

## List of Abbreviations

masc	, [m]	masculine gender
fem	, [f]	feminine gender
neut	, [n]	neuter gender
sg	, [sg]	singular number
pl	, [pl]	plural number
NOM	, [nom]	nominative case
GEN	, [gen]	genitive case
DAT	, [dat]	dative case
ACC	, [acc]	accusative case
STRONG		strong adjectival inflection form/pattern
WEAK		weak adjectival inflection form/pattern
MIXED		mixed adjectival inflection pattern
HN		head noun
SLI		semi-lexical item
ES		existential sentence
PDC		possessor doubling construction
QST		quantifier stranding
SC		Serbo-Croatian
AI		adjectival impoverishment
OS		object shift/stylistic fronting/scrambling
PN		partitive noun

### A note on technical terms

Throughout the analysis, I try to maintain a lucid use of technical terms by following several simple notational conventions: For one part, I mark the introduction of a technical term by putting the first mentioning in single quotes and, moreover, flag those terms designating derivational operations and restrictions with capitalization. Established concepts furthermore follow general spelling conventions in the literature (e.g. SEM, PHON, TRANSFER in capitals, Spec,XP without a space).

## **A note on grammaticality judgments**

Throughout the thesis, I employ graded grammaticality judgments, utilizing the symbols ‘\*’ for total ungrammaticality and ‘#’ for slight ungrammaticality/oddness as well as for cases judged (un)grammatical by approximately 50% of my informants. The former use can furthermore be intensified by reduplication (i.e. ‘##’) while the latter will always be mentioned in the text surrounding the datum.

## **Notes on citing data and footnotes**

When citing language data, I fully adopt the gloss of the source cited, including both its formatting and the abbreviations incorporated there if not indicated otherwise.

When citing or referring to specific language data or footnotes from other works, I also include the number of the respective chapter in cases where the source text is organized in such a way as to restart the count with each beginning chapter.

When repeatedly referring to a team of authors, it will be referenced by a short hand citation as indicated in the text. These are again compiled in a list following the bibliography. Moreover, key publications by Noam Chomsky are cited by an abbreviation of their title rather than by the year of publication – as listed in ch.1, fn. 1 – for ease of readability.

## Introduction

This book sets out to unify various agreement phenomena throughout the nominal domain in German. The patterns of agreement in this language are fairly complex, incorporating modifier-head agreement of various prenominal elements w.r.t. the so-called ‘ $\phi$ -features’ number and gender of the nominal head as well as case-agreement across the complete domain. An additional agreement relation holds apart from the nominal core between various left-peripheral elements and prenominal adjectives for – what has been termed – definiteness, depicted in varying inflection on the latter. All these instances of (i) modifier-head as well as modifier-modifier (ii) definiteness-,  $\phi$ - (i.e. person, number and gender) as well as case-agreement in the extended projection of the noun are standardly subsumed under the label ‘nominal concord’, a term that I will adopt here. The unifying approach to these seemingly heterogeneous instantiations of agreement builds on the narrow-syntactic relevance of  $\phi$ -feature values as well as their (dependency) relations among one another, which constitutes the basis for the account labeled ‘Phi-Syntax’, as elaborated by Bejar (2003). Building on her proposals, the analysis developed here first suggests a reordering of  $\phi$ -value dependencies and subsequently sketches the various paths of agreement for these configurations from the nominal core throughout diverging set-ups of its extended projection under a feature sharing version of Agree. Therein, several agreement relations reduce to one single chain of the shared feature hierarchy while, additionally, diverging categories of agreement reduce to the locus of overt realization of said structure; to wit, morphological definiteness reduces to gender-agreement in the extended nominal projection.

The book is structured as follows: Chapter one will set out to justify the two core notions which are not deducible but have to be stipulated for the analysis to follow in subsequent chapters, namely the effect of the status of definiteness of left-peripheral elements on the inflectional pattern of adjectives on the one hand, as well as the structural status of various prenominal lexical items as heads of discrete and ordered phrases in the extended projection of the noun on the other hand. Although I will go through some length to legitimize both, the refusal to acknowledge either one will render the following analysis moot. Therefore, this chapter has been labeled ‘axioms’ of my analysis.

Chapter two will start out by focusing on the phasal status inside the elaborated hierarchy of projections. As I will argue predominantly with reference to Bošković (2014), phasehood is a contextual, hence variable property. As will be

shown, co-occurrences of left-peripheral elements in ellipsis of, and extraction from, nominal domains are accounted for therein. The second half of the chapter will be devoted to the coding of the  $\varphi$ -features number and gender in nominal domains. Based on a variety of morpho-syntactic as well as linearizational idiosyncrasies, a split of these decided categories in favor of intertwined values will be advocated along with the diverging structural loci for the resulting hierarchically structured bundles, mainly following proposals by Ritter (1993) and Harley & Ritter (2002a). Since the concepts elaborated therein will together form the basis for the subsequent analysis and moreover facilitate the notions in which the final argument will be stated, it has been labeled 'premises' of the investigation.

The third chapter will set out to elaborate a modified framework of Phi-Syntax (Bejar 2003), incorporating among other things a feature sharing approach to Agree (Frampton & Gutmann 2000) and contrast the system developed therein with the default notion of Agree in Minimalist syntax. The remainder of the chapter will then employ all the above insights and modifications in the analysis of agreement in the nominal domain in German. It will be shown that morphological marking of definiteness and various patterns of  $\varphi$ -agreement on adjectives as well as left-peripheral lexical items are indeed two sides of the same coin, i.e. the uniform vs. disrupted chain of the shared  $\varphi$ -feature configuration throughout the nominal domain and beyond. Since the chapter will derive these findings in the combination of the insights from the preceding chapters, it has been labeled 'inference' of the current investigation.

Chapter four will be concerned with various aspects, touched upon in the course of the previous analysis. The first subchapter will take a closer look at optionality in the quantified nominal domain concerning both movement from as well as inflection on quantifying prenominal lexical items and carve out the structural and featural basis for both of them. The remainder of the chapter will then tie together various loose ends from the foregone investigation by reviewing complex configurations in the nominal domain, both above and below the word-level to (i) identify mechanisms of case-assignment inside the nominal domain and (ii) to defend a decompositional approach as well as (iii) to present considerations on the semantic purpose of the syntactic workings carved out over the course of this inquiry. Since these various topics will be taken up from previous stages of the analysis, the chapter has been labeled 'implications' of the investigation.

Chapter five provides a conclusion.

# **1 AXIOMS - Adjectival Inflection & Phrasal Categorization**

## **1.1 Introduction**

In order to guarantee a coherent analysis, both the object of investigation as well as the notions in which it is conducted have to be carefully defined in advance. The current chapter sets out to serve this purpose: On the one hand, it is intended to set the stage for the inquiry in the chapters to follow by taking a closer look at two intertwined core phenomena, i.e. adjectival inflection and definiteness in German, and introduce a general understanding of their relation to one another. The complexity concerning the questions asked in this introductory chapter regarding the relation of the two is herein restricted to the presentation of simple patterns of co-occurrence of the elements involved, followed by a pre-theoretical categorization of them.

On the other hand, the chapter is also understood to mark the outset of said analysis itself in a roundup of the structural premises that will be utilized throughout the rest of this book, i.e. the phrasal set-up of the functional domain in the nominal hierarchy of projections. Although I will do my best to motivate each of these in detail, I acknowledge that their selection, featural content and ordering to one another constitute mere stipulations that do not follow from deeper principles of the theory itself. As my analysis proceeds, however, I am positive that increasing approval will subsequently be given to the specific set-up by the reader, once a broader and wildly heterogeneous selection of data has been discussed and – as I hope – satisfactorily accounted for in the analysis.

Since the latter resides deeply in the premises of one framework of linguistic theorizing, viz. Generative Grammar, the establishment of a common ground is vital to the success of the analysis to follow, concerning the underlying rationale of the theory and the architecture of its model for the human capacity of speech as well as further concepts and technical terms. To this end I will prefix this chapter with a broad initial outline of the state of the theory in the following section, to be employed and modified in the course of my analysis. I will moreover include additional introductory subchapters and passages like the one below throughout the current analysis, preceding respective shifts in the focus of my discussion concerning the aforementioned model and its theoretical concepts as

well as elaborations of them. Therein, I hope that an accessible argumentation is provided for the reader.

## 1.2 Preliminary Remarks

The following analysis is couched in the Minimalist Program of syntactic theory, the current framework of Generative Grammar, as outlined in recent works by Noam Chomsky (1993 et seq.).<sup>1</sup> Generative Grammar takes syntactic computation to be the motor of the ‘Faculty of Language’ (FL), hence poses a syntacto-centric system. Said system takes as its input a selection of ‘Lexical Items’ (LIs), copied from long term memory (the ‘Lexicon’, LEX) into active short term memory (the ‘Numeration’/‘Lexical Array’, LA). Its output, on the other hand, is twofold: The ‘Logical Form’, LF, constitutes appropriate information for the language-external module of the conceptual-intentional (C-I) system, transmitted from the semantic component  $\Sigma$  via the interface SEM, while the phonological component  $\Phi$  transmits the ‘Phonological Form’, PF, to the external articulatory-perceptual (A-P)/sensorimotor (SM) system via the interface PHON. SEM and PHON, then, correspond loosely to the meaning and sound side of language, a basic structuralist tenet. Appropriateness of the output designates legibility at the external systems; therefore, call these requirements the ‘bare output’/‘legibility conditions’. Call the computational path from input to output the ‘derivation’.

The lexical items involved, as well as the complex structures derived thereof (call both ‘Syntactic Objects’, SOs), are taken to consist of ‘features’, basic building blocks of phonological, semantic and formal nature, the latter of which (FFs, henceforth [F]s) enter the computation of strings of (ultimately) sentential quality, the remaining ones inserted afterwards at the appropriate components (termed ‘Late Insertion’), with information at  $\Sigma$ /SEM consisting exclusively of semantic, information at  $\Phi$ /PHON solely of phonological features. A feature of inappropriate category is understood as poisonous at the respective components as well as interfaces and hence taken to force the derivation to a halt (i.e. to crash it); derivations satisfying legibility conditions at both  $\Sigma$  and  $\Phi$ , however, converge.

Formal features divide into intrinsic and optional ones, the former inherently specified in LEX, the latter added at LA. Certain formal features do not survive

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1 1993, henceforth MPLT; 1995a, henceforth MP; 1995b, henceforth BPS; 2000, henceforth MI; 2001, henceforth DbP; 2004, henceforth BEA; 2007, henceforth AUGB; 2008, henceforth OP; 2013, henceforth PoP.

past the syntactic core component ‘Narrow Syntax’ (NS): They delete before the derived structures are shipped off to the aforementioned components by the operation ‘TRANSFER’/‘Spell-Out’. Deletion applies as part of a complex process termed ‘checking’ between two compatible features consisting of (i) ‘Match’, searching for compatible items, (ii) ‘Agree’, itself a complex operation consisting of ‘Value’ and TRANSFER, as mentioned above. Compatibility is evaluated by (i) category and (ii) status of (un)interpretability: uninterpretability is unvaluedness (i.e. [ $uF$ : ]); interpretability signals survival at  $\Sigma$ /SEM (i.e. [ $iF$ :val]), hence semantic relevance, the ‘Valuation/Interpretability Biconditional’. The sets of semantic and formal features thus intersect. Interpretable features of a category [ $F$ ], call them [ $iF$ ], are able to check uninterpretable counterparts, call them [ $uF$ ], in the appropriate structural configuration of (extended) sisterhood in a binary branching, hierarchical and two-dimensional configuration, call it ‘c-command’, via Value (Agree). Call the [ $uF$ ] initiating checking the ‘probe’, [ $iF$ ] identified by Match the ‘goal’. This is the sole motor of syntactic computation, D-NS.

Features vary across another dimension, i.e. they are categorized as either strong ([ $u/iF^*$ ]) or weak ([ $u/iF$ ]), hence, the system exhibits four logically possible feature set-ups. This second partition has consequences as to the locality of the checking relation, outlined above, with weak features able to check either in a non-local, i.e. extended, or local relation of sisterhood. Lexical material is (i) selected from the Numeration/LA (in the case of terminal elements, i.e. LIs) or from a parallel workspace (in the case of complex SOs) into the computation (the current workspace) according to their undeleted (i.e. unvalued) [ $uF$ ]s, (ii) copied and (iii) combined with the highest node (the ‘Extension Condition’) by the operation ‘External Merge’ (EM). Thence, [ $uF$ ] (mutually) c-commands [ $iF$ ]. Additionally, Match is restricted to the structurally closest instance of [ $iF$ ] from [ $uF$ ] termed ‘Relativized Minimality’, the ‘Locality Condition’. Furthermore, the goal must itself bear [ $uF$ ] and hence be rendered active for further computation, the ‘Activity Condition’.

Alternatively, further buildup of the hierarchical configuration in the workspace might possibly also be established without recourse to the Numeration/LA or parallel workspaces. This is once again achieved via the operation Merge, applying workspace-internally: ‘Internal Merge’ (IM), via (i) selection of an appropriate [ $F$ ] (ii) copy of the smallest SO [ $F$ ] is part of (iii) addition of the copied SO at the top node of the hierarchy; EM and IM hence only differ in the source of the SOs involved (i.e. their initial steps as sketched above).<sup>2</sup> Thus, IM creates

2 Throughout the analysis, I represent applications of Internal Merge in language data by following traditional conventions in the employment of an indexed placeholder ‘ $t_x$ ’ (trace) in the source position for ease of exposition; the reader is asked to bear in mind that said structural position is occupied by a copy of the moved SO in Narrow Syntax.

local sisterhood relations of formerly distant SOs (more accurately, their [F]s), the prerequisite for checking relations involving strong (interpretable or uninterpretable, [*i/uF\**]) features.

The combination of two elements brings about a new terminal node, a label (but cf. Chomsky PoP for a revision of the mechanism). If the selection of lexical items has been performed on the basis of their respective featural set-up, the LI checking its [*uF*] is the one to be copied as the new label of the complex element, a subpart of both merging operations, introduced above, call it ‘Set-Merge’. Call the terminal elements ‘heads’, H. If no more [*uF*]s are part of the featural set-up of H, which provided the label before, the next item merged with the topmost node (and bearing another [*uF*]) is subsequently copied as the new label. Call the first element merged for the purpose of reducing the number of [*uF*]s of H the complement of H, call the path from the lowest label provided by H to the highest one the ‘projection of H’, the ‘phrase’ HP, call all remaining elements following the complement in the projection of H and merged with a label of H, the ‘specifiers of H’, Spec,HP. Let us, for the purpose of this analysis, restrict the number of the latter to one even though this does not follow from conceptual premises (cf. Chomsky DbP: fn. 48), hence enforce a rigid phrase-structural model.

Iff H corresponds to an item of an open class in LEX (arguably also prepositions), call HP a ‘lexical projection’, otherwise call it a ‘functional’ one. All heads are stored in LEX. Functional projections erect over lexical ones in a fixed order, given their heads are copied along with the lexical ones to the respective Numeration/LA. For the course of the present analysis, the proposal of functional projections has to be backed up by overt morphological reflexes of their respective heads or Specs, a rationale captured best in Bošković’s (2014: 30) terms: “[W]hat you see is what you get.” Call the hierarchy of projections erected on top of a lexical projection HP the ‘extended projection of H’, call the extended projection of an item of category V a sentence.

A hierarchy solely consisting of interpretable features is accessible for further computation at  $\Sigma$  and  $\Phi$  and therein translatable into appropriate information to be processed at C-I and A-P/SM respectively. However, recoverability of the semantic import of structural relations between SOs requires the retraction of applications of IM: While EM creates basic argument structure, IM creates discourse structure. Information hence splits up from D-NS as soon as all [*uF*]s have been valued and hence subsequently deleted, to be further processed at  $\Phi$ , accordingly. Call the subpart of D-NS prior to the split the ‘overt component’, the part of D-NS following said partition the ‘covert component’. The derivational path from  $\Phi$  to PHON to A-P/SM necessarily incorporates a module, bundling nodes in “word-like units” (Chomsky MP: 229), call it ‘Morphology’,



as well as a component translating hierarchical (i.e. two-dimensional) relations into relative linear order of said units, ‘Linearize’/‘Linearization’, arguably employing an algorithm based on (asymmetric) c-command relations, call this the ‘Linear Correspondence Axiom’, LCA.

Transmission from NS via TRANSFER proceeds piecemeal (i) to a fixed structural extent of the elaborated hierarchy in the workspace and (ii) at a fixed derivational timing. Call these structural stages ‘phases’. Concerning (i), TRANSFER does not target phrase-levels, but the complement of the ‘phase head’ H, call it the ‘interior’ of the phase, leaving H and Spec,HP. Call this the ‘edge’ of H. Concerning (ii), TRANSFER applies once the next higher phase head is introduced into the workspace by EM, call this the weak ‘Phase-Impenetrability Condition’, PIC. Call subparts of the Numeration corresponding of phasal magnitude, ‘Lexical Subarrays’ (LAs). Erection and transmission of SOs hence both apply iteratively in successive cyclic fashion of the basic operations involved.

The particular distribution of features along the dimension of strong vs. weak instances represents a language-specific idiosyncrasy; the totality of all valued [F]s, active in a specific language, hence constitutes a language-specific matrix of parameters, which becomes fixed for the particular native speaker during her/his respective L1-acquisition. The features themselves are (mostly) taken to constitute language universal elements, part of the cognitive endowment of human beings, as is the derivational system, sketched in this section. Call it ‘Universal Grammar’, UG.

L1-acquisition moreover includes the identification of phonological and morphological restrictions, arguably equally guided by tacitly known principles of the learner, as well as the aggregation of LIs in LEX. Languages do hence differ in PHON, not in SEM. They differ in the former in two ways: (i) obviously concerning the lexical items employed and (ii) structurally concerning the ordering of LIs/SOs w.r.t. each other, dependent on the setting of parameters, as outlined above. They do not differ in the latter structurally, since reconstruction resets language-specific restrictions. Meaning is hence universal, structure is not (though, however, restricted in its variety to the factor (active [F])<sup>2</sup> as well as principles of UG).

Information to be further processed at  $\Phi$  must hence split from the derivation at some point in the course from LEX to  $\Sigma$ , call the subpart of the latter path comprising NS and  $\Sigma$  the ‘Computational System for Human Language’, C<sub>HL</sub>. Call the design of the entire system the ‘inverted-Y model’.

FL arguably poses a perfect solution to the conditions imposed by the external systems it communicates with: the legibility conditions sketched above. Call this the ‘Strong Minimalist Thesis’, SMT. The thesis itself constitutes the primary yardstick of the Minimalist Program, a guideline in the search for deeper

explanations in the Galilean tradition that likely will turn out too restrictive. However, it is only through scrupulous analysis but confident conclusions that we will ever know. This work hopes to contribute to this end.

### 1.3 Basic Concepts – An Outline

It is a well-known though poorly understood phenomenon of several Germanic languages that adjectival inflection varies between two patterns, traditionally termed ‘strong’ and ‘weak’ inflection,<sup>3</sup> depending on what is most commonly understood to be the status of definiteness of the noun phrase that they are part of. Consider (1) in which the complex nominative noun phrase is headed by the indefinite and definite determiner respectively:

(1)

- a. ein großes Haus  
    *a big<sub>strong</sub> house*
- b. das große Haus  
    *the big<sub>weak</sub> house*

Furthermore, weak inflection is also triggered by demonstratives, certain quantifiers (to be made precise below) as well as possessive pronouns with plural head nouns (henceforth HNs), while another group of quantifiers is accompanied by adjectives bearing strong inflection. In addition, a possibly complex noun phrase, not headed by any overt determiner-like element, also exhibits strong inflection:

(2)

großes Haus  
*big<sub>strong</sub> house*

Because of the asymmetry of (1) and (2), accounts of the strong/weak inflectional dichotomy standardly take adjectives in the noun phrase to pose an inherently strong inflected category with weak inflection forced upon them by the subclass of left-peripheral elements, just outlined.

The current subchapter will be devoted to carve out the basic notions involved in generating this surface effect, i.e. definiteness and adjectival inflection, as well as their relation to one another. This might, at first, amount to a trivial task that has already been accomplished in the preceding paragraph, but as is

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3 The terms ‘strong’ and ‘weak’ ultimately go back to Jakob Grimm (1870: 718–756), as noted by Rochrs (2009).

almost always the case with human language, matters are not as simple as they first seem (although, then again, much simpler on a deeper level). To this end, I will first introduce the field of work based on the assumption that it offers a fruitful account to focus on – what has been termed – ‘definiteness’ in German, solely from a syntactic viewpoint. For that purpose, I will briefly transpose data demonstrating relevant surface effects from English to German and thereafter continue by sketching a tentative categorization of lexical elements in the nominal domain based on their interaction with the inflectional properties of coordinated adjectives, before the alignment of the source of these two phenomena is reviewed. Thereby, a basic framework for the analysis in the following chapters will be established from two of the core concepts involved.

### 1.3.1 (Morphological) Definiteness

Definiteness is a puzzling semanto-syntactic feature for language-universal linguistic theory today. This is mainly due to the manifold semantic and pragmatic concepts associated with, and expressible by, this grammatical feature comparatively as well as language-internally (e.g. specificity, situational and anaphoric familiarity, uniqueness, referentiality, associativity, deixis as well as genericity; cf. Lyons 1999: ch. 1.1, ch. 4). Several studies aimed at the unification of the aforementioned effects on meaning, associated with the grammatical feature (cf. Lyons 1999: ch. 7 and references therein); what these studies generally agree upon is that the core notions center around the availability of information in the discourse in a speaker-hearer relation (the ‘familiarity thesis’, expanded and shifted to ‘identifiability’ in Lyons’ (1999: 5f.) terms) on which all other concepts mentioned above build semantically. This line of reasoning led to a general hierarchical view of the semantic set-up of definite elements and established the approach to distribute basic semantic features to sets of definite lexical items.<sup>4</sup> But as Lyons (1999) extensively argues, this unifying attempt might run into conflict with two independent features of language itself: First, concerning the semantic aspect of definiteness, he observes that what is generally (cross-linguistically as well as language-internally) subsumed under semantic definiteness resists backtracking to a single such concept.<sup>5</sup> Second, and focusing on the syntactic side, a simple syntactic feature [ $\pm$  definiteness] may bear a variable relation to SEM/LF once again on both the language-internal as well as the cross-linguistic level. The combination of these possible realms of idiosyncrasy hence leaves a

4 See e.g. Lyons (1999: ch. 8.5.3); Klinge (2008: ch. 5); Roehrs (2009: ch 5.2.2).

5 For Lyons, unifying efforts end in the identification of two decided core concepts: ‘identifiability’ and ‘identification’, of which neither is said to be reducible to (a subpart of) the other.