

# Chapter 1

## Anarchy in Grammar? On headedness and some of its problems, illustrated by examples from German

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One of the fundamental characteristics of grammars of human languages seems to be the fact that (most of) their structures are inherently asymmetric, with exactly one element, the *head*, being more important than its co-elements. By way of introduction to this volume, we discuss some phenomena that pose potential problems for such a view and that have not yet been fully described empirically and understood theoretically. Here we focus on three structures from German, namely “left-headed” (?) verbs, then morphological reduplications and copulative/coordinative compounds, and finally (auxiliary) verb ellipses, all of which are not easily captured by a straightforward analysis in terms of head structures.

### 1 Grammar is all about hierarchies, or maybe not? – Structure-building in grammar

Once you start thinking about it, it appears that Grammar is a rather unlikely thing: it is full of asymmetries, full of dependencies, full of hierarchies.<sup>1</sup> Why is that so?<sup>2</sup> – Now, if you imagine a completely blank slate with regard to gram-

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<sup>1</sup>Fortunately we also have agreement and harmony and the like.

<sup>2</sup>The following reasoning is of course a gross simplification, but the general idea should hopefully become clear.



mathematical modelling (on the part of the linguist; or with regard to grammatical knowledge if you consider a new-born baby) the situation might be described like this: In the beginning there is just noise; the speech signal you receive consists of seemingly unstructured sounds.<sup>3</sup> However, you will soon realise that certain elements stick out: syllables with their vocalic nuclei, certain syllables that are more accentuated than others (in most languages) etc. In other words, a major factor to be taken into account when describing a language is ‘prominence’, the fact that some elements are more conspicuous and thus also somehow more important than others.

You will also realise that certain sound combinations co-occur together time and again, that’s what linguists call *words*, or sometimes larger units, collocations. In many languages, these words sometimes occur with minor differences, i.e. modifications or further elements added to them: inflection. After a while you will realise that not only sounds regularly co-occur in order to form words, but also that some of those words tend to come together with specific other words, or at least with one or another word of a small group of other words. In other words, words can be grouped into classes. The members of these classes share certain commonalities; for instance, members of one class tend to be preceded – immediately or with something in-between – by elements from another word class. Thus we get a distinction between, say, nouns and articles in English or German or French. If you carry out such classificatory operations long enough, by determining (types of) elements that somehow hang together, you will gradually build up a system of the building blocks of a language: sounds, words, and what in many grammatical models is called phrases. In their entirety, all these elements constitute a complex network of interrelations.

Interestingly now, not all of these elements are of equal standing with regard to their interaction with other elements, that is with regard to their behaviour in larger linguistic structures, the way they fit into those units. Some elements seem to be more important for structure-building at a particular location in the system than others. Factors that are relevant for the relative importance of elements include: the degree of obligatoriness of their occurrence within a particular structure, their ability to determine the occurrence and even the particular shape of other elements nearby, their ability to determine certain properties of the whole group of elements in which they occur.

So, for example, and like before we simplify slightly, in certain structures a verb is (more or less) certainly there – otherwise the whole thing would be a different structure altogether; such a verb, by virtue of its valency, requires through

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<sup>3</sup>This is similar to the situation one experiences when one hears an entirely unknown language.

a dependency relation the presence of certain other elements (called arguments, i.e. a subject, potentially also objects) and can assign them a particular case; all structures combining such an element *verb* with its companion(s) are verb phrases and share certain properties. For example, in most grammatical structures in languages such as English or German verbs have endings that indicate different *tenses*, and this entails that at some higher level the whole group containing the verb will have tense.<sup>4</sup> To put it in a nutshell: a verb phrase is a verb phrase only by virtue of its containing an obligatory element called verb, which is thus its most important element and which exhibits certain (combinatorial) properties, which in turn influence some of the properties of the structure at large, for instance how many verbal arguments this structure contains.

Such reasonings can be generalised: similar structure-building processes seem to occur at all levels of grammar, from phonology through morphology to syntax. We will always find structures where some element is more central, more dominant, more important than the other. This very observation is, of course, the rationale behind the wide-spread application of a notion *head* in grammatical theorising, in theorising across widely different grammatical models. Thus, the classical literature on the subject (since Bloomfield 1933) has collected a variety of characteristics of grammatical heads (in contrast to non-heads) that they exhibit typically in their respective structures:<sup>5</sup> Usually, heads are obligatory, determine the category and other properties of the structure they are part of, select for elements they co-occur with, and determine features of their respective non-heads via agreement, case and theta-role assignment, etc. – However, not all grammatical structures can be easily captured with such a notion of head: Time and again we find exceptional structures where there either seems to be no head at all because there is no structural asymmetry involved or where there seems to be a head that exerts some influence, but stays invisible otherwise, or where there is a head that just behaves in an unexpected way, for example by occurring in the “wrong” position with regard to the language-specific serialisation rules.<sup>6</sup>

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<sup>4</sup>Needless to say for linguists, depending on the particular grammatical framework you happen to work in, you might believe that things are much more complicated, such that, strictly speaking, it is not the verb phrase in the narrow sense that is tensed, but a somewhat more subtle grammatical element called the Inflectional Phrase or Tense Phrase or some other superordinated structural element or feature, respectively.

<sup>5</sup>We need to list only the most important publications here: Lieber (1980), Williams (1981), Selkirk (1982), Zwicky (1985), Hudson (1987), Corbett et al. (1993), Croft (1996), among many others.

<sup>6</sup>For a general discussion of how grammatical exceptions can be dealt with theoretically cf., e.g., Simon & Wiese (2011).

Now, by focussing on problematic cases, mostly but not exclusively from German, this volume aims to contribute some fresh ideas to the extensive discussion of headedness, the discussion around the central properties of grammatical heads, whether they are an essential ingredient of grammatical theory or whether they might actually be a hindrance to understanding the characteristics of some (or all?) grammatical structures, and whether the idea of *head* can even be done away with altogether and be replaced by more abstract notions. In the rest of this introductory chapter we will present some hard nuts from the grammar of German, without attempting to provide definitive answers regarding their analysis; they involve directionality, strict symmetry, thus non-headedness and invisibility, i.e. headlessness.

## 2 Potential problems for the notion *head*

### 2.1 Contrarianism: Against the usual directionality

First, problems for the notion *head* may arise if structures appear to be asymmetric and endocentric but if it is nevertheless hard to determine which constituent fulfils the function of the head. To illustrate this, we discuss two examples from word-formation of verbs in German(ic).

In German – as in Germanic languages in general –, morphologically complex words usually adhere to the “Righthand Head Rule” (RHR), as first formulated in Williams (1981: 248) with regard to English: “In morphology, we define the head of a morphologically complex word to be the righthand member of that word”.

Surprisingly then, the Low German verbs *nickköppen*, *schüddköppen*/*schürrköppen*, *luukoren*, *reckhalsen*, and *knipögen* in (1) have the structure “verb + noun”; here it is not the righthand nominal constituent that determines the properties of the complex word, such as word class, inflection class and semantic category, but the element on the left, the verb:

- (1)    a. *nick-köpp-en*                      (Low German, Åsdahl Holmberg 1973: 50–52)  
          *nod-head-INF*  
          ‘to nod (one’s head)’  
      b. *schüdd(e)-köpp-en*  
          *shake-head-INF*  
          ‘to shake one’s head’  
      c. *luuk-or-en*  
          *listen-ear-INF*  
          ‘to listen’

- d. reck-hals-en  
crane-neck-INF  
'to crane one's neck'
- e. knip-ög-en  
cut-eye-INF  
'to blink'

It is important to note that the respective simplex verbs *\*köppen*, *\*halsen*, *\*oren* etc. do not exist in Low German, at least not with the meanings involved in the examples above.

The pattern is not exclusive for Low German, it is also vividly present – and productive up to this day – in Dutch (cf., e.g., Åsdahl Holmberg 1973 for a vast collection of examples). There are not many analyses of these verbs on the market, and these few vary considerably. In brief, they offer the following morphological interpretations:

- Inverted compound (Henzen 1965):

This analysis is discussed by Åsdahl Holmberg (1973: 55–56) referring to a remark in Henzen (1965: Section 145c). It comes closest to the idea of left-headed compounds. The analysis is supported by the fact that some verbs have right-headed equivalents, such as *slagbuk(en)* / *bukslag(en)* 'to breathe heavily, lit. hit+belly' (Åsdahl Holmberg 1973: 53, 56).

- Noun incorporation (van Ginneken 1939: Section 2; Weggelaar 1986 for Dutch):<sup>7</sup>

Drawing parallels to noun incorporation in indigenous languages of the Americas, particularly to Nahuatl and the Algonquian and Iroquoian languages, van Ginneken and Weggelaar both assume that a noun with the function of instrumental adverbial, direct object or – less frequently – subject has been incorporated into the verb.

- Conversion (e.g. Weise 1920: 32–37; Åsdahl Holmberg 1973):

According to this view, verbs of the type illustrated in (1) originate from exocentric compounds, more precisely from possessive compounds, with the structure 'V+N', for example nouns such as *Knippoog* 'a wink', *Schüddekopp* 'someone who has a shaky head', or *Nickkopp* 'someone who keeps nodding approvingly, i.e. a hypocrite'. If these nouns, which remarkably involve without exception inalienable possessivity, are converted into verb

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<sup>7</sup>We are very grateful to Anne Breitbarth for bringing the paper by Weggelaar to our attention.

stems we get the verbs in (1). Here, any flavour of left-headedness is dispensable. Plausible as this account is, it faces the problem that often no corresponding possessive compounds are attested (cf. Weggelaar 1986: 304). The only way to maintain the conversion analysis is to assume that verbs without a corresponding noun have been formed by analogy (which can well be argued for considering the fact that many of these verb patterns are analogically productive; cf. Åsdahl Holmberg 1973).

However, this picture gets even more complicated when we look at nouns. N+N compounds such as *Stuutenbotter* (lit. bread-butter) ‘slice of bread and butter’ and *Katteik* (lit. cat-oak) ‘squirrel’ cannot be the result of incorporation or conversion but look indeed very much like inverted compounds (“Inversionskomposita”, Ortner & Ortner 1984: 61–62; Olsen 2015b). The respective right-headed equivalents exist alongside the “inverted” compounds, cf. examples (2) and (3):

- (2) *Stuuten-botter* vs. *Botter-stuuten* (Low German)  
white.bread-butter butter-white.bread  
‘slice of bread and butter (sandwich)’
- (3) *Katt-eik* vs. *Eik-katt* (Low German)  
cat-oak oak-cat  
‘squirrel’

Clearly, analyses that rely on morphological processes other than compounding, such as noun incorporation, or conversion from other word classes, are not feasible here.

What we illustrate by these few examples is that such patterns of (alleged or true) inversion still pose a number of empirical and theoretical problems. In this introduction we cannot discuss these questions further but must leave them open for now.

A more clear-cut case of potential left-headedness are verbs which are derived from nouns and adjectives through prefixation. Examples for this type of verb formation are abundant in German (and in other Germanic languages, e.g. in Swedish and English):<sup>8,9</sup>

<sup>8</sup>An example from Swedish is the prefixed verb *bekransa* ‘to garland’ (Schmidt 1996: 90).

<sup>9</sup>For present purposes we do not need to commit ourselves to any of the numerous accounts for the difference in morphosyntactic status of the first morpheme of the verbs in (4a-d) vs (4e,f), respectively; hence the unconventional gloss MORPH.

- (4) a. ver-gitter-n (German, Elsen 2014: 215, 216)  
 PREFIX-lattice-INF  
 ‘to lattice sth.’
- b. ver-blass-en  
 PREFIX-pale-INF  
 ‘to fade’
- c. be-frei-en  
 PREFIX-free-INF  
 ‘to free sth.’
- d. ent-thron-en  
 PREFIX-throne-INF  
 ‘to dethrone sb.’
- e. auf-heiter-n  
 MORPH-bright-INF  
 ‘to cheer up sb.’
- f. ein-nebel-n  
 MORPH-fog-INF  
 ‘to fog sb./sth.’

In the examples in (4), the syntactic category of the complex word is inherited from the verbal prefixes and verbal particles *ver-*, *be-*, *ent-*, *auf-* and *ein-*. This phenomenon cannot be waved aside as exceptional, for such types of denominal prefixed verbs are very frequent, and what is more, they comprise almost the whole inventory of German verbal prefixes and verbal particles (see Fleischer & Barz 2012: Sections 5.2–5.3 and Elsen 2014: 215–222 for comprehensive lists).

Williams (1981: 250) considers these derivations as “systematic exceptions to the RHR”, referring to English denominal verbs with the prefix *en-*, for example *to enrage*, *to encase*, *to ennoble*, etc.

This view is not generally taken in subsequent studies on German. Verbal prefixes are often considered as not being able to change the word-class of nouns and adjectives. Instead, it is assumed that verbal prefixes are strictly selective with respect to their base, i.e. they only combine with verbs. From this it follows that one needs to assume that the base nouns and adjectives are first turned into verbs by conversion (Olsen 1990a; Lohde 2006: 49–50, 275–277; Fortmann 2007: 27–28; Michel 2014: 145–149) or by derivation (Müller 2003: 284 for particle verbs) and then, in a second step, combined with the verbal prefix or verbal particle. While such analyses preserve the consistent right-headedness of complex verbs

it comes with a considerable disadvantage: again, we have to assume something special, namely virtual intermediate forms because simplex verbs corresponding to the base nouns and adjectives most often do not exist:

- (5)    a. Gitter<sub>N</sub> > \*gitter-<sub>V</sub> > ver-gitter-(en)<sub>V</sub>  
               ‘lattice’                  ‘to.lattice’                      (German)
- b. blass<sub>A</sub> > \*blass-<sub>V</sub> > ver-blass-(en)<sub>V</sub>
- ‘pale’                      ‘to.fade’

Assuming such virtual intermediate verbs is particularly unsatisfactory because conversion from noun to verb or adjective to verb is otherwise very productive in German, cf. *Salz* > *salzen* 'salt – to salt', *kühl* > *kühlen* 'cool – to cool'. Products of N>V and A>V conversion can easily be prefixed, cf. *versalzen* 'to oversalt' and *verkühlen* 'to get a chill', *abkühlen* 'to cool down'. Accordingly, exactly this observation is brought forward not against but in favour of the conversion analysis. The argument here is that verbs like *\*gittern* and *\*blassen* are potential, grammatically well-formed verb forms which are merely – and more or less accidentally – not in regular use in contemporary German.

The nature of conceivable ways of coming to grips with these prefix-verb patterns depends strongly on the very notion of *morphological head*. Here, relevant questions concern the categorial features of heads, their semantic contribution, their fixed (or non-fixed) position, among others. – Another way to approach this problem is to ask oneself, e.g., whether heads are really indispensable or whether structure-building processes may appropriately be modelled without relying on the basic premise that each type of structural complexity implies a head-complement configuration (a proposal for an analysis of verbs like those in (4) within the framework of Construction Morphology is spelled out in Michel 2014; cf. also the Construction Grammar account of applicative verbs like *bedachen* ‘to roof something’ in particular in Michaelis & Ruppenhofer 2001).

## 2.2 Egalitarianism: No or more than one head

A second difficulty for the notion of “head” and for the concept of headedness manifests itself in symmetric structures. Here we deal with structural complexity that lacks dependency. To illustrate this notorious problem very briefly and only exemplarily, we turn again to word formation in German, specifically to morphological full reduplication – with a side glance to coordinative compounds.

In general, full reduplication refers to a structure-building operation that comprises the exact doubling of a linguistic unit. In German, this process is considered as a marginal and not fully productive process by reference grammars and



text books (cf., e.g., Ortner & Ortner 1984: 104; Lohde 2006: 43; Fleischer & Barz 2012: 94–96). Recent studies have shown, however, that full reduplication is in fact quite productive in contemporary German (Finkbeiner 2014; Freywald 2015), namely with regard to a type of reduplication that has first been described in greater detail for English, where it was labelled as “Contrastive Focus Reduplication” (Ghomeshi et al. 2004), “Identical Constituent Compounding” (Hohenhaus 1996, 2004), and “lexical clone construction” (Horn 2018). These terms cover reduplications of the type *salad-salad* (‘green salad, as opposed to, say, pasta salad’) or *late-late* (‘very much too late and not just late’). Examples for the German equivalent are given in (6)–(8). They are attested widely in colloquial spoken and written German (cf. Finkbeiner 2014; Freywald 2015):<sup>10</sup>

- (6) Dann bin ich doch mal hier die langweilige Wurst, die ein Buch nach dem anderen liest. :-) Es ist höchstens drin gleichzeitig eins auf meinem Reader und ein *Buchbuch* zu lesen und selbst das mach ich nicht so gerne.<sup>11</sup>  
 ‘So, I’m the bore who reads one book after the other. At the utmost, I read one on my reading pad and a *book-book* at the same time. And even that I don’t like very much.’

For English, the function of this kind of reduplication has been described as “singl[ing] out a member or subset of the extension of the noun that represents a true, real, default, or prototype instance” (Horn 1993: 48). The same can be said for the German cases. The noun *Buchbuch* ‘book-book’ refers to a real, physical book, one that is made of paper between covers, which in the example above is contrasted with an e-book that consists only of an electronic file and can hence only be read with the help of an e-book reader or a similar device.

The internal structure of nouns like *Buchbuch* could be seen as that of a compound where the word *Buch* is combined with the word *Buch*. Then, the right-hand constituent could be regarded as the head of the resulting noun. Even if head effects, such as word-class change, determination of gender and inflection class, are not discernable at all – given that both nouns have the same grammatical properties –, the interpretation of the complex noun as a compound implies a semantic relationship of modification between the constituent on the left and the one on the right: A *Buchbuch*, or: *book-book*, is a book-like book. Thus, on semantic grounds, it can be argued that reduplicative nouns like the one in (6) are right-headed.

<sup>10</sup>Consequently, the remark made in Stolz et al. (2011: 202) seems somewhat outdated by now and calls for correction: “Not surprisingly, the pattern has not caught on in colloquial German”.

<sup>11</sup>Contribution in an internet forum, 2013-07-24; <https://wasliestdu.de/frage/lesegewohnheiten/buecher-parallel-lesen>.

This line of argumentation starts crumbling, however, as soon as other word classes are taken into account. Adverbs and verbs are as happily reduplicated as nouns and adjectives in German:

- (7) Und die Millisekunde nach dem Schuss reicht für den Geiselnnehmer auch, selbst noch den Abzug zu drücken. Man stirbt ja nicht *sofortsofort*.<sup>12</sup>  
'The millisecond after the gunshot is enough for the kidnapper to pull the trigger himself. One does not die *instantly-instantly* [= that instantly].'
- (8) Auch an so einem Vergleich merke ich, was ich an Gladbach mag: Hier sind alle so realistisch. Leverkusen muss europäisch spielen, Schalke muss, Wolfsburg *muss-muss*, vielleicht muss bald sogar Leipzig.<sup>13</sup>  
'By such a comparison I realise, too, what I like about Gladbach: They are so realistic. Leverkusen must play European [i.e. in a European league], Schalke must do it, Wolfsburg *must-must* do it, perhaps even Leipzig must do it soon.'

It is much harder to establish a modifying relation between the two instances of *sofort* 'instantly' in (7) and of *muss* 's/he must' in (8) than with *Buch* 'book' in (6). How can *muss* be a modifier of *muss*? – Moreover, and more importantly, compounding is generally not productive with adverbs and verbs in contemporary German (Fleischer & Barz 2012: 361–366, 374).

Another argument against a compound-like determinative modifier-head structure comes from the fact that, as in example (8), both reduplicated elements can be inflected word-forms – something unheard of in regular compounds. The reduplicated verb *muss* is a finite form of the modal verb *müssen* 'must', which is marked for 3SG.PRS.IND.

Similarly, in reduplicated nouns both elements are marked for number. In (9) and (10) the plural markers *-er* in *Büch-er* 'books' and *-e* in *Freund-e* 'friends' are attached twice:

- (9) So betrachtet müsste der Unterricht sehr viel individueller und offener gestaltet werden: bringt eure Lieblingsbücher mit und diskutiert sie, und wenn ihr *Bücherbücher* sterbenslangweilig findet, hey, es gibt auch zu zahlreichen Filmen und Spielen bereits komplette Bücherserien und Graphic Novels.<sup>14</sup>

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<sup>12</sup>Internet-forum entry, 2009-07-28.

<sup>13</sup>*Süddeutsche Zeitung* [German newspaper], 2016-07-23/24, p. 39. We are very grateful to Ursula Götz for spotting this example and sharing it with us.

<sup>14</sup>Internet-forum entry, 2010-08-12.

‘Seen from this perspective, lessons should be organised much more individually and openly: bring your favourite books along and discuss them, and if you find that *books-books* are deadly boring, hey, there are also whole book series on films and games as well as graphic novels.’

- (10) nächstes thema. ich brauche einen freund. also, *freunde**freunde* habe ich allemal genug, aber ich brauche einen festen freund.<sup>15</sup>  
 ‘Next topic. I need a friend. Well, *friends-friends* [= pals] I’ve got enough, I need a boy-friend.’

In conclusion, it is not only not self-evident, which of the two constituents might serve as a head, but also whether we deal with a headed structure at all.

A second kind of currently productive full reduplication in German, the reduplication of bare verb stems, illustrated in (11) and (12), poses even more severe questions with regard to headedness:

- (11) ...drei vier dünne scheiben frischen ingwer ungeschält mit heißem wasser übergießen, paar minuten ziehen lassen löffel zucker umrühren köööstlich und \**fühl-fühl*\* füsse sind warm<sup>16</sup>  
 ‘Pour hot water on three or four thin slices of unpeeled ginger, let it draw for several minutes, add a teaspoon of sugar, stir – delicious, and \*feel-feel\* feet are warm.’
- (12) \**freu-freu*\* Der erste Award hat meinen Blog erreicht :)))<sup>17</sup>  
 rejoice-rejoice the first award has my blog reached  
 ‘\*being glad\* The first award for my blog!’

The use of bare verb stems is widespread in computer-mediated communication, especially in chat rooms, guestbooks, forums, and newsgroups. Typically, they are enclosed by two asterisks. These bare verb stems are uninflected verbs which lack any inflection marker, even the otherwise obligatory infinitive suffix *-en* (the German term for these free-standing verb stems, coined by Teuber (1999), is “Inflektiv”, a somewhat confusing terminology when viewed from an English perspective; they are termed “Non-Inflectional Constructions” in Bücking & Rau (2013)). Here, roughly speaking, the function of bare verb stems is to depict sounds or to comment on an utterance or event by referring to a concomitant non-linguistic activity, such as grumbling, blinking, laughing or being

<sup>15</sup>Blog entry, 2009-07-19.

<sup>16</sup>Internet-forum entry, 2003-01-08.

<sup>17</sup>Newsgroup and forum corpus, Richling (2008).

glad (cf. Teuber 1999: 22–25; Schlobinski 2001: 193–206; Pankow 2003: 116–121; Bücking & Rau 2013: 76–82). For the most part, they are used in their simplex, non-reduplicated form, but reduplication is very common, too. The reduplicated forms express a prolonged way of the activity or state the single verb refers to; therefore they are analysed as expressing durative aspect in Freywald (2015: 935–938). Crucially, while reduplicated bare verb stems often have such iterative semantics, there is no restriction to iterativity. Verbs expressing states, such as *freuen* ‘to be glad’ in (12), are reduplicated, too. Thus, there is a structural meaning of the reduplication process as such, namely that of “extended duration of the denoted activity” (Freywald 2015: 936).

As to headedness, there is no modifying relation between the two reduplicated bare verb stems at all. The interpretation is tied to the reduplicative pattern itself and not to any semantic relation between the two parts. Thus, there is a clear indication that we deal with non-headed structures here.

The reduplication patterns discussed above, particularly the reduplication of nouns (cf. (6)), raise questions with respect to headedness that arise in a similar way with copulative, or more precisely: coordinative compounds, such as *Spieler-trainer* ‘player-coach’. These compounds are categorised as *Kopulativkomposita* ‘copulative compounds’ in the German tradition, but labelled “coordinative appositive compounds”, for instance, in Olsen (2015a: 368–369), in order to separate them from so-called “co-compounds” (Wälchli 2005; Arcodia 2018) (or: *dvandvas* in Sanskrit terminology). The latter refer to referents or concepts which represent “the sum of the meanings of the constituent lexemes”, which typically “form a ‘conceptual unit’”, for example Modern Greek *maxeropíruna* ‘cutlery’ (lit. knife-fork) (Arcodia 2018: 1198–1199). The former, in opposition, refer to referents which combine characteristics of both constituents; these two constituents usually do not form a natural conceptual unit (cf. Wälchli 2005: 5; Arcodia 2018: 1198) (as, for example, in the English compound *singer-songwriter* or in the German compound *Dichterkomponist* ‘poet-composer’).

In German, the *coordinative appositive compound*-type is prevalent (as it is in European languages in general; cf. Arcodia 2018 for an investigation of areality). The problem with headedness in German coordinative appositive compounds arises from the fact that they lack a determinative structure. Rather, the relation between the two constituents is symmetric: a *Dichterkomponist* is a person who is a poet and a composer at the same time. With regard to the English equivalents, such as *singer-songwriter*, *poet-translator* etc., Plag (2003) therefore concludes: “They could be said to have two semantic heads, neither of them being subordinate to the other. [...] both members equally contribute to the meaning of the compound” (Plag 2003: 146).

Contrary to this view, findings from an earlier empirical study on the interpretation, perception and production of coordinative appositive compounds in German show that a semantic symmetry between the two constituents is not justified by speaker judgements (Breindl & Thurmair 1992). There is a clear preference for an asymmetric interpretation, which suggests that, in fact, the two parts do not equally contribute to the meaning of the compound. Instead, in the majority of cases, the second constituent is interpreted as semantically dominant (which, among other reasons, brings Breindl & Thurmair to dispense with the category “Kopulativkompositum” altogether).

At the level of morphological structure the situation is even less unclear. Concerning their grammatical features coordinative appositive compounds behave like headed structures quite consistently (cf. Olsen 1990b: 143; Olsen 2015a: 369). Gender and inflection class of German coordinative appositive compounds is always determined by the right constituent, which has therefore to be considered the morphological head. See Breindl & Thurmair’s (1992: 34) examples in (13):

- (13) a. Fürst-bischof(M) < Fürst(M) + Bischof(M) (German)  
           prince-bishop  
           ‘prince-bishop’  
       b. Mantel-jacke(F) < Mantel(M) + Jacke(F)  
           coat-jacket  
           ‘coat jacket’  
       c. Radio-wecker(M) < Radio(N) + Wecker(M)  
           radio-alarm.clock  
           ‘clock radio’

Having said that, it is remarkable and perhaps no coincidence that the constituents of coordinative appositive compounds very often belong to the same gender class so that a gender conflict cannot arise in the first place (as in (13)a). There are numerous examples for same-gender coordinative appositive compounds, for example *Kaiserinkönigin* ‘empress-queen’, *Fürstabt* ‘prince-abbot’, *Dichtersänger* ‘poet-singer’, *Gottkönig* ‘god-king’, *Kinocafé* ‘cinema-café’, *Strichpunkt* ‘semicolon, lit. dash-dot’, and many more (all examples are attested and come from Breindl & Thurmair 1992: 34). Hence, a certain degree of ambivalence in terms of relational (a)symmetry remains.

## 2.3 Hidden rulers: Invisible heads

Finally, we encounter structures which lack a visible (or audible) head but undergo effects of a head, such as, for example, case marking and theta-role assign-

ment. This leads to the indirectly obtained inference that in these cases a head must be structurally present even if it is not phonetically expressed. Prototypical cases are different kinds of ellipses which – if not purely pragmatic in nature – require that the dropped element is reconstructable from the linguistic context through some kind of identity (semantic, grammatical, phonological) with an antecedent.

However, there are more puzzling cases of ellipsis; in this section we point briefly to two cases of verbal ellipsis which are not easily categorised as simple cases of antecedent ellipsis under identity. The first phenomenon is auxiliary ellipsis in subordinate clauses, a kind of ellipsis that is particularly frequent in Early New High German (Demske-Neumann 1990; Breitbarth 2005). The omission of the (supposedly finite) auxiliary in (14), which was taken from Demske 2022: 128, this volume, ex. (5a) – is apparently not immediately licensed by any antecedent:

- (14) vnd bekamen gleich am Morgen vor tags wiederumb den  
and got right on.the morning before day again the  
Maistral, welchen wir [...] mit frewden angenommen \_\_\_\_  
mistral which we with pleasure accepted  
'Right in the morning before daylight, we got the mistral which we  
welcomed with pleasure.'

We are here dealing with a perfect construction that would normally consist of an auxiliary HAVE or BE plus a participial form of a lexical verb. The challenge is now that there is no suitable antecedent of the omitted auxiliary available (a form of HAVE in this case), neither within the linguistic nor within the extra-linguistic context. At the same time, it is evident that the subordinate clause is finite, judging, for example, from the presence of the subject *wir* 'we'.

As Demske (2022) argues, these cases of auxiliary omission represent a type of antecedent-correlated ellipsis in its own right. According to Demske, what is reconstructed during the resolution of the missing auxiliary information is grammatical information which is provided by the matrix clause via the linking subordinating element that introduces the subordinate clause. Thus, we can consider omitted auxiliaries in Early New High German as instances of "silent heads".

A second candidate for a silent head is the unrealised infinitive of a lexical verb in modal verb constructions in Contemporary German. As a default, modal verbs take a non-finite verb phrase as their complement, as illustrated in (15):

- (15) Darf ich noch einen Keks essen? (German)  
 may I still a biscuit eat  
 'May I have another biscuit?'

Especially in informal, spoken language the head of the complement VP, the infinitive, is regularly missing, leading to utterances like those in (16):<sup>18</sup>

- (16) a. Darf ich noch einen Keks? (German)  
 may I still a biscuit  
 'May I have another biscuit?'  
 b. Kann ich eine Cola?  
 can I a cola  
 'Could I have a cola?'  
 c. Muss ich den ganzen Apfel?  
 must I the whole apple  
 'Do I have to eat the whole apple?'

Without doubt, the interpretation of the missing infinitive is dependent on the situational, i.e. the extralinguistic, context. The head of the verb phrase selected by the modal verb can not be reconstructed with respect to an antecedent in the preceding discourse. So, either we observe a process of transitivity of modal verbs or we deal with pragmatic ellipsis here, where the general meaning of the infinitive has to be inferred from the communicative situation.

The first option would fit in with the behaviour of the modal verbs *mögen* 'to like', *können*<sub>1</sub> 'to be able to', *möchten/wollen* 'to want'. The transitive use of these modal verbs is entirely acceptable in modern German:

- (17) a. Sie mag Kekse. (German)  
 she likes biscuits  
 'She likes biscuits.'  
 b. Sie können Rumba.  
 they can rumba  
 'They are able to dance the rumba.'  
 c. Willst du eine Cola?  
 want you a cola  
 'Would you like to have a cola?'

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<sup>18</sup>For a comprehensive corpus study and analyses concerning patterns of use and communicative functions of 'bare' modal verbs cf. Kaiser (2017).

In contrast to the transitive modal verbs in (17), the modal verbs *dürfen/können*<sub>2</sub> ‘to be allowed to’, and *sollen* ‘to be supposed to’ from the examples in (16) undergo restrictions which are quite unexpected in transitive verbs. For example, as opposed to the verbs in (17), they cannot be combined with complement clauses (cf. (18)), they cannot be used in the passive (cf. (19)), and they cannot occur in embedded clauses (cf. (20)):

- (18) a. \* Sie darf/kann, dass sie noch einen Keks isst. (German)  
           she may/can that she still a biscuit eats  
           intended meaning: ‘She is allowed/supposed to eat another biscuit.’  
       b. Sie mag/möchte (es), dass du noch einen Keks isst.  
           she likes/wants (it) that you still a biscuit eat  
           ‘She likes it that you’ll have another biscuit.’
- (19) a. \* Heute werden Kekse gedurft/gekonnt. (German)  
           today are biscuits may.PTCP/can.PTCP  
           intended meaning: ‘It is allowed/supposed to eat biscuits.’  
       b. Kekse werden immer gern gemocht/gewollt.  
           biscuits are always gladly like.PTCP/want.PTCP  
           ‘Biscuits are always fancied by all.’
- (20) a. \* Er wundert sich, dass er heute eine Cola kann/darf. (German)  
           he wonders REFL that he today a coke can/may  
           intended meaning: ‘He is surprised that he is allowed to have a coke today.’  
       b. Er wundert sich, dass sie Rumba mögen/können.  
           he wonders REFL that they rumba like/can  
           ‘He is surprised that they like/are able to dance the rumba.’

In light of these observations, it is not plausible that the direct objects in (16) are complements of (transitivised) modal verbs. Rather, it seems more appropriate to assume that the object is the complement of a phonetically unrealised infinitive, namely the “silent” head of the VP that is selected by the modal verb.

As outlined above, this silent verbal head is not recoverable from the previous linguistic context; it has no antecedent. Thus, one option is to consider the ellipsis as being pragmatically licenced. Another option is to assume that the verbal head position is filled by a “zero verb”, which is a verb with semantic and syntactic properties but without phonological form. Van Riemsdijk (2002, 2012)



suggested zero verbs in modal verb constructions in Swiss German. Van Riemsdijk (2012: 22) argued that the utterances in (21) contain the “silent” non-finite verb *gaa* ‘to go’:

- (21) a. wil si het müese i d schuel [GAA] (Swiss German)  
 because she had have.to in the school go  
 ‘because she should have gone to school’  
 b. das mer no-ni händ döörfe häi [GAA]  
 that we yet-not have may home go  
 ‘that we were not allowed to go home yet’

In parallel, the constructions in (16) might contain a zero verb with the quite un-specific semantics of ‘having / consuming / getting something’. This is supported by the fact that verbs with other meanings are not as easily omissible as verbs with a HAVE-semantics, cf. (22):

- (22) \*Darf/Kann ich heute Nachmittag meine Oma? (German)  
 may/can I today afternoon my grandma  
 intended meaning: ‘May I visit my grandma this afternoon?’

A structure which is inspired by the zero-verb analysis in van Riemsdijk (2002, 2012) could look like this:

- (23) a. Darf ich noch einen Keks [HABEN]? (German)  
 may I still a biscuit [have]  
 ‘May I have another biscuit?’  
 b. Kann ich eine Cola [HABEN]?  
 can I a coke [have]  
 ‘Could I have coke?’  
 c. Muss ich den ganzen Apfel [HABEN]?  
 must I the whole apple [have]  
 ‘Must I eat the whole apple?’

Under such an analysis, structures that involve bare modal verbs divide into two categories in German: first, “true” transitive uses of modal verbs, as illustrated in (17), and second, modal verbs that select a VP that is headed by a “silent verb” with the general meaning HAVE (cf. (23)).

What “silent verbs” in modal verb constructions and auxiliary ellipsis in subordinate clauses have in common is that the absence of heads is only apparent.

There are clearly visible head effects, such as finiteness in the case of auxiliary ellipsis and case and theta-role assignment in the case of seemingly headless VPs which are selected by a modal verb. Thus, these kinds of heads can be seen as elements that take their effect in hiding.

### 3 This book

The above walk through some grammatical phenomena in German that might possibly pose problems for the notion of “head” may remind us of the fact that there are still a number of unanswered questions and loose ends with regard to head concepts – both at the empirical and the theoretical level. In this book, we intend to take up the thread of the previous discussions on heads, which started gathering speed in the 1980s with the seminal contributions of Zwicky (1985) and Hudson (1987). The problems that were formulated in this debate and in its aftermath (cf. Corbett et al. 1993 and subsequent work) are still with us. Furthermore, problems and problem-solving are generally quite framework-dependent.

With the collection of papers in this volume we aim at putting a new spin on the discussion of (notions of) heads in syntax, morphology, and phonology. This involves the intention to enlarge the empirical grounding and to further the theoretical understanding and show pathways for grammatical modelling.

To this end, the aim of this book is to approach the concept of *headedness* from its margins. Thus, central questions of the volume relate to the nature and grammatical status of heads and their implications for grammatical theory (Martin Salzmann, Manuela Korth, Hubert Haider, Renate Raffelsiefen) and the distinction between headed and non-headed structures (Stefan Müller, Patrizia Noel Aziz Hanna), to the origin of head effects (Yury Lander, Ulrike Demske), to the diachronic processes of gaining and losing head status (Jörg Bücker), and to the thought-provoking question as to whether grammar theory could do without heads at all (Andreas Nolda).

Most of the papers in this volume are characterised by a decidedly empirical approach, focussing on phenomena of one of the most-studied grammatical systems of the world, German. They bring new ideas for grammatical modelling and use an improved theoretical toolkit. It is thus to be hoped that the contributions to this volume stimulate and reinvigorate interest in one of the basic notions of grammatical theorising.

The collected papers view the topic from diverse theoretical perspectives (among others Mainstream Generative Syntax, HPSG, Optimality Theory) and different empirical angles, covering also typological and corpus-linguistic accounts, with a focus on data from German.

In sum, this volume contains contributions that discuss grammatical phenomena where heads might be involved or might not be involved, where their effects might be felt or not, or where it is in any case unclear what relevance the very notion of head should still possess. In that sense, they approach grammar and grammatical theory with the idea in mind that anarchy might in fact be a feasible (and attractive) state of being.

And now, to use a different metaphor at the very end: just as with the *akephaloi* and *blemmyes* of ancient Greek fame, i.e. those mythical beings who had their faces on their chests, there might be a certain ambivalence in grammar. Depending on how you look at it/them, heads or head-like structures might be there (albeit maybe in an unexpected way), or they might be completely absent, as non-essential elements of grammatical theorising as in Figure 1<sup>19</sup>.



Figure 1: Figure from Hartmut Schedel's *Liber Chronicarum*; Nuremberg, 1493

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<sup>19</sup>Figure taken from Wikimedia 2022-08-25. [https://commons.wikimedia.org/wiki/File:Nuremberg\\_chronicles\\_-\\_Strange\\_People\\_-\\_Headless\\_\(XIIr\).jpg](https://commons.wikimedia.org/wiki/File:Nuremberg_chronicles_-_Strange_People_-_Headless_(XIIr).jpg)

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