

Scrambling in German Is Driven by Prosody and Semantics

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1. Introduction

Since the seminal work of Lenerz (1977), many approaches to the word order of German (and related languages) base their representations on information structural properties, such as theme/rheme, topic/comment, focus/background, etc.. These approaches have often had considerable success in describing more or less marked word orders, e.g. in the German middle field: Old information tends to precede new information (theme tends to precede rheme, topics tend to precede comments, backgrounds tend to precede foci, pronouns tend to precede full DPs), and focussed elements tend not to scramble altogether. However, explanations that attempted to couch these observations in a formal generative analysis were, as we will argue, much less successful in representing the available word order options: Whereas the older generalizations referred to more or less marked or preferred and dispreferred word orders, generative analyses do not cope well with the apparent optionality that these approaches entail.

When it comes to generative analyses of German *scrambling*, the established wisdom is expressed in analyses by, e.g., Meinunger (2000), Molnarfi (2002), or Frey (2004): "Topicalized" or "anti-focus" arguments scramble to an information structural functional projection (henceforth IS) that attracts that information structural category. Focussed elements (F) remain in-situ, i.e. in their base position in vP or VP. Scrambling of an direct object (dO) across the indirect object (iO), could occur in:

- (1) Gestern hat Peter den Kuchen wohl den Kindern gegeben.
yesterday has Peter the cake particle the children given
'Yesterday, it was the children, apparently, that Peter gave the cake to.'

[_C Adv V_{fin} [_T subject [_{IS} dO_{IS} [(particles) [_{vP} subject iO_F dO V_{infin}]]]]]]

At a closer look, these representations cause a multitude of problems: Conceptually, there are legitimate doubts whether these representations have any explanatory power. There is a very real danger of circularity in at least some approaches (as section 1 will demonstrate). Empirically, most, if not all, IS approaches oscillate between two states which are equally untenable for generative grammars: On the one hand, some IS notion used to trigger scrambling movements are not defined clearly enough. Models of this type fail (as section 2 will show) to be fully explicit, thus violating basic tenets of generative theory building. On the other hand, other theories do define IS movement triggers precisely (or at least, as precisely as possible). These proposals fail (as section 3 demonstrates) to make word order predictions that hold with sufficient generality.

Note that the last point is of special relevance for formal syntactic theory: Scrambling theories have often been presented as "first pass" approximations, that admit not to represent faithfully the "actual complexities" of German scrambling. This kind of excuse, however, would presuppose that the

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proposed representations, while being a bit rough around the edges, make essentially the right predictions. This, we argue, is simply not the case: A grammar that labels sentences as "ungrammatical" that speakers find "fully acceptable" does not represent the speaker knowledge at all. Likewise, a grammar that only distinguishes between "perfect" and "impossible" instances of scrambling does not represent the undeniable fact that speakers often prefer or disprefer certain orders – without considering the dispreferred ones as "unacceptable".

Therefore, we want to serve a dual purpose in this paper: Firstly, we demonstrate that purely syntactic scrambling approaches fail, especially when they employ IS features of the outlined kind. Secondly, we propose an alternative grammatical architecture that delegates different tasks to those modules that seem to be suited best to handle them: Whereas syntax handles constituent structures (and the relations that base on them), the semantic interface handles interpretative phenomena, and the spellout interface handles the prosodic facts (which can induce gradient acceptability judgements). To achieve these goals, we propose to abandon IS-driven approaches to the German middle field altogether and offer an interface-based account of scrambling in German, with the following properties:

- Syntax is ignorant of IS: IS neither triggers nor prevents scrambling in German (section 4).
- Syntactic structures will rather be assessed by the interfaces, which impose restrictions on syntactic outputs. Optional (untriggered) instances of internal merge (IM), e.g., are free as far as the syntax is concerned – but need to be interpretable for the semantic interface. Therefore, only optional IM with an effect on outcome (EoO) leads to a derivation that converges at the semantic interface (cf. section 5).
- Furthermore, syntactic structures must be mapped onto phonological structures. To the degree that syntax and semantics underdetermine (!) certain aspects of word order, spellout options can specify the word order choices left undecided by syntax and/or semantics (cf. section 6).
- Amongst the remaining options, prosody defines the (dis-) preferred word orders (section 7).

This architecture, we show, approximates actual speaker's intuitions much better than approaches that attempt to represent scrambling movements on the basis of syntactically encoded IS features alone: Harsh deviance (in the case of syntactic, semantic, and some prosodic violations) as well as gradient (dis-) preferences (for other prosodic properties) are represented in the architecture we propose.

2. Cartographic solutions and the danger of circularity

Investigations of information structure categories have had great success in the past: For many languages, the effects of IS on word order, morphological markers, prosody, etc., have yielded extremely satisfying observations and generalizations. However, over the past decades, it has also become quite clear that for some IS notions, no consensus has been reached concerning their definitions. This clearly is true for the notion most often assumed to drive scrambling, topicality: Reinhart (1982), e.g., starts out precisely from the assumption that "despite the intensive attention that linguists of various schools have paid to the notion TOPIC, there is no accepted definition of it" (ibid: 1). More than a decade later, Vallduvu concedes: „The conclusion that the notion of topic used in the topic-comment framework, as it stands, is not operationizable seems unavoidable“ (1993: 41). Meinunger (2000) und Grewendorf (2005) see similar problems with topicality for their work, and 25 years after Reinhart's assessment, Erteshik-Shir summarizes that „the optimal notion of topic is not easy to find if we link it to syntactic phenomena such as topicalization.“ (2007: 26f.). Worse, sometimes uncertainty regarding the notions persists even for a single phenomenon, and a single definition of topicality: Cook & Bildhauer (2011) find that they have a low inter-rater agreement for the labelling of elements as topics – with a single topic definition, chosen specifically for the task at hand.

It is important to us that the purpose of this overview is not misunderstood: We are not arguing that the study of information structural notions, or even only the study of topicality more specifically, has made no progress. Also, it would be ridiculous to assume that topicality (or any other notion, IS-related or not) should play no role in syntax before a universal consensus regarding its definition has been achieved. Topicality remains a viable candidate for a scrambling trigger in German, of course. However, syntactic analyses that make "topics" move to specified syntactic positions bear the burden of

proof. They must define a reproducible IS notion that makes for precise predictions regarding the phenomenon they are describing: Which elements scramble after all? For German scrambling movements, we argue in the next section, this level of precision has not yet been achieved.

3. Which IS-categories trigger movement – and how categorical is the trigger?

It might be argued that the difficulties mentioned in the previous section will be overcome some time soon, and that syntactic analyses will then be able to employ topic positions and their ilk to yield satisfyingly predictive results. We believe that there is reason to doubt this assessment: Topic-driven analyses of scrambling, even when well-defined, make word order predictions that are much too harsh to be empirically viable (cf. section 3.1). Furthermore, it is never quite clear which IS categories are relevant for word order at all: Is topicality a driving factor for German scrambling – or rather lack of focus (cf. 3.2), or anti-focus (3.3)? Is contrast a syntactic movement trigger, too (3.4)? As we will see, the data support focus as a restricting factor for word order, but no syntactic "IS trigger" can be found.

3.1. Topic analyses make predictions that are much too harsh

For German, some analyses have defined topicality to a very satisfying level of precision. Amongst others, Meinunger (2000) and Frey (2004) assume that on the basis of their definitions, topicality can serve as a scrambling trigger in structures like the following:

- (2) [C XP V_{fin} [T subject [Top dO_{Top} [(particles) [vP subject iO_F dO_{Top} V_{infin}]]]]]

Note, however, the mechanism that is employed here: feature-driven movement immediately predicts that failure to move to the target position should be comparable to syntactic violations that employ the same technology, e.g. for English subject movements. This is clearly false, cf. (3) and (4):¹

- (3) a. Gestern hat Peter [Top [den Kuchen]Top wohl [vP den KINDern gegeben]] (Perfect)
 b. Gestern hat Peter [Top __ wohl [vP den KINDern [den Kuchen]Top gegeben]] (Slightly worse)
- (4) a. [T Peter has not [vP Peter given me my cake today]] (Perfect)
 b. [T ____ has not [vP Peter given me my cake today]] (Slightly worse?)

For scrambling examples, we thus agree with Fanselow: "The small size of the acceptability difference militates against the view that [the acceptability difference between scrambling and in-situ cases] is caused by the failure of carrying out an obligatory movement operation" (2006: 154). Scrambling is often slightly preferred by some (but not even all) speakers, in some contexts. For the English example, it makes no sense whatsoever that (b) should be "slightly worse" than (a). Right from the start, then, the two cases fail to behave similarly – as a shared formal implementation would, however, have to predict.

3.2. An alternative proposal: scrambling is caused by (lack of) focus

Following Büring (2001), we propose that the difference for many scrambling cases lies in their effect on sentence-level stress assignment: Assume that both (3a,b) are perfectly well-formed syntactically and semantically (as witnessed by the fact that both forms receive a mapping to the semantics, i.e. are perfectly interpretable). The difference in acceptability between the two could well be explained purely on the basis of prosodic differences, e.g. regarding the formation of accent domains: Scrambling of the direct object (dO), as in (a), makes the stressed (focussed) indirect object (iO) the last argument in its accent domain, yielding a "perfect AD" (Büring 2001: 91). However, not scrambling the dO (as in b) places the nuclear stress on an argument that is not final in its AD. Given that no subsequent AD boundaries can be formed, we obtain a "super-big AD" (ibid: 90):

¹ Capitalization signifies main stress placement on the capitalized syllable.

- (5) a. ... x)iP
 (x) (x)AD
 dO iO_F V
- b. (x)iP
 (x)AD
 iO_F dO V

The prosodic violation explains the mild preference some speakers have for scrambling in these cases: (a) quite literally *sounds* a little better than (b). The fact that both sentences cannot be considered ill-formed is explained by the assumption that there is, in fact, no syntactic or semantic violation after all.

3.3. *Anti-focus is no viable trigger for scrambling*

The prosodic facts have led some authors (e.g., Molnarfi 2002) to believe that *anti-focus* (AF) features cause scrambling: The right middle field is the locus of default stress assignment (cf. Höhle 1982), and primary stress must be placed on a focussed element. Molnarfi therefore proposes to move discourse-given XPs out of harm's way, to the specifiers of [anti-focus] heads in the left middle field:

- (6) [C XP V_{fin} [T subject [AF dO_{AF} [(particles) [VP subject iO_F dO_{AF} V_{infin}]]]]]

Molnarfi maintains that "there can be no A PRIORI objection against such a proposal: [...] antifocus licensing should enable a constituent to escape the focus domain" (2002: 1132). While we agree with the a priori assessment, problems abound a posteriori: Elements that are not focussed can, as we have seen, remain in-situ in many cases (cf., again, 3b). Therefore, anti-focus analyses, just like topic analyses, make predictions that are much too harsh empirically. Conceptually, anti-focus is not a very convincing notion, either: To define a property that essentially prevents stress assignment as a syntactic feature is a classic example of a *look-ahead* type of architecture, since syntactic operations are triggered by effects on the phonology that will hold in a different component, as an effect of the operation itself. Furthermore, anti-X features are exotic in any event: As Fanselow notes, "there appear to be no languages with a [-wh] position (to which all phrases must move that are not positively specified for [+wh]) or a [-relative] position" (2003: 211). On the other hand, the basic intuition behind anti-focus features is, we agree, essentially correct: We need a grammatical architecture that allows us to judge word order options on the basis of their prosodic properties. However, syntax is not the right place to encode purely prosodic notions.

4. There are no trivial relations between word order and IS

Surface-true relations between IS notions and syntactic effects are hard to find in German:

- IS features cannot be shown to trigger movement obligatorily (section 4.1), and
- IS features cannot be shown to prevent syntactic operations, either (section 4.2).

4.1. *IS features do not trigger obligatory syntactic operations in German*

There is no known definition of topicality such that topics of this kind would have to move obligatorily in German scrambling movements. This holds true even of some examples from the literature that appear quite convincing at first glance. In many well-known examples, topicality may simply not be the driving factor behind scrambling options: Frey (2004), e.g., argues that arguments must scramble when they are explicitly set up as aboutness topics contextually. E.g., *den Fritz* is the designated topic in the following example and must scramble obligatorily (Frey's judgement and example, cf. 2004:174):

- (7) Let me tell you something about Fritz. (*Fritz is set up as topic...*)
 #Morgen wird wohl eine reiche Dame den Fritz heiraten. (...cannot stay in-situ)
tomorrow will particle a rich lady the Fritz marry
 "Tomorrow, a rich lady will marry Fritz."

We agree that the scrambling case is a slightly preferred solution in this context. However, we strongly disagree that the in-situ case is really infelicitous: The order in (7) is, at worst, slightly dispreferred –

and this may have nothing at all to do with topicality in the first place. Rather, what seems to be at issue here is a problem with stress placement: The object *den Fritz* cannot receive default stress (since it is *Given* in the context), but *reiche Dame* and *heiraten* cannot receive stress either, since they are no plausible narrow foci! Therefore, no perfect stress placement is possible and the structure is accordingly dispreferred.² If, however, we allow *heiraten* (in 8) or *reiche Dame* (in 9) to serve as narrow foci (which, arguably, should not influence the topicality of *den Fritz*), the picture changes completely:

- (8) You know that Fritz could never find a woman who would [even only talk to him].
But let me tell you something new about Fritz now:
Morgen wird wohl eine reiche Dame den Fritz [HEIraten]_F. (Topic is perfect in-situ)
- (9) Fritz only ever married women who were [con artists, who wanted to steal his money].
But let me tell you something new about Fritz now:
Morgen wird wohl [eine reiche DAME]_F den Fritz heiraten. (Topic is perfect in-situ)

Note that these examples also put to rest any hope that anti-focus could trigger scrambling: In these examples, the direct object *den Fritz* remains in-situ, despite being unstressed, definite and *Given* – in other words, a quintessential anti-focus remains unscrambled in these perfectly well-formed examples. Anti-focus, we conclude, does not trigger obligatory middle field movements.

Lastly, contrastive elements do not seem restricted to any particular position in the German clause in the first place. They appear in the prefield, left middle field, right middle field, and even the post-field. The only pertinent restriction seems to consist in the requirement for the contrastive rise contour to precede the main-stress fall contour. This requirement is also met when the contrastive element does not c-command the focus element – i.e. the relation is of a linear, rather than structural nature:

- (10) Peter hat den [Mann [den er in /KÖLN kennt]] ja NIE besucht.
Peter has the man who he in Cologne knows particle never visited
'As for the man he knows in Cologne, Peter has never visited him.'

This concludes our (admittedly small-scale) survey of IS categories. It appears highly dubious that IS features should be involved in obligatory movement operations in German scrambling. Rather, the prosodic output of scrambling seems to restrict its appropriateness. This finding can, almost by definition (*no look-ahead*), not be reflected in analyses that employ syntactic operations exclusively.

4.2. IS features cannot prevent scrambling operations in German

Proponents of syntactic IS analyses might argue that IS features may not trigger syntactic operations – but could, on the other hand, prevent the application of movement operations. E.g., elements that cannot serve as topics (e.g. the indefinite *wh*-pronoun *wo*) fail to scramble sometimes (example 11, by Frey 2004: 174), but do scramble unproblematically in other cases (example 12):

- (11) *Jemand ist wo leider gestürzt.
somebody is somewhere sadly fallen
'Sadly, somebody fell somewhere.' (*intended*)
- (12) Da hat wer wem was wohl nicht gesagt.
there has someone to-someone something particle not said
'Apparently, somebody did not tell somebody something.'

² Note that there are more complex prosodic implementations that make (7) quite acceptable. However, speakers of German often prove incapable of deriving many (marked) prosodic implementations for sentences when the sentences under discussion are presented only in writing, cf. Brocher, Graf & Struckmeier, in prep.

Wh-indefinites apparently do scramble – at least as a group. Under a purely discourse-oriented model, this is unexpected: Indefinites are poor topics, and linear adjacency (a PF property?) should not change that state of affairs. Topicality thus becomes a questionable candidate for the restrictions needed here.

In a similar vein, focussed elements are supposed not to scramble. But it is not true that focussed elements are exempt from movement. Given good reasons to scramble, foci will, with complete ease:³

- (13) Q: If doctors were paid for sick patients only – how many patients would they NOT heal?
 A: Dann würden die (wohl) [ALLe Patienten]_F (wohl) nicht mehr heilen.
then would they (particle) all patients (particle) not anymore heal
 'In that case, they would (probably) not heal any patients anymore.' (salient: $\forall \neg$)

The reason the all-quantified QP moves is the simple fact that the semantic interpretation intended (\forall scopes over \neg) simply requires syntactic c-command of the QP over the negation (cf. Frey 1993). As the example demonstrates, the focus status of the QP does not prevent the scopal movement. Similar results are obtained with binding effects achieved by scrambling, and other sentence-level semantic effects (cf. Struckmeier 2014 for a more complete overview).

In sum, the findings from this section are quite damning for purely syntactic analyses that attempt to implement scrambling on the basis of IS features: No feeding or bleeding relation seems to actually hold between IS constellations on the one hand, and the presence or absence of syntactic operations on the other. We therefore insist that the core syntactic operations required to derive scrambling for German might as well be completely oblivious to IS constellations altogether, contrary to a 35-year tradition in this field of inquiry. Rather, the phonological and semantic outcomes of scrambling operations seem to be inspected by the respective interfaces. In the following two sections, this observation is taken up in an architecture that derives scrambling restrictions at the interfaces.

5. Scrambling at the semantic interface: EoOs license free internal merge

As far as semantically driven scrambling operations are concerned, nothing new has to be stated here: As a matter of fact, the *duality of semantics* that underlies internal and external merge (cf. Chomsky 1999) makes all the right predictions. In (a), mergers represent the argument structure readings of the vP/VP structure as well as the negation of the proposition. If the internal argument happens to be an all-quantified QP, then internal merger of this QP above the negation (b) is licensed, since the semantic EoO (adding the $\forall \neg$ interpretation to the $\neg \forall$ reading available for the structure in a) makes the newly merged root node interpretable at the semantic interface:

- (14) a. [Neg [_{vP} subject v [_{VP} QP V]]] ($\neg \forall$ reading only)
 b. [QP [Neg [_{vP} subject v [_{VP} QP V]]]] (both $\neg \forall$ and $\forall \neg$ reading)

The only statement that needs to be added here is the fact that German (unlike, say, English) will express newly gained scopal readings overtly at the phonological interface (cf. Frey 1993, Bobaljik & Wurmbrand 2012). We assume that the same spellout requirement holds for other cases of semantically transparent word order changes: Scopal readings of adverbials and other scope-taking elements, as well as genericity effects along the lines of Diesing (1992) can trigger many semantically driven scrambling movements discussed in the mentioned literature already. Likewise, scrambling can afford the semantic interface with new binding options, as in the following example (by Chocano 2007: 129):

- (15) Gestern habe ich (*[die Gäste]_i) einander_i *([die Gäste]_i) vorgestellt.
*yesterday have I (*the guests) to-each-other *(the guests) introduced*
 'Yesterday, I introduced the guests to each other.'

In short, no core syntactic technology has to be added for semantically transparent scrambling cases. Rather, the internal merger of the relevant elements serves as a simple explanation, as far as

³ In an experiment conducted in Cologne, scrambled foci of this kind were judged as well-formed by native speaker informants as were the positive control sentences, cf. Brocher, Graf & Struckmeier, in prep.

syntactic structure-building is concerned. As section 6 points out, though, not all scrambling instances have semantic effects after all – so that another mechanism must be added to cover those cases as well.

6. Scrambling at the phonological interface: Prosody licenses word order changes

Not all instances of scrambling have sentence-level semantic effects, e.g. the scrambling of definite DPs scrambling across each other: no new scopal readings, binding configurations or genericity effects are expected in cases like (3a,b), nor do they arise. Additionally, scope-taking elements can often scramble without scope effects (a), and potential binders can fail to bind (b) in cases like:

- (16) a. weil ein einzelner Arzt /ALLE Patienten ja NICHT heilen kann
since a single doctor all patients particle not heal can
 'since a single doctor will not be able to heal all patients.' (note: salient reading $\neg\forall$)
- b. weil sich /SELBST ja nur HOEness angezeigt hat
since himself particle only Hoeness reported has
 'since only Hoeness accused himself' (note: no principle C violation)

Note that these word order changes cannot be explained as post-syntactic operations entirely: the resulting structures show no syntactic anomalies, e.g. the violation of island constraints, etc. (cf. Zubizarreta 1998). We assume that a syntactic movement takes elements of various categories (DPs, QPs, low AdvPs) to the left middle field – but prevents them from taking semantic effect from their new position. Following Struckmeier (2014), we will assume here that the solution to this problem requires no new landing sites with mysterious semantic properties, or A' stipulations. Rather, the complete vP, which contains all asemantically scrambled elements, moves to SpecTP, e.g. for (16a):⁴

- (17) [TP [vP subject v [vP QP V]]] ... (particle) ... [Neg [vP subject v [vP QP V]]]

The absence of semantic effects follows directly, since the element copies contained in the moved vP are embedded too deeply within vP to take scope or bind from their positions. Note that this absence of semantic EoOs leads to a new scenario for the spellout algorithm: Since copies contained in vP stand in no semantic relations to elements outside of the moved vP, their ordering with regard to those vP-external elements is not determined by semantic transparency. We propose, therefore, that prosodic factors affect the spellout of these elements, explaining the connection between the absence of semantic effects with the special prosody that these cases often have (cf. e.g., Krifka 1998): The rise on *alle Patienten* precedes the stressed *nicht* in (18) iff the left-most object copy spells out – and the rise-marked object spells out before the stressed subject in (19):

- (18) a. [TP [vP ein Arzt /ALLE Patienten...] ja NICHT [vP .../ALLE Patienten heilen] kann]
 b. *[TP [vP ein Arzt /ALLE Patienten...] ja NICHT [vP .../ALLE Patienten heilen] kann]
- (19) a. [vP nur HOEness sich /SELBST angezeigt] ja [vP nur HOEness sich /SELBST angezeigt] hat
 b. *[vP nur HOEness sich /SELBST angezeigt] ja [vP nur HOEness sich /SELBST angezeigt] hat
 c. *[vP nur HOEness sich /SELBST angezeigt] ja [vP nur HOEness sich /SELBST angezeigt] hat
 d. *[vP nur HOEness sich /SELBST angezeigt] ja [vP nur HOEness sich /SELBST angezeigt] hat

In these cases, word order changes that look like internal merge are actually spellout effects caused by prosodic requirements. However, since the spellout of copies presupposes that these copies have actually been generated by the syntax, the adherence to syntactic restrictions is explained.

⁴ For similar proposals, cf., e.g., Biberauer & Richards 2006, Zubizarreta 1998. For reasons of space, we cannot discuss the technical issues related to this assumption here. However, the reader is referred to Struckmeier (2014), Struckmeier & Groat (in prep.) for two different technical accounts. Note that verbs can indeed occur far away from their 'bracket' position, too. All vP-internal material does, in fact, occur on the left of modal particles.

7. Preferred (and dispreferred) word orders as (dis-) preferred prosody

As we have seen above, scrambling can lead to changes in the prosodic results obtained: Scrambling of a direct object, e.g., can make a focussed indirect object more palatable. We assume that the spellout of vP-internal copies may be behind "soft" preferences such as these as well:

- (20) a. [_{VP} subject v [_{VP} iO dO ...]]] ... [_{VP} subject v [_{VP} iO dO V]]] (perfect syntax, "perfect AD")
 b. [_{VP} subject v [_{VP} iO dO ...]]] ... [_{VP} subject v [_{VP} iO dO V]]] (perfect syntax, "super-big AD")

The impact of information structure on German word order (but not syntax!) is captured transparently:

- Syntacto-semantic constellations force some (semantically transparent) word orders.
- IS categories that are prosodically marked (focus, contrastivity) have word order effects – to the degree that the spellout algorithm can decide word order on a prosodic basis.
- IS features that are prosodically unmarked (topics, anti-foci) have no word order effects.

"Gradable" (dis-) preferences are the hallmark of gradable restrictions: Placing main stress far from the right sentence edge, e.g., is a syllable-by-syllable violation. Failure to scramble de-accented material "out of the way" is worse in some cases than others, i.e. with long vs. short post-focal unaccented stretches. Syntactic operations, however, need not express these graded violations anymore.

8. Conclusion

We have advocated here one conceivable approach to German scrambling: All semantically interpretable orders require a core syntactic explanation. However, some word orders may not be perfectly acceptable – but neither are they crashingly bad. "Soft" violations, we maintain, must not be represented by the same syntactic machinery that causes harsh deviance. Rather, a "subtractive" view of German word order makes very fine-grained predictions possible: Syntax defines a *set* of permissible word orders. Semantic and spellout constraints *restrict* this set. Within the restricted set, some orders are preferred for prosodic (or performance or pragmatic) reasons. The remaining set of "possible and preferred" orders, however, may not be a singleton set even for the most precisely specified contexts and prosodic implementations. This is a good result: After all is said and done, German middle field word order is not entirely "free", as traditional grammars have long assumed. However, nor is it determined by a conceptually outmoded, empirically inadequate, "if-IS-then-move" type of syntax.

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