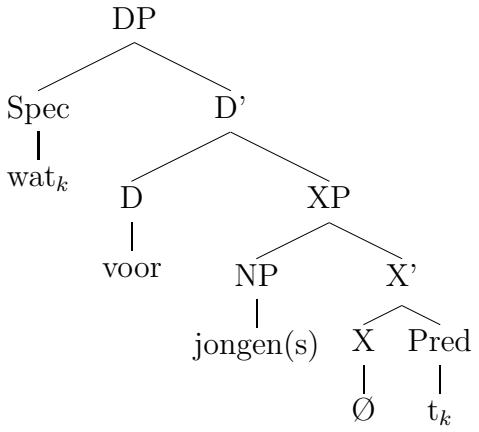
(20) Wat voor een [jongens] zijn dat? Dutch
what for a boys are that

BCD claim that the spurious article is not actually an article but instead a nominal copula, which is overt when predicate inversion has taken place.[15] Predicate inversion is argued to be of the A-movement variety, as opposed to predicate fronting, which is A-bar movement. The head noun and *wat* are taken to be in a subject predicate relation. Predicate inversion moves *wat* from a post-nominal position to a pre-nominal A-position. BCD propose that in order for this movement to be licit in terms of locality, the copula (i.e. the head relating subject and predicate, i.e. the RELATOR in terms of Den Dikken (2006)) makes a head movement step, which, by hypothesis (Chomsky, 1995), renders the specifier and the complement (i.e. subject and predicate) of the trace of the head-chain equidistant for attraction into the specifier of the head of the head-chain.

Dutch also has a variant of *what for* without an article even with singular count head nouns (21a). BCD propose that *what for* in Dutch has two sources, i.e. two possible derivations. The one in (19), featuring predicate inversion and subsequent DP-internal A-bar movement, and the one in (21), in which the A-bar movement takes place directly from post-N position.

(21) a. wat voor jongen Dutch
what for boy

b.



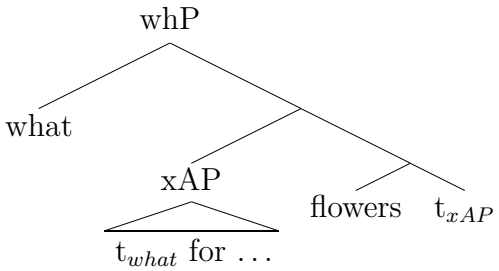
[14]BCD present an intriguing comparative study of three complex nominal constructions in Dutch which feature a spurious article. For a similar phenomenon in Scandinavian see (Delsing, 1993). Leu (2004, 2008); Van Riemsdijk (2005) argue that this indefinite article is not actually spurious but is syntactically construed with a silent nominal. In my earlier work, this was argued for *what for*. Van Riemsdijk showed how the idea can be extended to the other complex nominal constructions discussed in BCD. In this thesis I will use the term "spurious article" in a descriptive sense, i.e. without implying that BCD's proposal is right. However, it is not immediately obvious how my earlier proposal regarding the "spurious article" in *what for* is (a) compatible with the plausible proposal in (17), and (b) how it extends to the discussion in chapter 6, where I show that the presence of such ("spurious") indefinite articles is more pervasive than is generally thought. I will remain agnostic about the precise account of the so-called "spuriousness" of the article in this thesis.

[15]Note that the homophony between BCD's hypothesized copula and the indefinite article remains accidental on their approach.

The proposal that there are two derivations for *what for* seems correct, and is strongly supported by evidence from Swiss German and Norwegian. And the possibility of A-bar movement directly from post-N position will also be adopted in the present proposal, albeit for the derivation of (19a).

All three structures (18), (19b), and (21b) can independently be shown to run into problems with regard to a number of properties, which I discuss shortly. The structure I am proposing treats the sequence *what for* as an adjectival modifier, i.e. crucially as part of a constituent (at some point) that excludes the noun.[16]

(22)

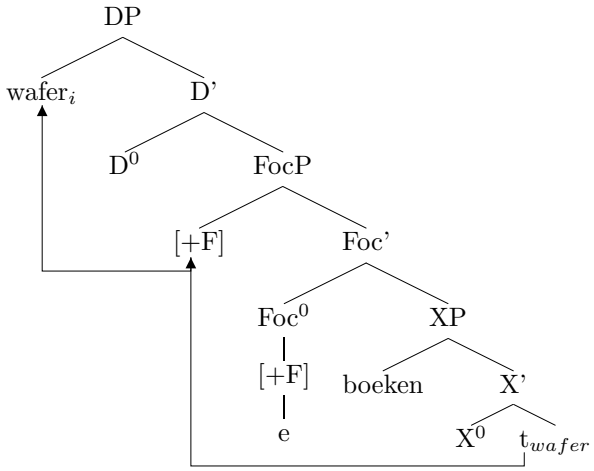


A structure with these properties was motivated in Leu (2008) independently of the INV proposal (see also right below). The observation that an INV derivation is sometimes involved strongly supports that proposal.

[16]Corver and Van Koppen (2005) discuss different dialects. For dialects that allow *what for* split, they adopt BCD's structure. On the other hand there are dialects in which the *wh*-component and the prepositional component are inseparable and "[form] one unit morphologically." These C&K analyze differently, giving the structure in (ii), for example (i) from Katwijk Dutch.

i. wafer-e _ bedoel je? Katwijk
what-for-$_e$ mean you
'Which one do you mean?'

ii.



For does not c-command *Hund*

Let us first consider the element *for*. In non-*what for* contexts *für* assigns accusative case to the noun phrase that follows it, which is its complement DP.

(23) Ich habe das Lied [für dich] geschrieben. German
I have the song for you.ACC written

One of the striking facts about *what for* is that the (open class) noun phrase that overtly follows *for* is marked for case relative to the syntactic context in which the entire *what for* phrase occurs, i.e. it can be nominative, accusative, dative or genitive.[17] In other words, in *what for* contexts *for* and the open class nominal of the *what for* phrase are not in a case relation. Concretely, in (24) *für* and *einem Hund* are not in a case relation. Instead *einem Hund* is in a case relation with the dative preposition *mit*. Note further that *für* is not an intervener for the case relation between *mit* and *einem Hund*.

(24) **Mit** was **für** ein-**em** Hund hast du gespielt? German
with what for a-DAT dog have you played
'What kind of dog did you play with?'

These observations have led to the description of *für* in *was für* as case-inert (Den Besten 1981, Corver 1991, Pafel 1996), i.e. the fact that *für* in *was für* does neither assign case to the head nominal nor intervene for case assignment has been ascribed to lexical properties of *für* in *was für*, thereby alienating it from other occurrences of *für*.

I propose an alternative view, namely that *für* is inside a specifier in the xNP. On such an analysis, it is possible to more closely assimilate *für* in *was für* to other occurrences of *für* and ascribe its irrelevance regarding the case of *einem Hund* to the structural configuration holding between *für* and *einem Hund*. Concretely, I propose that *für* does not c-command *einem Hund*. Put another way, *einem Hund* is not in the complement of *für*. This is why *für* does not intervene between *mit* and *einem Hund*. In this respect *für* in (24) is like *auf* in (25), relative to the case relation between *mit* and the head noun (*Hund* and *Mutter* respectively).

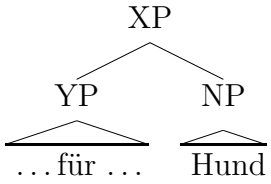
(25) **Mit** ein-er [[**auf** ihr-en Sohn] stolz]-**en** Mutter German
with a-DAT of her-ACC son proud-DAT mother
'with a mother proud of her son'

This way, we do not need to stipulate that *für* in *was für* does not assign case. In fact, in Leu (2008) I argued that it does assign accusative case, namely to *was*. For now, I conclude that the constituent headed by *for* in *what for* is (in) a specifier within the extended projection of the open class head noun, similar to *auf* in (25).

(26) a. was für ein Hund German
what for a dog

[17] *What for* examples in genitive contexts sound odd due to a register clash.

b.



Silent *SORT*: a functional KIND nominal

Assuming that *for* in *what for* does nevertheless take a complement, we are faced with the question of what that complement is. Echoing the stereotypical interpretation of a *what for* question - which is akin to *"what kind of N"* - I propose that the complement of *for* in *what for* features a KIND nominal, which can/must sometimes remain silent, *SORT* (Leu, 2008).[18] [19]

A strong piece of evidence in favor of the existence of a functional nominal between *for* and *NP* comes from instances of *what for* in which there is an overt closed class nominal in this position. Such examples are common in Norwegian and Swedish and are also found in Dutch. This is exemplified here for Norwegian (with an example of *what for* split), and Swedish:

(27) a. Hva har du lest for **slags** bok? Norwegian
what have you read for *slags* book
'What kind of book did you read?'

b. Vad för **slags/sorts** bil köpte du? Swedish
what for *slags/sorts* car bought you

Note that in the Norwegian and Swedish examples, the *sort-s/slag-s* bears genitive morphology, suggesting that it is in a local relation with another nominal. In Leu (2008) I proposed that this other nominal is *what*.[20]

[18] As we will see, the KIND nominal can be overt, as in Scandinavian *slags, sorts*, and in Swiss German *-lei, -hand, -chäibs*, or silent. The silent variant will be written *SORT*.

[19] The idea of a silent SORT in *what for* was noted and rejected in Corver (1990), see note 22.

[20] A more detailed analysis of this genitive *-s* should also take into account examples like Norwegian (i) (due to Øystein Vangsnes p.c.), Dutch (ii) (from Corver 2006), and Swiss German (iii).

i. en helvete-s idiot Norwegian
a hell-s idiot

ii. een bliksem-s-(e) mooi-e meid Dutch
a lightning-s-(AGR) pretty-AGR girl

iii. a. ä hund-s gemäinä chäib Swiss German
a dog-s mean guy
'a very mean guy'

b. ä wahnsinn-s typ
an insanity-s guy
'an incredible man'

Dutch (ii) and Swiss German (iiia) suggest that in (iiib) as well *-s* may be followed by an (in this case silent)

The functional KIND nominal is overt also in the non-*wh*-variant (28) in Swiss German, more on which below.

(28) mit [all-er-**lei** für] luschtig-ä büächer — Swiss German
with all-GEN-kind for funny-DAT books

I am generalizing from the overt manifestation of *slags/sorts* in the above examples to all instances of *what for*, and claim that cross-linguistically in all instances of *what for* there is always such a functional nominal present, and that this nominal is in the complement of *for*. In some cases this KIND nominal remains non-overt, and will be represented as *SORT*.

In addition to the kind-reading, *was für* phrases also allow a token interpretation. The question arises of how the semantics of *SORT* can accommodate this.[21] Indeed, according to my Norwegian informants, (29a) strongly favors a type reading, in contrast to the variant without overt *slags* (29c), which readily allows a token answer. The judgment for (29b) seems somewhat intermediate, with some speaker variation.

(29) a. Hva for slags bok har du lest? — Norwegian
what for sort book have you read

b. Hva slags bok har du lest?
what sort book have you read

c. Hva for en bok har du lest?
what for a book have you read

A similar albeit subtle and highly elusive contrast obtains in Swiss German between the variant with and the one without overt *ig*.

(30) a. Was list dr Niko für büächr? — Swiss German
what reads the Niko for books

b. Was list dr Niko fürn-ig-i büächr?
what reads the Niko for-ADJ-AGRA books

An answer to (30a) is more likely to consist of book titles, while an answer to (30b) is more likely to consist of the name of a genre.

A possibility is that the set of functional nominals that can occupy the position of *SORT* has more than one member and that these can be semantically distinct. For a concrete proposal along such lines see Van Riemsdijk (2005).

Indeed, e.g. Swedish has at least two overt variants, *slags* and *sorts*, in *what for*, and Swiss German has at least three distinct functional nominals in the non-*wh*-variant (see (34) below).

---

adjective (an idea suggested to me by Marcel Den Dikken p.c.), e.g. *GREAT*, and similarly in (i). I.e. in all the examples, the modifier plausibly consists of two parts related by *-s*.

[21] Note that the compatibility of *Was für SORT Bücher? 'What for SORT books'* with a token answer, e.g. *Voltaires Candide und Reuters Schelmuffsky*, is parallel to the proposal by Heim (1987), that English *what* has the semantics of *something of what kind*, in the light of the fact that English *What (two) books did you read?* also allows such an answer. If Heim is right, this suggests that all *what* questions are really *what for* questions, with a silent *for NP*. In light of the contrast in (29), this line of reasoning suggests that non-pronunciation correlates with a sort of semantic weakening/bleaching (a notion that ultimately needs to be made more precise).

Kind as a head noun

It is important to distinguish the functional KIND nominal *SORT* from other nominals (in the vicinity of English *kind*) which (by contrast) can function as the head noun of a *what for* phrase. Swiss German and German do have overt noun counterparts of English *kind*, as e.g. in German (31). Here the nominal *Art 'kind'* is preceded by an indefinite article, *Art* triggers agreement on the indefinite article (31a), and the noun phrase *einer Art 'a_{DAT} kind'* (31b) receives outside case (see section 5.2.2), namely dative from *von*. Hence it is not in the complement of *für*.

(31) a. Was für ein-e Art Bücher liest du? German
what for a-FEM kind books read you

b. Von was für ein-er Art Film hat er gesprochen?
of what for a-DAT kind movie has he spoken

c. diese Art Bücher/diese Art von Büchern
this kind books/this kind of books.DAT

The fact that there is an additional noun *Bücher 'books'* present has to do with properties of *Art 'kind'*, and is independent of *what for*, as witnessed by (31c). Secondly, if the assimilation to degree fronting is correct, *Art* would be expected to occur to the left of the indefinite article, unless it is stranded by *was für* fronting, which would necessitate prior extraction of *Art* out of the xAP. On the present analysis *Art* is the modified head noun and there is still a silent functional nominal (e.g. *SORT*) present in (31a,b), which is in the complement of *für*.

Further, if *(eine) Art* in (31a) were the overt realization of the proposed silent nominal *SORT*, we would for the case in which it is silent expect (32a) with silent *ART* and a spurious *eine*, or (32b) with silent *EINER ART* to be possible in German, contrary to fact.

(32) a. * Was für eine ART Bücher... German
what for a KIND books...

b. * Von was für EINER ART Film...
of what for A.DAT KIND film...

A similar potential confusion arises in Dutch.

(33) a. Wat voor SORT een [jongens] zijn dat? Dutch
what for SORT a boys are that

b. Wat voor SORT een [soorten wijn] zijn er?
what for SORT a sorts wine are there

(33a) is an example of *what for* with a spurious article and *jongens 'boys'* has the modified head noun. The copula has a plural form, agreeing with *jongen*. In (33b), on the other hand, *soorten* clearly is the head noun of the *what for* phrase, triggering plural agreement on the copula. Hence, as far as the structure of *what for* is concerned, (33b) is parallel to (33a), with *soorten 'sorts'* as the head noun instead of *jongens 'boys'*. The difference between the two examples is that in (33b) the indefinite NP following [*...for SORT ...*] is itself more complex than the one in (33a).

But this is not directly relevant to the structure of *what for*.[22] On the present analysis, the silent nominal *SORT* is crucially within the forP and not the head noun of the *what for* phrase.

What for a case domain

The *what for* phrase is its own case-domain. *For* may assign (accusative) case to *what* (Vangsnes, 2008a; Leu, 2008). Though evidence in favor of this claim (as well as counter evidence) is not copious. But there is good evidence that the KIND nominal associates with genitive case.

Swiss German has a non-*wh* variant of *(what) for* in which the the KIND nominal is overt. A handful of expressions (e.g. *allerlei/allerhand/allächäibs 'all kinds'*) that transparently contain a universal quantifier (*all-*) and a (semantically bleached) closed class nominal (*-lei/-hand/-chäib-*) can license a *für NP*.[23]

(34) Swiss German

a. all-er-lei für sachä
all-GEN.F-KIND for things

b. all-er-hand für sachä
all-GEN.F-KIND for things

c. all-ä-chäib-s für sachä
all-ACC-KIND-GEN.M for things

Note that the functional nominal in (34a)-(c) is genitive marked. In German, when a modified noun phrase is in a genitive environment, the adjective modifying a feminine singular has an *-er*

[22] Assuming a different internal structure of *what for*, Corver (1990:chap 6, note 10) considers (ia) to be favorable evidence for the existence of a silent SORT, but abandons the idea in view of (ib), which would suggest the presence of yet another SORT. But this latter does not seem to be able to be overt (ic).

i. Dutch

a. [Wat voor (een) soort honden] heb je gezien?
what for (a) sort dogs have you seen

b. [Wat voor een soorten honden] heb je gezien?
what for a sorts dogs have you seen

c. ?* [Wat voor een soort soorten honden] heb je gezien?

But first of all, notice that the (silent) KIND nominal *SORT* would precede the indefinite article, rather than following it, since it is in the complement of *for*. Secondly, the very marginal status of (ic) should, I think, be related to German (iib) which is unacceptable.

ii. German

a. Diese Art Bücher lese ich nicht.
this kind books read I not

b. * Diese Art Art(en) Bücher lese ich nicht.
this kind kind(s) books read I not

Hence independently of *what for*, the complex noun phrase of the *Art Bücher* kind does not allow recursion (in the absence of a mediating preposition).

[23] Some speakers readily allow *allerlei fürtigi NPs* where *für* is followed by the adjectival suffix *ig* discussed in section 5.2.3. If *lei* and *chäibs* are taken to be counterparts of *slags/SORT* (as suggested by the genitival morphology, paralleling Scandinavian), then this supports an analysis of *ig* as "combining" with the entire [. . . *for* . . .] phrase rather than with *SORT*.

ending, compare (34a,b) and (35a). An adjective modifying a masculine or neuter singular has the ending *-en* (Swiss German *-ä*) and the noun has the ending *-s*, compare (34c) and (35b).[24]

(35) a. gut-er Gesinnung wegen — German
good-GEN conviction.F because-of

b. schlecht-en Wetter-s wegen
bad-ACC weather.N-GEN because

Similarly in Norwegian, the overt KIND nominal in *what for* features a genitive ending.[25]

(36) hva for slag-s bil
what for KIND-GEN car

The claim that the *für NP* in (34) is indeed the same as in *what for* is corroborated for one thing by the fact that the *für NP* must be licensed (i.e. *allerlei* etc. cannot be omitted), and secondly by the fact that *für* is not in a case relation with the overtly following NP. As shown in (37), *komischä*, the adjectival modifier of the head noun, has dative case morphology, assigned by *mit*, even though it follows *für*. This is exactly parallel to the situation in the more familiar *what for* discussed above.

(37) (?) Ich ha mit [allerlei für komisch-**ä** lüt] gred. — Swiss German
I have with *all kinds* for funny-DAT people talked
'I talked to all kinds of weird people.'

I conclude that the material associated with *for* in *what for* constitutes a case domain, i.e. it is case-theoretically active and self-sufficient.

5.2.3 *What for* is input to "adjective formation"

In the previous subsections I have argued that *[what for SORT]* forms a constituent that sits in a specifier in the xNP. This has brought us a long way toward assimilating it to the degree-modified adjectives that undergo INV in English.

Swiss German lets us go one step further. Swiss German has a variant of *what for* where *für* is followed by the adjectival suffix *ig* and adjectival agreement AgrA (38).

(38) a. Was für-ig-ä wi hesch kauft? — Swiss German
what for-ADJ-AGRA wine.M have-you bought
'What kind of wine did you buy?'

b. Was für-ig-i musig wetsch losä?
what for-ADJ-AGRA music.F want-you hear

[24]The accusative gloss of the adjective suffix in the genitive contexts (34c) and (35b) is based on the proposal in chapter 7.

[25]Compare also Icelandic (25), (from Vangsnes (2008a)).

i. [Hvers konar] bílum keyrir hann? — Icelandic
what.GEN type.GEN cars.DAT drives he

The suffix *ig* typically combines with nominal (39a) or verbal (39b) stems to form adjectives.

(39) a. witz ; witz-ig — Swiss German
joke ; funny

b. zapplä ; zappl-ig
to fidget ; fidgety

It is impossible for *-ig* to suffix onto a stem that is entirely non-overt. In other words *für* in (38) must be part of the stem for *-ig*-suffixation.[26]

Notice that *-ig* in (38) is followed by strong adjectival agreement AgrA. Recall from the discussion in chapter 3 that strong agreement on the adjective is derived by movement of a projection containing the adjective to the left of AgrA.

(40) Indef: $[_{xAP}$ Adj ... AgrA ... Adj ...]

Hence the constituent formed of the adjectival stem and *-ig* in (38) occupies the left periphery of the xAP. In other words, *für* is embedded in the specifier of a specifier of xNP.

[26]The morpheme *-ig* can compose with complex phrases in other cases too. An example is the very colloquial Swiss German (ia), where the stem contains an R-pronoun and hence an entire PP structure containing an empty category in the complement of P (Van Riemsdijk 1978). (I refrain from discussing the identity of the morpheme glossed *n* at this point.) Cf. also Swiss German (ib), akin to *übr-mäss-ig* lit. *'over-measure-*ADJ*'* meaning *'excessive'*, and English *-ish* in (ic), due to Richard Kayne p.c.

i. a. En völlig dr-uf-n-ig-ä typ — Swiss German
a totally there-on-n-ADJ-AGR guy
'A total weirdo'

b. Es isch nu öpis übr-ig
it is still something over-ADJ
'There's something left over.'

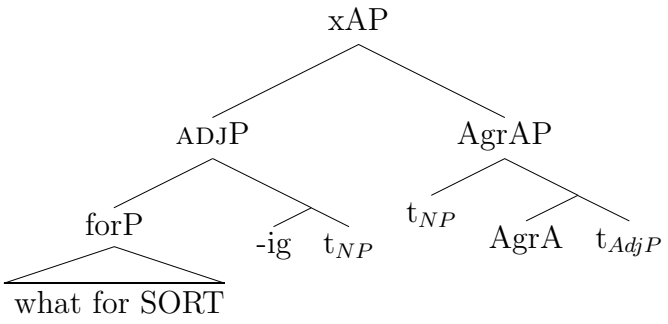
c. It must be a [quarter after five]-ish.

Another example of an adjectival modifier headed by a P element is the colloquial German (iia), and the corresponding Swiss German (iib), where the verbal particle *zu* takes adjectival inflection (and optionally combines with *-ig*). A possible analysis would be that there is an unpronounced participle *MADE* (or German *GEMACHT*).

ii. a. eine zu-e Tür — German
a PRT-AGRA door
'a closed door'

b. ä zuä-n-i/zuä-n-ig-i türä — Swiss German
a PRT-n-AGRA/PRT-n-ADJ-AGRA door

(41)



Summarizing so far, *what for NP* features a functional nominal morpheme *SORT/SLAG*, which occurs between *for* and the open class head noun, and which in some varieties of Germanic can and in some varieties must remain unpronounced. The structure of the *what for* phrase must be something like (41). This xAP sits in a specifier of the xNP "headed" by the noun that has relativized out of the xAP (see chapter 4).

Next I will investigate the syntax of *what* more closely, and show that *what* is subject to two noun phrase internal movements: one in which it pied-pipes a larger piece of structure, and one in which it extracts from forP (and out of the xAP).

5.2.4 The syntax of *what*

For present purposes the syntactically most interesting element of *what for* is *what*. *What* in *what for* participates in (up to) four movements.

(42)
a. what [for t_{what} ...] — *what*-fronting
b. [$_{xAP}$ what for] ein t_{xAP} ... — INV
c. what [[$_{xAP}$ t_{what} for] ...] — *what*-extraction
d. what ... V ... [for ...] — *what for* split

In what follows I will motivate each of these, starting with *what*-fronting.

What-fronting within the forP

It is possible to ask whether *what* arrives to the left of *for* by external merge or by internal merge (i.e. movement). This question is largely orthogonal to the present discussion and hence I will not dwell on it much.

Both Bennis et al. (1998) and Leu (2008) argue (on different grounds) that *what* moves to the left of *for* from a position that is lower than *for*. The plausibility of such a proposal is supported by the following small clause examples.

(43) a. Sie hielt den Mann **für** einen Schwindler. German
she considered the man P a liar

b. Sie hielt den Mann **für** dumm.
she considered the man P stupid

In (43a) and (43b) the phrase following *für* is clearly predicated of *den Mann*. A question is whether the predication relation is mediated via *für*, with *für* playing the role of a copula (a Relator, cf. Den Dikken (2006)), or whether the predication relation is structurally within the scope of *für*, in which case the complement of *für* is a small clause. That *für* may be able to take a clausal complement is witnessed by the existence of English

(44) [For John to be sick] would be surprising.

Hence it is conceivable that *den Mann* in (43a) and (43b) originates in the complement of *für*, or that it controls a silent PRO in the complement of *für*. The *for* in *what for* is plausibly not unlike that in (43a) and (43b).

Independently of whether the right analysis of *what for* involves movement or a sort of control, the crucial difference between Bennis et al. (1998) and Leu (2008) is that for BCD *what* is in a predication relation with the open class head noun, e.g. *dog* (45a). Movement from that position to the left of *for* does not provide the desired constituency. In Leu (2008), the predication relation in the complement of *for* involves *what* and a functional KIND nominal (45b), but crucially not the open class head noun *dog*.

(45) a. what [for [a [dog t_{what}]]] BCD 1998
b. [[what for [t_{what} SORT]] a dog] Leu 2008

INV-mvt

The crucial movement step whose parametrization derives the two variants is the INV movement. The absence of INV movement gives rise to a variant that is akin to ("ordinary") adjectival modification (46).

(46) ADJECTIVAL 'WHAT FOR':
a. % was für -ig -s buäch Swiss German
what for ADJ AGRA book
b. hva for slag-s bil Norwegian
what for kind-GEN car

Swiss German (46a) exhibits the adjectivalizing morpheme *-ig* and adjectival inflection.[27] Similarly Norwegian (46b) exhibits a suffix *-s* which may be viewed as adjectival morphology (see note 20).

The other variant is diagnosed by the presence of an indefinite article to the right of *for*.[28]

(47) INV-MOVED 'WHAT FOR':
a. [was für] es huus Swiss German
what for a house

[27]Some speakers require an initial indefinite article in (46a). More on this below.
[28]I'm grateful to Øystein Vangsnes for inspiring discussion on this issue.

b. [hva for] en bil — Norwegian
what for a car

Taken together with the observation above, that *was für* is adjectival, the fact that *what for* in (47) precedes an indefinite article makes it similar to English degree phrase fronting (Hendrick, 1990).[29]

(48) a. [too good]$_k$ a t$_k$ deal
b. [how good]$_k$ a t$_k$ deal
c. [so good]$_k$ a t$_k$ deal

Taking this parallelism seriously, I propose that (47) involve an INV-movement step. An operator (possibly associated with *was*) triggers inversion, pied-piping a larger constituent, and moving it to the left of the indefinite article.

I will come back to INV shortly (section 5.3). But first let us look at *what*-extraction.

What-extraction from xAP

A cue to understanding the internal structure of *what for* phrases and one of the restrictions on the availability of splitting comes from the following little known phenomenon. Some speakers of West Germanic (including speakers of Swiss German, Austrian, German, and Dutch dialects) allow variants of *what for* like the Swiss German examples (49a) and (50a), where *what* is (optionally[30]) preceded by an indefinite article (which is sensitive to the gender features of the head noun (neuter in the case of *velo 'bicycle'*)).[31] The variant with an overt indefinite article strongly resists splitting

[29]Vangsnes (2008a) shows that "degree *how* constitutes an integral part of manner *how* across Scandinavian varieties," and that in many of them manner *how* is bigger than degree *how* in the sense that it is [degree *how* + α]. He further shows that many of these (complex) manner *how*s are used as determiners, very similar to *what for*. The example is from the Western Norwegian dialect of Sogn, taken from Vangsnes (2008a, p. 121).

i. Kelais bil køyre han? — Sogn Norwegian
how$_{mnr}$ car drives he
'What car does he drive?'

ii. Kelais ha dagen vore pá < . . . > arbai i dag dá?
how$_{mnr}$ has day-DEF been on work in day then
'How has the day been at work today?'

Vangsnes also finds that the determiner use of manner *how* can, in some varieties, be used to query for both kinds and tokens. Again this mirrors *what for*. Given that an element that (morphologically) contains degree *how* can semantically be used essentially like *what for*, it may become less surprising to find that *what for* exhibits syntactic properties that happen to have been identified first for degree modifiers, including degree *how*.

[30]By "optionality" I simply mean that both the variant with and without are acceptable, not that they are identical in any interesting sense. In fact, the variant with a pre-article is more delicate, and seems restricted in ways that are presently not clear to me.

[31]I am grateful to Marcel Den Dikken, Eva Dobler, Dorian Roehrs, and Susi Wurmbrand p.c. for judgments. Den Dikken further notes that the pre-*wat* article cannot be spurious, i.e. it is incompatible with a plural head noun (unlike the post-*wat* article in Dutch, see Bennis et al. (1998)).

(49b), (50b,c).[32]

(49) a. (**%es**) **was fürt-ig -s** velo wotsch? Swiss German
(a) what for-ADJ -NEU bicycle want-you
"What kind of bicycle do you want?"

b. % (***es**) **was** wotsch **fürt-ig -s** velo?
(a) what want-you for-ADJ -NEU bicycle

(50) a. [(**%es**) **was für** es velo] hesch kauft? Swiss German
(a) what for a bicycle have-you bought
"What kind of bicycle did you buy?"

b. [(***es**) **was**] hesch **für** es velo kauft?
(a) what have-you for a bicycle bought

c. [**was**] hesch (***es**) **für** es velo kauft?
what have-you (a) for a bicycle bought

As far as I am aware, an initial indefinite article makes the *what for* phrase categorically unsplittable across West Germanic.[33]

(49a), repeated as (51a), seems parallel to an ordinary modified indefinite noun phrase (51b), where the adjective *farbig 'colored'* is the counterpart of *was fürtig*.[34]

(51) a. (%es) [was fürt]-ig -s velo wotsch? Swiss German
(a) what for-ADJ -NEU bicycle want-you
"What kind of bicycle do you want?"

b. es [farb] -ig -s velo
a color -ADJ -NEU bicycle
"a colored bicycle"

Similarly revealing is a comparison of the *what for* interrogatives with their (indefinite) demonstrative counterparts:

(52) a. [(%es) [was für] es velo] hesch kauft? Swiss German
(a) what for a bicycle have-you bought

b. (ä/es) [so^n] es velo
(a) such a bicycle
"a bicycle like this"

[32]The contrast between the (a) and the (b)/(c) examples in (49) and (50) also holds for speakers who do not readily accept an initial indefinite article in (49a) and (50a).

[33]Dutch has variants with and without a post-*wat* article both in plural and in singular count contexts. The fact that the post-*wat* article can be left out even with singular count nouns may suggests that Dutch also has a non-INV variant, albeit with no additional adjectival morphology. See Bennis et al. (1998) section 7.3. for discussion and an alternative view.
Note it is also thinkable that the post-*wat* article can be licensed to remain silent under certain circumstances, along the lines of the discussion of possessive *ihr*, see note 34 on page 158.

[34]Across Swiss German there coexist slightly distinct forms of the *-ig* variant, including *fürig, fürnig, fürtig*. It is not immediately obvious what the right account of these differences is.

(53) a. (%es) [was fürt] -ig-s velo wotsch? Swiss German
(a) what for -ADJ-NEU bicycle want-you
b. es [sert] -ig-s velo
a such -ADJ-NEU bicycle

Again, this is paralleled in Dutch (54) (Marcel Den Dikken p.c.),

(54) % een zo'n grote auto Dutch
a such-a big car

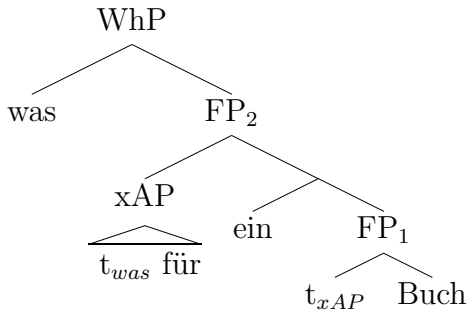
and similarly in English (55) from Wood (2002).[35]

(55) ... we're on **a such a** cut back ...

The observations that (A) the sequence *was für* seems to occupy the same position as *so/sert* in (53), and (B) *was für* moves as a unit in the INV variant, e.g. (52), strongly supports the claim that *what* and *for* form a constituent

Extraction of *what* out of xAP seems to be competing with the overt initial indefinite marker.[36] Merger of the initial indefinite article may be thought of as rendering the *what* movement represented in (56) unnecessary (and therefore impossible).[37]

(56)



Very interestingly, there are speakers of Swiss German for who the *-ig* variant requires an initial indefinite article in the context of singular count nouns. I.e. On my analysis, for these speakers *was* cannot extract from xAP in this contexts. Accordingly it is expected that these speakers do not allow splitting with the *-ig* variant, in singular count context. This seems correct for the one informant I have for this variety of Swiss German, here marked as "Swiss German X."

[35]Other examples of the kind where two indefinite articles are present in the presence of some sort of uninflected degree modifier include

i. es ganz es [$_{Adj}$ schöns] velo Swiss German
an entirely a pretty bicycle
'a really beautiful bike'

(see also Steiner (2005) for a quantitative study of such "indefinite article doubling" in Swiss German and Kallulli and Rothmayr (2008) for a recent analytic proposal based on Bavarian).

[36]See Starke (2004) for the idea that XPs can move and simultaneously project.

[37]Another instance of essentially the same phenomenon may be the contrast in German between *einjeder 'an every'* (cf. Roehrs (2007a)) and *jeder 'every'*, suggesting that *je* in *jeder* also undergoes a DP-internal movement step to the DP left periphery, and that this movement step as well is in complementary distribution with overt *ein*.

(57) a. *(es) was fürigs velo wotsch? Swiss German X
(a) what for.ADJ.AGRA bicycle want.you
b. *(*es) was wotsch fürtigs velo?
(a) what want.you for.ADJ.AGRA bicycle

In this variety, embedding of the constituent containing *was* and *für* under *-ig* seems to have the effect that *was* cannot extract. This I take to strongly support the claim that *was* and *für* are part of the adjectival stem, and form a constituent (possibly including further silent material).

Summarizing, *what* extraction without prior INV movement competes with merger of the lowest indefinite article. *What*-extraction after INV movement (illustrated in (56)) competes with merger of a higher indefinite article.

Splitting

The actual split then involves fronting of the [*for* NP] across *what* and subsequent (wh-)movement of the remnant *[what t]*, as argued in Abels (2003); Leu (2003, 2007a).

The crucial argument comes from Abels (2003). There are examples of split *what for* PPs, as in the examples (58a) and (58b) adapted from Abels's (290a) and (292a). Crucially, the NPs *Sachen* and *Leuten* are assigned case by *über* and *mit* respectively, and hence they must be in the complement of that preposition at some point, as indicated by the trace after *was* in (58a).

(58) a. [Über was *t*] der alles **für Sachen** Bescheid weiss! German
about what that all for things information knows
"(It's amazing) how much the guy knows!"
b. [Mit was *t*] hast du denn **für Leuten** gerechnet?
with what have you PRT for people-DAT reckoned

Many instances of *what for* PPs do not seem to allow splitting, and I have nothing insightful to say about these. But the fact that there are acceptable examples (in German and Swiss German) is crucial, because (58) cannot, under common assumptions, be derived by subextraction of *was* pied-piping the preposition but stranding the *für NP*. The reason is that *über* and *was* in (58a), and *mit* and *was* in (58b) do not form a constituent at the point where wh-movement applies, unless *(alles) für Sachen* and *für Leuten*, respectively, has first moved out from within the complement of *über/mit*.

(59) $\ldots\ldots [_{PP}$ mit [was $[_{FP}$ für Leuten$_{DAT}$]]] $\ldots$

5.3 INV and Morphology

This section addresses an observation that generalizes widely (chapter 6), which is that the INV variant is typically morphologically poorer than the ADJ variant. I will sketch a possible approach. It is important though to realize that whether or not the proposal I'm sketching in subsection 5.3.3 is workable does not affect the validity of the observation/generalization nor does it impinge on the general validity of chapters 5 and 6.

5.3.1 A puzzle

Comparing the two variants of *what for*, we note that in the INV-movement variant (60a) there is no adjectival morphology overt. The suffix *-ig* and AgrA, on the one hand, and the (post-adjectival) indefinite article on the other, cannot co-occur.

(60) a. Was für (*-ig) es velo hesch kauft? Swiss German
what for a bicycle have-you bought

b. Was für-ig-ä wi hesch kauft?
what for-ADJ-AGRA wine have-you bought

This is similar in Norwegian.

(61) a. hva for en bil Norwegian
what for a car

b. hva for slag-s (*en) bil
what for kind-ADJ car

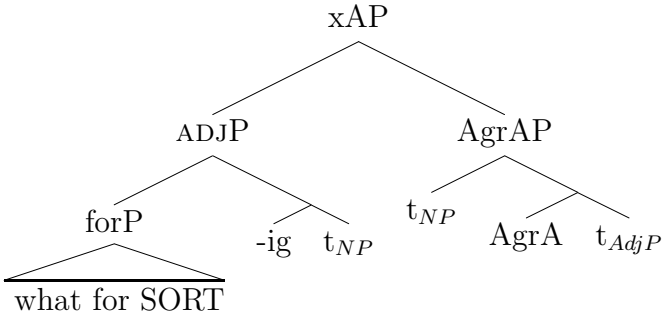
In (61a) the sequence *hva for* precedes an indefinite article, which identifies the INV-variant. Vangsnes (p.c.) observes that overt *slags* and the overt indefinite article cannot co-occur (61b).

The contrast between the two variants with regard to the presence of some adjectival morphology is puzzling. Below I sketch two possible ways of thinking about the issue. In the first possible approach, the base-generated structure is kept uniform across the two variants. The disappearance of the adjectival morphology under INV remains obscure. The second possible approach I present relates the syntax and the morphology more closely in that INV movement is argued to follow from the lack of a layer of syntactic structure which would also host the agreement morphology. This latter approach, even though at the current level of understanding still somewhat stipulative, seems more promising, and I will adopt it.

5.3.2 Uniform structure approach

Considering the tree representation in (62) (repeated from above), it is tempting to view the puzzle as including the question of how much structure is being pied-piped and how much (if any) is stranded.

(62)



To the extent that the structure in (62) is accurate, the minimal subtree that is pied-piped in inversion must be forP, since *for* overtly surfaces to the left of the indefinite article. If it is forP that moves, the non-pronunciation of *ig* and AgrA could reflect a PF strategy of deleting/ignoring affixal material that does not have an (appropriate) host.

Alternatively ADJP may be pied-piped, in which case the non-pronunciation of *ig* and that of AgrA would be predicted to be subject to distinct constraints and we may expect to find some variation between the two. The non-pronunciation of *-ig* would remain rather puzzling.

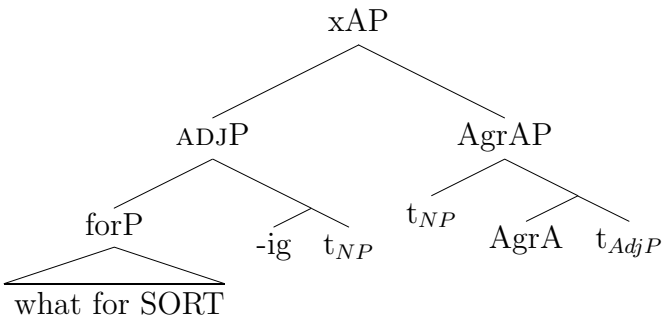
Finally, it is conceivable that xAP is pied-piped, in which case the non-pronunciation of *ig* and of AgrA may again constitute a unified though puzzling phenomenon. It may be argued that the relevant morphology needs to be licensed to receive a pronunciation, and that INV moves the xAP out of the relevant licensing domain.[38]

However, such an approach would add a level of complexity to the issue of pronunciation. I have argued earlier that there are instances in which certain functional elements are licensed (in the syntax) to remain silent (chapter 3). Adding the opposite licensing possibility to the grammar, i.e. syntactic licensing of pronunciation, seems a priori undesirable.

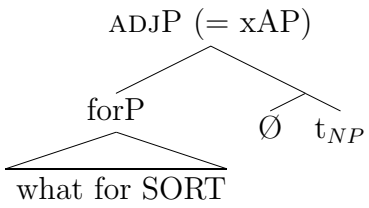
5.3.3 Structure versus movement

The uniform structure kind of approach leaves the relation between syntax and morphology opaque, and adds a level of complexity to the interaction between morphosyntax and pronunciation. It seems more desirable to pursue a line of thought that maximizes the mapping between syntax and morphology and to interpret the absence of (some) adjectival morphology in the INV variant as indicative of the absence of the corresponding piece of syntactic structure, and to also relate the trigger of INV movement to said absence of structure. Consider the structures below.

(63)



(64)

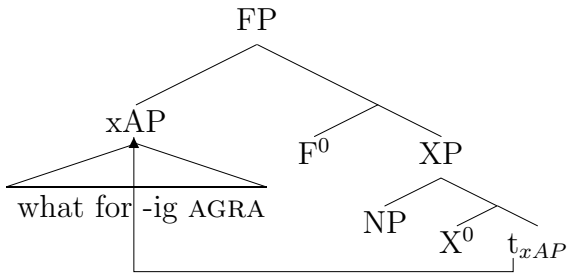


[38]The possibility of an account along these lines was suggested to me by Susi Wurmbrand p.c. and David Pesetsky p.c.

Plausibly the structures actually both contain a greater number of functional projections than what is represented in the trees above. Importantly though, (63) is larger than (64). The shared part is mostly identical (except perhaps for the highest projection in the smaller tree).

Thinking of the xAP fronting movement (65) as attraction by a functional head (a Probe) of an appropriate matching head (a Goal),

(65)



it is now easy to see how the difference in structure may have an impact on the syntactic behavior of the phrase. Concretely, I propose that the relevant head that constitutes the Goal for F^0 in (65) is present in (63) but absent in (64).

Hence I interpret the absence of *-ig* and of an overt AgrA morpheme as indicating the absence of AgrAP and every projection above it.[39] This may be related to the notion of truncation (Rizzi, 1993/4, 2002).[40,41]

What that means for (64) is that it remains post-nominal even after merger of F^0 in (65). Another potential consequence has to do with requirements of F^0. If movement of xAP into Spec,FP is thought to satisfy a requirement of F^0, than lack of such movement will have to be

[39]Perhaps even AdjP is absent. Or alternatively, it is projected but by a distinct head, one that's phonetically null, as represented in (65).

[40]Rizzi (1993/4, 2002) discusses truncation in the context of Topic drop and Root Subject drop, noting the following. "UG defines the clausal structure as a hierarchy of positions, starting from the left periphery, along the lines investigated by the cartographic approach (Cinque (2002), Rizzi (2002b), Belletti (2002) and references quoted there): [...] with some obligatory positions which form the structural backbone of the clause (Force, Tense, etc.) and other positions that are there only if called for by the content to be expressed (Top, Neg, etc.).
The truncation parametrisation is now expressible as follows. Suppose that languages can vary in the inventory of categories which can be taken as the root, Force being the unmarked case always available to function as the root, but other categories (TopP, IP,) being admissible options which some languages may choose. Then, external slices of the universal structure (including the obligatory backbone) may be omitted, while the hierarchy is respected from the first expressed element downward. So, what we are now suggesting is that languages may vary in the amount of truncation permitted in root clauses, as a matter of parametric choice." (Rizzi 2002, p. 22)

[41]If the lack of higher structure is the right approach to inversion of the "degree fronting" kind, language variation with regard to the amount of "truncation" can be observed between West Germanic, which does not allow adjectival agreement in INV contexts, and e.g. Danish/Norwegian (i), which sometimes do.

i. så stor-t et hus — Danish/Norwegian
so big-AGRA a house
(from Delsing (1993, p.139), glosses mine)

But see the general picture emerging from the discussion in section 6.2.

compensated somehow. This may be the trigger of *ein* insertion at this point.[42,43]

5.3.4 INV from post-N position

Let us assume that the *what for* AP, containing a wh-phrase, needs to be associated with a left peripheral head, wh^0. Whether a large xAP may provide a relevant head is not entirely clear. However, a truncated xAP certainly does not. Hence a truncated *what for* xAP must associate with the relevant wh^0 in the xNP is modifies. This seems like a plausible trigger for xAP fronting for small *what for* xAPs.[44] Hence the derivation of the ADJ variant and the derivation of the INV differ with regard to the "timing" of xAP fronting around the noun.[45] Let me exemplify this.

The derivation of an indefinite singular noun phrase containing an xAP includes the following derivational steps (ignoring irrelevant aspects for purposes of readability):

(66) a. ein schönes Buch — German
a pretty book

b. [Buch [$_{xAP}$ schönes]] → xAP fronting

c. [[$_{xAP}$ schönes][Buch t_{xAP}]] → merger of *ein*

d. [ein [[$_{xAP}$ schönes][Buch t_{xAP}]]]

The derivation of the ADJ variant of *what for* proceeds essentially analogously. The derivation of the INV variant of *what for*, on the other hand, differs from (66) with regard to the earlier step, from (66b)-(c). Consider (67).

(67) a. was für ein Buch — German
what for a book

b. [Buch [$_{xAP}$ was für]] → merger of *ein*

[42]Perhaps akin to the notion of T-extension in Kučerová (2005, p.228)
"The T-Extension Condition (TEC): Merger of T must be followed by further extension of the structure."

[43]Notice that this article sometimes exhibits special properties, earning it the attribute "spurious" (Bennis et al., 1998).

[44]Recalling the affinity between the definite marker and the complementizer, it is tempting to draw a parallel between definite xAPs/xNPs and embedded clauses, on the one hand, and non-definite xAPs/xNPs and root-clauses on the other. If this is correct then the fact that INV is possible only with non-*d*-determiners plausibly reduces to the fact that truncation (of the relevant sort) is possible only in root-contexts.

[45]The existence of adjectival modifiers with no AgrAP is supported by the existence of adjectives such as e.g. *lila 'purple', sexy 'sexy'* which do not inflect. These also don't easily combine with comparative and superlative morphology, which can be understood in a very similar way, as the lack of a DegP layer. Interestingly, some of these can optionally combine wit "adjectivalizing" suffixal morphology, e.g. *lilanig-*, in which case they also exhibit ordinary inflectional morphology, and are capable of combining with comparative or superlative morphology.

i. Es lilanig-er-s spilzüg git s aso nümmä. — Swiss German
a purple.ADJ-COMP-AGRA toy gives it PRT no.more
'As far as toys go, it can't get more purple than this.'

c. [ein [Buch [$_{xAP}$ was für]]] → xAP fronting

d. [[$_{xAP}$ was für][ein [Buch t$_{xAP}$]]]

(67) then further proceeds either by merger of *ein* or extraction of *what* from xAP.[46]

While the proposal presented in this section is fairly sketchy, it is worth emphasizing the interesting aspect of this proposal, that it makes a three way correlation between the difference in suffixal morphology, the size of the relevant xAP, and the syntactic behavior of the relevant xAP.

5.4 Summary

In this chapter, I have shown the following three important points:

(A) The *what for* phrase is an xAP in an indefinite xNP. The xAP has two components that are important for the discussion in the next chapter:

(68) [$_{QP}$ what] for [$_{fN}$ SORT]

These components are an (often silent) functional nominal *SORT* and a quantificational morpheme *what* (presumably related to an operator).

(B) *What for* has two surface appearances: an ADJ variant, involving adjectival suffixal morphology; and an INV variant, in which *what for* precedes an indefinite article and lacks the adjectival suffixal morphology. These variants are attested across languages and can coexist within languages. Some languages may exhibit only one of the two variants with *what for*.

(69) a. **adj variant**
was für ig s auto — Swiss German
what for ADJ AGR car

b. **inv variant**
was für ɔs auto
what for a car

(C) In both variants, *what* extracts from the xAP into the left periphery of the xNP. If *what* fails to undergo this movement overtly, it is preceded by an indefinite article, and *what for* is unsplittable.

(70) [(%es) [was für] es velo] hesch kauft? — Swiss German
(a) what for a bicycle have-you bought

It was concluded that *what* movement targets the same projection as merger of the indefinite article.[47]

[46] This is close to the proposal by Vangsnes (2008a) for *wh*-determiners more generally.

[47] Recall that the initial article and the non-initial article have a different status at some level in that the initial one is never "spurious."

What extraction is one (71c) of (at least) three movements that *what* can be subject to.

(71) a. Fronting across *for*:
$[_{xAP}$ what [for t_{what} SORT]]

b. INV:
$[[_{xAP}$ what [for t_{what} SORT]] [ein NP [t_{xAP}]]]

c. Extraction from xAP:
$[_{whP}$ what [$[_{xAP}$ t_{what} for t_{what} SORT] [ein NP [t_{xAP}]]]]

An important descriptive generalization (that remains to be understood) is stated in D and E:

(D) The INV variant never allows agreement morphology.[48]
(E) The INV variant is never morphologically richer than the ADJ variant (*slags, -ig*).

The idea that the phonetic absence of *-ig* and of *AgrA* is due to their being structurally absent in the INV variant, and that their structural absence is the reason that INV movement applies seems highly appealing. It is important to note, however, that the non-overtness of Norwegian *slags* in the INV variant cannot plausibly be taken to be an effect of its being structurally absent. Hence even though a more direct mapping of phonetic presence and structural presence may be desirable for *ig* and AgrA, the non-pronunciation of the functional nominal *slag* requires a different account.

The essence of the above mentioned properties (A, B, and E, as well as parts of C, and for the most part also D) holds across non-*d*-determiners and across Germanic, as I will argue in the next chapter. The fact that this is rather stable reinforces the claim that a unified analysis of the internal structure of determiners across Germanic is desirable.

[48]There may be what looks like exceptions. Cf. note 41 for a case in point from Scandinavian.

Chapter 6

Non-*d*-determiners

6.1 Introduction

In the previous chapter I motivated the structural analysis of *what for* into

(1) [[$_{QP}$ what] for [$_{fN}$ SORT]]

Secondly, I argued that this component can surface with the (external) morphosyntax of an adjective, i.e. ADJ, or with the (external) morphosyntax of a "degree" fronted phrase, i.e. INV. And third, I argued that the two previous claims hold of Germanic, rather than a particular language.

In this chapter I will argue that all of this largely extends to a number of other determiners. They decompose analogously to (1). They can surface as ADJ and as INV. And this holds across Germanic. The set of determiners in question includes (the counterparts of) *which, such, no*, and the possessive determiners.

I will first (section 6.2) motivate this claim for each of these determiners with examples from both West and North Germanic languages. Subsequently (section 6.3), I will discuss aspects of the external behavior of *kein 'no'* and of possessive determiners, also drawing parallels to *what for*. Then (section 6.4) I will return to the internal syntax of possessive determiners and show that in German and Swiss German the feminine and the non-feminine possessive determiners differ from each other in their internal syntax in that the derivation of non-feminine (but not that of feminine) possessives has an overt extraction step, similar to DP-internal *what* movement in *what for*.[1] This aspect of the discussion of possessives will be taken up again in chapter 7.

6.2 Overview of non-*d*-determiners: ADJ and INV

The discussion on *what for* in the previous chapter extends, I claim, to *welch, which*; *solch, such*; *kein, no* ; and possessive determiners such as *mein, my* etc.

In order to motivate this claim I will start by comparing surface traits of these determiners with those of *what for* in a comparative cross-Germanic fashion. The descriptive traits we are

[1] In chapter 7 I will argue that extraction may well occur in both, but with no overt effect in the feminine.

looking for are the following.

- has a quantificational (or deictic[2]) morpheme (cf. *wh-*).
- features a functional nominal (cf. *SORT*).[3]
- can surface with the external morphosyntax of ADJ.
- can surface with the external morphosyntax of INV, whereby the absence of adjectival morphology and the presence of a non-initial indefinite article is characteristic of INV.
- (i.e. a cognate thereof) exhibits these properties across Germanic.

This is surface-correct for the above-mentioned determiners, to various degrees. Overall a strong generalization emerges.[4] In harmony with the findings regarding *d*-determiners in chapter 2, the discussion of non-*d*-determiners suggests the generalization that determiners (other than the articles) are syntactically complex and are variants of extended adjectival projections.

6.2.1 *Welch- 'which'*

I will start with *welch-*, which lends itself straightforwardly to a comparison with *what for*.

Components of *welch-*

Welch- decomposes into the following compoments (cf. also Vangsnes (2006a); Haegeman (2007)).

(2) a. $[_{QP}$w] + $[_{fN}$-lch]
b. $[_{QP}$was] für $[_{fN}$SORT]

w- is parallel to the *w-* of *was*. *-lch* (cognate with *-like/-lich*, which historically derives from the noun for *'body, form'* (Pfeifer, 2003)) is a functional nominal, parallel to *SORT*.

ADJ and INV of *welch-*

In German, *welch-* can surface with the morphosyntax of an adjective (3a) or inverted (3b).

(3) a. **adj variant**:
welch-es Buch German
which-AGRA book
b. **inv variant**:
welch ein Buch
which a book

[2]There are pairs of quantificational and deictic determiners in that they are morphologically very similar, except that the left-peripheral morpheme is distinct. One such pair is German *welch-/solch-* cognates with English *which/such*. This pairing goes beyond Germanic, e.g. French *quel-/tel 'which/such'*

[3]The notion "nominal" should not be taken too seriously. In the case of *kein 'no'* and of the possessive determiners, there clearly is functional material present that syntactically behaves like *SORT* or *for* of *what for*, a state of affairs which I take to fulfill this criterion.

[4]I'm grateful to Anna Cardinaletti p.c. for pointing out to me that much of the discussion in this chapter seems to extend to Romance.

The INV variant lacks some of the adjectival suffixal morphology, namely the agreement morphology. *-lch* remains overt.

The two variants are semantically distinct in that the ADJ variant is typically interrogative, whereas the INV variant is exclamative.[5,6]

Welch- cross-Germanically

The decomposition of *welch-* into two components, corresponding to *w-* and *-lch* is straight forward also in other Germanic languages, even though sometimes *-l-* and sometimes *-ch* is no longer pronounced.

Swiss German *wel-* Swiss German only allows the ADJ variant (4a).

(4) a. **adj variant**:
wel-i bluämä — Swiss German
which-AGRA flower

b. **inv variant**:
* wel ä bluämä
which a flower

Hence in terms of truncation (5.3) it seems that in the context of *wel-* Swiss German does not allow truncation.[7]

Scandinavian *(h)vilk-* Scandinavian has both variants. Icelandic (and similarly Old Norse) *hvílík-* inflect like strong adjectives (Vangsnes, 2008a,b). Modern Mainland Scandinavian *(h)vilk-en* inflects (almost) like an indefinite article (Vangsnes, 2008a).[8]

[5]See d'Avis (2001) for discussion *wh*-exclamatives in German.

[6]Some speakers of German also allow the uninflected (exclamative) variant without an overt non-initial indefinite article.

i. Welch schlechtes Gewissen er hat! — German
which bad conscience he has

While I don't have an account for the absence of the expected *ein* here, it should, perhaps, be understood in relation to the absence of *ein* in the feminine possessive determiner *ihr* discussed in section 6.4. See also below on Dutch.

[7]It is, at this point, not entirely clear how the sensitivity of truncation to properties of *wel-* versus *was für* should be thought of.

[8]See Vangsnes (2008b) for very interesting discussion suggesting that in (some variants of) Norwegian the suffix in (5b) is really an instance of the noun suffix, usually glossed DEF. This recalls the fact that in German and Swiss German the ADJ variant of *welch-/wel-* triggers weak agreement (i.e. "definite agreement") on a following adjective. Secondly it recalls Albanian, where the counterpart of *which* also surfaces with a suffixal definite article.

i. cil-in libër — Albanian
which-the.ACC book
(Taken from Kallulli (2008, p.237))

(5) a. **adj variant**:
hvílík-ur — Icelandic
which-AGRA

b. **inv variant**:
(h)vilk-en — Modern Mainland Scandinavian

English *which* English *which* also exhibits two variants diachronically, which presumably should be analyzed as the two variants under discussion. Middle English had the INV variant. The OED lists an obsolete exclamative use of *which* in English (noting that "in non-collective sing[ular it is] followed by *a*," hence not spurious).

(6) **inv variant**:
whiche a worschip sche hadde, & whiche a ioye. — MEnglish
what a worship she had and what a joy
(c1440 Jacob's Well 102 Lo)

Modern English may be argued to have the ADJ variant. Interestingly, it seems that in English, like German, the INV variant receives an exclamative interpretation whereas the ADJ variant receives an interrogative interpretation. In Modern English, in order to express the exclamative force conveyed in example (6), *what* must be used instead of *which* (as indicated in the glosses), and an indefinite article follows that *what*, hence it is presumably an INV variant (possibly a variant of *what for* with silent *FOR*).

Dutch *welk* Dutch *welk 'which'* inflects like adjectives (Kester, 1996b; Broekhuis et al., 2003; Haegeman, 2007).

(7) **adj variant**:

a. welk-e mooi-e tuin — Dutch
which-AGR beautiful-AGR garden

b. welk-Ø mooi-Ø huis
which-AGR beautiful-AGR house
(Kester, 1996b)

It is worth noting here that Dutch has *wat een N* exclamatives, where the indefinite article *een* is always obligatory, whether the head noun is singular, plural, count, mass, or a proper name (Bennis et al., 1998). In other words it is a spurious article.

West Flemish *wek* In West Flemish, by contrast, *wek* does not exhibit adjectival agreement, but instead is followed by a spurious indefinite article, as argued by Haegeman (2007).

(8) **inv variant**

a. wek-nen und — West Flemish
which-a dog.MAS.SG

b. wekk-en hen
which-a hen.FEM.SG

c. wekk-en ennen
which-a hens
(Haegeman, 2007)

Summary of *welch-*

Summarizing the findings regarding *welch-*, it decomposes into [QP + fN]; it exhibits the two surface variants ADJ and INV. And third, these properties are present across Germanic. Some languages have both variants (synchronically) whereas others only have one.

6.2.2 *Solch- 'such'*

Solch- is the indefinite demonstrative counterpart of *welch-* (on *solch-* see also Demske (2005)). Not surprisingly, it is parallel to *welch-* in several respects.

Components of *solch-*

The *-lch*: is the same as in *welch-*. *Solch-* differs from *welch-* at least in having a deictic *s-* instead of the wh-morpheme *w-*. I submit that *solch* decomposes as represented in (9a).

(9) a. $[_{QP}$s] + $[_{fN}$-lch]
b. $[_{QP}$w] + $[_{fN}$-lch]
c. $[_{QP}$was] für $[_{fN}$SORT]

German *solch-* exhibits both variants ADJ and INV. Adjectival *solch-* prefers a pre-article with singular count nouns.

(10) a. **adj variant**:
ein solch-es Buch
a such-AGR book
German

b. **inv variant:**
solch ein Buch
such a book

There is also a variant without overt *-lch*, which only allows the INV variant.[9]

(11) a. * ein so Buch
a such book
German

b. **inv variant**:
so ein Buch
so a book
'such a book'

[9]It is not immediately obvious whether *-lch* here should be understood the same way as Norwegian *slags* or as Swiss German *ig* of *what for*; or perhaps a combination thereof, considering the remarks around (12) right below.

***Solch-* cross-Germanically**

Swiss German *sert-* Swiss German does not have *sol(ch)-*, but instead has adjectival *se(r)tig-*, and *so*.

(12) a. **adj variant**:
ä sert-ig-i bluämä — Swiss German
a such-ADJ-AGRA flower

b. **inv variant**:
ä so^{n} ä (schöni) bluämä
a such a (beautiful) flower

Sertig is plausibly composed of *so-art-ig 'such kind* ADJ*'* (Henk van Riemsdijk p.c.). Note that *so*, as compared to *sert-ig-*, is missing some overt morphology at the right edge beyond the adjectival agreement and the adjectival suffix *ig*. This should be understood in relation to both the absence of *-ig* and AgrA in Swiss German *what for*, and the absence of *slags* in Norwegian *what for*.

Norwegian *slik-* Norwegian exhibits both variants, the ADJ variant (13), and the INV variant (14).[10] *Slik* is plausibly *så-lik 'so-like'* parallel to German *so-lch* (Henk van Riemsdijk p.c.).[11]

(13) **adj variant**:

a. et slik-t hus — Norwegian
a such-AGRA house ('a house like this')

b. en slik-Ø bil
a such-AGRA car ('a car like this')

In (13) there is no non-initial indefinite article, and the adjective agrees.

[10]Scandinavian also has a variant without *-lik*. Danish and Norwegian *så* exhibits INV (i). In Standard Swedish, on the other hand, *så* does not trigger INV (ii).

i. *så* stort et hus — Danish/Norwegian
so big a house

ii. en *så* stor bil — Swedish
a so big car
(Delsing, 1993, p.139)

Furthermore, Scandinavian has a variant of the functional nominal which, according to Delsing (1993, p.139), derives from the Low German participle *don 'done'*, giving rise to e.g. *sådan et hus 'such a house'*. See also Vangsnes (2008a) for the discussion of the corresponding *wh*-variant.

i. Hurdan bil kjøpte du?
how.done car bought you
'What kind of car did you buy?' (Vangsnes, 2008a, p.134)

[11]Cf. English *a dog-like creature*.

(14) **inv variant**:

a. slik et godt eksempel — Norwegian
such a good example

b. Slik en bil ville vi ha!
such a car wanted we have

In (14) *slik* does not agree but instead is followed by an indefinite article.

English *such* English *such* exhibits INV.

(15) such a (nice) house

English also has a variant without *-ch*, namely *so*. English *so* cannot modify a noun (Matushansky, 2002). This is illustrated in (16a). English *so* triggers obligatory INV (16b-c).

(16) a. * (a) so (a) house

b. * a so nice house

c. so nice a house

Comparing *such* and *so* with regard to their interaction with *nice* suggests that English *s-* must be related to an adjective, and that *such* already contains an adjective (Siegel, 1993), while English *so* doesn't.

(17) a. such (*nice) a (nice) house

b. so *(nice) a (*nice) house

If the dependence of English *s-* on an adjective (in some sense) extends beyond English (which is the hull hypothesis), German *so* (11b) may really be *so MUCH/KIND* with a silent adjective (cf. Kayne (2006); Săvescu Ciucivara (to appear)), perhaps silent *-LCH*.

Dutch *zulk* Dutch *zulk* and West Flemish *zuk* are very similar to *welk/wek*, though there is already a split within Dutch along the count versus mass/plural distinction. Dutch *zulk* and ADJ is used in plural and in non-count noun phrases (18,19).

(18) **adj variant**:
PLURAL

a. zulk-e mooi-e tuinen — Dutch
such-AGR beautiful-AGR gardens

b. zulk-e mooi-e huizen
such-AGR beautiful-AGR houses

(19) **adj variant**:
NON-COUNT NOUN PHRASE

a. zulk-e witt-e wijn — Dutch
such-AGR white-AGR wine

b. zulk-Ø wit-Ø bier
such-AGR white-AGR beer

In count noun phrases *zo* and INV is used instead (20).[12]

(20) **inv variant**:
SINGULAR COUNT NOUN PHRASE
a. zo'n mooi-e tuin Dutch
such-a beautiful-AGR garden
b. zo'n mooi-Ø huis
such-a beautiful-AGR house

West Flemish *zuk* In West Flemish, *zuk*, like *wek* discussed above, does not inflect but instead is followed by a (spurious) indefinite article (Haegeman, 2007).

(21) **inv variant**:
a. zuk-nen und West Flemish
such-a dog.MAS.SG
b. zukk-en hen
such-a hen.FEM.SG
c. zukk-en ennen
such-a hens.PL

Pre-article with *such*

With adjectival *solch-* in German, an initial indefinite article is normal. What is perhaps more surprising is that also the INV variant (somewhat marginally) allows a (reduced) initial indefinite article.[13]

(22) a. **adj variant**:
ein solch-es Buch German
a such-AGRA book
b. **inv variant**:
(?n) solch ein Buch
(a) such a book

Also in some varieties of English the obligatorily inverting *such* allows a pre-article (Wood, 2002).

(23) a. **inv variant**:
(%a) such a wonderful piece

In Swiss German both INV *so* and ADJ *sertig-* allow a preceding indefinite article.

[12]The parallel of the indefinite articles in *zo'n* and *wat voor een* in Dutch is also suggested in Bennis et al. (1998).
[13]It may not be entirely clear whether an initial article with the ADJ variant should really be less surprising.

(24) **inv variant**:
ä so^{n} ä (schöni) bluämä
a such a (beautiful) flower

Hence a hierarchy in the degree of acceptability of an initial indefinite article seems to emerge, ranging from unacceptable (with *welch-*), to fairly acceptable for some speakers (with *was für*), to acceptable or even preferable (with *solch-*). The hierarchy of acceptability may reflect semantic differences between the three determiners. Recalling the proposal presented in chapter 5, that merger of an initial indefinite article competes with extraction of *was* from xAP the relevant semantic features are of the sort that are syntactically represented.

Summary of *solch-*

Summarizing the findings regarding *solch-*, it decomposes into [QP + fN]; it exhibits the two surface variants ADJ and INV. Some variants of *s-* also allow a preceding indefinite article, similar to the pre-article discussed with *what for*. Finally, these properties are present across Germanic.

6.2.3 *Kein 'no'*

With regard to the components of *kein*, the synchronic morphosyntactic evidence from German is rather sparse. However, there is some historical evidence.[14]

Kein historically derives from Old High German *nihein*, which is composed of *ni+uh* (Gothic) and the numeral *ein*, i.e. *'not + and/also + one'* (Pfeifer, 2003).[15,16] Hence to the extent that the diachronic dimension can provide evidence for synchronic analysis in the relevant respect, there is evidence for postulating two components (in addition to *ein*). *Kein* seems to only exhibit the INV variant.[17]

(25) [[NEG + k] ein]

(26) **inv variant:** k- ein Buch German
not a book ('no book')

The inversion movement of [k-] will be motivated in section 6.3.2 beyond the argument on the grounds of analogy to other *ein*-determiners.

[14]Roehrs (2006, p. 249,262) systematizes/categorizes occurrences of the morpheme *-ein-* in German. On the grounds of morphophonological and morphosyntactic properties Roehrs groups the *ein* in *k-ein* and in *m-ein* into the same category. Roehrs proposes *kein* as the spell out of *nicht* and *ein*. Similarly Christensen (1986) analyzes Norwegian *ingen* as consisting of *ikke 'not'* and *noen 'some'*.

[15]Once an NPI (Harbert, 2007), akin to "not even one."

[16]Old High German: *nihein*, Middledutch: *negheen, engheen*

[17]German has *nicht-ig* as an adjective.

i. ein nicht-ig-es Geschäft German
a not-ADJ-AGRA business ('an unimportant business')

But an analysis of *nichtig* as an adjectival variant of negation may be misleading.

Swiss German *kä* The Swiss German counterpart of *kein* can sometimes be preceded by an unstressable vowel *ä*, *e*, or schwa (cf. Weber (1964); Fischer (1960)).

(27) gar ä-k-ä gäld — Swiss German
totally no money

This is not a pre-article. It does not inflect, unlike the pre-article with *was für* and *sertig-*. Instead it seems likely that Swiss German (27) has overtly retained the pre-*k* morpheme that corresponds to OHG *ni-* in *nihein*.

Norwegian Norwegian has *ingen*. *-en* may be a counterpart of *-ein*.

(28) a. ingen enhjørning — Norwegian
no unicorn

b. ingen biler
no cars

c. ingen hus
no house

Summary of *kein*

Two components could be identified (in addition to *-ein*) that plausibly form a constituent at some level. While indeed in the case of *kein* the morphosyntactic evidence from German for a decompositional approach is somewhat meager (probably not by accident), there is strong evidence from West Flemish and from semantics for a such an analysis, presented in section 6.3.2 below.

6.2.4 *Mein-*, *dein-*, *sein-*

The German possessive determiners exhibit the INV variant.

(29) **inv variant:**
m-ein (alt-es) Buch — German
1sg-a (old-AGRA) book

Swiss German exhibits the ADJ variant.[18]

[18]This is most clearly the case with neuter possessees. With masculine and with feminine possessees the forms suggest a more complex derivation.

i. mi tisch (m) — Swiss German
my table

ii. min-ä (m)
mine-AGRA

iii. min-i bluämä (f)
my-AGRA flower

It is not immediately obvious what analysis the *n* consonant in (ii) and (iii) should be given. What is clear is that in the feminine (iii) and in the elliptical masculine (ii), the possessive determiner exhibits AgrA.

(30) **adj variant:**

m-i-s	(alt-ä)	buäch	Swiss German
1sg-STEM-AGRA	(old-WK)	book	

Similarly Norwegian has possessive determiners which arguably exhibit the ADJ variant.

(31) a. mit-t hus Norwegian
my-AGRA house

b. et fin-t hus
a decent-AGRA house

The empirical situation with possessive determiners is complicated across Germanic, with a lot of dialectal variation. For instance Scandinavian has dialects (e.g. Skellefteå Swedish) with two sets of possessive determiners, perhaps instantiations of the two variants at some level of abstraction (see Vangsnes (1999); Julien (2005), also Corver and Van Koppen (2007a) on Dutch dialects).[19]

As before with the negative determiner *kein*, the identification of the components of the possessive determiner is not as straightforward as with *what for, welch-*, and *solch-*.[20]

(32) a. $[_{QP}$s] + $[_{fN}$-lch] (ein)
b. $[_{QP}$w] + $[_{fN}$-lch] (ein)
c. $[_{QP}$was] für $[_{fN}$SORT] (ein)

Analogizing to the hypothesis for *kein*

(33) [[NEG + k] ein]

I propose that *mein* is composed as in (34).

(34) [[POSS_j] + [m_j]] ein

In other words there is an inverted constituent containing a silent possessor POSS that is co-indexed with the overt person morpheme *m-*. This claim will further be argued for below.

Summary of possessive determiners

Also for possessive determiners we find the two variants ADJ and INV. The existence of two components in the constituent preceding *ein* in the INV variant has been hypothesized and will be argued for shortly (section 6.3.1).

[19]Most intriguingly, the paradigms are often not uniform, but depend on properties of both the possessor and the possessee. This is reminiscent of the contrast in Dutch between ADJ *zulk-* which goes with plurals and mass nouns, and INV *zo'n* which goes with singular count nouns. In the case of the possessive determiners, one source of non-uniformity (beyond the form of the agreement morpheme) is the (sensitivity to) grammatical gender of the possessee nominal. Given the fact about Western Jutlandic observed in Delsing (1993, p.6ff) that in that language morphological gender marking has been re-analyzed (and is now productively used) as marking the mass/count distinction, this may reduce to the same kind of contrast at some level.

[20]Roehrs (2006) argues for a decomposition with *-ein-* in D^0 and *m-* in Spec,DP.

6.2.5 Summary

On basic surface-observable grounds I have shown that the two variants found with *what for* across Germanic, ADJ and INV, are also found across Germanic with a number of other non-*d*-determiners, including *welch, 'which'*; *solch, 'such'*; *kein, 'no'* ; and possessive determiners such as *mein, 'my'* etc.

ADJ is most readily diagnosed by the presence of strong adjectival agreement, AgrA. INV is diagnosed by the absence of adjectival agreement and the presence of a non-initial indefinite article.

Based on the preceding discussion of non-*d*-determiners and on the discussion of *d*-determiners in chapter 2, it seems reasonable to think that quite generally determiners (other than the articles) are syntactically complex and are special instances of extended adjectival projections.

In the next section I will discuss aspects of the external behavior of *kein* and possessive determiners, showing that component parts of these determiners remain accessible to syntactic operations, just as we have seen with *what for*. Subsequently I will turn to a more detailed discussion of the internal syntax of possessive determiners. It is important to note that, while I will be phrasing the discussion assuming that in INV xAP moves from a post-N position directly to the left of the indefinite article, this choice is secondary. The overall validity of the discussion in this chapter does not rely on the correctness of the details of the INV derivation.

6.3 Splitting determiners

The possessives and *kein 'no'* allow clausal material to intervene between the quantificational/deictic component and the rest, similar to *what* and *for NP* in *what for* splitting. I will begin with possessives and afterwards discuss *kein 'no'*.

6.3.1 Possessive determiners

For the sake of clarity, let me indicate up-front the three distinct movement steps which possessive determiners are subject to, in chronological order (derivationally speaking). The first one of these is the subject of section 6.4 and will be important in chapter 7. The second movement is INV, which was discussed in section 5.3.

- Dative fronting (see section 6.4)

  (35) [im s-] [i t_{ims-}] -AgrA

- INV: *ein*-word formation (see section 5.3)

  (36) [$_{xAP}$ dem the.DAT Bauer farmer s- PERS] ein a Haus house t_{xAP}
  'the farmer's house'

- POSS extraction/splitting (this section)

  (37) POSS ... [t_{poss} his beer]

The third movement is possessor extraction and is the topic of the present section.

Mein generalized possessor doubling

The claim that *mein* decomposes into a (silent) possessor POSS, a person morpheme *m-*, and an indefinite article

(38) [POSS$_j$] + [m$_j$] + ein

is essentially equivalent to proposing generalized possessor doubling. This idea is not entirely new, but closely resembles one by Gisbert Fanselow (noted in Olsen (1989b) as p.c.), that *dein-* may be preceded by a co-indexed silent pronominal.

(39) pro$_k$ d$_k$eine Blume
POSS your flower

Such a proposal is strongly supported by the existence of overt possessor doubling (see Schoorlemmer (1998); Haegeman (2004); Corver and Van Koppen (2007a)).

(40) a. dem Hans$_k$ s$_k$eine Blume — German
the.DAT Hans his flower 'his flower'

b. John$_k$ z$_k$'n auto — Dutch
John his car

While such overt doubling is largely restricted to third person possessors, Vangsnes (2006b) reports a Northwestern Norwegian "innovation," in which first and second person possessors are doubled.

(41) a. mitt sitt/*mitt hus — NW Norwegian
my his/my house
'my house'

b. ditt sitt/*ditt hus
your his/your house
'your house'

Setting aside, for the time being, the interesting question of why an overt possessor is not compatible with a person-marked double, let me conclude that the generalized possessor doubling hypothesis is strongly supported by (40) and (41).

Shifting our view back to West Germanic, we note that possessor doubling is possible both in the INV variant and the ADJ variant.[21]

[21] The doubling possessor may be related to a position lower than the adjectival stem in the ADJ variant. Compare the positions of masculine *-m* (42b) and feminine *-r* in (i).

i. Ø i-**r**-əs buäch
i-her-AGR book

Possibly [[(i)m$_k$] s$_k$-] (cf. Kayne (2002)) extracts across *-i-*. Subsequently, [(i)m] may extract. I will return to this in some detail.

(42) a. dem Bauer sein Haus — German
the.DAT farmer his house

b. i**m** s-i-s buäch — Swiss German
him REFL-i-AGRA book

For the cases without an overt full satelite[22] possessor, I postulate (43) by analogy.

(43) a. POSS m-ein Buch — German
1st-INDEF book

b. POSS m-i-s buäch — Swiss German
1st-i-AGRA book

$[_{xAP}$[POSS] m-] inverts across *ein* in (43a).

Possessor extraction

Recall from chapter 5 that *what* and *for NP* can be separated: "*what for* split."

(44) **Was** hat er [**für** ein Auto] gekauft?
what has he for a car bought

(Overt) pre-article and splitting are strongly incompatible (45b).[23]

(45) a. **n** was für ein Auto hat er nun gekauft? — German
a what for a car has he now bought

b. **(*n) was** hat er **(*n) für** ein Auto gekauft?
(a) what has he (a) for a car bought

I concluded that *what* moves to/through the DP left periphery. In other words, in a split derivation, *was* must extract from xAP and move into the DP left periphery. [24]

With this much in mind, let us return to possessive determiners. Possessors can, in some languages and to differing degrees of acceptability, extract from their DP (Szabolcsi, 1983/84; Corver, 1990). Consider the Hungarian examples in (46).[25] Hungarian has two DP-internal positions in which possessors can surface, a low position, to the right of the definite marker *a(z)*, and a higher one, to the left of the definite marker. The lower position is marked by the absence of case-morphology (which Szabolcsi interprets as an instance of nominative), and the higher position is associated with dative case.

[22]In *dem Hans sein Buch 'the Hans his book'* I will call *dem Hans* the satellite, since it can move away in some cases.

[23]According to my informants the initial indefinite article in (45) must be reduced.

[24]In the case of *what for* splitting, the literature agrees that this distance relation is an instance of movement. What exactly the movements involved are is controversial. See Leu (2007a, 2008) and the literature cited there.

[25]I will analogize two distinct movements in the German possessive determiners and *what for* to the Hungarian contrast in (46). The intuition behind this is that the movement of the dative possessor in Hungarian is presumably not a one step process.

(46) a. (a) Mari kalap-ja Hungarian
the Mary.NOM hat-POSS.3SG

b. Mari-nak a t kalap-ja
Mary-DAT the hat-POSS.3SG

c. Mari*(-nak) ... a kalap-ja
Mary(-DAT) the hat-POSS.3SG

Szabolcsi (1994) argues that Hungarian possessor extraction cannot take place from the nominative in one fell swoop, but must proceed through the dative position, which she calls an "escape hatch" and which she argues is the noun phrase counterpart of Spec,CP.

In light of the cartographic view on the left periphery both of the clause (Rizzi, 1997), and of the noun phrase (Aboh, 2004a), it is not immediately obvious what part of the left periphery the dative possessor occupies. Possibly it has more than one option.

Comparing Szabolcsi's analysis of (46) and the claim regarding the steps in *what for* split, it is interesting that in both cases, in order for the split to be possible the possessor and *what* need to first move into the left periphery of their respective noun phrases. Furthermore, in both cases movement to the noun phrase left periphery does not need to lead to splitting.

Before this background, let us return to Germanic possessors. Some speakers of Swiss German allow possessor extraction in a limited fashion (47b).[26]

(47) a. Das isch **im** sini schrift. Swiss German
that is him.DAT his handwriting

b. % **Wem** isch das t sini schrift?
who.DAT is that his handwriting?
'Whose handwriting is this?'

I propose that the satellite possessor obligatorily extracts from xAP and moves into the DP left periphery. In German and Swiss German possessive DPs, the satellite is typically in a topic in the left periphery of the DP, from where extraction is possible, similar to *what* of *what for*, and also similar to the dative possessor position in Hungarian.

(48) a. [was [[$_{xAP}$ t$_{was}$ für] ein Buch]]

b. [$_{TopP}$ IHM [[$_{xAP}$ t$_{ihm}$ s] ein Buch]]

Assuming generalized possessor doubling, the satellite must sometimes be silent. Specifically, with first and second person possessors the satellite must be silent in German, with third person possessors it can be silent.[27] Plausibly this should be related to the notion of topic drop.

[26]Corver (1990, p.183) notes that short possessor extraction (i.e. from predicate noun phrase) is also possible in Norwegian (examples from Terje Lohndal p.c.),

i. Det er han sin håndskrift. Norwegian
that is him his handwriting

ii. Hvem er det sin håndskrift?
who is that his handwriting

[27]But cf. the NW Norwegian examples in (41).

6.3.2 *kein*

In *what for* and with possessors, splitting separates the two components of the relevant xAP, leaving one in a constituent with the following *ein-NP*, separated from the other by sentential material. The extracted component is the one associated with an operator (*wh-* in the two cases).

(49) a. was ... [[$_{xAP}$ t$_{was}$ für] ein Buch] German
what for a book

b. wem ... [[$_{xAP}$ t$_{wem}$ sis] ... buäch] Swiss German
who.DAT his book

We will see momentarily that such a discontinuity is also possible with the negative determiner *kein*. In the case of *kein*, the material that remains in a constituent with the *ein-NP* is *k-*. We have seen some suggestive historical evidence that there may be more material structurally present, associated with *k-* and forming an xAP with it. I am proposing that *kein* is really

(50) [$_{xAP}$ NI k-] ein ...

where *NI* can be separated from *k-* by movement. The proposal is in dire need of more supportive evidence. In this section I will discuss strong evidence in favor of such an analysis.

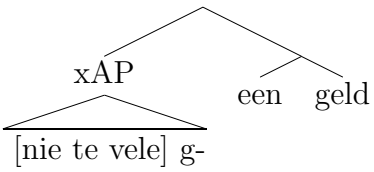
Negative doubling in West Flemish

The present proposal is strongly supported by West Flemish negative doubling. Consider (51). There are two negative elements that are part of the modifier of *geld 'money'*.

(51) nie (te) vele geen geld West Flemish
not (too) much no money
'not (too) much money'

Haegeman (2001) notes that while each *nie* and *geen* are able to negate a sentence, they do not cancel each other out in (51). Let me (partly adopting Haegeman's (2001) proposal) propose (52) for (51).

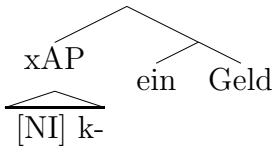
(52)



It seems possible that (52) generalizes across Germanic, in that a negative morpheme (*ni* or silent *NI*), associated with *k/g*, moves to the DP left periphery and sometimes splits off from the DP, into the sentential projection line.

(53) a. kein Geld German
no money

b.



This possibility is strongly supported by the existence of split scope readings, discussed shortly.

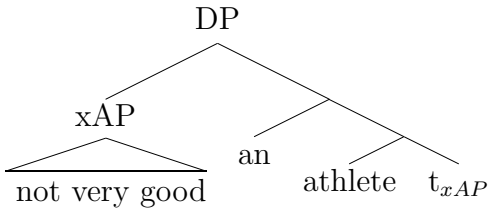
NEG as INV trigger

Turning back to *kein*, I have proposed to analyze *kein* as an instance of *inv*, i.e. as being derived by inversion. The idea, or rather, the observation that a negative element in an adjectival constituent can trigger "degree" fronting is not new. Troseth (to appear) proposes the derivation in (54).

(54) a. * Attila is [very good] an athlete.

b. Attila is [**not** very good] an athlete.

c.



The contrast in (54a) and (54b) is a strong argument that it is NEG that triggers INV, i.e. the presence of *not* inside xAP.[28]

NEG splitting

Troseth (2004) further proposes that *not* can extract and become sentential negation by movement.[29]

(55) I do**n't** think that sink or swim is [$\mathbf{t}_k$ very good (of) a philosophy].

The idea that this is movement is supported by the fact that there is a subject-object asymmetry (Troseth, 2004), as exemplified in (56).

[28] Again, it is not entirely clear how the correlation between the presence of *not* and the absence of the higher functional field of the relevant xAP (5.3) should be thought about.

[29] Notice that, if the assimilation of the quantifiers with an *ein* (including *kein*) to English degree fronting is correct, then the fact that for many English speakers there is an obligatory *of* in e.g. (i), suggests an extension of this proposal to Romance, specifically to French (ii), assimilating *of* to *de*.

i. not very good of an athlete

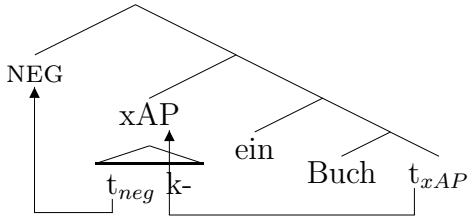
ii. pas de fric French
not of money *'no money'*

(56) a. I don't think John wrote [t very good (of) a thesis].
b. * I don't think that [t very good (of) a student] wrote this paper.
(Examples due to Richard Kayne p.c.)

The intuition that I want to pursue is that German *kein Buch 'no book'* has the same derivation in the relevant respects.

(57) NEG $[_{xAP}$ t_{neg} k-$]_j$ ein Buch t_j

(58)



Split scope of *kein*

Evidence that this is on the right track comes from semantic considerations concerning German *kein*. German *kein* exhibits split scope, i.e. a dissociation of the negative component of *kein* and the existential component (Jacobs, 1980; Penka and von Stechow, 2001; Penka, 2005, 2007).[30,31]

(59) Du musst keine Krawatte anziehen.
you must n-Det tie wear
a. ?? 'It is required that you don't wear a tie.' must > ¬ > ∃
b. ? 'There is no tie that you are required to wear.' ¬ > ∃ > must
c. 'It is not required that you wear a tie.' ¬ > must > ∃
(taken from Penka (2005))

[30]Also available with Norwegian *ingen*, cf. Svenonius (2002).

[31]The situation is complicated by Verb Phrase Raising structures (Haegeman and Riemsdijk, 1986).

i. Ich ha döffä kä grawattä aleggä. Swiss German
I have may no tie wear
be allowed > wear no tie

ii. Ich ha nid döffä ä grawattä aleggä.
I have no may a tie wear
not > be allowed > wear a tie

iii. Ich ha kä grawattä döffä aleggä.
I have no tie may wear

With regard to negative scope, (i) is a like a cleft, where the negation is part of the lowest xVP and is not allowed to scope over the modal *döffä 'be allowed'*. In (ii) negation must scope over the modal. The first reading of (iii) is truth conditionally equivalent to that of (ii). In addition there is a faint reading of (iii) with the truth conditions of (i).
What is important for the time being is that in some cases scopally active sentential material can intervene between the negative component and the existential component of *kein NP*.

Penka and von Stechow (2001); Penka (2005) argue *kein* is licensed by an abstract NEG (under adjacency). Thinking of the previous discussion of *what for* split and possessor extraction, let us rethink this in terms of movement.

The idea then is that the (abstract, i.e. silent) negation that licenses *kein* originates as a part of *kein* and relates to it by movement (cf. Postal (2000); Troseth (2004)). Such an analysis would assimilate the structure of *kein* even more closely to that of *what for*.

Again, we want to set aside, for the time being, the question of what exactly the constraints are that this movement is subject to. The fact that licensing at some distance is possible supports the extractability hypothesis.

6.3.3 Summary

There is strong evidence that both possessive determiners and negative determiners involve a complex constituent which in some varieties of Germanic undergoes INV. The quantificational/deictic component of that constituent, corresponding to QP in (60), can extract, similar to *what* in *what for* (see chapter 5). This is witnessed by the fact that clausal material can intervene between it and the component that remains in the (DP-internal) landing site of INV, corresponding to fN in (60).

(60) [QP [$_{xAP}$ t$_{QP}$ + fN] ein ... t$_{xAP}$]

6.4 Possessive determiners and dative fronting

This section explores the internal syntax of possessive determiners. I will describe the (derivationally speaking) earliest of the three movement steps of possessors that concern us in this dissertation: a movement step inside of xAP, comparable to *what* fronting in *what for* (5.2.4), which I will call dative fronting. Recall the three movement steps.

- Dative fronting (this section)

  (61) [$_{xAP}$[im s-] [i t$_{ims-}$] -AgrA]

- INV: *ein*-word formation (see section 5.3)

  (62) [[$_{xAP}$ POSS + s-] [ein [NP t$_{xAP}$]]]

- POSS extraction/splitting (see section 6.3)

  (63) [POSS$_k$ [[$_{xAP}$ t$_{poss}$ s$_k$] ein Bier]]

INV has been introduced in the discussion of *what for* and was subsequently found to be available in Germanic with other non-*d*-determiners, including possessive *sein*.

(64) a. [$_{XP}$ was für] ein Haus t_{XP} German
what for a house

b. [$_{XP}$ dem Bauer s-] ein Haus t_{XP}
the.DAT farmer PERS a house
'the farmer's house'

Splitting was also introduced with its perhaps most famous Germanic example, *what for*, and was similarly found to obtain in other non-*d*-determiners, including possessive determiners, as was discussed in the previous section.

(65) a. Was bist du für ein Esel!? German
what are you for a donkey
'How can you be so stupid!?'

b. % Wem isch das sini schrift? Swiss German
who.DAT is this his handwriting

Now recall that there is yet a movement step in the derivation of *what for* that I argued for in chapter 5, namely *what* fronting, i.e. movement of *what* from a position below *for* to the left of *for* (see also Leu (2008)). If the internal syntax of determiners is indeed largely uniform (which is strongly suggested by the discussion so far) we would expect there to be a correlate of this *what* movement in some other determiner. This expectation is indeed borne out. German and Swiss German possessive determiners exhibit an alternation that plausibly involves the counterparts of the two positions involved in *what* fronting.[32]

(66) a. [was] [für t_{was}] -ig-AgrA

b. [im s-] [i t_{ims-}] -AgrA

This movement step distinguishes dative *r* from dative *m*, or in terms of gender features, feminine possessor from non-feminine possessors. In what follows I will attempt to make the contrast/movement precise, and in doing so wrap up the discussion of possessive determiners and prepare the ground for the chapter 7.

6.4.1 Stem classes of German possessive determiners

Consider the forms of the (singular) possessive determiners in German.[33]

(67) mein / dein / sein / ihr Bier German
my your his her beer

It will be noticed immediately that there is a non-trivial contrast between the feminine form and the non-feminine forms involving the presence of (overt) *ein*. (Overt) *sein* is compatible with

[32]The stem *-i-* may, perhaps, be compared to *slags* of Norwegian *what for*.

[33]For plural possessors the forms are *unser, euer, ihr Bier 'our, your, their beer'*. Hence plural and feminine pattern together, as so often in West Germanic (Corver and Van Koppen, 2007a). The discussion will remain limited to singulars.

both masculine and neuter possessors. For first and second person, gender is not expressed and presumably absent from the syntactic representation.

From the perspective of *ein*-word formation presented above, the pattern is very striking in that the non-feminine forms are clearly *ein*-words, i.e. derived by INV. The feminine form does not look like an *ein*-word, but neither is it a typical ADJ, since it does not inflect the way adjectives do.[34]

Swiss German reveals that the (apparent) *ein*-word versus non-*ein*-word contrast in (67) is a confounding factor that can be circumvented, by choosing the right language. In Swiss German, possessive determiners are not INV variants. Yet the relevant contrast between feminine and non-feminine possessive determiners remains. Therefore the discussion will be based on Swiss German, but the insights carry over to German. Consider the (singular) possessive determiners in Swiss German.

(68)	mis / dis / (im) sis / irəs	piär	Swiss German
	my your (him) self's her	beer	

These must be decomposed as in (69) into a stem *-i-*, an adjectival agreement ending, here *-s* agreeing with the neuter noun *piär 'beer'*, and a person morpheme preceding the stem.

(69)	m-	i	-s	piär ('my')
	d-	i	-s	piär ('your')
	PERS	STEM	AGR	beer

For third person masculine/neuter possessors there is the form *(im) sis 'him his'*, where the person morpheme is *s-* and the string *sis* can be preceded by an optional (or optionally overt) dative pronoun *im 'him'*.

(70)	(im)	s-	i	-s	piär	(only masculine and neuter possessors)
	(him)	PERS	STEM	AGR	beer	

This is an instance of possessor doubling (see section 6.3.1 above).

Importantly, the form *sis* cannot be used for feminine possessors, for which the form *irəs 'her'* must be used.

(71)	irəs	piär	(feminine possessors)
	her	beer	

[34] In fact it inflects the way *ein*-words do, suggesting that it is an *ein*-word with silent *ein*. Plausibly, feminine *ihr Buch 'her book'* features a silent *S-* and a silent *-EIN*, hence is *[$_{poss}$ ihr S]-EIN Buch*. This would make *s-* gender neutral, along with the first and second person morphemes *m-* and *d-*, which is desirable given that they form a paradigm (Kayne, 2000b) and that this *s-* is gender neutral in other contexts (e.g. reflexives) in Germanic and Romance, e.g. German *Er/Sie hat sich amüsiert.*, French: *Il/Elle s'est amusé(e).* (Both meaning *'He/She had fun.'*). (I am grateful to Richard Kayne p.c. for alerting me to this line of argument.) The asymmetry between feminine and non-feminine is then one of pronunciation, which plausibly is in turn related to one of movement. The non-pronunciation of *S-* is likely related to the lack of *-r* extraction from the POSS phrase (see section 6.4.3). The non-pronunciation of *ein* remains somewhat mysterious at this point. The alternation between presence and absence of overt *-ein* in INV contexts is not limited to possessives however, cf. *manch (ein) junger Mann 'many (a) young man'*; *welch (eine) grosse Freude 'what (a) great joy'*.

In the feminine form the AgrA morpheme is not directly preceded by the vowel *-i-*, but by an *r*. We may note immediately that the presence of an *r* is also one distinctive property of the feminine possessive determiner *ihr* in German, as opposed to the non-feminine forms *mein, dein, sein*.

Decomposing the possessive determiners in this way highlights the similarities and the differences in a way that makes it possible to explore further potential correspondences of morphemes, and to perhaps correlate stem contrasts with other contrasts in their behavior.

6.4.2 The syntax behind "stem alternations"

We are now ready to try and understand the stem alternation between the feminine and the non-feminine (singular) possessive stems. The key to an understanding of the German and Swiss German pattern comes from Hungarian.

Hungarian movement to dative

Recall from section 6.3.1 that Hungarian has two DP-internal positions for possessors. A low position (72a) and a higher position (72b). The higher position is associated with dative case.

(72) a. (a) Mari kalap-ja Hungarian
the Mary.NOM hat-POSS.3SG

b. Mari-nak a t kalap-ja
Mary-DAT the hat-POSS.3SG

Hence there are (at least) two DP-internal positions a possessor can surface in. The higher position is outside the domain of (ordinary) adjectives, namely to the left of the (non-suffixal) definite marker.[35]

Szabolcsi (1994) notes that *wh*-possessors can only occur in the dative position, which is a left peripheral position. This property is shared by *what* in *what for*. Let us return now to Swiss German possessives.

Notice that I am drawing two parallels to the Hungarian movement in (72b). In sections 5.2.4 and 6.3.1 *what* extraction and *possessor* extraction were analogized with Hungarian (72), and here it is *what*/DAT fronting which is analogized to Hungarian possessor extraction. This, if correct, suggests that (72b) proceeds in two steps.

Swiss German movement to dative

From a Hungarian perspective, the masculine/neuter form and the feminine form in Swiss German should perhaps be contrasted in a visually more telling way as in (73).

(73) a. **im** s- [-i-]-s piär *(his beer)*
b. [-i- **-r**]-əs piär *(her beer)*
DAT STEM DAT AGR beer

[35]The significance of this hinges of course on the "non-suffixal" property of the Hungarian definite marker. In other Balkan languages the definite marker exhibits Wackernagel properties and can linearly follow a DP-initial adjective (Dimitrova-Vulchanova and Giusti, 1998).

In (73a) the stem is immediately followed by the agreement morpheme. The (optionally non-overt) *im* precedes the stem. In (73b) on the other hand, the stem is followed by the *-r* which in turn is followed by the agreement morpheme.

Following the traditional view that *m* and *r* are respectively the masculine/neuter and the feminine exponents of the same thing, namely dative case, and assimilating the dative markers *m* and *r* to the *m* and *r* in (73), we can now propose that the two exponents not only differ in phonetic form but (at least in the context of possessive determiners) also in terms of syntactic position.[36]

Let me assume that the contrast between the realization of the case marker *m* in (73a) and the realization of the case marker *r* in (73b) is parallel to the realization of the possessor in Hungarian in the dative and the non-dative position respectively. Plausibly the possessor makes two movements, dative fronting across *-i-*, and POSS extraction from the xAP into the DP left periphery.

6.4.3 Possessor doubling as movement and base generation

It is remarkable that the *im 'him'* in *im sis 'him his'* is optionally non-overt, unlike *r* in *irəs 'her'*.

(74) a. (im) sis piär — Swiss German
(him) his beer

b. i*(rə)s piär
her beer

This contrast should be related to the contrast in position. Given the plausible parallel with Hungarian, *im* in *im sis* is in a left peripheral position within the possessive DP, i.e. in the nominal counterpart of CP. The DP left periphery, like the CP (Rizzi, 1997), distinguishes several dedicated positions including a topic position (Aboh, 2004a). If the topic position in the clause and the topic position in the noun phrase share relevant properties, it is conceivable, in the light of the fact that German and Swiss German allow topic drop in the clause, that the dative fronted possessor in *im sis* can be topic dropped.[37]

It is worth noting that feminine *irəs* also allows possessor doubling in Swiss German.

(75) a. derä frau irəs buäch — Swiss German
that woman her book

b. *? irä^{n} irəs buäch
her her book

c. im sis buäch
him his book

[36] Given the parallel drawn to Hungarian, calling the *r* a dative case marker may seem questionable. This skepticism seems right. In chapter 7 the notion of oblique case marker (meaning dative and genitive) will be revised.

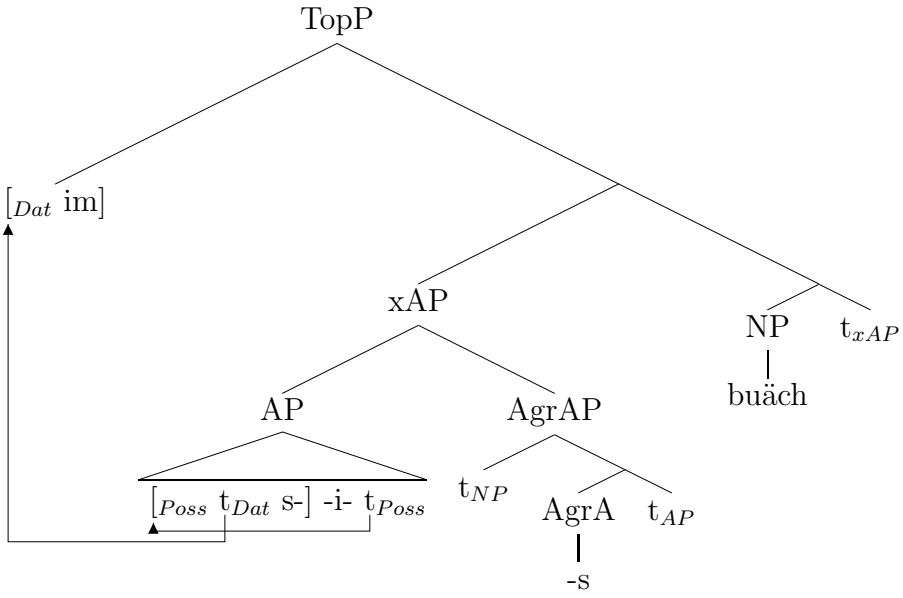
[37] Regarding DP-internal topic drop see also section 2.2.4.

However, it is not very felicitous if the satellite is a pronoun (75b), contrary to the non-feminine *sis* (75c). And secondly, whereas with non-feminine (75c), the case marker morpheme *m* is (part of) the satellite possessor, the satellite possessor in the feminine (75a), which itself also contains a dative *r*, co-occurs with the case marker morpheme *r*. This supports the idea that (75c) involves movement of *im* to the left periphery, whereas the satellite possessor in (75a) is base generated there.[38]

Let me illustrate the proposal for the sake concreteness. (76) illustrates the derivation of a possessor doubling structure with a masculine possessor. The parts of the derivation that differ from ordinary adjectival modification (as presented in chapter 3) are the fact that the AP is internally complex, and that a constituent moves out of AP and xAP and into the left periphery of the DP. The subscripted bracket and trace labels *Dat* and *Poss* should be read as indicating the satellite possessor and the full possessor phrase (containing both the possessor XP and the Person head) respectively.

(76) a. im sis buäch
him his book

b.



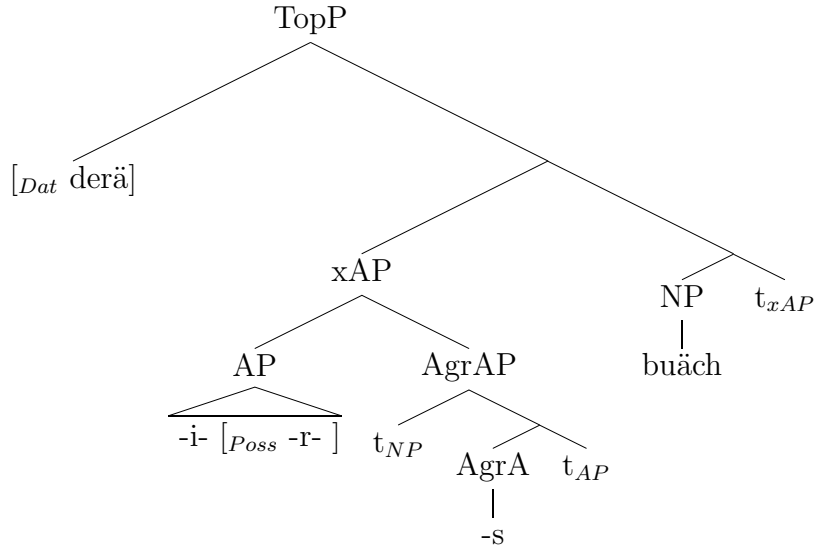
(77) illustrates the feminine counterpart of (76). The crucial differences are that with feminine possessors the dative morpheme *r* (unlike the masculine/neuter dative morpheme *m*) does not front across *-i-* inside the AP, and (as a consequence, see also chapter 7) cannot extract from AP and xAP into the left periphery of the DP. The satellite possessor *derä* is merged into the DP left periphery, but is not moved there from a left edge position within the AP (but see note 38).[39]

[38]The discussion in chapter 7.4 will suggest that (75a) also involves movement, but remnant movement. What I propose there is, as far as I can see, fully compatible with the general proposal outlined here.

[39]It is conceivable that there is an *s-* morpheme inside the *Poss* constituent to the right of *-r-*, analogous to that in [$_{Poss}$ im s-], and that it remains unpronounced for the same reason the definite marker in D^0 is silent when a definite xAP sits in its specifier (see chapter 3). See also note 34.

(77) a. derä^{n} irəs buäch
that.ONE.FEM her book
'that female person's book'

b.



A presumably related contrast between feminine and non-feminine possessors can be observed in some varieties of German and Swiss German that further allow adjective formation with *-ig* of the possessives (pointed out to me by Henk Van Riemsdijk p.c. whose examples and judgments I am here reproducing).

(78) a. di *(?im) sin-ig-e büecher Zürich German
the (him) his-ADJ-WK books

b. di (*ire) ir-ig-e büecher
the (her) her-ADJ-WK books

The crucial aspect in the contrast between (78a) and (78b) concerns the presence of the parenthesized dative possessor. There does not seem to be room for base-merger of a dative possessor inside the adjectival structure (xAP, between AgrA and AP). Presumably, *im* in (78a) is within the fronted AP in xAP, in which case it corresponds to the feminine *-r*, and not to the independent pronominal *ire* in (78b). There is no Topic position below AgrA into which *im* would have fronted, and importantly, in which *ire* could be merged. This then partly explains the contrast in (78).

6.4.4 Summary

The possessive determiners in German and Swiss German exhibit distinct stem classes. The (singular) stems fall into a feminine and a non-feminine class. In traditional descriptions, these two classes are distinguished with regard to their form. However, their form is taken to be opaque. In this section we have seen that the formal differences are plausibly derived from syntactic differences. The syntactic differences in question have been compared to the well-known syntactic difference between nominative and dative possessors in Hungarian. The match between Hungarian and (Swiss) German is astonishingly good, which suggests that the finding is real.

Concretely, in German and Swiss German, non-feminine possessors extract from AP and xAP. These include first person, second person, and third person masculine and neuter possessors. Feminine possessors (i.e. third person feminine) do not participate in this movement. The effect is that the feminine possessive stem looks different from non-feminine possessive stems. The fact that this portion of syntax applies largely within "words" and is obscured by topic drop like effects has kept it hidden from traditional analyses, and is making it extra precious to a veritable non-lexicalist view.

6.5 Summary and conclusion

The cross-Germanic comparative analysis of *what for* presented in chapter 5 in essence extends (equally at the cross-Germanic level) to a number of other non-*d*-determiners, including *which, such, no,* and possessive determiners. Specifically, a set of determiners (including the aforementioned ones) are extended adjectival projections containing a quantificational/deictic element and another component, typically a functional nominal.

(79) [QP] + [fN]

Further these determiners can, across languages, surface in two variants, an ADJ variant, where the determiner exhibits (strong) adjectival agreement, and an INV variant, the derivation of which involves an inversion movement such that the determiner ends up preceding an indefinite article (in the typical case). This movement is akin to English type degree fronting.

(80) $\big[_{xAP}$[QP] + [fN]$\big]$ ein ... t_{xAP} ...

INV correlates with the absence of (some) adjectival morphology. I suggested that this correlation be captured by relating both the lack of morphology and the inversion movement to the absence of parts of the higher functional structure in the xAP.

In section 6.3, I argued that the accessibility to further syntactic operations of parts of determiners extends beyond *what* in *what for* to *kein* and to POSS.

In section 6.4 I discussed possessive determiners in a little more detail, and proposed that in German and Swiss German, possessive determiners are subject to a possessor fronting operation (not unlike that familiar from Hungarian (Szabolcsi, 1983/84, 1994)) if the possessor is non-feminine. More concretely, the *-r-* morpheme in the feminine possessor determiner *irəs 'her'* is in a lower syntactic position than its masculine/neuter counterpart *-m*, which is in a dative position outside of the relevant xAP.

The significance of the syntactic account of the possessive stem alternation is twofold. First it constitutes a further case of syntactic depth inside of what is traditionally viewed as "words," and often (wrongly) held to be subject to "lexical integrity" (meaning that such constructs should be syntactically opaque). Secondly, the discussion exposes an instance of gender sensitive syntax precisely affecting those kind of elements which the literature on German adjective and determiner agreement has been struggling with least successfully. This will be the central concern of chapter 7, where I will advocate a unified approach to the possessive stem alternation and dative and genitive case markers in German and Swiss German.

In conclusion, this chapter complements the claim I made in chapter 2, that *d*-determiners are special kinds of xAPs, by extending the claim at this general level to a wide range of non-*d*-determiners. Hence it seems plausible that in Germanic all determiners (other than the articles) are phrasal and share the basic aspects of a complex internal syntax which is very similar to that of adjectives.

Chapter 7

Datives and genitives, and the syntax behind syncretism

7.1 Introduction

In the context of possessive determiners (cf. the previous chapter), it is entirely clear that the masculine/neuter ***m*** and the feminine ***r*** are distinct from AgrA. ***m*** and ***r*** are part of the "stem" material of the possessive determiner.

(1) a. i**m** s-i-s buäch — Swiss German
him PERS-his-AGRA book

b. i**r**ə-s buäch
her-AGRA book

In this chapter I will argue for an assimilation of the ***m*** and ***r*** case markers in dative (and the ***s*** and ***r*** case markers in genitive) noun phrases to the ***m*** and ***r*** of possessive determiners. This strongly differs from traditional descriptions, in which they are analyzed as inflection and are represented in one paradigm together with determiner / adjectival agreement. The new proposal takes seriously hitherto puzzling "exceptions" and simplifies the account of adjectival inflection both in the syntax and in the morphology.

I will begin by presenting the issue of mixed declension and *ein* words, discussing three kinds of approaches, the last of which is my proposal (section 7.2). Subsequently (section 7.3) I will discuss evidence in favor of distinguishing dative and genitive morphology from AgrA and assimilating it to the consonantal stem material of possessive determiners. This will lead to the tentative proposal that the dative/genitive forms ***s***, ***m***, and ***r***, are contextual allomorphs of a possessor clitic. Lastly (section 7.4) I will discuss some consequences for the treatment of adjectival inflection in German and Swiss German, showing that the present proposal strongly simplifies the pattern and significantly lessens the burden on morphological or lexical rules to derive syncretism.

7.2 No mixed declension

7.2.1 Case and agreement: The traditional pronominal paradigm

German is traditionally said to have four cases: Nominative, Accusative, Dative, and Genitive. The four cases are overtly distinct in noun phrases with a masculine open class head noun. In standard descriptions we find, among the inflection paradigms, one for definite determiner declension or "pronominal declension" (table 7.1). The paradigm cells are identified with reference to case (4 rows), gender (3 columns), and number (1 column for plural[1]). I will, for the time being, continue to restrict my discussion to the singular forms. The plural brings with it a number of additional complications which I leave for future research.

Table 7.1: German definite determiner declension

	MASCULINE	NEUTER	FEMININE	PLURAL
NOMINATIVE	-r	-s	-e	-e
ACCUSATIVE	-n	-s	-e	-e
DATIVE	-m	-m	-r	-n
GENITIVE	-s	-s	-r	-r

Representing the dative, genitive, nominative, and accusative forms in the same paradigm (as in the traditional table 7.1) amounts to claiming that they are in complementary distribution, i.e. that they do not co-occur and that their positional distribution is identical. This seems a priori correct for definite determiners. Consider (2), which exemplifies the neuter column.[2] (The glosses in (2) express the traditional categorization with "STR" for "strong," i.e. determiner-inflection, which is identical to strong adjectival inflection except for the genitive ***-s*** (2d).)

(2) a. NOMINATIVE:
dies-es schön-e Buch German
this-STR pretty-WK book

b. ACCUSATIVE:
dies-es schön-e Buch
this-STR pretty-WK book

c. DATIVE:
dies-em schön-en Buch
this-STR pretty-WK book

[1]German has gender neutralization in the plural.

[2]The nominative/accusative distinction is only visible in masculine contexts in German. This is why usually masculine nouns are used to exemplify the case paradigm. I'm using a neuter noun because the strong/weak distinction is unambiguous in neuter contexts across the board, but not in masculine contexts.

d. GENITIVE:
dies-es schön-en Buch-es
this-STR pretty-WK book-GEN

There are, however, (under such a view surprising) differences with regard to the positional distribution between these morphs as we steer away from definite determiners. This has been the subject matter of some discussion on German nominal inflection in the literature . In fact, the distribution of dative and genitive morphology in the noun phrase has (in the prominent lexicalist tradition) given rise to the postulate of a mixed declension class for a set of determiners (the so-called *ein* words),[3] as well as to the postulate of "true exceptions." Consider the indefinite examples (3), where the "strong inflection" is on the adjective half of the time and on the article the other half of the time.

(3) a. NOMINATIVE:
ein schön-es Buch German
a pretty-STR book

b. ACCUSATIVE:
ein schön-es Buch
a pretty-STR book

c. DATIVE:
ein-em schön-en Buch
a-STR pretty-WK book

d. GENITIVE:
ein-es schön-en Buch-es
a-STR pretty-WK book-GEN

While the view represented by the paradigm in table 7.1 has been the standard view at least since Bierwisch (1967), the comparative analysis of both the morphological shape and the syntactic properties of each of these morphs warrants, I will argue, a closer examination of an alternative perspective. The alternative perspective disputes the claim made by the representation in table 7.1, that none of the elements in the paradigm co-occur. I will argue that the elements in the dative and genitive row actually do co-occur with the ***-n*** in the masculine accusative cell. The reason why they very often seem to be in complementary distribution is that the overt presence of one as a suffix on a stem X+1 prevents the overtness of another (adjacent) suffix on X.[4,5]

[3]This is the view taken, for instance, by the standard German reference grammar *Duden* (cf. Drosdowski (1995)).

[4]This is reminiscent of Koopman's (1996) and Koopman and Szabolcsi's (2000) second *Corollary of the modified Linear Correspondence Axiom*, that says "if a head adjoins to another head, they cannot both be overt" (Koopman and Szabolcsi, 2000, p.189). I will, for the time being, assume that in some cases such adjunction, and consequently the obviation of pronunciation, is post-syntactic (see subsection 7.4.3).

[5]For a descriptively similar effect in Italian infinitives with and without post-infinitival clitics, see note 27 on Cardinaletti and Shlonsky (2004).

(4) a. X-u ⇒ X-u
b. X-u-y ⇒ X-Ø-y

This gives the (misleading) impression that the relevant morphs (u and y in the schema in (4)) are alternating realizations of the same syntactic element. However, there is strong evidence that the elements in the dative and genitive row in table 7.1 and the elements in the nominative and the accusative rows do not belong to the same syntactic category, since they exhibit distinct syntactic properties.

Complementary distribution does obtain among the genitive and dative morphs of the table. I propose that they are allomorphs of a morpheme distinct from any of the morphemes in the upper half of the table. The argument crucially integrates positional asymmetries between the forms in the lower half and the forms in the upper half (section 7.2), as well as such among the three singular forms of the lower half, ***-s***, ***-m***, and ***-r*** (section 7.3).

The proposal to be developed takes seriously a number of seeming exceptions that have previously been swept under the PF rug, or were not addressed at all, and makes them an integral part of the description. Secondly, the proposal lightens the burden on morphology in that the three syncretism pairs in the lower half of table 7.1 (***-s, -m, -r***), as well as the syncretism in the dative and genitive rows of the traditional weak adjectival paradigm[6] (***-en*** for all six singular cells) are syntactically determined. Furthermore, the one (puzzling) instance in which (on the traditional view) determiner declension and strong adjectival declension differ (the non-feminine genitive cells) receives a natural explanation under the proposal to be developed. Last but not least, the proposal allows us to keep to the simple and independently supported analysis of the distribution of AgrA presented in chapter 3.

7.2.2 The mixed declension problem

In chapter 3 the distribution of strong adjectival agreement AgrA was discussed and the following analysis was proposed. The AgrA morpheme precedes the adjective when a definite article (overtly or abstractly) lexicalizes the left periphery of the xAP. When no definite article is merged in the left periphery of xAP, the AP moves to the left of AgrA, hence AgrA surfaces as a suffix to the adjective. The relevant examples are repeated below.

(5) NOMINATIVE (masculine)

a.	[d-	**er**	alt-e	] Mann	German
	the-	AGRA	old-WK	man	
b.	[alt-	**er**	] Wein		
	old-	AGRA	wine		

[6]The traditional weak adjectival declension paradigm of German is as follows.

	MASCULINE	NEUTER	FEMININE	PLURAL
NOMINATIVE	-e	-e	-e	-en
ACCUSATIVE	-en	-e	-e	-en
DATIVE	-en	-en	-en	-en
GENITIVE	-en	-en	-en	-en

c. ein [alt- **er**] Mann
a old- AGRA man

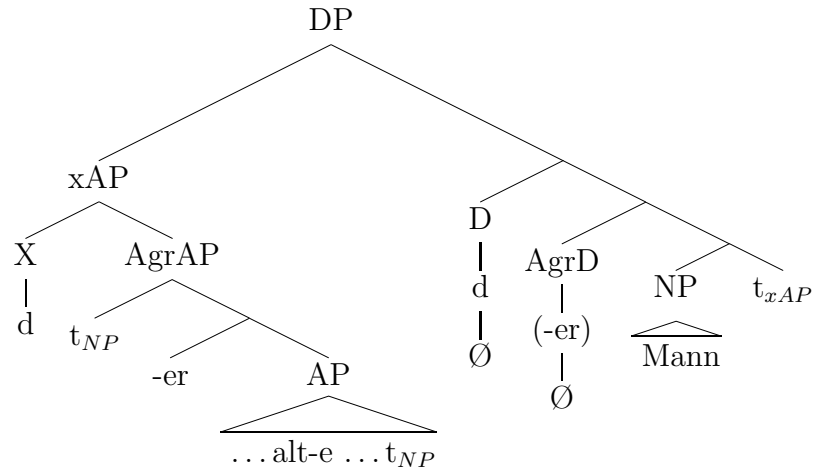
Whereas the pre-adjectival definite marker prevents a following adjective from moving to the left of AgrA, a noun phrase initial indefinite article does not prevent the adjective from moving. I concluded that *ein* is merged outside of the xAP.

(6) Indef: $[_{XP}$ ein $[_{xAP}$ Adj ... AgrA ... Adj ...] Mann]

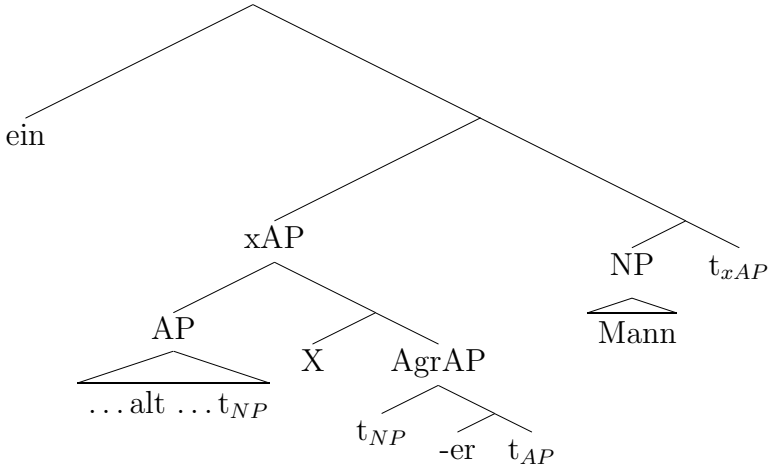
(7) Def: $[_{DP}$ $[_{xAP}$ *d-* ... AgrA ... Adj ...] Mann]

Below are the tree representations for (5a) and (5c).

(8) = (5a)



(9) = (5c)



Apart from the definite marker and the indefinite article, adjectives can be preceded by determiners (and other xAPs). The inflection on the adjectives then depends on properties of the determiner. One set of determiners patterns like the definite marker, inducing weak agreement on a following adjective (descriptively speaking). This set contains the *d*-determiners, as well as

some non-*d*-determiners in the ADJ variant (see chapter 6). I incorporated this by means of their licensing the non-pronunciation of a definite marker in a lower xAP, and hence argued that (7) is correct quite generally.[7]

Another set of determiners patterns like the indefinite article, inducing strong agreement on a following adjective (descriptively speaking). This second set contains all the INV variants of non-*d*-determiners (i.e. the *ein* words), as well as a few determiners in their ADJ variant.

In chapter 6 I argued that the *-ein-* component in the different *ein* words is the same as the indefinte article *ein*.[8] Crucially these occurrences have in common that they are never followed by strong agreement (AgrA) followed by an adjective. In other words (10).

(10) *Ein* words never play a role in determining the distribution of AgrA.

This statement may (and should) come as a surprise, since it is in contradiction with traditional descriptions with regard to oblique case environments (dative and genitive). Consider the dative noun phrases below.

(11) DATIVE (masculine)

a. d- **em** alt-en Mann — German
the- DAT old-INFL man

b. alt- **em** Wein
old- DAT wine

c. ein- **em** alt-en Mann
a- DAT old-INFL man

(11a,b) seem parallel to (5a,b), but how does (11c) fit with (5c)? In the traditional literature on German adjectival inflection, the morph *-em* in (11) is taken to be the dative variant of the strong adjectival / determiner agreement, hence an instance of AgrA. If that were correct, we would have to concede that *ein* words do play a role in determining the distribution of AgrA after all, at least sometimes. However, I will argue that it is not correct. This has important consequences which will be explored throughout this chapter.

7.2.3 Three kinds of approaches to the "mixed declension" problem

There are three kinds of approaches to the (seemingly) mixed behavior of *ein* words, differing with regard to the question of whether *ein* words play a role in determining the distribution of AgrA. One says that they always play a role, one says that they sometimes do, and finally the present proposal is that they never do. I will briefly discuss the basic idea behind each of the approaches.

Below I give the strong and the weak adjectival agreement paradigms for reference (table 7.2). The "mixed paradigm" corresponds to the combination of the nominative and accusative rows of the strong and the dative and genitive rows of the weak paradigm. The "definite determiner

[7] Hence the proposal should be understood to include the relevant non-*d*-determiners in their ADJ variant.

[8] Ultimately something more will need to be said here with regard to the observation mentioned earlier that the non-initial indefinite article can exhibit "spuriousness," whereas the initial indefinite article does not.

paradigm" is identical to the strong paradigm, with the exception of the genitive masculine and neuter cells, which in determiners contain the ending *-es*, instead of *-en* (cf. table 7.1).

Table 7.2: German singular adjectival agreement (traditional)

	STRONG PARADIGM			WEAK PARADIGM		
Singular	MAS	NEU	FEM	MAS	NEU	FEM
NOM	gut-er	gut-es	gut-e	gut-e		
ACC	gut-en			gut-en		
DAT	gut-em		gut-er	gut-en		
GEN	gut-en					

The ALWAYS kind of approach

A first possibility is to assume that *ein* words always play a role in determining the distribution of strong agreement whether the noun phrase is in a nominative, accusative, dative, or genitive environment (among the proponents of such an approach are e.g. Zwicky (1986); Kester (1996b)). A standard implementation of this idea is in terms of selectional features. On such a view, *ein* words have a "mixed declension" feature (cf. Drosdowski (1995)). Definite determiners on the other hand have a "weak declension" feature, and the zero determiner has a "strong declension" feature.[9]

der	selects [weak adjective]	(12a,13a)
Ø	selects [strong adjective]	(12b,13b)
ein	selects [mixed adjective]	(12c, 13c)

(12) NOMINATIVE (masculine)

a. [d- **er** alt-e] Mann — German
the- AGRA old-WK man

b. [alt- **er**] Wein
old- AGRA wine

c. ein [alt- **er**] Mann
a old- AGRA man

(13) DATIVE (masculine)

a. d- **em** alt-en Mann — German
the- DAT old-AGR man

[9] In Zwicky's (1986) proposal adjectives are "assigned to a [declension] class by virtue of the type of determiner with which they are in construction." (p.961)

b. alt- **em** Wein
old- DAT wine

c. ein- **em** alt-en Mann
a- DAT old-AGR man

Hence there are three adjectival paradigms, a "weak" one, a "strong" one, and a "mixed" one, where half of the mixed one is identical to the strong one and the other half is identical to the weak one. Alternatively, the "mixed declension" feature of *ein* words is such that it (somehow) selects a strong adjective under certain conditions, and a weak adjective under other conditions (Zwicky (1986)).

Simultaneously, each (class of) determiner has its own paradigm (in addition to the three adjectival paradigms). The endings of the definite determiner paradigm are (almost[10]) identical to the endings in the strong adjectival paradigm. The endings of the *ein* words paradigm complements the endings of the mixed adjectival paradigm, such that in nominative and in accusative environments the mixed adjective inflects identical to definite determiners, and in dative and genitive environments the *ein* word ending is identical to that of a definite determiner. These correlations can be left as whole sale stipulations, or derived by (stipulated) rules.

Importantly, on such a view, the correlations are treated as entirely accidental. There is nothing that forces the pattern to be the way it is. For instance, the fact that the strong adjectival paradigm and the definite determiner paradigm are essentially identical is accidental in the worst sense, namely it is not one accident, but it is an accident for every paradigm cell (except for the two "exceptional" cells, where the forms are not identical). Hence there are 10 accidents, and the two exceptions are in effect the least unexpected instances, except that they happen to both occur in non-feminine genitive environments, which is once again accidental, on this approach.

The SOMETIMES kind of approach

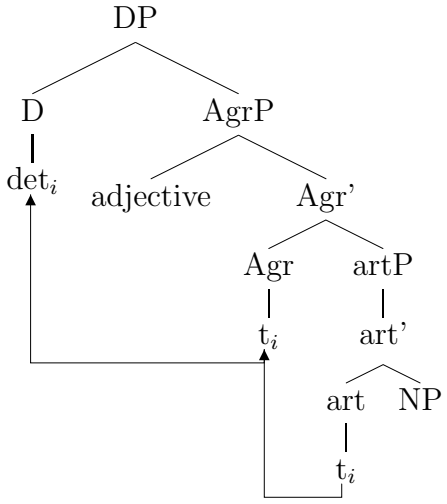
Another way in which the interaction of (kinds of) determiners and their effect on the positional distribution of inflectional morphology in the noun phrase can be approached is what I call the SOMETIMES kind of approach to *ein* words. Such an approach has been proposed by Roehrs (2006).

On this approach, the way in which a determiner influences the position of the strong agreement morpheme is uniform across determiners and adjectives, namely the determiner/adjective is assigned the strong agreement morpheme by a case assigning head (or alternatively, this morpheme is licensed on the determiner/adjective). What is not uniform across determiners is whether a determiner is always available for assignment of the strong agreement or only sometimes.

Roehrs's idea is that determiners move to the left periphery of the DP from a relatively low position (lower than that of adjectives).

[10]Modulo the aforementioned exception in the masculine/neuter genitive, with ***-s*** for determiners and *-en* for (other) adjectives. This is discussed in section 7.3.5

(14) Roehrs (2006) p.200



And secondly, the strong agreement is licensed on the left most element (of the relevant sort, i.e. ignoring degree modifiers and such) in the DP at some point in the derivation. The way Roehrs distinguishes the differential behavior of different determiners is by stipulating that they move to DP-initial position at different times, depending on Case.

The distribution pattern of AgrA is, on this approach, a consequence of the differential sequencing of two operations: movement to D and licensing/assignment of strong agreement. Definite determiners always move before strong agreement is licensed. *Ein* words move before strong agreement is licensed in dative and in genitive environments, but in nominative and accusative environments they move only after the point in the derivation at which the strong agreement is licensed on the left most element. In sum:

AGR is licensed on the DP-initial element at some point in the derivation.		
Determiners are generated below adjectives, and move to D.		
der	moves to D before AGR is licensed	(12a,13a)
ein	moves to D after AGR is licensed in NOM/ACC	(12c)
ein	moves to D before AGR is licensed in DAT/GEN	(13c)

Roehrs succeeds in eliminating the mixed paradigm and to give a unified treatment to the basic distribution of strong adjectival agreement, but at some cost. His proposal is in part motivated by the assumption that there is a natural class/category "art," which the definite article, the indefinite article, and other "determiners" are instantiations of. But the idea of such a syntactic category is not warranted, given the earlier discussion in this dissertation.

To get a sense of the severity of the proposal, note that Roehrs would have to treat *what für ein* (and similarly all the other *ein*-words) as a constituent, or allow multiple late movements to the left of *schön-* in (15).

(15) [was für ein] schön-es $t_{wasfuerein}$ Buch German
what for a pretty-AGRA book

The proposal is ill-equipped for accounting for the Swiss German *d/di*-alternation discussed in section 3.3.2.

(16) a. d rosä — Swiss German
the rose

b. d-i rot rosä
the-AGRA red rose

Furthermore, as Roehrs acknowledges, the proposal leaves the unavailability of genitive ***-s*** on noun phrase initial adjectives as an inexplicable exception.

(17) a. de-s schlecht-en Wetter-s wegen — German
the-GEN bad-WK weather-GEN because.of

b. schlecht-en/*-es Wetter-s wegen
bad-WK/-GEN weather-GEN because.of

Finally, late movement of *ein* is counter-cyclic, violating the *Extension Condition* (Chomsky, 1995).

The NEVER kind of approach (present proposal)

A third possibility is that *ein* words never play a role in determining the distribution of strong adjectival agreement. This is the proposal I made in chapter 3, and which I will maintain. *Ein* "simply" isn't within the relevant domain i.e. it is not inside xAP.

(18) a. Def: $[_{xAP}$ *d-* ... AgrA ... Adj ...]

b. Indef: $[_{xAP}$ Adj ... AgrA ... Adj ...]

This proposal captures correctly the distribution of *-er* in masculine nominative singular noun phrases (19), and extends to nominative and accusative noun phrases generally in a rather straightforward way.

(19) a. gut-**er** Wein — German
good-AGRA wine

b. ein gut-**er** Wein
a good-AGRA wine

c. d-**er** gut-**e** Wein
the-AGRA good-WK wine

Recall, however, the pattern we find in dative noun phrases (and similar though not identical in genitive noun phrases, which I will come back to below).

(20) a. gut-**em** Wein — German
good-DAT wine

b. ein-**em** gut-**en** Wein
a-DAT good-WK wine

c. d-**em** gut-**en** Wein
the-DAT good-WK wine

Given that the presence (versus absence) of *ein* does make a difference with regard to the position of dative ***-m*** (and ***-r*** and genitive ***-s, -r***), a consequence of this proposal is that these morphs are not instances of strong adjectival agreement, but must be something else.

Summary

On the traditional view, represented in table 7.2, the distribution of strong and weak forms in German adjectival declension opposes the presence versus absence of **definite** determiners/article in nominative and accusative contexts. But in dative and genitive contexts it opposes presence versus absence of **any** determiner/article, grouping definite and indefinite determiners/articles together.

I have presented three kinds of approach to this puzzle, according to whether indefinite determiners should be thought of as playing any role in determining the position of strong adjectival agreement. Of the three approaches, two (the ALWAYS and the SOMETIMES approach) propose that they do at least sometimes play a role. The third (the NEVER approach) states that they never do. The NEVER proposal is the simplest one and is immediately compatible with the proposal in chapter 3. Hence I conclude that it is the most attractive one. However, it makes the non-trivial claim that some of the morphs that the traditional view considers to be strong adjectival/pronominal inflection, namely the oblique case markers, are of a different nature. In order to maintain the NEVER approach, it has to be made plausible that the oblique case marker morphemes are indeed something else.

Notice that the ALWAYS and the SOMETIMES approaches are a priori oblivious to the syncretism patterns found in the traditional agreement paradigms, while the NEVER approach delegates an account of (most of) the syncretism patterns to a different component.

In the next section I will motivate the claim that dative ***m / r*** and genitive ***s / r*** receive an independent account, and I will sketch a proposal that relates their syncretism pattern to basic aspects of their differential syntactic behavior. In the subsequent section I will discuss consequences of this proposal for the analysis of adjectival agreement in German and Swiss German, showing that it significantly simplifies the pattern of adjectival agreement and lessens the burden on morphology (or the lexicon, depending on the choice of competitor analysis).

7.3 Oblique case marker puzzles

This section is devoted to showing that the oblique case marker morphemes ***-m, -r*** and ***-s*** have their own existence independent of AgrA. For the purposes of this section I will use the acronym OCM for "oblique case marker."

We are used to seeing instances where the morphological form of a head co-varies with grammatical properties, such as e.g. gender features, of another constituent in the structure. That is

agreement. What we are much less used to seeing are cases in which the "agreeing" form also co-varies with such features with regard to its syntactic position.

Below I present four syntactic environments in which a contrast in gender (the conditioning factor) correlates both with a contrast in form of an OCM and with a contrast in syntactic position of the OCM. Put another, more concrete way, in these four syntactic environments there is an overt contrast in both morphological form and syntactic position of the OCM morpheme between feminine and non-feminine contexts, and within non-feminines between dative and genitive contexts. In all four environments the relevant forms are the same. I will conclude that the four cases are surface reflexes of the same underlying phenomenon.

The emerging picture is that (descriptively speaking) there is a feminine ***-r***, a dative ***-m*** and a genitive ***-s***, mapping onto the syntactic hierarchy Gen > Dat > Fem. I will take this to suggest that the three forms are contextual allomorphs.

7.3.1 Four unexpected positional feminine versus non-feminine contrasts

The case marker forms I will be concerned with are given in the table below.

(21) Dative and Genitive case marker exponents in German (singular DPs):

	MASCULINE	NEUTER	FEMININE
DAT	m	m	r
GEN	s	s	r

In traditional terms there are six morphemes (corresponding to the six paradigm cells). There clearly is some degree of homonymy/syncretism between the morphemes. If UG allows homonymy of this kind, it is logically possible that this is accidental. Most modern morphologists would certainly oppose such a view and instead devise lexical or morphological mechanisms to derive the syncretisms. It would, for example, be possible to devise a *rule of referral* (Zwicky, 1985; Stump, 2001) to the effect that in oblique environments neuter case markers are realized by the masculine form. In a DM framework (Halle and Marantz, 1993) an *impoverishment* rule (Bonet, 1991) could be devised which impoverishes the feature matrix of the relevant morpheme/head such that e.g. the masculine-neuter contrast no longer obtains in these environments.

While such procedures would, of course, be capable of rendering the correct forms, they are stipulative. But what is more is that the choice of form/exponent is in fact correlated with the syntactic behavior/position of the relevant head, a fact which the kinds of approaches just mentioned cannot capture. This clustering of properties suggests that the right account must start in the syntax.

In what follows I will first discuss the four instances of gender-sensitive positional contrasts and subsequently sketch a proposal in which the three forms in (21) are allomorphs of one morpheme, and in which the syntax determines an upper bound to the possible morphological variation of the relevant morpheme, such that the morphology (VI insertion) could not make any additional dis-

tinctions. Hence on this proposal the syncretisms in the table above are syntactically determined.[11]

The four surprising instances of a gender-sensitive positional contrast I will discuss are:

A) **Inflectional Parallelism** violation — German
This phenomenon has previously been marginalized or analyzed as non-syntactic.

B) **Indefinite article** — Swiss German
This phenomenon has previously not received an analysis in the generative literature.

C) **Possessive determiners** — German / Swiss German
This phenomenon has not previously been viewed in the relevant way.

D) **Genitive *-s*** failure to occur on adjectives — German
This phenomenon, finally, has previously been viewed as a "true exception."

Some of these phenomena have been discussed in the literature, but they have not, to my knowledge, been related to one another. As usual, if looked at in isolation, it is often difficult to even know what domain of grammar a certain surface phenomenon is to be attributed to. It will become clear, however, that a unified analysis of the phenomena mentioned must be syntactic.

7.3.2 Violation of "Parallel Inflection"

The first surprising phenomenon to be discussed is what looks like a violation of "parallel inflection." Parallel inflection is a generalization that can be stated roughly as below.

(22) **Parallel inflection:** Two (or more) adjectives that modify the same noun within a DP carry identical inflection, i.e. either both are strong or both are weak, but no mixing.

What that means is that in the examples below, for instance, the two adjectives *klein 'small'* and *rot 'red'* must exhibit identical inflection. In (23a) they inflect weakly, in (23b) they inflect strongly.

(23) a. dies-es klein-**e** rot-**e** Buch — German
this-STR small-WK red-WK book

b. ein klein-**es** rot-**es** Buch
a small-STR red-STR book

This has, of course, been recognized in the literature. Milner and Milner (1972, p.42) consider such an inflectional parallelism generalization a plausible universal.[12]

[11] The morphology could, of course, still fail to make the distinctions it does, e.g. it could fail to make any distinctions.

[12] Among the names for the principle/constraint at hand we find "Adjective Correspondence" constraint (Müller, 2002) and "Parallel (NP, A-Infl)" constraint (Gallmann, 2004). A recent and interesting discussion can be found in Roehrs (2007b), where the term "Inflectional parallelism generalization" is used.

The generalization may be very intuitive and among the things that a traditional grammar would not bother mentioning. What makes the generalization so noteworthy in the present context, though, is the existence of a case in which it seems violated. Consider examples (24) of German modified bare noun phrases in dative environments.

(24) a. FEMININE:
mit [gut-**er**] [frisch***-en/-er**] Milch German
with good-DAT.F fresh-WK/DAT.F milk

b. MASCULINE/NEUTER:
mit [gut-**em**] [frisch-**en/-em**] Wein
with good-DAT.M fresh-WK/DAT.M wine

In the feminine example (24a) the two adjectives must exhibit identical inflection, the feminine dative case marker ***-r***. In (24b) on the other hand there are two variants that are acceptable to a reasonable degree. Either both adjectives exhibit the masculine dative case marker ***-m***, or only the first adjective is so inflected, while the second adjective carries so called weak agreement.

The relative judgments reported in the literature for the two variants in (24b) vary (see Roehrs (2007b) for discussion on that point). Some authors find one variant preferable, others the other. The details of this are presently irrelevant. What is of interest is that all authors agree that there is a strong contrast between the distributional options of the feminine dative (and genitive) ***-r***, which must obey *Parallel Inflection*, and the masculine and neuter ***-m*** which may but does not have to obey it.

There are a number of different reactions to the non-parallel possibility (24b) in the literature. Let me briefly mention four recent ones. As far as I can see, none of the proposals is fully capable of capturing the seeming optionality. What is important at this point is how the contrast between the feminine ***-r*** and the masculine/neuter ***-m*** is handled. My criticism for each proposal will rely on the assumption that the four surface phenomena listed in section 7.3.1 derive from the same underlying phenomenon.

Schlenker (1999), working in a Distributed Morphology framework and arguing for a top-down grammar (Phillips, 1996), employs the same mechanism that he uses to distinguish determiner agreement from adjective agreement. Schlenker attributes to the inflection on determiners the morphological feature [+Fission]. This feature has the effect of destroying the features in a node, such that those features are no longer available (down the tree) for vocabulary insertion.

(25) a. d-er gut-e/*-er Wein German
the-STR good-WK/-STR wine

b. gut-er frisch*-e/-er Wein
good-STR fresh-WK/-STR wine

In (25a) *-er* on the definite article is [+Fission], hence it destroys (some of) the features it spells out[13], and therefore *-er* will not be inserted in the next relevant node, but the weak agreement form *-e* is inserted instead. In (25b) on the other hand, the strong agreement *-er* is on the adjective

[13]The precise details of Schlenker's proposal are irrelevant here.

and thus is (by stipulation) not marked [+Fission], with the effect that the features do not get destroyed and will be visible for vocabulary insertion lower down.

In order to account for the violation of parallel inflection in (24b), Schlenker proposes that the masculine and neuter dative ***-m***, unlike the feminine ***-r***, is always marked [+Fission], even when it occurs on an adjective. This then derives the possibility of ***-m*** not being repeated in (24b).

We will see that this account cannot be correct, because the ***-m*** versus ***-r*** contrast can be observed also when only one case marker position (i.e. one ***-r***) is involved.

Gallmann (2004, p.156) working in an OT framework proposes that the effect is phonologically determined. Gallman proposes the following (violable) phonological constraint.

(26) *Schwa-m: German word forms do not end in schwa + /m/

This is sufficient to distinguish the distribution of masculine/neuter dative ***-m*** from that of feminine dative ***-r***. The precise effect that an OT constraint has of course always depends on the other constraints in the grammar and their relative ranking.

However, the account can be discarded independently of what the rest of the grammar looks like. First of all, we will shortly see an instance of the ***-m*** versus ***-r*** contrast in which neither is in word-final position (to the extend that word-finality is a usable notion). And secondly, we will see an instance of the contrast underlying (24b) that involves ***-s*** rather than ***-m***.

A similar proposal is made by Roehrs (2007b), who proposes the following phonological rule.

(27) Phonological rule: m → n / $[\ldots]_A$+ə __#

This rule is fairly specific with regard to its context. This is necessary in order for it not to apply in undesirable cases.

However, its narrow definition also makes it unfit for capturing the more general phenomenon we are dealing with here. First of all, it is not immediately clear that the relevant context is right adjacent to a constituent of category A. Secondly, the surface effect is not always the replacement of ***-m*** by ***-n***.

As a last reaction to the violation of parallel inflection in (24b) let me mention Müller (2002, p.24) who notes that "[i]t seems preferable to classify [the non-parallel variant of (24b)] as not resulting from the core system of nominal inflection in present-day German."

It is not clear to me what else the possibility of violating parallel inflection in (24b) should be resulting from. But what is more important is the fact that there are a number of somewhat distinct environments in which feminine dative/genitive ***-r*** contrasts in its positional distribution with masculine/neuter dative ***-m*** and masculine/neuter genitive ***-s***. The more such contrasts there are, and the more similar to each other they look, the less likely it is, it seems to me, that we are dealing with something that is not part of the relevant core system.[14]

In what follows I will discuss another three phenomena in which a positional asymmetry between feminine ***-r*** and its masculine/neuter pendant is observed. Subsequently, I will conclude that the phenomena are most plausibly related and that a syntactic account is called for. Finally,

[14]Note that, playing on words, it would be possible to say that ***-m*** is not inflection. This may be reasonable, but it is not what Müller had in mind.

I will make a somewhat tentative proposal of a syntactic account that captures not only the syntactic differences between the relevant forms, but also partly accounts for the syncretism pattern observed.

7.3.3 Swiss German indefinite article

The "indefinite article" in Swiss German dative DPs is tri-morphemic, consisting of a stem ***ən***,[15] an invariant ending ***-ä***, and a dative case marker ***-m*** (masculine/neuter) or ***-r*** (feminine). The linear order between the stem and the case marker co-varies with the form of the case marker (and hence with the gender features of the overt head noun). Consider the minimal pair in (28).

(28)	a.	uf **əm**	[-ən-		]-ä	bärg$_{mas}$	*(on a mountain)*
	b.	uf	[-ən-	**-ər**	]-ä	bluämä$_{fem}$	*(on a flower)*
		on DAT.M/N	STEM	DAT.F	AGR	N	

The masculine (and neuter) dative marker ***-m*** precedes the stem ***-ən***, while the feminine dative marker ***-r*** follows the stem ***-ən***, suggesting a hierarchical order ***-m*** < ***-r***.

This could, of course, be viewed as an instance of metathesis (Studler, 2001), and hence as entirely unrelated to the case of the parallel inflection violation discussed above. However, it seems more interesting a hypothesis to me to take the two phenomena as being closely related, in which case the correct analysis cannot rely on metathesis, nor can it rely on Schlenker's [+Fission] feature, since in (28) only one instance of the relevant head/morpheme is involved. Similarly Gallmann's and Roehrs's phonological proposals are not capable of accounting for (28).

That (28) is not an entirely isolated phenomenon, and secondly that it indeed is not simply an instance of metathesis is strongly suggested by the fact that it perfectly parallels the feminine versus non-feminine contrast in possessives, to be discussed next.

7.3.4 Possessive pronouns/determiners

Recall from section 6.3.1 the syntactic basis of the possessor stem alternation.

(29)	a.	i**m**	s-	[-i-		]-s	piär	*(his beer)*
	b.			[-i-	**-r**	]-əs	piär	*(her beer)*
		DAT		STEM	DAT	AGR	beer	

In (29a) the stem is immediately followed by the agreement morpheme. The (optional non-overt) ***-m*** precedes the stem. In (29b) on the other hand, the stem is followed by the ***-r*** which in turn is followed by the agreement morpheme. This picture hence is very similar to what we found in the dative indefinite article (28). Let us assume that the similarity is not accidental.

Of course, there are important differences between (28) and (29). First of all, in (29) the ***-m*** is part of a constituent that can remain unpronounced (possibly due to a form of topic drop). Secondly, this constituent can, in a limited range of cases, move "away from home," as it were (Szabolcsi, 1983/84), as I showed in section 6.4. And third, the ***-m*** is separated from the stem

[15] This stem can sometimes remain unpronounced.

by a person morpheme ***s-***. This last property suggests (especially thinking of the discussion in section 6.4) that the relation between the position of ***-r*** in (29b) and the position of ***-m*** in (29a) is not a head-head relation. If the two positions in (29a) are related by movement, it is phrasal movement.

Let me make the hypothesis that the case markers ***-m*** and ***-r*** occur in distinct syntactic positions/domains, with ***-m*** higher than ***-r***, and that this is the unified basis of the three Gender-sensitive contrasts in (24), (28), and (29). Before sketching a partial derivation, I will briefly discuss a fourth such contrast.

7.3.5 Genitive *-s*: the "true exception"

The fourth and last contrast I want to discuss in this section concerns the genitive marker ***-s***. The genitive feminine case marker ***-r*** contrasts syntactically with its non-feminine counterpart which is syncretic across masculine and neuter (like ***-m***). Unlike above in the dative, however, the genitive masculine/neuter variant is ***-s***. Secondly, the environment is genitive rather than dative. And lastly, the position of ***-s*** is even higher than that of dative ***-m***. Consider first the feminine examples (30).

(30) FEMININE (Dative = Genitive)

a.	wegen	d-**er**	gut-**en**		Sicht
	because.of	the-GEN/DAT	good-WK		sight
b.	wegen		gut **-er**	/ ***-en**	Sicht
	because.of		good -GEN/DAT	/ -WK	sight

The case marker morpheme ***-r*** is suffixed to the definite article, triggering "weak" agreement on the following adjective (30a). When no determiner or article is present, the case marker ***-r*** is suffixed to the adjective, instead of the weak agreement (30b). Notice that the feminine case marker is identical in genitive and dative environments, both with regard to its form and to its position!

This contrasts with the distribution of the masculine/neuter genitive case marker ***-s***. While ***-s*** also occurs suffixed to the definite article (31a), in the absence of a determiner or article, the ***-s*** will not appear on the adjective. Instead, the adjective overtly retains the "weak" agreement (31b).

(31) MASCULINE/NEUTER

a.	wegen	d-**es**	gut-**en**	Wetter-s		German
	because.of	the-GEN	good-WK	weather-GEN		
b.	wegen		gut	***-es** / **-en**	Wetter-s	
	because.of		good	-GEN / -WK	weather-GEN	

This seems to be exceptional in that it is the only instance where, in traditional terms, strong adjectival agreement and determiner agreement are not identical. This is illustrated in the two traditional tables below.

Table 7.3: German (singular) strong **adjectival** inflection (e.g. *gut 'good'*)

	MAS	NEU	FEM
NOM	gut -er	gut -es	gut -e
ACC	gut -en	gut -es	gut -e
DAT	gut -em	gut -em	gut -er
GEN	gut -**en**	gut -**en**	gut -er

Table 7.4: German (singular) **determiner** inflection (e.g. *dies- 'this'*)

	MAS	NEU	FEM
NOM	dies -er	dies -es	dies -e
ACC	dies -en	dies -es	dies -e
DAT	dies -em	dies -em	dies -er
GEN	dies -**es**	dies -**es**	dies -er

The observation is of course far from new. (Bierwisch (1967) for instance integrates it into his analysis of German adjectival agreement by marking the insertion context of ***-s*** as [-ADJ].) Yet it has remained entirely mysterious. (Roehrs (2006, p.169) calls (31) a "true exception.")

What is new, here, is the attempt to relate this contrast between ***-r*** and ***-s*** in genitive environments to the Gender-sensitive contrast between ***-r*** and ***-m*** in dative environments.

7.3.6 Taking stock

Before proceeding to my tentative proposal, let me take stock of the findings.

Feminine *-r*

Feminine noun phrases look identical in Genitive and Dative environments.

(32) (mit) gross-**er** Mühe German
with$_{dat}$ great-FEM.DAT/GEN trouble

(33) gross-**er** Verwirrung wegen German
great-FEM.DAT/GEN confusion because.of$_{gen}$

⇒ The GEN-DAT distinction is irrelevant, for both form and position of the case marker.

Dative *-m* (versus *-r*)

In Dative environments, the case marker distinguishes:

- form: non-feminine versus feminine
- position: non-feminine versus feminine

⇒ The MAS-NEU distinction is irrelevant, for both form and position.

Genitive *-s* (versus *-r*)

In Genitive environments, the case marker distinguishes:

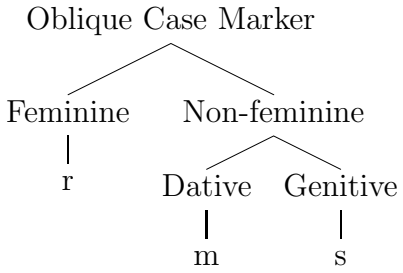
- form: non-feminine versus feminine
- position: non-feminine versus feminine

⇒ The MAS-NEU distinction is irrelevant, for both form and position.

Ergo

There are two levels of distinctions: feminine versus non-feminine, and within the latter dative versus genitive.

(34)



Furthermore there is a strict form-syntax mapping.

(35) ***-s*** > ***-m*** > ***-r***
GEN DAT FEM

In words, we can say that when a noun phrase occurs in an oblique environment (dative and genitive), it will contain an oblique case marker (OCM) with the following properties:

- If this noun phrase is feminine,
  (A) something will assure that OCM remains "low," and
  (B) something will assure that OCM is realized as ***r***.
  Non-feminine seems to be the elsewhere case.

- If this noun phrase is non-feminine, then
  (A) a dative environment will assure that OCM is "medium high," and
  (B) the dative environment will assure that OCM is realized as ***m***.
  (A') a genitive environment will assure that OCM is "high," and
  (B') the genitive environment will assure that OCM is realized as ***s***.

In each of these, one and the same conditioning factor determines both form and syntactic position. Clearly this calls for a unification. In the next section I will make a tentative proposal and subsequently discuss some consequences as well as some challenges that come with the attempt of integrating the abstract proposal with the syntax of (modified) DPs.

7.4 The syntax behind syncretism: A tentative proposal

In this section, I aim to complete the elimination of the oblique strong agreement (***-s, -m, -r***), eliminate oblique weak agreement, and show that the massive syncretism in these two (traditional) German adjective/determiner declension paradigm(s) is syntactically determined. (In a sense that means that the notion *syncretism* does not actually apply to them.)

Unfortunately, the aim of this section cannot, at this point, be to arrive at a fully worked out theory. Instead, I want to motivate a novel kind of approach to these issues, and argue that the right analysis must have the properties that characterize the account I am sketching.

Let me reproduce the forms of table 7.2 in table 7.5, conflating the determiner paradigm and the strong adjectival paradigm as ***-es/-en*** in the genitive masculine and neuter cells (see section 7.3.5).

Table 7.5: German singular adjectival agreement (traditional)

<table>
<tr><td></td><td colspan="3">STRONG PARADIGM</td><td colspan="3">WEAK PARADIGM</td></tr>
<tr><td>Singular</td><td>MAS</td><td>NEU</td><td>FEM</td><td>MAS</td><td>NEU</td><td>FEM</td></tr>
<tr><td>NOM</td><td>-er</td><td rowspan="2">-es</td><td rowspan="2">-e</td><td colspan="3">-e</td></tr>
<tr><td>ACC</td><td>-en</td><td>-en</td><td colspan="2"></td></tr>
<tr><td>DAT</td><td colspan="2">-em</td><td rowspan="2">-er</td><td colspan="3" rowspan="2">-en</td></tr>
<tr><td>GEN</td><td colspan="2">-es/-en</td></tr>
</table>

What is going to be eliminated from the paradigm represented in table 7.5 is the lower half. By "eliminate" I mean that the oblique case marker forms (***-s, -m, -r***) do not belong in this paradigm. They are, instead, analyzed as contextual allomorphs of one and the same morpheme, a possessor clitic.

What traditional descriptions call the weak agreement in oblique case environments ***-en***, is identified as an instance of AgrA. It is analyzed as agreeing with a silent functional nominal rather than with the overt noun, which explains its insensitivity to the gender features of the overt noun.

This amounts to eliminating half of the adjectival (singular) agreement paradigms in German and Swiss German. Let me start with the dative and genitive "strong agreement."

7.4.1 Eliminating oblique strong agreement

Traditional view

The part of the determiner declension paradigm that we are concerned with in this section traditionally receives the representation given in table 7.6 (which zooms in on a subset of table 7.5). This traditional view, which holds that these are the dative and genitive forms of the same mor-

Table 7.6: ***-s, -m, -r*** paradigm

	MASCULINE	NEUTER	FEMININE
DAT	m	m	r
GEN	s	s	r

phosyntactic object that e.g. ***-r*** is the masculine nominative form of, has the following properties (among others).

It postulates six morphemes for the morphs in table 7.6. It positions the syntactic contrasts between the three forms, which I have shown to be pervasive and systematic, as surprising exceptions, pushing them outside the realm of syntax proper. It leaves both the particular syncretism pattern and even the presence of syncretism in the first place among the morphs in table 7.6 as an unexplained accident. Let me emphasize here that, by positioning both the syntactic contrasts between the elements in different paradigm cells and the syncretisms across different paradigm cells as accidental, it appears, on the traditional view, as entirely baffling that there is a systematic correlation between the **positional** (i.e. syntactic) properties and the **form** of the morphs in the paradigm. Perhaps even more so, given the fact that the correlation spans across both vertical and horizontal syncretism pairs, cross cutting through purported gender and case specifications of the "morphemes."

This situation calls for a revision of the traditional perspective on the morphosyntax of oblique case "inflection" in German and Swiss German.

Alternative: present proposal

One thing that an account of the forms in table 7.6 needs to address is the question of why the homophony pattern is the way it is and not otherwise. In the proposal I am going to sketch the precise homophony pattern falls out directly from properties that are independently needed to account for the syntactic behavior of each form (discussed in section 7.3).

Let me start by making explicit the observation that the oblique case markers ***-s, -m, -r*** do not co-occur within a case domain. In other words, in a (singular) oblique case environment there is one and only one of these forms present.[16] This suggests the possibility of an allomorphy

[16]The same form may co-occur with "itself" in the case of multiple adjectives, and in the case of ***-s*** it does co-occur with "itself" as a determiner suffix and a noun suffix. The multiple appearance of ***-m*** and ***-r*** with multiple adjectives may be an argument in favor of a deep coordination analysis of multiple adjectival modifiers, a possibility pointed out to me by Mark Baltin p.c.

analysis of these forms.

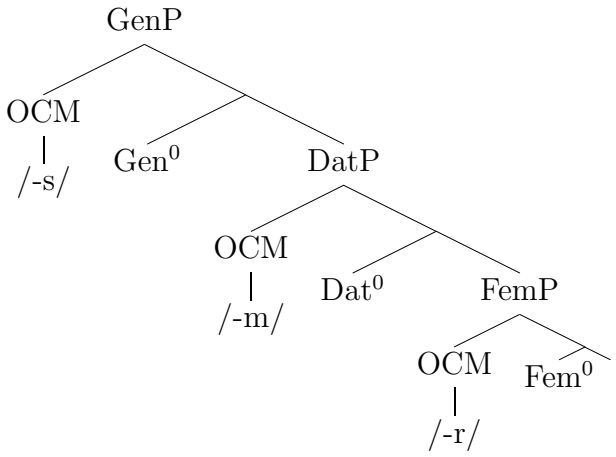
Saying that ***-s, -m, -r*** are allomorphs is saying that they spell out a head with invariant feature content in the syntax. Given an invariant feature content of the relevant head in the syntax, we would a priori expect only one spell out form. This constitutes a complete shift in perspective. Whereas the traditional view expects six forms and needs to explain the lack of diversity (cf. table 7.6), the present proposal expects only one form, on the basis of the feature content of the relevant syntactic head. What it needs to explain is what underlies the differential spell out of the relevant morpheme, i.e. how the morphology is able to draw the distinctions it does.

The allomorphy in question is quite obviously not phonologically conditioned, nor is it lexically conditioned (in the traditional sense). Instead it is syntactically conditioned.[17]

Consider the fact that each form has its own syntactic properties, distinct from the other two forms. The syntactic properties are determined by [+feminine], or else by Case. Let me propose now that the spellout form of the morpheme is determined by its syntactic context. In other words, ***-s***, ***-m***, and ***-r*** are syntactically conditioned contextual allomorphs (Bobaljik, 2000).

We have seen that there is a syntactic hierarchy: $\boldsymbol{s} > \boldsymbol{m} > \boldsymbol{r}$. In order to capture this, I suggest the following representation, where OCM stands for "oblique case marker," and is assumed to correspond to an invariable feature bundle.

(36)



There may be additional functional heads in between GenP, DatP, and FemP. The important claim here is that one and the same morpheme is realized differently depending on its morphosyntactic context. In a late insertion framework such as Distributed Morphology, this can be formalized along the following lines (partly adopted from Harbour (2003, p.545ff.)). For morphosyntactic feature bundles F and G, and a phonological string ψ we formulate the Vocabulary Insertion rule *[F]* $\leftrightarrow$ ψ */ _ [G]*, which reads: "ψ realizes [F] in the context of [G]." Here ψ is the EXPONENT of [F], and [G] is the CONDITIONING ENVIRONMENT.

For our example at hand, we thus formulate the following Vocabulary Insertion rules.

[17] In a sense this may be lexical conditioning by abstract functional heads.

- [OCM] ↔ ***s*** / _ [Gen]
- [OCM] ↔ ***m*** / _ [Dat]
- [OCM] ↔ ***r*** / _ [Fem]

This proposal has surprising consequences for the syncretism pattern (i.e. the occupancy of two paradigm cells by each form in table 7.6).[18] Let us consider the characterization of SYNCRETISM as a *situation where several abstract morphemes have the same exponent* (Embick and Halle, 2008), or put differently, a situation where *a single Vocabulary Item realizes feature bundles that are distinct in the syntax* (Harbour, 2003). Note now that the Vocabulary Items ***-s, -m, -r*** above realize identical feature bundles. Hence, on the present proposal, these cases do not match the description of syncretism.

In other words, for the case of German oblique case markers, the appearance of syncretism is misleading. In order to account for the purported syncretism pattern in German oblique case markers, no special morphological rule needs to be postulated. An important question is still outstanding however, namely that of how the OCM gets into the right position in the syntax, relative to the gender and case properties of its containing noun phrase. I will turn to this next, providing a partial answer.

Oblique case marker placement

What does the syntax of the oblique case marker have to look like such that it remains low in feminine environments, but has two distinct higher positions in non-feminine environments the choice between which is Case dependent?

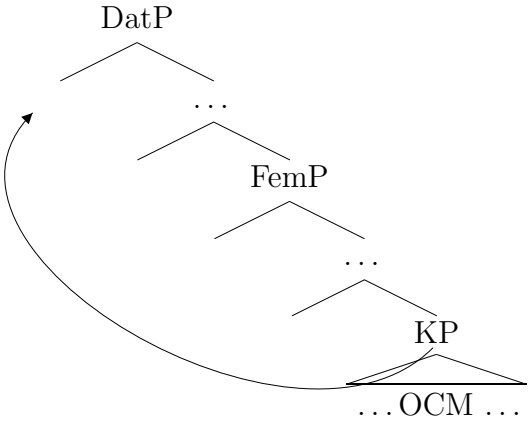
Abstractly, what seems to have to happen is that there is a high genitive position in genitive noun phrases, and a lower dative position in dative noun phrases (as represented in (36) above). These positions, when present, attract the OCM, or a projection containing the OCM. Furthermore, in feminine contexts, something must assure that the OCM will not reach the dative or the genitive position. Importantly, note that it is the OCM itself that mustn't reach the higher positions in feminine contexts, but it does not have to be the OCM itself that is ever attracted to GenP and DatP.

I propose that what is attracted to GenP and DatP is a projection, say KP, that contains the OCM (at some point in the derivation). In feminine environments, a subpart of KP, importantly containing OCM, extracts out of KP, prior to attraction of KP to GenP or DatP. The trees below abstractly exemplify the relevant aspects of a non-feminine and a feminine dative derivation.

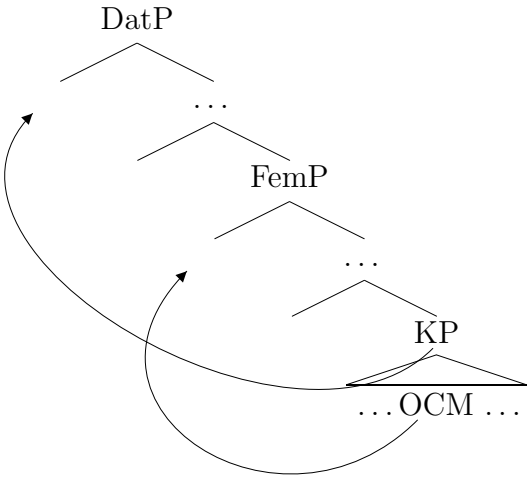
[18] Distributed Morphology has three ways of producing syncretism, which operate on two distinct levels.

- At Vocabulary Insertion:
  - SUBSET PRINCIPLE (Halle, 1997)
- Prior to Vocabulary Insertion (making two distinct feature bundles identical):
  - IMPOVERISHMENT rules (Bonet, 1991)
  - FEATURE INSERTION rules (Harbour, 2003)

(37) Non-feminine dative:



(38) Feminine dative:



This derives the syntactic distinctions that are minimally necessary to account for the differential positional properties of the oblique case marker morpheme relative to the case and gender properties of the noun phrase, which I discussed in section 7.3. Simultaneously it sets the case marker in different morphosyntactic contexts such that the morphology (i.e. Vocabulary Insertion) has the option of realizing the OCM in at most three different ways.

Importantly, the (immediate) syntactic environment of the OCM does not distinguish between Genitive and Dative in feminine noun phrases, and it does not distinguish between masculine and neuter (ever). Hence this syntax sets an upper bound on the possible allomorphic variation, which, in German and Swiss German the morphology exploits fully, and it forces the homophony pattern observed and represented in table 7.6.

An issue that arises is the following. The OCM in (37) seems to be the only element in KP that receives an overt realization, which seems unproblematic. In (38) however, where the OCM has extracted prior to movement of the remnant KP, this KP moves despite not having any overt element in it, or so it seems. This may in and of itself be considered problematic. In addition it would potentially violate Koopman's (1996) *Principle of Projection Activation*, in that in feminine

noun phrases neither DatP nor GenP would get activated.[19]

In the next section I will argue that this is (in the usual case) only apparent. KP contains overt material in addition to the OCM.[20]

7.4.2 Possessive structure in datives and genitives

Consider the French possessor doubling example in (39a).[21]

(39) a. son amie à lui — French
his friend to him
'his friend'

b. im / am ma sis buäch — Swiss German
him / to.DAT man his book
'his / the man's book'

In French the dative possessor, *à lui*, ends up in post-nominal position, unlike Swiss German. Consider now the hypothetical possibility that in certain syntactic contexts, Swiss German (and German) also allows a derivation in which (part of) the dative possessor ends up in post-nominal position (similar to French), while leaving the dative marker ***-m*** in initial position (unlike French). Let us terminologically distinguish OCM (as above, for Oblique Case Marker morpheme, here ***-m***) and PN (for Possessor Nominal, corresponding to the component of the possessor that ends up in post-nominal position in the hypothetical example). Let us assume that OCM and PN originate as a constituent, as suggested by *am ma 'the.*DAT *man'* in (39b). An antisymmetric derivation

[19]Unless we adopt the idea that the case assigning preposition originates as Gen^0 or Dat^0 and moves to its overt position.

[20]An issue which I will leave open is that of how, exactly, the OCMs are linearized. In the linear string they often surface in the same position relative to other elements, but not always. In order to account for the hierarchical order ***s*** > ***m*** > ***r*** which can be inferred on the basis of the few cases in which their linear surface order relative to other elements is not identical, some deep syntactic distinction has to be posited (as I do in (36) and (37)-(38)). Only secondarily it will need to be understood why the positional distinction only sometimes transpires to the surface. This is not a trivial matter. Abstractly the situation can be captured as follows:

i. $[\delta(s)$ s $[\delta(m)$ m $[\delta(r)$ r $]\,]\,]$

The spell out position/domain δ of ***-s*** is higher than that of ***-m***, which is higher than that of ***-r*** (=(36)). It is conceivable that the OCM has the property of being a second position clitic in a post-syntactic component, and (with the linearization domain being distinct for the respective positions the OCM is in in a given noun phrase) what counts as second position will depend on the syntax of other elements relative to each of the linearization domains. The details of such an account will need to be addressed in future work.

[21]The dative P-article combination, *a-m*, in (39b) is definite, despite there not being an overt definite marker. In a feminine example, e.g. *(a) dr Sarah irəs buäch '(to) the.*DAT *Sarah her book'* there is an overt *d-* preceding the feminine ***-r***. (There is one preposition in which contraction also obtains in the feminine: *zu-r 'to.*DAT*'*.) In the spirit of the present discussion, it is conceivable that ***-m*** moves to the left of the definite marker and, being definite itself, licenses the non-pronunciation of the latter. The feminine ***-r*** by contrast, does not move to a position preceding the definite marker. (39b) would then actually be *am THE ma sis buäch* (with the silent definite marker represented as *THE*).

with the desired effect would include the following steps.[22]

(40) a. [[am ma] sis buäch]
to.DAT man his book

b. [[ma]$_{PN}$ [[am t$_{PN}$] sis buäch]]

c. [[[am t$_{PN}$] sis buäch]$_j$ [[ma]$_{PN}$ t$_j$]]

While (40c) is not a possible linear string in Swiss German, I propose that an analogous derivation is the correct analysis of dative DPs.

Recall that possessive DPs and dative DPs are strongly parallel with regard to the morphosyntax of the dative marker / possessor pronoun.

(41)	a. MASCULINE:	i**m**	s-	-i-		-s	piär	*(his beer)*
	b. FEMININE:			-i-	**-r-**	-əs	piär	*(her beer)*
		POSS	PERS	STEM	POSS	AGRA	beer	

(42)	a. MASCULINE:	uf ə**m**	ən		ä	bärg	(*on a m.*)
	b. FEMININE:	uf	ən	**ər**	ä	bluämä	(*on a f.*)
		on DAT	STEM	DAT	AGRA	mountain/flower	

In both structures, the form and position of the OCM correlates with the grammatical gender of a nominal. In the possessive DP (41) it is not the "head noun" (*piär*) but the possessor. Taking the parallels seriously, let me propose that in dative DPs (42) the nominal whose gender feature the form and position of the OCM correlates with is also a possessor. That is, *bärg* and *bluämä* in (42) are possessor nominals.

In possessive DPs the possessive determiner (exhibiting the ADJ variant in Swiss German, see section 6.2.4) exhibits AgrA, agreeing with the possessee (*piär* in (41)). Continuing to assume that the parallelism between (41) and (42) is substantial, I propose that in datives as well, the possessor is associated with a possessee in an adjectival structure, hence featuring AgrA, which agrees with the possessee. Whereas the possessee in (41) is overt *piär*, the possessee in (42) is silent.

Coming back now to the partial analogy with French (39a) in the beginning of this section, I propose that a dative noun phrase like (42a) really looks like (43b), with silent *PLACE*, which is very close to the hypothetical possessive DP (40c)=(43a), with extraposed PN *ma 'man'*.

(43)	a.	* a	m	s-i	-s	buäch	ma	Swiss German
		to	OCM	PERS.STEM	AGRA	book	man	
	b.	uf	əm	ən	ä	PLACE	bärg	
		on	OCM	STEM	AGRA	place	mountain	

[22](40c) differs from the (grammatical) French example (39a) in that in French the entire dative constituent (containing the counterparts of both OCM and PN) ends up postnominally.

Hence *on a mountain* is really something like *on a mountain's place* (cf. Terzi (to appear) on Greek).[23]

Morphologically speaking, the main differences between possessive DPs and dative (and genitive) DPs are the presence versus absence of a person morpheme ***m-, d-, s-***; the overtness versus non-overtness of the possessee (*piär* versus *PLACE*); and the extraposition of the possessor nominal, PN.

This proposal largely solves a mystery pointed out at the end of the previous section, namely that KP should move despite being phonetically empty (in the feminine), and hence violate Koopman's (1996) Principle of Projection activation. In the proposed derivation the PN (*bärg* in (43b)) extracts from the fronted KP, stranding the OCM. In other words, the KP that fronts to Spec,DatP in neuter and masculine datives contains not only OCM (which is spelled out as ***-m*** in Spec,DatP) but also the PN. This means that even if the fronted KP does not contain the OCM, as I proposed is the case in feminine datives, it still contains the PN. In other words, Spec,DatP is activated by overt material also in feminine datives such as (44), despite the extraction of OCM previous to KP fronting.[24]

(44)

uf	$[_{KP}$ t_j t_{PN}]	ən	ər$_j$	ä	PLACE	bluämä$_{PN}$
on		STEM	OCM	AGRA	place	flower

On the present proposal the moving KP is not phonetically empty, but instead hosts the PN.[25,26]

7.4.3 Eliminating oblique weak agreement

Default features for a silent functional possessee nominal

Assuming that an analysis along the lines sketched in the previous subsection is correct, the purported "weak" agreement on adjectives in datives (and analogously in genitives) is really an

[23]In non-locative datives (and genitives) the abstract nominal is plausibly distinct. It is conceivable that the range of abstract nominals available in datives and genitives is not unlike the range of functional nominals found e.g. in indefinite pronouns: *some-place*, *some-thing*, *some-time* etc. See Leu (2005); Roehrs (2008) for some discussion.

[24]Whether and how, exactly, this can/should carry over to possessive DPs with feminine possessors is not entirely clear at this point.

[25]The PN can subsequently be subject to non-pronunciation (in NP-ellipsis contexts). Possibly the notion of pronunciation relevant to Koopman's *Projection Activation* is not absolute, in the sense that material that is later in the derivation subject to phonetic non-realization may count as overt at an earlier stage, which would be possible if we assume that roots have phonetic content in the syntax (Embick and Halle, 2008), combined with an approach to (this kind of) non-pronunciation as outlined in Kayne (2006).

[26]The proposal in (43) is close in spirit to recent proposals by Uriagereka (2001); Terzi (to appear); Aboh (to appear). Uriagereka (2001, p.423) relates clitic doubling to the structure of inalienable possession (akin to Szabolcsi (1983/84)).

i. I her saw the hand (to) Mary.

ii. I her saw THE PERSONA (to) Mary.

Note the similarity between (43b) and (ii).

instance of strong agreement, AgrA, with the silent possessee nominal. (Examples repeated from above.)

(45)	MAS:	i**m**	s-	-i-	-s	piär		*(his beer)*
	FEM:			-i- **-r-**	-əs	piär		*(her beer)*
		POSS	PERS	STEM	POSS AGRA	beer		
(46)	MAS:	uf **əm**		ən	ä	PLACE	bärg	(*on a mountain*)
	FEM:	uf		ən **ər**	ä	PLACE	bluämä	(*on a flower*)
		on DAT		STEM DAT	AGRA		mount/flower	

If so, its insensitivity to the phi-features of the overt noun in datives (an analogously in genitives) is parallel to the insensitivity of the AgrA suffix on possessive determiners to the phi-features of the possessor.

A remaining question may be whether the AgrA form *-ä* (*-en* in German) should have a special status or be attributed to one of the independently existing cells, in which case it would have to be the masculine accusative cell, given its form (*-en* in German *-ä* in Swiss German). I do not see a reason to assume the former.

Table 7.7: German singular adjectival agreement

	STRONG PARADIGM			WEAK PARADIGM		
Singular	MAS	NEU	FEM	MAS	NEU	FEM
NOM	gut-er	gut-es	gut-e	gut-e		
ACC	gut-en			gut-en		
—	gut-em		gut-er	gut-en		
—	gut-en					

In possessives, the form of AgrA on the possessive determiner is sensitive to the gender features of the possessee nominal. The fact that the AgrA suffix in datives (and genitives) is invariable, could a priori be interpreted in three different ways, two of which are more desirable than the other.

The least desirable interpretation would be that it is always the same functional nominal that figures as the possessee nominal in datives and genitives. This is undesirable if we assume that the functional possessee in (46) is indeed PLACE with locative prepositions, as suggested above. After all, certainly not all dative and genitive noun phrases have a locative character. In other words there might be a number of silent nominals.

A more likely hypothesis is that the silent functional nominal has no gender feature specifications, i.e. the *-ä*/*-en* is some kind of "default."

A third possibility would be that the silent functional nominals are always grammatically masculine. However, this would have to be made to follow from something, since it does not seem accidental.

Adjectival agreement and the position of the case marker

The surface position of the case marker not only correlates with its form, but also obliterates the overtness of adjacent agreement morphology.[27]

(47) a. mit de-m gut-en Wein German
with the-DAT good-AGR wine

b. mit gut-em Wein
with good-DAT wine

c. * mit gut-en-em Wein
with good-AGR-DAT wine

This effect can be described as obliteration of the overt realization of a phonologically dependent morpheme closer to the stem by the overt presence of a (presumably) outer phonologically dependent morpheme. This seems close to one aspect of Koopman's (1996) modified LCA, that under *head-to-head* adjunction only one head can be overt. On the present view (and contrary to Koopman's) this adjunction takes place in the morphology (under adjacency).[28]

7.5 Summary

In this chapter I addressed the status of oblique case marker morphemes in relation to adjectival agreement and the role of *ein* words.

The traditional view is that, in German and Swiss German, *ein* words trigger a mixed declension on a following adjective. Discussing the role of *ein* words in determining the distribution of strong agreement, I presented three kinds of approaches, which say that *ein* words always, sometimes, or never play a role respectively. I concluded that the NEVER kind of approach is desirable on different grounds including simplicity and its compatibility with the proposal in chapter 3.

Subsequently, I turned to presenting four a priori surprising syntactic asymmetries between the three (singular) oblique case markers ***-s***, ***-m***, and ***-r***, and suggested that they should receive

[27] A similar phenomenon is known in Italian, where the appearance of a pronoun as an enclitic on an infinitive obliterates the presence of infinitival *-e* (Cardinaletti and Shlonsky, 2004, p.528ff).

i. Lo vorrei vedere. Italian
it would-want.1SG see.INF
'I would want to see it'

ii. Vorrei veder(*e)lo
would-want see.INF.it

Cardinaletti and Shlonsky (2004) note that this fact is "extremely robust." They also note another context in which an infinitive lacks infinitival *-e*, namely when the verb is functional (i.e. "modal and volitional predicates in their restructuring guise." (p.529)). If the Italian facts and the German facts discussed in the main text are instances of the same phenomenon we would expect to possibly find counterparts of these other contexts also in the German determiner system. I will leave this question for future research.

[28] The mechanism will need to be restricted in its application, such that not every such adjunction leads to the deletion of a head.

a unified analysis. I argued that the forms map onto a syntactic hierarchy ***s*** > ***m*** > ***r***, allowing us to analyze them as contextual allomorphs of a single morpheme, which I referred to as OCM (oblique case marker), for lack of a better term.

The syntactic properties of the OCM distinguish it from AgrA. I concluded that the OCM forms are not instances of strong adjectival agreement, AgrA. This has important consequences for the analysis of adjectival agreement in German and Swiss German. It eliminates the dative and genitive rows from the paradigm and thereby makes the NEVER kind of approach to the role of *ein* words possible.

The discussion in this chapter allows a full-hearted endorsement of the proposal regarding the distribution of strong adjectival agreement I made in chapter 3. (Note though that the proposal sketched in this chapter could be right even if the proposal in chapter 3 should turn out to be mistaken.)

The proposed syntax of the OCM provides the morphology with the means to make (at most) the distinctions it does. Hence the homophony pattern observed in the dative and genitive markers (7.8) is not accidental, but is syntactically determined. Table 7.8, if read as a description, is accurate. But if read as an analysis in terms of features, I claim, it is wrong. There are no two syntactic terminals distinguished by their gender features but being realized as *-m*, for instance. But every OCM is identical in features in the syntax.[29]

Table 7.8: *OCM forms* ***-s, -m, -r*** and their environment

	MASCULINE	NEUTER	FEMININE
DAT	m	m	r
GEN	s	s	r

Finally, the purported weak agreement in oblique case environments was re-analyzed as an instance of strong agreement AgrA with a silent functional nominal. This accounts for its insensitivity to features of the overt noun and constitutes a crucial step toward explaining its invariance.

[29]Strictly speaking I did not show that, but I showed that this is a possible analysis, and since it is very simple, the burden of proof is on any more complicated proposal.

Chapter 8

Conclusion

This chapter contains a short summary of the thesis where specific results and conclusions are stated. This is followed by a statement of the main conclusions from a more general perspective and an outlook beyond the immediate discussion in this thesis.

8.1 Summary

Starting with definite demonstratives in chapter 2, I motivated the idea that certain determiners have the structure of extended adjectival projections (xAPs). Definite demonstratives involve a definite marker and (typically) a deictic element, akin to English *here/there* (1).

(1) a. det svarte huset — Norwegian
the black house.DEF

b. det derre huset — Coll. Norwegian
the there house.DEF *'that house'*

Not all the components that are syntactically and semantically present always receive a phonetic realization. Often the component akin to English *here/there* is not overt (2a), which I represented by means of capitalization. And sometimes this locative component is overt (and inflects strongly) but there is no overt definite marker (2b).

(2) a. det THERE huset — Norwegian
the THERE house.DEF *'that house'*

b. än-es Bächli — Zürich German
LOC-AGRA stream.DIM *'that little stream'*

Abstractly, (using English spelling to represent abstract morphemes that are hypothesized to have close counterparts to their actual English variants in the relevant languages, perhaps universally) there are the following options to express a definite demonstrative noun phrase roughly corresponding to English *this book*.

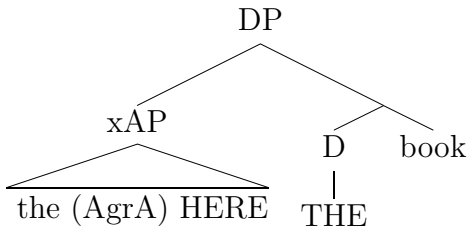
(3) a. the (AgrA) here book
b. the (AgrA) HERE book
c. here (AgrA) book

I considered the possibility that the silent *HERE* may be in a position further to the left (left of the definite marker). Indeed in e.g. Afrikaans (*die* in (4a)) and Greek (*to* in (4b)) there is an overt definite marker component present in demonstratives that is not DP-initial. At least in Greek it is clear that the *-to* that is perceived as part of the demonstrative *afto* is not the definite marker in D^0.

(4) a. hier-die huis — Afrikaans
this house
b. afto to vovlio — Greek
this the book

In part by analogy to Greek (but also based on Germanic evidence) I proposed the abstract representation in (5b), where the demonstrative - an xAP containing a definite marker, a counterpart of English *here/there*, and adjectival morphology - occupies a specifier in the left periphery of the extended projection of the noun where it licenses (in Germanic, unlike Greek) the non-pronunciation of the definite marker in D^0.

(5) a. 'this house'
b.



In Greek, the demonstrative determiner does not license the non-pronunciation of the definite marker in D^0. This was put in relation to Greek "determiner spreading," as exemplified in (6b), which I analyzed as involving movement of the xAP *to megalo* to a DP-internal focus position from where licensing of non-pronunciation is not possible.

(6) a. to megalo piano — Greek
the big piano
b. to megalo to piano
the big the piano

Such an analysis implies the claim that the pre-adjectival definite marker and the adjective are part of a constituent that excludes the noun (and the post-adjectival definite marker).

This can be argued independently on the grounds of Germanic. I noted, for instance, that the structural variants (3a) and (3c) are also attested with the (cognate of the) dual quantifier *both* in German and Swiss German.

(7) a. the (AgrA) both girls
b. both (AgrA) girls

The two variants are in fact possible with adjectives quite generally.

(8) a. d-i fein milch Swiss German
the-AGRA nice milk
b. fein-i milch
nice-AGRA milk

Based on this kind of evidence I proposed (in part following Milner and Milner (1972)) that the adjectival stem is generated to the right of the initial-merge position of the (strong) adjectival agreement morpheme AgrA (7a), and can sometimes move to its left (7b).

The quantifier *both* can float, in which case the agreement morpheme AgrA is floated (/stranded) together with *both*. This is an argument in favor of the idea that the adjectival stem and AgrA (can) be part of a constituent which the overt noun is not part of.

(9) a. bäid-i mäitli Swiss German
both-AGRA girls
b. D mäitli hend bäid-i es piär trunkä.
the girls have both-AGR a beer drunk

In agreement with the structure in (5b) I proposed in chapter 3 that the (strong) adjectival agreement AgrA is a projection inside the xAP, and that the adjectival stem follows AgrA when a definite marker is merged in the left periphery of the xAP (10a). When no definite marker is merged there, the adjectival stem (i.e. a constituent in the complement of AgrA that contains the adjective) moves to the left of AgrA (10b) into the left periphery of xAP (possibly in order to activate the relevant projection cf. Koopman (1996)).

(10) a. Def: $[_{xAP}$ *d-* ... AgrA ... Adj ...$]$
b. Indef: $[_{xAP}$ Adj ... AgrA ... Adj ...$]$

This, I claim, captures the essence of the weak/strong adjectival declension alternation in Germanic. (The surface complications that (seem to) arise when considering dative and genitive environments are discussed in chapter 7.)

Viewed this way, the alternation is paralleled in the tensed clause, where the presence of a complementizer, German *dass* (interestingly containing a *d-/th-* morpheme), correlates with a verb final surface structure, and the absence of a complementizer correlates with a V2 (i.e. possibly VP-first, cf. Nilsen (2002); Müller (2004)) surface structure.

If it is correct that AgrA is the non-highest head of xAP, there must (on standard assumptions) be a representative of the noun (with the noun's phi-features) inside the xAP in order for agreement to obtain. This is so independently of whether agreement is established in a Spec-Head

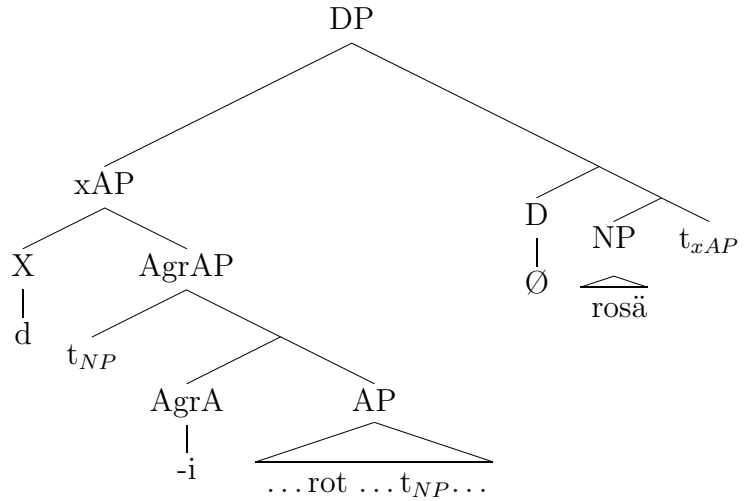
configuration or under Agree. In either case, AgrA has to c-command the noun (or a representative thereof) at some point.[1]

If it is also correct that the noun itself is not inside the xAP (on the surface), as is strongly suggested by the scope pattern of *bäid- 'both'* (section 2.3.3), by the fact that the xAP (sometimes) can be floated/stranded, and by the fact that the xAP sometimes can be separated from the noun by an (overt) definite article, then it seems likely that the noun originates in the xAP and moves out of the xAP. In other words xAPs are relativization structures.

Chapter 4 discusses this conjecture and some of the issues that arise when adopting it. The idea that adnominal adjectives derive from relative clause like structures has a long tradition (Chomsky, 1957; Smith, 1961; Kayne, 1994). It seems plausible that at least in some cases a promotion analysis must be adopted. However, it is also clear that the original formalization in Smith (1961) cannot be maintained (see e.g. Winter (1965); Yamakido (2005)). Instead, the adjective (which itself may well be phrasal, i.e. consist of several components in the syntax) combines with the noun (or NP), crucially not a DP. Subsequently heads that make up the higher functional field of the xAP are merged and the noun/NP moves (via Spec,AgrA by assumption) out of the xAP. Finally, the remnant xAP preposes into a prenominal specifier position.

(11) a. d-i rot rosä Swiss German
the-AGRA red rose

b.



In section 4.5 I show how this proposal can feed into a cartographic representation of adjectival phrases.

An intermediate conclusion at this point is that (some) determiners are really instances of extended adjectival projections.

[1] In the case of Spec-Head this is true if we assume that the noun is not base-generated in Spec,AgrA and that movement is exclusively to a c-commanding position.

In chapter 5 the structure and derivation of non-*d*-determiners was explored with a detailed comparative discussion of the *what for* construction. I identified the components (12) and the movement steps (13) involved in the derivation of *what for*.

(12) $[_{QP}$ what] for $[_{fN}$ SORT]

What for features a quantificational component *what*, and an (often silent) functional nominal SORT, and has a structure akin to that of degree modified adjectives.

The derivation of *what for* always involves fronting of *what* across *for* (13a), sometimes involves movement of the xAP across an indefinite article (13b), and usually involves extraction of *what* out of its containing xAP (13c).

(13) a. Fronting across *for*:
$[_{xAP}$ what [for t_{what} SORT]]

b. INV:
$[[_{xAP}$ what [for t_{what} SORT]] [ein NP [t_{xAP}]]]

c. Extraction from xAP:
$[_{whP}$ what [$[_{xAP}$ t_{what} for t_{what} SORT] [ein NP [t_{xAP}]]]]

Note that the extraction step (13c) is not controversial, in the sense that *what* and *for* can be overtly separated by intervening clausal material, as exemplified in (14b). This is called "*what for* split."

(14) a. Was für ein Buch hast du gelesen? German
what for a book have you read

b. Was hast du für ein Buch gelesen?
what have you for a book read

The importance of *what for* split, and more precisely of the extraction step (13c) is that it witnesses the fact that part of the modifier, namely *what*, is accessible to further syntactic operations. This could not be the case if the *what for* modifier were not itself composed in the syntax. The consequences of this are, I claim, far-reaching, and surpass the traditional appreciation of the *what for* construction in the syntactic literature significantly. This is so if my main claim in chapter 6 is correct. There I claim that the analysis of *what for* by and large generalizes to all non-*d*-determiners, e.g. the counterparts of *which, such, my,* and *no* (and presumably others).[2]

Chapter 6 hence extended the analysis presented in chapter 5 to other determiners. I showed that a range of determiners have as their main overt building blocks a quantificational/deictic component and a functional nominal. The surface similarity to *what for* differs among determiners. *welch 'which'* and *solch 'such'* for instance very clearly show the decomposition into the component

[2]The analysis must, with some ultimately insightful challenges, also extend to *jed- 'every'* in very exciting ways, as I am hoping to show in future work.

parts: *we-lch, so-lch*. The possessives and the negative determiner, on the other hand, show the extraction possibility, and hence the accessibility to further syntactic operations.

An important aspect of the discussion is that it shows that sometimes what is perceived as "a word" is not a constituent, in line with the important insight in Julien (2002b). Concretely, I argued that e.g. *m-* and *ein* in *mein Buch*, and similarly *k-* and *-ein* in *kein Buch 'no book'*, do not form a constituent (that excludes the noun) in the syntax. This is orthographically and intuitively clear in *welch ein Buch 'what a book'*. The claim is that the three instances receive a parallel analysis.

(15) a. [[$_k$ m-] [ein [t$_k$ Buch]]] *'my book'*
b. [[$_k$ k-] [ein [t$_k$ Buch]]] *'no book'*
c. [[$_k$ welch] [ein [t$_k$ Buch]]] *'what a book'*

The claim that (15a,b,c) as well as *what for* in (14) all should receive a parallel analysis is very strongly supported by the fact that (across languages) they all[3] exhibit the (otherwise) rather peculiar alternation between, what I called, an ADJectival variant (16) and an INVerted variant (17).[4]

(16) a. was für-ig-s piär — Swiss German
what for-ADJ-AGRA beer
'what kind of beer'

b. w-el-es piär — Swiss German
what-like-AGRA beer
'which beer'

c. m-i-s piär — Swiss German
1SG-POSS-AGRA beer
'my beer'

The ADJ variant (16) features overt adjectival morphology, (usually) including AgrA. The INV variant (17), on the other hand, is morphologically less rich and generally lacks (overt) AgrA, instead the xAP moves to the left of an indefinite article.

(17) a. was für ein Bier — German
what for a beer
'what kind of beer'

b. w-elch ein Bier — German
what-like a beer
'what a beer'

c. m-ein Bier — German
1.SG-a beer
'my beer'

[3]With the possible exception of *kein*.

[4]My using Swiss German for one type and German for the other is not meant to constitute a claim. Recall that some languages only allow one form or the other for particular determiners.

Taking the results of chapters 2-3 and those of chapters 5-6 together, I claim that a large number of what is sometimes called "determiners" are specialized instances of extended adjectival projections, i.e. they are phrasal constituents with an elaborate internal syntax of a kind also found outside the realm of determiners.[5]

In chapter 7, finally, I took up a loose end left hanging in chapter 3, namely the issue of dative and genitive morphology. The dative/genitive morphemes *-s, -m, -r* are traditionally represented as part of the pronominal inflection paradigm (of German), along with the nominative and accusative agreement endings. I argued that this is a misleading conception, and that (A) adjectival agreement is better understood as not involving special forms for dative and genitive environments, and (B) that the dative/genitive morphemes are better understood as possessor clitics. These clitics are related to the open class head noun of the noun phrase in dative and genitive environments in a way akin to possessor doubling constructions.

I identified a strict syntax-form correspondence for the oblique case marker(s) *-s, -m, -r* and concluded that an analysis of these forms as contextual allomorphs is well suited to capture this observation.

An important consequence of such a view is that the (traditional) assumption of the existence of dative and genitive weak agreement is misleading. The form that fills the fully syncretic dative and genitive weak agreement cells of the traditional adjectival agreement paradigm is better understood as an instance of (accusative) AgrA, i.e. "strong agreement."

Taking together the re-analyses of the dative and genitive case markers and of the weak agreement form in dative and genitive contexts, the amount of syncretism in German pronominal/adjectival agreement, which, on the traditional view, is the subject of lexical or morphological rules or simply redundantly stated as an accumulation of accidental facts, is drastically reduced.

8.2 Conclusions

I set out to gain some understanding of the nature of determiners. What I found is a rich structure inside of what has traditional been thought of as function words, concluding (18).

(18) Determiners are internally complex.

The ways in which this structural complexity obtains is not idiosyncratic to individual determiners, instead we find (19).

(19) Different determiners systematically share their structural makeup and derivational patterns.

Similarly, the structural properties internal to determiners are not language specific, hence conclusion (20).

(20) The structural makeup and derivational patterns of determiners are systematically shared across languages.

[5]This leaves open an important question which is that of what exactly makes a determiner a determiner.

Furthermore, determiners are not an entirely new and unique species of structural complexes, but instead they are variations on extended adjectival projections. Although this is only delicately quantifiable, it appears that the degree to which determiners and (ordinary) adjectival projections are similar is larger than the degree to which they differ. (21) captures the core idea.

(21) Determiners are instances of (specialized) extended adjectival projections.

That an extended adjectival projection (e.g. *how nice*) is assembled in the syntax is widely accepted. Determiners, on the other hand, are typically thought to be syntactically atomic chunks that come, fully built, from the lexicon. Saying now that determiners are instances of xAPs creates a tension. The tension dissolves as we recognize that parts of determiners move around within the xAP, as in the D-determiners discussed in chapter 2. And, perhaps more significantly, some components of such an xAP are accessible to further syntactic operations outside the xAP, including movement, as witnessed by *what for* split and by possessor- and negation-extraction (chapters 5 and 6). Hence I conclude (22).

(22) The internal complexity of determiners - and perhaps "function words" more generally - is, at least in part, the product of syntactic operations.

Conclusion (22) entails that syntax operates on constituents much smaller than what has traditionally been viewed as the domain of syntax. This can be expressed by the vague statement in (23). The vagueness and relativity of this statement should not distract us from its significance.

(23) There is more syntax than is usually assumed.

It seems to me that we are, as of yet, at quite some distance from fully grasping what the minimal elements are that syntax operates on. That does not mean that we cannot do serious syntax. This is so because syntax does not operate on such minimal (atomic) elements exclusively. On the contrary, the syntactic operations that are easily detectable to us are operations on large pieces of structure, phrasal components, often remnant constituents. We have seen instances of movement, where a constituent containing several overt morphemes is displaced.[6] In other instances the surface effect of that same movement was the displacement of only a single consonant. We have seen this sort of surface discrepancy both between different determiners and between languages. I conclude (24).

(24) A significant amount of syntactic structure typically remains unpronounced.

In many cases, some components may fail to receive a phonetic realization not because of their being intrinsically unpronounceable, but due to the structural configuration they are in at PF. This is strongly suggested for instance by the observation that sometimes the overtness of an element (e.g. the definite article in D) depends on the position of another constituent (xAP).

[6]This may seem to even be dwarfed by the massive remnant pied-piping movements proposed in much work over the past 15 years (e.g. Nkemnji (1995); Koopman (1997c); Kayne and Pollock (2001)). The point here is, however, to unfreeze our ideas of what counts as large. From a nanoscopic perspective (cf. unpublished work by Michal Starke) elements that have traditionally been viewed as morphemes may constitute structures of the sort that are elsewhere associated with the better half of a clause.

The fact (23) and the particular way in which (19) concretely pans out has led us to recognize that certain determiners consist only of a single consonant, preceding an indefinite article. Such a lonesome consonant phonologically associates with a close-by syllable nucleus. Furthermore, if the single consonant constituent predominantly occurs in the relevant sequence of overt elements, this sequence may come to be perceived as forming a unit (a word, cf. Julien (2002b)), even if the components of the relevant sequence do not form a constituent, e.g. *m-ein 'my'*. Hence, we are led to conclude (25).

(25) Sometimes, what is perceived as a determiner - and perhaps more generally as a "function word" - may not form a constituent in the syntax.

Finally, given the necessity of a more fine-grained syntax (23) of the sort proposed here, and given conclusion (24), the syntax, in a sense, becomes more powerful, and may be given more responsibility, beyond accounting for the kinds of facts that have led to conclusions (23) and (24). A reconsideration of a syntactic account of certain aspects of grammar that have been delegated to extra-syntactic components (lexicon, morphology) becomes necessary, and has, in some cases, been shown to be justified. Specifically, the discussion in chapter 7 warrants the conclusion (26).

(26) At least some seeming instances of syncretism (patterns) may profitably be re-analyzed as involving a more complex syntax, but no syncretism.

8.3 Consequences and outlook

A re-examination of the syntax inside of determiners reveals a rich field of study. The micro-comparative perspective witnesses an exciting amount of variation (see also Vangsnes (2008a)). At the same time the comparative study both across languages as well as across determiners exposes astonishing regularities which must be taken seriously in our striving toward a deeper understanding of the structure building component of language.

The insights that can be won from work as that presented in this thesis on Germanic determiners must, and hopefully will, reflect beyond Germanic and beyond determiners.

The internal syntax of determiners isn't but one subarea of the study of the internal syntax of function words. Finding a rich structural articulation inside of e.g. *welches 'which'* raises the expectation of finding structural complexity not only in e.g. *solches 'such'*, but also in (or around) other function words (prepositions, auxiliaries, modals etc.). This has been recognized in much recent work (e.g. by Aboh, Kayne, Koopman, Noonan, Terzi to name but a few), and is related to the tradition of Cardinaletti and Starke (1994, 1999).[7] But a lot remains to be discovered.

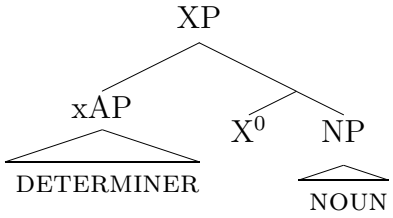
The fact that determiners are syntactic configurations and that these configurations vary only minimally and mostly on the surface within a limited range of options across Germanic, raises the question of the status of these findings vis-à-vis UG. A possibility is that this kind of noun

[7]The Cardinaletti and Starke view associates less overtness with less structure - which is certainly sometimes correct, but may sometimes be systematically misleading.

phrase determination/quantification is a parametric option, and that other languages may work differently. A more interesting hypothesis is, of course, that the Germanic pattern is universal. The immediate parallels that I have occasionally drawn to non-Germanic (and in some cases non-Indoeuropean) languages strongly support this hypothesis.

An important feature of the analysis of determiners here is that they are not instantiations of D^0, but instead occur in addition to an overt (or sometimes silent) article.[8] Hence the structural relation between the determiner and the noun is not one of sisterhood, but typically has the form in (27), where X typically corresponds to a definite article or an indefinite article, depending on the nature of the determiner.

(27)



This is very close to the proposal by Cardinaletti and Giusti (1992) for Italian and by Matthewson (1998, 2001) for Salish noun phrase quantification. According to Matthewson (1998), Salish - more precisely, the Salish language Sta'át'imcets - differs from (the traditional analysis of) English not in lacking DP-internal quantification, but in not allowing a quantifier to directly combine with the predicate, i.e. a constituent of type $< e, t >$, as its restriction. That is, Salish does not have quantifiers of category D. Instead, Salish only allows quantifiers to syntactically combine with DPs.

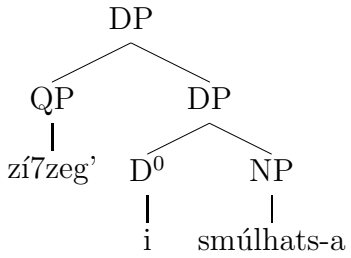
(28) Sta'át'imcets

a. zí7zeg' i smúlhats-a
each PL.DET woman-EXIS

b. tákem i máq7-al
all PL.DET snow-EXIS

Matthewson concludes that Salish *zí7zeg'* is DP adjoined, as illustrated in (29).

(29)



The present thesis provides massive evidence in favor of a generalization of such a structure to Germanic determiners.[9] A plausible hypothesis is that no language has quantifiers of category D.

[8] In the case of the ADJectival variant of non-*d*-determiners there is at least some functional head structurally intervening between the determiner and the noun.

[9] As a note of caution, let me point out that Matthewson follows the traditional terminology in using "determiner" for elements that realize D^0. Hence what she calls "determiner" is very different from what I call determiner.

Languages differ, however, with regard to the pronunciation of (the definite article in) D. Hence my proposal concurs with that of Matthewson (2001) (and Cardinaletti and Giusti (1992)) that determiners/quantifiers combine with a functional projection in the higher functional field of the extended noun phrase xNP (possibly typically DP).

An interesting feature specific to my analysis is that part of the determiner, namely the adjectival component does combine with the NP at an earlier stage in the derivation. I have not explored the possible theoretical consequences of this for the semantics of determination and quantification.

A partially overlapping hypothesis is that no language has syntactically atomic quantifiers/determiners. The present work certainly points toward such a conjecture. A question that will need to be addressed is why this should be so, i.e. what it is about UG that forces determiners/quantifiers to be syntactically complex. A plausible route of investigation would be the intuition that there are limitations on the possible meaning of heads, such that the property of the present proposal, that (part of) the determiner combines early with the noun and the entire xAP combines (again) later with a functional projection of the extended noun phrase, is the only way to derive determiner meanings that UG allows.

Bibliography

Abels, Klaus. 2003. Adposition stranding and Universal Grammar. Doctoral Dissertation, University of Connecticut.

Abels, Klaus. 2008. Towards a restrictive theory of (remnant) movement: Improper movement, remnant movement, and a linear asymmetry. In *Linguistic Variation Yearbook 2007*, ed. Jeroen Van Craenenbroeck, 53–120.

Abney, Steven. 1987. The English noun phrase in its sentential aspect. Doctoral Dissertation, Massachussetts Institute of Technology.

Aboh, Enoch Olade. 1999. *From the syntax of Gungbe to the grammar of Gbe*. Sierre, Suisse: Edition à la Carte SA.

Aboh, Enoch Olade. 2004a. *The morphosyntax of complement-head sequences: Clause structure and word order patterns in Kwa*. New York: Oxford University Press.

Aboh, Enoch Olade. 2004b. Topic and Focus within D. In *Linguistics in the Netherlands*, ed. Leonie Cornips and Jenny Doetjes, volume 21, 1–12. John Benjamins.

Aboh, Enoch Olade. to appear. The P-route. In *The Cartography of PPs*, ed. Guglielmo Cinque and Luigi Rizzi. Oxford University Press.

Alexiadou, Artemis. 2001a. Adjective Syntax and Noun Raising: Word Order Asymmetries in the DP as the Result of Adjective Distribution. *Studia Linguistica* 55:217–148.

Alexiadou, Artemis. 2001b. *Functional Structure in Nominals: Nominalization and Ergativity*. Linguistik Aktuell. Amsterdam: John Benjamins.

Alexiadou, Artemis, and Elena Anagnostopoulou. 1999. Parametrizing AGR: Word order, V-movement, and EPP-checking. *Natural Language and Linguistic Theory* 16:491–539.

Alexiadou, Artemis, Liliane Haegeman, and Melita Stavrou. 2007. *Noun phrase in the generative perspective*. Berlin: Walter De Gruyter.

Alexiadou, Artemis, and Chris Wilder. 1998. Adjectival Modification and Multiple Determiners. In *Possessors, Predicates and Movement in the DP*, ed. Artemis Alexiadou and Chris Wilder. Amsterdam: Benjamins.

Ammon, Ulrich. 1995. *Die Deutsche Sprache in Deutschland, Österreich und der Schweiz. Das Problem der nationalen Varietäten*. Berlin: Walter de Gruyter.

Androutsopoulou, Antonia. 1996. Licensing of adjectival modification. In *Proceedings of the fourteenth West Coast Conference of Formal Linguistics*, ed. Jose Camacho, Lina Choueiri, and Maki Watanabe, 17–31.

Androutsopoulou, Antonia. 2001. Adjectival Determiners in Albanian and Greek. In *Comparative Syntax of Balkan Languages*, ed. María Luisa Rivero and Angela Ralli, 161–199. Oxford: Oxford University Press.

Baker, Mark. 1988. *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.

Baltin, Mark. 2007. Deletion versus pro-forms: A false dichotomy? Ms. NYU.

Belletti, Adriana. 2004. *Structures and beyond. The cartography of syntactic structures*, volume 3. New York: Oxford University Press.

Bennis, Hans. 1983. A case of restructuring. In *Linguistics in the Netherlands*, ed. H. Bennis and W.U.S van Lessen Kloeke, 9–19. Foris.

Bennis, Hans. 1995. The meaning of structure: The *wat voor* construction revisited. In *Linguistics in the Netherlands*, ed. Marcel den Dikken and Keers Hengeveld, volume 12, 25–37. John Benjamins.

Bennis, Hans, Norbert Corver, and Marcel den Dikken. 1998. Predication in nominal phrases. *Journal of Comparative Germanic Linguistics* 1:85–117.

Bernstein, Judy. 1993. Topics in the syntax of nominal structure across Romance. Doctoral Dissertation, City University of New York.

Bernstein, Judy. 1997. Demonstratives and reinforcers in Romance and Germanic languages. *Lingua* 102:87–113.

Bernstein, Judy. 2008. English *th-* Forms. In *Essays on nominal determination. From morphology to discourse management*, ed. Henrik Høeg Müller and Alex Klinge, 213–232. John Benjamins.

Den Besten, Hans. 1981. Government, syntaktische Struktur und Kasus. In *Akten des 15. Linguistischen Kolloquiums, Münster 1980*, ed. Manfred Kohrt and Jürgen Lenerz, volume Band 1, 97–101. Tübingen.

Den Besten, Hans. 1985. The ergative hypothesis and free word order in Dutch and German. In *Studies in German Grammar*, ed. J. Toman, 23–65. Dordrecht.

Bhatt, Rajesh. 2002. The raising analysis of relative clauses: Evidence from adjectival modification. *Natural Language Semantics* 40:43–90.

Bianchi, Valentina. 1999. *Consequences of antisymmetry for the syntax of headed relative clauses*. Berlin: Mouton de Gruyter.

Bierwisch, Manfred. 1967. Syntactic features in morphology: General problems of so-called pronominal inflection in German. In *To Honour Roman Jakobson*, 239–270. The Hague: Mouton.

Bobaljik, Jonathan. 2000. The ins and outs of contextual allomorphy. In *University of Maryland Working Papers in Linguistics*, ed. K. Grohmann and C. Struijke, volume 10, 35–71.

Boeckx, Cedric. 2006. *Agreement systems*. Amsterdam: John Benjamins.

Bolinger, Dwight. 1967. Adjectives in English: Attribution and predication. *Lingua* 18:1–34.

Bolinger, Dwight. 1972. *Degree words*. The Hague: Mouton.

Bonet, Eulalia. 1991. Morphology after syntax. Doctoral Dissertation, Massachussetts Institute of Technology.

Borer, Hagit. 2005. *In name only*, volume I. Oxford University Press.

Börjars, Kersti. 1992. *D* selecting a *PP* complement in Germanic languages. In *Papers from the Workshop on the Scandinavian Noun Phrase*, ed. Anders Holmberg, volume Report 32, 1–19. Department of General Linguistics, Umeå.

Boroditsky, Lera. 2000. Metaphoric structuring: Understanding time through spatial metaphors. *Cognition* 75:1–28.

Bowers, John. 1993. The syntax of predication. *Linguistic Inquiry* 24:591–656.

Brame, Michael K. 1968. A new analysis of the relative clause: Evidence for an interpretive theory. Ms. MIT.

Bresnan, Joan. 1973. Syntax of the comparative clause construction. *Linguistic Inquiry* 4:273–349.

Brisson, Christine M. 1998. Distributivity, maximality, and floating quantifiers. Doctoral Dissertation, Rutgers University.

Brody, Michael, and Anna Szabolcsi. 2003. Overt Scope in Hungarian. *Syntax* 6:19–51.

Broekhuis, Hans, Evelien Keizer, and Marcel Den Dikken. 2003. Modern grammar of Dutch: Nouns and noun phrases. *Occasional papers 4, Tilburg* .

Brugè, Laura. 1996. Demonstrative movement in Spanish: A comparative approach. *University of Venice Working Papers in Linguistics 6.1* 1–53.

Burzio, Luigi. 1981. Intransitive verbs and Italian auxiliaries. Doctoral Dissertation, Massachussetts Institute of Technology.

Campos, Héctor, and Melita Stavrou. 2004. Polydefinite constructions in Modern Greek and in Aromanian. In *Balkan Syntax and Semantics*, ed. Olga Miseska Tomić, Linguistik Aktuell 67, 137–174. Amsterdam: John Benjamins.

Cardinaletti, Anna, and Giuliana Giusti. 1992. Partitive *ne* and the QP-hypothesis. A case study. In *Proceedings of the XVII meeting of Generative Grammar*, ed. Elisabetta Fava, 121–143. Rosenberg&Sellier.

Cardinaletti, Anna, and Ur Shlonsky. 2004. Clitic positions and restructuring in Italian. *Linguistic Inquiry* 35:519–577.

Cardinaletti, Anna, and Michal Starke. 1994. The typology of structural deficiency: A view from Germanic. *GenGenP 3.1* .

Cardinaletti, Anna, and Michal Starke. 1999. The typology of structural deficiency. In *Clitics in the Languages of Europe*, ed. Henk van Riemsdijk, 145–233. Berlin: Mouton de Gruyter.

Carstens, Vicki. 2000. Concord in minimalist theory. *Linguistic Inquiry* 31:319–355.

Chomsky, Noam. 1957. *Syntactic Structures*. The Hague: Mouton.

Chomsky, Noam. 1977. On *wh*-movement. In *Formal syntax*, ed. Peter Culicover, Thomas Wasow, and Adrian Akmajian, 71–132. New York: Academic Press.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Massachusetts: MIT Press.

Chomsky, Noam. 1999. Derivation by phase. *MITWPL* 18.

Chomsky, Noam. 2000. Minimalist Inquiries: The Framework. In *Step by Step: Essays in Minimalist Syntax in Honor of Howard Lasnik*, ed. Robert Martin, David Michaels, and Juan Uriagereka, 89–155. Cambridge, MA: MIT Press.

Chomsky, Noam, and Howard Lasnik. 1977. Filters and control. *Linguistic Inquiry* 8:425–504.

Christensen, Kirsti Koch. 1986. Norwegian 'ingen': A case of postsyntactic lexicalization. In *Scandinavian syntax*, ed. Östen Dahl and Anders Holmberg, 21–35. Stockholm: Institute of Linguistics, U. of Stockholm.

Cinque, Guglielmo. 1993. On the evidence of partial N movement in the Romace DP. *University of Venice Working Papers 3.2* 21–40. Centro Linguistico Interfaculta, Venice.

Cinque, Guglielmo. 1999. *Adverbs and functional heads – a crosslinguistic perspective*. Oxford: Oxford University Press.

Cinque, Guglielmo. 2002. *Functional structure in the DP and IP. The cartography of syntactic structures*, volume 1. New York: Oxford University Press.

Cinque, Guglielmo. 2005a. Deriving Greenberg's Universal 20 and its Exceptions. *Linguistic Inquiry* 36:315–332.

Cinque, Guglielmo. 2005b. The dual source of adjectives and phrasal movement in the Romance DP. Ms. Venice.

Cinque, Guglielmo. to appear. Two types of nonrestrictive relatives. In *Proceedings of the Colloque de Syntaxe et Sémantique de Paris 2007*.

Cinque, Guglielmo, and Richard S. Kayne. 2005. *The Oxford Handbook of Comparative Syntax*. Oxford University Press.

Corver, Norbert. 1990. The Syntax of the Left Branch Extraction. Doctoral Dissertation, Tilburg.

Corver, Norbert. 1991. The internal syntax and movement behavior of the Dutch 'wat voor'-construction. *Linguistische Berichte* 133:190–228.

Corver, Norbert. 2006. Proleptic agreement as a good design property. In *Studies on Agreement*, ed. Joo Costa and Maria Cristina Figueiredo Silva, Linguistik Aktuell 86, 47–73. Amsterdam: John Benjamins.

Corver, Norbert, and Marjo Van Koppen. 2005. Microvariation and ellipsis in the *wat voor*-construction. Talk handout, *Sounds of Silence* workshop, Tilburg.

Corver, Norbert, and Marjo Van Koppen. 2007a. Ellipsis in possessive noun phrases: A comparative approach. Ms. Utrecht.

Corver, Norbert, and Marjo Van Koppen. 2007b. Let's focus on noun phrase ellipsis. Ms. Utrecht.

Cresti, Diana M. 1995. Extraction and reconstruction. *Natural Language Semantics* 3:79–122.

Crisma, Paola. 1993. On adjective placement in Romance and Germanic event nominals. *Rivista di grammatica generativa* 18:61–100.

de Cuba, Carlos. 2007. Factive and non-factive complement clauses. Doctoral Dissertation, SUNY Stony Brook.

d'Avis, Franz-Josef. 2001. *Über 'w-Exklamativsätze' im Deutschen*. Linguistische Arbeiten 429. Tübingen: Heinz Niemeyer.

Delsing, Lars-Olof. 1993. The Internal Structure of Noun Phrases in Scandinavian Languages. Doctoral Dissertation, Lund.

Demske, Ulrike. 2005. Weshalb Demonstrativepronomina nicht immer Determinantien sind. In *Deutsche Syntax: Empirie und Theorie*, ed. Franz-Josef d'Avis, Acta Universitatis Goteburgensis, 53–80. Göteborg.

Diessel, Holger. 1999. *Demonstratives: Form, Function, and Grammaticalization*. Amsterdam/Philadelphia: John Benjamins.

Den Dikken, Marcel. 2006. *Relators and linkers: The syntax of predication, predicate inversion, and copulas*. Cambridge: MIT Press.

Dimitrova-Vulchanova, M., and G. Giusti. 1998. Fragments of balkan nomimal structure. In *Possessors, predicates, and movement in the determiner phrase*, ed. Artemis Alexiadou and Chris Wilder. Mouton.

Donaldson, Bruce C. 1993. *A Grammar of Afrikaans*. Mouton de Gruyter.

Drosdowski, Günther. 1995. *Duden Band 4. Grammatik der deutschen Gegenwartssprache*. Mannheim: Dudenverlag, 5th edition.

Dryer, Matthew. 1992. The Greenbergian word order correlations. *Language* 68:81–138.

Elbourne, Paul. 2002. Situations and individuals. Doctoral Dissertation, Massachussetts Institute of Technology.

Elbourne, Paul. 2005. Presuppositional Demonstratives. Ms. Universität Potsdam.

Embick, David, and Morris Halle. 2008. On the status of *stems* in morphological theory. Ms. UPenn and MIT.

Embick, David, and Rolf Noyer. 2001. Movement Operations and Syntax. *Linguistic Inquiry* 32:555–595.

Emonds, Joseph. 1979. Appositive relatives have no properties. *Linguistic Inquiry* 10:211–243.

Emonds, Joseph. 1985. *A unified theory of syntactic categories*. Dordrecht: Foris.

Fanselow, Gisbert. 1988. Aufspaltung von NPn und das Problem der 'freien' Wortstellung. *Linguistische Berichte* 114:91–113.

Ferguson, Charles A. 1959. Diglossia. *Word* 15:325–337.

Fischer, Ludwig. 1960. *Luzerndeutsche Grammatik*. Hitzkirch: Comenius Verlag. Edition 1989.

Gallmann, Peter. 1996. Die Steuerung der Flexion in der DP. *Linguistische Berichte* 164:283–314.

Gallmann, Peter. 2004. Feature sharing in DPs. In *Explorations in Nominal Inflection*, ed. Gereon Müller, Lutz Funkel, and Gisela Zifonun, 121–160. Berlin: Mouton De Gruyter.

Giusti, Giuliana. 1994. Enclitic articles and double definiteness: A comparative analysis of nominal structure in Romance and Germanic. *Linguistic Review* 11:231–255.

Giusti, Giuliana. 1997. The categorial status of determiners. In *The new comparative grammar*, ed. Liliane Haegeman, 95–123. London: Longman.

Giusti, Giuliana. 2002. The functional structure of noun phrases: A bare phrase structure approach. In *Functional structure in DP and IP*, ed. Guglielmo Cinque, 54–90. Oxford University Press.

Göbbel, Edward. to appear. Focus and marked positions for VP adverbs. In *On information structure, meaning and form*, ed. S. Winkler and K. Schwabe. Amsterdam: John Benjamins.

Gruber, Bettina. 2008. Complementiser Agreement new evidence from the Upper Austrian variant of Gmunden. Master's thesis, University of Vienna.

Gulli, Nino. 2003. Reduplication in Syntax. Doctoral Dissertation, CUNY.

Haegeman, Liliane. 1992. *Theory and description in generative syntax: A case study in West Flemish*. Cambridge: Cambridge University Press.

Haegeman, Liliane. 1997. *The new comparative grammar*. London: Longman.

Haegeman, Liliane. 2001. Some notes on DP-internal negative doubling. In *Syntactic microvariation*, ed. J. Barbiers et al. Amsterdam: Meertens Institute. [electronic publication].

Haegeman, Liliane. 2004. DP-periphery and clausal periphery: Possessor doubling in West Flemish. In *Peripheries, syntactic edges, and their effects*, ed. David Adger, Cécile de Cat, and Georges Tsoulas, 211–240. Dordrecht: Kluwer.

Haegeman, Liliane. 2007. Spurious *een* and the syntax of interrogative *wek* ('which') and demonstrative *zuk* ('such') in West Flemish. Ms. Lille.

Haegeman, Liliane, and Henk Van Riemsdijk. 1986. Verb projection raising, scope, and the typology of rules affecting verbs. *Linguistic Inquiry* 17:417–466.

Hägi, Sara, and Joachim Scharloth. 2005. Ist Standarddeutsch für Deutschschweizer eine Fremdsprache? Untersuchungen zu einem Topos des sprachreflexiven Diskurses. *Linguistik online* 24. Http://www.linguistik-online.de/24_05/index.html.

Hale, Kenneth L. 1976. The adjoined relative clause in Australia. In *Grammatical categories in Australian languages*, ed. R. M. W. Dixon, 78–105. Canberra: Australian Institute of Aboriginal Studies.

Halle, Morris. 1997. Distributed morphology: Impoverishment and fission. *MIT Working Papers in Linguistics* 30:425–449.

Halle, Morris, and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The view from building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. Ken Hale and Samuel Jay Keyser, 111–176. MIT Press.

Hankamer, Jorge, and Line Mikkelsen. 2002. A morphological analysis of definite nouns in Danish. *Journal of Germanic Linguistics* 14:137–175.

Harbert, Wayne. 2007. *The Germanic languages*. Cambridge.

Harbour, Daniel. 2003. The Kiowa case for feature insertion. *Natural Language and Linguistic Theory* 21:543–578.

Harbour, Daniel. 2007. *Morphosemantic number: From Kiowa noun classes to UG number features*. Springer.

Harley, Heidi, and Ralf Noyer. 1999. Distributed morphology. *Glot International* 4:3–9.

Heim, Irene. 1987. Where does the Definiteness Restriction apply? Evidence from the definiteness of variables. In *The representation of (in)definiteness*, ed. Eric J. Reuland and Alice G. B. ter Meulen, 21–42. Cambridge, Massachusetts: MIT Press.

Heim, Irene, and Angelika Kratzer. 1998. *Semantics in generative grammar*. Blackwell.

Hendrick, Randall. 1990. Operator Binding in NP. In *Proceedings of the Ninth West Coast Conference in Formal Linguistics*, ed. A. Halperin, 249–264. CSLI.

Higginbotham, James. 1985. On Semantics. *Linguistic Inquiry* 16:547–593.

Holmberg, Anders, and Christer Platzack. 2005. The Scandinavian Languages. In *The Oxford Handbook of Comparative Syntax*, ed. Guglielmo Cinque and Richard S. Kayne, 420–458. Oxford.

Holmes, Philip, and Ian Hinchliffe. 1994. *Swedish. A Comprehensive Grammar*. New York: Routledge.

Van Hoof, Hanneke. 2002. What stranded adjectives reveal about split-NP topicalization. Ms. Tübingen.

Van Hoof, Hanneke. 2006. Split topicalization. In *The Blackwell Companion to Syntax*, ed. Martin Everaert, Henk Van Riemsdijk, Rob Goedemans, and Bart Hollebrandse, volume IV. Blackwelll.

Hróarsdóttir, þorbjörg, Gunnar Hrafnbjargarson, Anna-Lena Wiklund, and Kristine Bentzen. 2006. The Tromsø guide to Scandinavian verb movement. *Working Papers in Scandinavian Syntax* 78:1–36.

Hughes, Michael. 2003. Morphological faithfulness to syntactic representation. Doctoral Dissertation, University of California, San Diego.

Ihsane, Tabea. 2006. The construction of the DP domain: From *un*-NPs and *du/des*-NPs in French to bare nouns in Romance and Germanic. Doctoral Dissertation, Université de Genève.

Ihsane, Tabea, and Genoveva Puskás. 2001. Specific is not Definite. *Generative Grammar in Geneva* 2:39–54.

IJbema, Aniek. 1997. Die *was für*-Konstruktion und Extraktion aus Nominalphrasen. Ms. Rijksuniversiteit Groningen.

Inkelas, Sharon. 1993. Nimboran position class morphology. *Natural Language and Linguistic Theory* 11:559–624.

Ioannidou, Alexandra, and Marcel Den Dikken. 2006. P-drop, D-drop, D-spread. Ms. CUNY.

Jackendoff, Ray. 1977. *X-bar syntax: A study of phrase structure*. Cambridge, Massachusetts: MIT Press.

Jacobs, Joachim. 1980. Lexical decomposition in Montague grammar. *Theoretical Linguistics* 7:121–136.

Jouitteau, Mélanie, and Milan Rezac. 2006. Deriving the complementarity effect: Relativized minimality in Breton agreement. *Lingua* 116:1915–1945.

Julien, Marit. 2002a. Determiners and word order in Scandinavian DPs. *Studia Linguistica* 56:264–314.

Julien, Marit. 2002b. *Syntactic heads and word formation*. New York: Oxford University Press.

Julien, Marit. 2005. *Nominal phrases from a Scandinavian perspective*. Amsterdam: John Benjamins.

Kallulli, Dalina. 2008. Resumption, relativization, null objects and information structure. In *Sounds of silence: Empty elements in syntax and phonology*, ed. Jutta Hartmann, Veronika Hegedüs, and Henk Van Riemsdijk, Linguistic Variations 63, 235–264. Amsterdam: Elsevier.

Kallulli, Dalina, and Antonia Rothmayr. 2008. The syntax and semantics of indefinite determiner doubling in varieties of German. *Journal of Comparative Germanic Linguistics* 11:95–136.

Katz, J. J., and P. M. Postal. 1964. *An integrated theory of linguistic descriptions*. Cambridge, MA: MIT Press.

Katzir, Roni. 2006. Scope marking, morpheme economy, and the structure of certain Germanic noun phrases. Ms. draft MIT.

Katzir, Roni. 2007. Morphology at a distance: Marking, economy, and the structure of certain Scandinavian noun phrases. Ms. MIT http://ling.auf.net/lingBuzz/000600.

Kayne, Richard S. 1984. *Connectedness and binary branching*. Dordrecht: Foris.

Kayne, Richard S. 1989. Facets of romance past participle agreement. In *Dialect variation and the theory of grammar*, ed. Paola Benincà, 85–103. Dordrecht: Foris.

Kayne, Richard S. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.

Kayne, Richard S. 2000a. *Parameters and universals*. Oxford: Oxford University Press.

Kayne, Richard S. 2000b. Person morphemes and reflexives in Italian, French, and related languages. In *Kayne 2000a*, chapter 8, 131–162.

Kayne, Richard S. 2002. Pronouns and their antecedents. In *Derivation and explanation in the Minimalist Program*, ed. Samuel David Epstein and T. Daniel Seely, 133–166. Malden, MA: Blackwell. Reprinted in Kayne 2005a.

Kayne, Richard S. 2003. Silent years, silent hours. In *Grammar in Focus. Festschrift for Christer Platzack*, volume 2, 209–226. Lund: Wallin and Dalholm. Reprinted in Kayne 2005a.

Kayne, Richard S. 2004. Here and there. In *Syntaxe, lexique et lexique-grammaire. Volume dédié à Maurice Gross*, ed. Eric Laporte, Christian Leclère, Mireille Piot, and Max Silberztein, number 24 in Lingvisticae Investigationes Supplementa. Amsterdam/Philadelphia: John Benjamins. Reprinted in Kayne 2005a.

Kayne, Richard S. 2005a. *Movement and Silence*. Oxford University Press.

Kayne, Richard S. 2005b. A note on the syntax of quantity in English. In *Kayne 2005a*, chapter 8.

Kayne, Richard S. 2005c. A Short Note on *where* vs. *place*. Ms. NYU.

Kayne, Richard S. 2006. On Parameters and on Principles of Pronunciation. In *Organizing Grammar. Linguistic Studies in Honor of Henk van Riemsdijk*, ed. H. Broekhuis, N. Corver, R. Huybregts, U. Kleinhenz, and J. Koster, 289–299. Berlin: Mouton de Gruyter.

Kayne, Richard S. 2007a. Antisymmetry and the lexicon. Ms. NYU.

Kayne, Richard S. 2007b. Some thoughts on grammaticalization. The case of *that*. XVIIIe Conférence internationale de linguistique historique UQAM, Montréal, handout.

Kayne, Richard S. 2008a. Some preliminary comparative remarks on French and Italian definite articles. In *Foundational issues in linguistic theory. Essays in honor of Jean-Roger Vergnaud*, ed. R. Freidin, C. P. Otero, and M. L. Zubizarreta, 291–321. Cambridge, MA: MIT Press.

Kayne, Richard S. 2008b. Why isn't *this* a complementizer? Ms. NYU.

Kayne, Richard S., and Jean-Yves Pollock. 2001. New Thoughts on Stylistic Inversion. In *Inversion in Romance*, ed. A. Hulk and Jean-Yves Pollock, 107–162. New York: Oxford University Press.

Kennedy, Christopher, and Jason Merchant. 2000. Attributive comparative deletion. *Natural Language and Linguistic Theory* 18:89–146.

Kester, Ellen-Petra. 1996a. Adjectival inflection and the licensing of empty categories in DP. *Journal of Linguistics* 57–78.

Kester, Ellen-Petra. 1996b. The nature of adjectival inflection. Doctoral Dissertation, Universiteit Utrecht.

Kolde, Gottfried. 1981. Sprachkontakte in gemischtsprachigen Städten. Vergleichende Untersuchungen über Voraussetzungen und Formen sprachlicher Interaktion verschiedensprachiger Jugendlicher in den Schweizer Städten Biel/Bienne und Fribourg/Freiburg i.Ue. *Zeitschrift für Dialektologie und Linguistik* Beiheft 37.

Kolliakou, Dimitra. 1999. Non-monotone anaphora and the syntax of polydefiniteness. In *Empirical issues in formal syntax and semantics*, ed. F. Corblin, C. Dobrovie-Sorin, and J.-M. Marandin, 121–145. The Hague: Thesus.

Kolliakou, Dimitra. 2004. Monadic definites and polydefinites: their form, meaning and use. *Journal of Linguistics* 40:263–323.

Koopman, Hilda. 1996. The spec head configuration. In *Syntax at sunset*, ed. E. Garret and F. Lee, UCAL Working Papers in Syntax and Semantics, 37–64. Reprinted in Koopman 2000.

Koopman, Hilda. 1997a. The Doubly Filled C Filter, the Principle of Projection Activation, and Historical Change. Ms. UCLA.

Koopman, Hilda. 1997b. Prepositions, postpositions, circumpositions and particles: The structure of Dutch PPs. In *Koopman 2000*, 204–263.

Koopman, Hilda. 1997c. Unifying predicate cleft constructions. Ms, UCLA.

Koopman, Hilda. 2000. *The syntax of specifiers and heads*. London: Routledge.

Koopman, Hilda. 2003. Inside the noun in Maasai: Head movemment and syntactic theory. In *Syntax at sunset 3*, ed. Anoop Mahajan, 77–116. UCLA/Potzdam Working Papers.

Koopman, Hilda. 2005. Agreement configurations: In defense of "Spec head". Ms. UCLA.

Koopman, Hilda, and Anna Szabolcsi. 2000. *Verbal complexes*. Cambridge, Massachusetts: MIT Press.

Kučerová, Ivona. 2005. The T-Extension Condition. In *Proceedings of the 24th West Coast Conference on Formal Linguistics*, ed. John Alderete et al, 227–235. Somerville, MA: Cascadilla Proceedings Project.

Ladusaw, William. 1982. Semantic constraints on the English partitive construction. In *Proceedings of WCCFL 1*, ed. Daniel P. Flickinger, Marlys Macken, and Nancy Wiegand, 231–242. Stanford.

Laenzlinger, Chistopher. 2005. French adjective ordering: Perspectives on DP-internal movement types. *Lingua* 115:645–689.

Landman, Fred. 1989. Group, I. *Linguistics and Philosophy* 12:559–605.

Langacker, Ronald W. 1968. Observations on French possessives. *Language* 44:51–75.

Larson, Richard. 1998. Events and modification in nominals. In *Proceedings from SALT VIII*, ed. D. Strolovitch and A. Lawson. Ithaca, NY, Cornell University.

Larson, Richard, and Franc Marušič. 2004. On indefinite pronoun structures with APs: Reply to Kishimoto. *Linguistic Inquiry* 35:268–288.

Lazorczyk, Agnieszka, and Roumyana Pancheva. undated. From 'two' to 'both': Historical changes in the syntax and meaning of *oba* in Slavic. Ms. USC.

Leu, Thomas. 2001. A Sketchy Note on the Article-Modifier Relation. *Generative Grammar in Geneva* 2:55–69.

Leu, Thomas. 2003. What moves where and *what for*: An account of Swiss German *was für*. Ms. NYU.

Leu, Thomas. 2004. What for properties are odd? Paper presented at CGSW19 at CUNY.

Leu, Thomas. 2005. Something invisible in English. In *Penn Working Papers in Linguistics: Proceedings of PLC 28*, ed. Sudha Arunachalam, Tatjana Scheffler, Sandhya Sundaresan, and Joshua Tauberer, volume 11, 143–154.

Leu, Thomas. 2007a. The four steps of *was für* splitting. Ms. NYU.

Leu, Thomas. 2007b. A note on *What for* split. *NYU Working Papers in Linguistics* 1.

Leu, Thomas. 2007c. These HERE Demonstratives. In *Penn Working Papers in Linguistics: Proceedings of P L C 30*, ed. Tatjana Scheffler, Joshua Tauberer, Aviad Eilam, and Laia Mayol (eds.), volume 13.1, 141–154.

Leu, Thomas. 2008. 'What for' internally. *Syntax* 11:100–124.

Leu, Thomas. to appear. From Greek to Germanic: Poly-(*in)-definiteness and weak/strong adjectival declension. In *Merging features: Computation, interpretation and acquisition*, ed. Anna Gavarró, Josep M. Brucart, and Jaume Solà. Oxford: Oxford University Press.

Lie, Svein. 1982. Discontinuous questions and subjacency in Norwegian. In *Readings on unbounded dependencies in Scandinavian languages*, ed. Elisabet Engdahl and Eva Ejerhed, 193–204. Umeå.

Lilley, Jason. 2000. The syntax of Germanic post-adjectival articles. CGSW talk abstract.

Lohndal, Terje. 2008. The syntax of exclamative phrases in Norwegian. Ms. University of Oslo.

Longobardi, Giuseppe. 1994. Reference and proper names. *Linguistic Inquiry* 25:609–665.

Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. *UPenn Working Papers in Linguisics* 4:201–225.

Marušič, Franc, and Rok Žaucer. 2006. The definite article TA in Colloquial Slovensian. In *Formal Approaches to Slavic Linguistics 14 (The Princeton Meeting)*, ed. J. E. Lavine et al., 189–204. Ann Arbor: Michigan Slavic Publications.

Matthewson, Lisa. 1998. *Determiner systems and quantificational strategies: Evidence from Salish*. The Hague: Holland Academic Graphics.

Matthewson, Lisa. 2001. Quantification and the nature of crosslinguistic variation. *Natural Language Semantics* 9:145–189.

Matushansky, Ora. 2002. Movement of degree/degree of movement. Doctoral Dissertation, Massachussetts Institute of Technology.

McCawley, James D. 1981. The syntax and semantics of English relative clauses. *Lingua* 53:99–149.

Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands and the theory of ellipsis*. Oxford University Press.

Milner, Judith, and Jean-Claude Milner. 1972. *La morphologie du groupe nominal en allemand*. DRLAV 2. Université de Paris VIII.

Montague, Richard. 1974. English as a formal language. In *Formal Philosophy: Selected papers of Richard Montague*, ed. Richmond H. Thomason, 188–226. New Haven: Yale University Press.

Müller, Gereon. 2002. Remarks on Nominal Inflection in German. Ms. IDS Mannheim.

Müller, Gereon. 2004. Verb-second as vP-first. *Journal of Comparative Germanic Linguistics* 7:179–234.

Nilsen, Øystein. 2002. Eliminating positions. Doctoral Dissertation, Utrecht University: LOT.

Nkemnji, Michael. 1995. Heavy pied-piping in Nweh. Doctoral Dissertation, UCLA.

Noonan, Máire. 2005. Spotlight on spatial PPs: Evidence from German shadows. Ms. McGill (draft).

Olsen, Susan. 1989a. AGR(eement) in the German noun phrase. In *Syntactic phrase structure phenomena in noun phrases and sentences*, ed. Ch. Bhatt, E. Löbel, and C. Schmitt, 39–49. Amsterdam: John Benjamins.

Olsen, Susan. 1989b. Das Possessivum: Pronomen, Determinans oder Adjektiv? *Linguistische Berichte* 120:133–153.

Ordóñez, Fransisco, and Esthela Treviño. 1999. Left dislocated subjects and the pro-drop parameter: A case study of Spanish. *Lingua* 107:39–68.

Ott, Dennis. 2008. Multiple NP split: A distributed deletion analysis. Ms. Harvard.

Pafel, Jürgen. 1996. Die synaktische und semantische Struktur von *was für* Phrasen. *Linguistische Berichte* 161:37–67.

Penka, Doris. 2005. A crosslinguistic perspective on n-words. Ms. Tübingen.

Penka, Doris. 2007. Negative Indefinites. Doctoral Dissertation, Eberhard Karls Universität Tübingen.

Penka, Doris, and Arnim von Stechow. 2001. Negative Indefinita unter Modalverben. In *Modalität und Modalverben im Deutschen*, ed. R. Müller and M. Reis, volume 9 of *Linguistische Berichte, Sonderheft*, 263–286.

Penner, Zvi, and Manuela Schönenberger. 1995. The distribution of nominal agreement features in Swiss-German dialects and the strong DP/CP parallelism hypothesis. In *Topics in Swiss German syntax*, ed. Zvi Penner, 331–346. Bern: Peter Lang.

Pfeifer, Wolfgang. 2003. *DTV etymologisches Wörterbuch des Deutschen*. München, 6 edition.

Phillips, Colin. 1996. Order and Structure. Doctoral Dissertation, Massachussetts Institute of Technology.

Platts, Mark. 1979. *Ways of meaning*. London: Routledge.

Platzack, Christer. 2000. A complement-of-N^o account of restrictive and nonrestrictive relatives: The case of Swedish. In *The syntax of relative clauses*, ed. Artemis Alexiadou, Paul Law, André Meinunger, and Chris Wilder, 265–308. Amsterdam: John Benjamins.

Poletto, Cecilia. 2000. *The higher functional field. Evidence from Northern Italian dialects*. Oxford: Oxford University Press.

Pollock, Jean-Yves. 1989. Verb movement, universal grammar, and the structure of IP. *Linguistic Inquiry* 20:365–424.

Postal, Paul. 2000. An introduction to the grammar of SQUAT. Two lectures presented at the Ohio State University. Ms. NYU.

Puskás, Genoveva. 2002. Floating quantifiers: What they can tell us about the syntax and semantics of quantifiers. *Generative Grammar in Geneva* 3:105–128.

Quine, W. V. O. 1960. *Word and object*. Cambridge: MITPress.

Van Riemsdijk, Henk. 1978. *A Case Study in Syntactic Markedness*. Dordrecht: Foris.

Van Riemsdijk, Henk. 1982. A note on case absorption. *Wiener Linguistische Gazette* 27–28:71–82.

Van Riemsdijk, Henk. 1989. Movement and Regeneration. In *Dialect variation and the theory of grammar*, ed. Paola Benincà, 105–136. Dordrecht: Foris.

Van Riemsdijk, Henk. 1998a. Categorial feature magnetism: The endocentricity and distribution of projections. *Journal of Comparative Germanic Linguistics* 2:1–48.

Van Riemsdijk, Henk. 1998b. Head movement and adjacency. *Natural Language and Linguistic Theory* 16:633–678.

Van Riemsdijk, Henk. 2002. The unbearable lightness of *Going*. The Projection Parameter as a Pure Parameter governing the distribution of elliptic motion verbs in Germanic. *Journal of Comparative Germanic Linguistics* 5:143–196.

Van Riemsdijk, Henk. 2005. Silent nouns and the spurious indefinite article in Dutch. In *Grammar & Beyond: Essays in honour of Lars Hellan*, ed. Mila Vulchanova and Tor A. Åfarli, 163–178. Oslo: Novus Press.

Rijkhoff, J. 2002. *The noun phrase*. Oxford University Press.

Ritter, Elisabeth. 1991. Two functional categories in noun phrases: Evidence from Modern Hebrew. In *Syntax and Semantics 25. Perspectives on phrase structure*, ed. Susan Rothstein, 37–62. New York: Academic Press.

Rizzi, Luigi. 1990. *Relativized minimality*. Cambridge, Massachusetts: MIT Press.

Rizzi, Luigi. 1993/4. Some notes on linguistic theory and language development: The case of root infinitives. *Language Acquisition* 3:341–393.

Rizzi, Luigi. 1994. Early Null Subjects and Root Null Subjects. In *Language acquisition studies in generative grammar*, ed. T. Hoekstra and B. Schwartz. Amsterdam: John Benjamins.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar*, ed. L. Haegeman, 281–337. Dordrecht: Kluwer.

Rizzi, Luigi. 2002. On the grammatical basis of language development: A case study. Ms. Università di Siena.

Rizzi, Luigi. 2004. *The structure of CP and IP. The cartography of syntactic structures*, volume 2. New York: Oxford University Press.

Rizzi, Luigi. 2005. Grammatically-based target-inconsistencies in child language. *The Proceedings of the Inaugural Conference on Generative Approaches to Language Acquisition - North America (GALANA). UConn/MIT Working Papers in Linguistics.*

Roberts, Craige. 1987. Modal subordination, anaphora, and distributivity. Doctoral Dissertation, University of Massachusetts at Amherst.

Roehrs, Dorian. 2006. The Morpho-Syntax of the Germanic Noun Phrase: Determiners MOVE into the Determiner Phrase. Doctoral Dissertation, Indiana University.

Roehrs, Dorian. 2007a. Complex determiners: A case study of German *ein jeder*. Handout 81st Annual Meeting of the LSA; Anaheim, CA.

Roehrs, Dorian. 2007b. Inflectional parallelism with German adjectives. Ms. University of Northern Texas.

Roehrs, Dorian. 2008. Something inner- and cross-linguistically different. *Journal of Comparative Germanic Linguistics* 11:1–42.

Rooryck, Johann. 2003. The morphosyntactic structure of articles and pronouns in Dutch. In *Germania et alia. A linguistic webschrift for Hans den Besten*, ed. Jan Koster and Henk Van Riemsdijk.
Http://odur.let.rug.nl/ koster/DenBesten/contents.htm.

Rubin, Edward. 2002. The structure of modifiers. Ms. Utah (draft).

Salzmann, Martin. 2006. Resumptive prolepsis: A study in indirect A-dependencies. Doctoral Dissertation, Utrecht University: LOT.

Santelmann, Lynn. 1993. The distribution of double determiners in Swedish: *Den* support in D. *Studia Linguistica* 47:154–176.

Sauerland, Uli. 1998. The meaning of chains. Doctoral Dissertation, Massachussetts Institute of Technology.

De Saussure, Ferdinand. 1973. *Cours de linguistique générale*. Paris: Payot. Tullio de Mauro (ed).

Săvescu Ciucivara, Oana. 2007. Hungry experiencers: An argument for silence. Ms. NYU.

Săvescu Ciucivara, Oana. to appear. Hungry experiencers. In *Proceedings of NELS 37*, ed. E. Elfner and M. Wakov.

Schachter, Paul. 1973. Focus and relativization. *Language* 49:19–46.

Scharloth, Joachim. 2004. Zwischen Fremdsprache und nationaler Varietät. Untersuchungen zum Plurizentrizitätsbewusstsein der Deutschschweizer. *Internet-Zeitschrift für Kulturwissenschaften* 15. Http://www.inst.at/trans/15Nr/06_1/scharloth15.htm.

Schlenker, Philippe. 1999. La Flexion de l'Adjectif en Allemand: La Morphologie de Haut en Bas. *Recherches Linguistiques de Vincennes, 28* .

Schoorlemmer, Maaike. 1998. Possessors, articles, and definiteness. In *Possessors, Predicates and Movement in the DP*, ed. Artemis Alexiadou and Chris Wilder, 55–86. Amsterdam: Benjamins.

Scott, Gary J. 2002. Stacked adejctival modification and the structure of nominal phrases. In *Functional structure in DP and IP: The cartography of syntactic structures*, ed. Guglielmo Cinque, 91–120. New York: Oxford University Press.

Selkirk, Elisabeth. 1977. Some remarks on noun phrase structure. In *Formal syntax*, ed. Peter W. Culicover, Thomas Wasow, and Adrian Akmajian, 185–316. New York: Academic Press.

Shlonsky, Ur. 1991. Quantifiers as functional heads: A study of quantifier float in Hebrew. *Lingua* 84:159–180.

Shlonsky, Ur. 2004. The form of Semitic noun phrases. *Lingua* 114:1465–1526.

Siebenhaar, Beat, and Alfred Wyler. 1997. *Dialekt und Hochsprache in der deutschsprachigen Schweiz*. Zürich: Edition "Pro Helvetia".

Siegel, Muffy. 1976. Capturing the Adjective. Doctoral Dissertation, University of Massachusetts, Amherst. (Published 1980 by Garland Publishing, New York).

Siegel, Muffy E. A. 1993. *Such*: Binding and the pro-adjective. Ms. Temple University.

Sigurðsson, Halldór Ármann. 2006. The Icelandic noun phrase: Central traits. *Arkiv för nordisk filologi* 121:193–236.

Siloni, Tal. 1995. On participial relatives and complementizer D^0: A case study in Hebrew and French. *Natural Language and Linguistic Theory* 13:445–487.

Simpson, Andrew. 2000. On the status of modifying DE and the structure of the Chinese DP. In *On the formal way to Chinese languages*, ed. S.W. Tang and L.L. Chen-Sheng. Stanford: CSLI.

Smith, Carlota S. 1961. A Class of Complex Modifiers in English. *Language* 37:342–365.

Solt, Stephanie. 2006. Why a few? And why not *a many? In *Proceedings of Sinn und Bedeutung 10. ZAS Papers in Linguistics*, volume 40, 333–346.

Sportiche, Dominique. 1988. A Theory of Floating Quantifiers and its Corollaries for Constituent Structure. *Linguistic Inquiry* 19:425–449.

Sproat, R., and Ch. Shih. 1988. Prenominal adjectival ordering in English and Chinese. In *Proceedings of NELS 18*, 456–489.

Starke, Michal. 2001. Move dissolves into Merge: a theory of locality. Doctoral Dissertation, Université de Genève.

Starke, Michal. 2004. On the Inexistance of Specifiers and the Nature of Heads. In *Structures and Beyond*, ed. Adriana Belletti. Oxford University Press.

Steiner, Janine. 2005. *Also d'Susi wär e ganz e liebi Frau für de Markus!* Zur Verdoppelung des indefiniten Artikels in der adverbiell erweiterten Nominalphrase im Schweizerdeutschen. *Linguistik online* 24. Http://www.linguistik-online.de/24_05/index.html.

Studler, Rebekka. 2001. Zur Syntax und Semantik der DP im Schweizerdeutschen. Master's thesis, University of Vienna.

Stump, Gregory. 2001. *Inflectional morphology: A theory of paradigm structure*. Cambridge University Press.

Svenonius, Peter. 1994. On the structural location of the attributive adjective. In *Proceedings of the 12th West Coast Conference on Formal Linguistics*, 439–454. CSLI Publications.

Svenonius, Peter. 2002. Strains of negation in Norwegian. *Working Papers in Scandinavian Syntax* 69:121–146.

Svenonius, Peter. 2007. The position of adjectives and other phrasal modifiers in the decomposition of DP. Ms. Tromso.

Szabó, Zoltán. 2001. Adjectives in context. In *Perspectives on semantics, pragmatics, and discourse*, ed. R. Harnisch and I. Kenesei, 119–146. Amsterdam: John Banjamins.

Szabolcsi, Anna. 1983/84. The possessor that ran away from home. *The Linguistic Review* 3:89–102.

Szabolcsi, Anna. 1994. The noun phrase. In *Syntax and Semantics 27: The syntactic structure of Hungarian*, ed. Ference Kiefer and Katalin Kiss, 179–274. San Diego: Academic Press.

Tamanji, Pius N. 2006. Concord and DP structure in Bafut. *Afrikanistik-online* Http://www.afrikanistik-online.de/archiv/2006/595.

Terzi, Arhonto. to appear. Locative prepositions and place. In *The Cartography of PPs*, ed. Guglielmo Cinque and Luigi Rizzi. Oxford University Press.

Thompson, Sandra. 1971. The deep structure of relative clauses. In *Studies in Linguistic Semantics*, ed. Charles J. Fillmore and D. Terence Langendoen, 78–94. New York: Holt, Rinehart, and Winston.

Troseth, Erika. 2004. Negative inversion and degree inversion in the English DP. *Linguistics In the Big Apple: CUNY/NYU Working Papers in Linguistics* .

Troseth, Erika. to appear. Degree inversion and negative intensifier inversion in the English DP. *The Linguistic Review* .

Uriagereka, Juan. 2001. Doubling and possession. In *Clitics in phonology, morphology and syntax*, ed. B. Gerlach and J. Grijzenhout. Amsterdam: John Benjamins.

Valois, Daniel. 1991. The internal syntax of DP. Doctoral Dissertation, UCLA.

Vangsnes, Øystein A. 1999. The Identification of Functional Architecture. Doctoral Dissertation, University of Bergen.

Vangsnes, Øystein A. 2004. Rolling up the Scandinavian noun phrase. GLOW handout.

Vangsnes, Øystein A. 2006a. On *wh*-determination across Scandinavian dialects. Talk at Utrecht, handout.

Vangsnes, Øystein A. 2006b. Syntactic doubling phenomena in Scandinavian. Workshop Syntactic Doubling in European Dialects, Amsterdam (handout).

Vangsnes, Øystein A. 2007. On the morphosyntax of Scandinavian adjectives: A display of selected issues. Guest lecture, Stuttgart, handout.

Vangsnes, Øystein A. 2008a. Decomposing manner *how* in colloquial Scandinavian. *Studia Linguistica* 62:119–141.

Vangsnes, Øystein A. 2008b. What kind of Scandinavian? On interrogative noun phrases across North Germanic. Ms. Tromsø.

Vergnaud, Jean-Roger. 1974. French relative clauses. Doctoral Dissertation, Massachussetts Institute of Technology.

Vicente, Luis. 2007. The syntax of heads and phrases. A study of verb (phrase) fronting. Doctoral Dissertation, Universiteit Leiden.

Vikner, Sten. 1995. *Verb movement and expletive subjects in the Germanic languages*. Oxford University Press.

De Vries, Mark. 2002. The syntax of relativization. Doctoral Dissertation, Utrecht University: LOT.

Weber, Albert. 1964. *Zürichdeutsche Grammatik*. Zürich: Schweizer Spiegel Verlag. Second and revised edition.

Williams, Edwin. 1981. Argument structure and morphology. *The Linguistic Review* 1:81–114.

Winter, Werner. 1965. Transforms without kernels. *Language* 41:484–489.

Wood, Johanna L. 2002. Much about such. *Studia Linguistica* 56:91–115.

Yamakido, Hiroko. 2005. The nature of adjectival inflection in Japanese. Doctoral Dissertation, Stony Brook University.

Zaenen, Annie, and Joan Maling. 1982. The status of resumptive pronouns in Swedish. In *Readings on unbounded dependencies in Scandinavian languages*, ed. Elisabet Engdahl and Eva Ejerhed, 223–230. Umeå.

Zamparelli, Roberto. 2000. *Layers in the determiner phrase*. New York: Garland.

Zweig, Eytan. 2005. Nouns and adjectives in numeral NPs. In *Proceedings of NELS 35*, ed. Leah Bateman and Cherlon Ussery, volume 2. GLSA.

Zwicky, Arnold. 1985. Rules of allomorphy and phonology-syntax interactions. *Journal of Linguistics* 21.

Zwicky, Arnold. 1986. German adjective agreement in GPSG. *Linguistics* 24:957–990.