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Context and grammaticality in German

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Abstract

The sentence is generally assumed to be the largest unit available to formal syntactic theories. However, the influence of adjacent sentences on each other makes it seem reasonable to claim that grammaticality is not only a result of the relations holding between the constituents of a sentence but also between the sentences themselves.

In German this is particularly apparent because of the relatively free word order, which is used to express the discourse functions of topic and focus. The scrambling phenomenon poses great problems for Chomsky's Minimalist Program which is based on principles allowing movement of constituents only when essential to grammaticality. If the context is disregarded it becomes impossible to justify apparently optional movement within this theory.

This paper contains a brief summary of a recent Minimalist account of the scrambling phenomenon and explore how it fits in with observed data. In addition, I will outline a further problem related to discourse effects — the occurrence of null topics in spoken German.

1 Topic and focus

1.1 Accent placement

In general, it is valid to claim that the focus of an utterance is that part which the speaker intends to emphasize. It normally contains new or contrastive information. The topic, on the other hand, is what the utterance is about, and is often given in the context or implicit in the surroundings.

In order to determine the topic and the focussed constituents more easily utterances can be placed in context. This helps to establish what is given, what requires special emphasis and what is new to the discourse. The following examples show how the topic and focus of the same sentence can change depending on the immediate context of a particular question. The square brackets indicate the scope of the focus and the capitals indicate nuclear accent placement.

(1) *What happened?*
[Jacqui climbed Ben NEVis.]

(2) *What did Jacqui do?*
Jacqui [climbed Ben NEVis.]

(3) _What did Jacqui climb?_
Jacqui climbed [Ben NEVis.]

As we can see, in all these examples the same syllable is accented. The three utterances are indistinguishable from each other in terms of word-order and accenting and the scope of the focus can only be determined from the context. The only conclusion we can draw from the examples seen so far is that the syllable bearing the nuclear accent must at least be part of the focus. It is not possible to have the nuclear accent fall outside the range of the focus:

(4) _What about Ben Nevis?_
*_[Jacqui climbed] Ben NEVis._

Although for presentational focus the nuclear accent falls on the final NP in English it is possible to shift it in order to narrowly focus other constituents:

(5) _Who climbed Ben Nevis?_
[JACqui] climbed Ben Nevis.

In this example it is the initial NP which is the focus and must therefore receive the nuclear accent.

1.2 The role of word order

In most languages there is a so-called _neutral_ or _default_ word-order. Even if a language potentially allows a range of different word-orders there is usually one which is perceived by native listeners as being unmarked. This means that any word-order deviating from this unmarked order will be perceived as conveying a specific intention of the speaker. Usually the speaker intends to place emphasis on a particular constituent by changing the word-order.

In English the unmarked word order is SVO, as seen in all of the above examples. In most cases this order is strictly adhered to but there are exceptions in which a non-subject constituent, for example the object, is fronted:

(6) _Those boots, I can [AFFORD.]_

1.3 Definiteness

Givon (1976) proposes the following hierarchy of structural encoding for the "topicness" of constituents:

+TOPIC	null anaphora	pronouns	definite NPs	indefinite NPs	-TOPIC

Ziv (1994) also points out that stressed elements are less topic-like than unstressed elements.

At this point it is perhaps necessary to bring to attention the automatic incompatibility between topic and focus. If an element is a topic it cannot be a focus and vice-versa. It would be almost impossible for a null pronoun or a pronoun to be a focussed constituent unless in very exceptional circumstances such as in a strongly contrastive reading.

It was mentioned in the introductory section that there is often a correlation between focus and new information on the one hand and topic and given information on the other. The different ways of structurally encoding an NP reflect its newness or givenness. Pronouns contain a minimum of information about the entity they refer to, usually only number and gender, and null anaphora contain none at all. If a speaker makes use of these s/he must be certain that there is enough shared knowledge for the hearer to correctly interpret them. This is usually the case if the entity is in the immediate surroundings or if it has been just previously mentioned in the discourse, that is if it is the topic of the discourse.

Indefinite NPs are at the other end of the scale. The use of these is restricted to reference to entities which are new to the discourse and therefore likely to be the focus or part of the focus. They contain more semantic information than pronouns.

The difference between indefinite and definite NPs is more subtle. Both contain a large amount of semantic information when compared to pronouns or null anaphora. Definite NPs are usually only used for entities which have been mentioned at least once before. It may be the case that there is potential for misunderstanding or that the previous mention occurred further back in the discourse and that the speaker therefore feels the use of a pronoun would be ambiguous.

In the section on accenting it has been pointed out that the constituent bearing the nuclear accent is perceived as being particularly salient. Again, it will be the speaker's intention to draw attention to the new part of the utterance, i.e. the focus. Focussed constituents are therefore more likely to be accented than topics. It can be inferred from this that indefinite and definite NPs are more likely to be accented than pronouns. It is interesting to note here that a look at the occurrence of pronouns shows that in most languages they strongly resist accent placement.

2 Problems with the Minimalist Program

2.1 Scrambling and the Minimalist Program

One of the main principles of the Minimalist Program (Chomsky 1993) claims that movement of a constituent can only take place to fulfill a requirement of that constituent itself. This means that a derivation is illegitimate if it contains unnecessary steps.

This principle — the Greed Principle — is apparently violated by the scrambling phenomena occurring in Germanic languages. In main clauses German has a V2 word-order, meaning that the verb is always in second position. Subordinate clauses, on the other hand, always exhibit a verb-final ordering. In these clauses the area between the complementiser and the verb is referred to as the Mittelfeld, and DPs occurring there can be moved to occupy a variety of different positions, i.e. they can *scramble.*

DP-movement is optional and for each utterance there are a number of different DP-orderings which are grammatical. The following two examples show that despite the fact that the objects occur in a different order, the propositional content of the sentence remains the same:

(7) a. *dass Gesche dem Kind die Schokolade gibt*
that Gesche the child the chocolate gives

b. *dass Gesche die Schokolade dem Kind gibt*
that Gesche the chocolate the child gives
'that Gesche is giving chocolate to the child'

It is difficult to justify the existence of the Greed Principle bearing this characteristic of German in mind. If a derivation may not contain unnecessary steps then it is unclear how the scrambled derivations can be explained. A minimalist approach to syntax assumes that there is one optimal derivation and all others do not converge.

2.2 Existential and generic readings

Schmidt (1995) offers a different approach to this problem. She also proposes that it is wrong to regard scrambling as an *optional* movement. Given a list of DPs there are indeed a number of ways in which they can be ordered within a clause. However, according to Schmidt and others, each ordering will have a different reading. Therefore, in order to achieve each of these readings there is only *one* possible ordering.

Schmidt distinguishes between existential and generic readings and proposes an analysis for German which explains why word-order influences the interpretation. To illustrate, she gives the following English example which is ambiguous between an existential and a generic reading:

(8) *Firemen are available*

This could either mean that it is a general characteristic of firemen that they are available (generic) or that there are firemen who are available (existential). In the generic reading the DP is bound by a generic operator GEN, whereas in the existential reading it is bound by the existential operator E. This difference is, of course, only apparent at LF and has no effect at PF, that is there is no difference in the phonological form of the two utterances.

The sentence

(9) *There are firemen available*

on the other hand, is not ambiguous. It can only receive an existential reading.

According to Schmidt, German distinguishes between the two readings by word order. She cites the following examples to illustrate her point [1]:

(10) a. *weil Hans meistens Kinder verfuehrt*
because Hans usually children seduces
'because Hans usually seduces children' (E)

b. *weil Hans Kinder meistens verfuehrt*
because Hans children usually seduces
'because Hans usually seduces children' (GEN, *E)
(Bayer & Kornfilt 1991)

Indefinite DPs are not moved overtly if they have an existential reading (a). Indefinite DPs with a non-existential reading, on the other hand, are scrambled (b).

Furthermore, the following examples (from Schmidt) show that focussed DPs are not scrambled:

(11) a. *Peter hat schliesslich KUCHEN gegessen*
Peter has after.all CAKE eaten
'Peter has, after all, eaten CAKE.'

b. * *Peter hat KUCHEN schliesslich gegessen*
Peter has CAKE after.all eaten

To summarize, one can say that non-focussed non-existential DPs must be moved overtly.

Despite this analysis, which appears to prove that the DP-movement in German is not optional but essential for each specific interpretation, the basic problem still remains that, as opposed to an analysis based on the Definiteness Effect, Schmidt's analysis relies on an LF-factor. As Schmidt points out herself, only PF-requirements should determine the derivational position of Spell Out.

Even with this apparent solution there are still a number of problems. The first is that the large number of subtly different types of reading have not been clearly specified. In order to be able to account for the different available word orders in a formal theory, each reading would have to be formally defined.

2.3 Binding by operators

In order to explain the other possible word orders, Schmidt makes reference to Diesing's (1992) theory of quantification domains. Diesing's Split-Clause hypothesis states that:

a) the R-variable of a DP in VP is existentially bound by I;

[1] As sentential adverbs are said to be at the leftmost edge of the VP, any object DP occurring to the left of them is said to be scrambled.

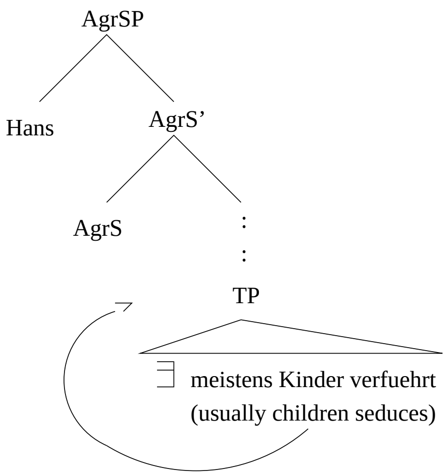

Figure 1: *Existential binding in TP.*

b) because of (a) QR can only take place from a DP in IP;

c) because of (b) IP is the domain in which the restriction holding over the R-variable of a DP remains and in which the R-variable can be bound by a presuppositional Operator (eg GEN, SPEC).

In Schmidt's modification of this hypothesis a DP within the domain of TP, i.e. in VP, will be existentially bound. If the DP remains *in situ* it receives an existential reading (see Figure 1). The only way for a DP to escape this existential binding and receive a generic reading is for it to move out of the TP and have a copy in the IP domain above TP. This higher copy can then be bound by a different operator.

This movement can also occur after Spell Out at LF (therefore having no effect on the phonetic form of the utterance) but only if it is indicated by a specific intonation contour. As the examples (11) in the previous section show, focussed DPs also remain in situ at Spell Out.

The nuclear accent on the final DP argument indicates, according to Schmidt, that movement takes place at LF. Here, even without scrambling, a non-existential reading is possible. It seems that movement at LF is sufficient to escape binding by the existential operator.

To summarize, movement at LF is sufficient to escape existential binding, but it must be indicated by a specific intonation contour. If the utterance lacks this contour, overt scrambling at PF becomes necessary to avoid existential binding.

3 Summary and conclusion

Schmidt's analysis provides an interesting formal description of the FWO phenomenon in German and the various types of interpretation the different word orders can evoke. It seems, though, that the examples she uses are very restricted. In actual fact there is frequently more than one possible word order and they are often indistinguishable in terms of acceptability.

To go back to some examples cited by Schmidt, we find that although she indicates that a particular word order and intonation contour give a preferred reading, other readings are not altogether ruled out, as we can see in (10).

For (10a) an existential reading may be preferred but the same utterance could also be used to express a presuppositional (i.e. non-existential) reading for the DP 'children'. As has been pointed out above, the pre-verbal DP receives the nuclear accent both in a narrow focus and in a presentational focus reading:

(12) a. *weil [Hans meistens KINDER verfuehrt.]*

b. *weil Hans meistens [KINDER] verfuehrt.*

If the first example can also bring about a generic interpretation does this mean that the scrambling which has taken place in the second example is optional? In a sense it is: native speakers would accept either in answer to a question specifically enquiring after 'children'. It is not the case that one of the two options can be rejected outright.

This brings us back to the problem of the first sections: we had determined not only that there are various focussing devices but also that they have varying degrees of strength. The analysis seemed to prove that nuclear accent placement is the overriding factor. *Correlating* with it we frequently find certain syntactic constructions, as shown by Weinert & Miller's (1993) analysis. These alone do not suffice to induce a focus reading but they can be used to strengthen the effect brought about by the intonation contour.

Schmidt would possibly argue that the strength of the focussing effect also results in a variation in meaning and therefore the two variants are not identical. In the examples Schmidt uses to justify her hypothesis there is a clear difference between grammatical and ungrammatical. The examples given here cannot be said to differ in terms of absolute *grammaticality* and it is this which the Minimalist Theory makes reference to, when claiming that only one single variation will converge. Although they may have different readings, they are both *acceptable* and the difference in meaning is so slight that it becomes difficult if not impossible to express it in formally defined terms.

The Minimalist Theory claims that a given projection will not converge and will be rejected, that is be considered ungrammatical, if it does not comply with the principles. The scrambled option of the example given above is clearly as grammatical as the unscrambled option in any formally expressable terms and thereby provides a problem for Schmidt's approach.

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