Information structure meets Minimalist syntax. On argument order and case morphology in Bavarian[1]

Helmut Weiß
Universität Regensburg

I. Introduction

This paper will (i) focus on the interplay of case morphology and (relatively) free word order in Middle Bavarian and (ii) draw some theoretical consequences regarding the relation between information structure and narrow syntax in a Minimalist sense (Chomsky 1999). The paper is organized as follows: sections II and III will briefly sketch the basic facts of case morphology and case syntax in Middle Bavarian, and in section IV I will try to draw some theoretical consequences concerning first scrambling and second the relation between the computational system of the human language faculty and requirements coming from information structure. Thereby, the newly introduced principle of strong morphology will play a crucial role.

Before beginning the paper a short note on terminology will be necessary: in what follows I will investigate a certain variety of Bavarian spoken in the Bavarian Forest (Weiß 1998). With respect to case morphology, this variant is representative at least for Middle Bavarian, which is spoken in Upper and Lower Bavaria and parts of Austria. Especially Southern Bavarian differs in some important aspects, for instance because it possesses a prepositional dative marking (cf. Seiler 2000). This variant will be completely ignored.

II. Case system of (Middle) Bavarian

Middle Bavarian exhibits a reduced morphological case system, somewhere in between English/Dutch and Standard German (SG). There are especially two aspects which are of particular interest for our purpose. First, morphological case marking is a function of the determiner alone, whereas nouns are only marked for number. This can be seen in the examples given in (1a-b), where, for instance, the noun *Katz* 'cat' does not exhibit any alternation of form whether it is subject or indirect object, whereas the article forms do. However, as (1c) compared to (1a) or (b) shows, nouns alter their form with resepct to number.

(1) a d'Katz dringd da Maus d'Mil weg
the cat drinks the mouse the milk away
b d'Maus dringd da Katz d'Mil weg
the mouse drinks the cat the milk away
c d'Katzn dringan de Mais d'Mil weg
the cats drink the mice the milk away

Second, Middle Bavarian has only two morphologically distinct case forms. The sentences in (1a-c) illustrate the standard case: the structural cases nominative and accusative have fallen together and differ from the oblique case dative. However, there is one exception from this pattern: in masculine singular it is the form of the object cases which is identical and contrasts

1 I am grateful to Werner Abraham, Josef Bayer, Hany Babu, László Molnárfi, and Stefan Hinterwimmer for discussions and helpful comments. Special thanks to Janna Zimmermann for checking and improving my English.

with the nominative form. Examples are given in (2a, b): note that the verb *help* requires a dative form in Bavarian, too.

(2) a ea hod n'Sepp ghoifa
he has the Sepp helped
b ea hod n'Sepp troffa
he has the Sepp met

In Table 1, the case system is summarized schematically, and Table 2 gives the forms of the definite article.

Sg.	masc	fem	neutr	Pl.	M/F/N
Nom	A	A	A		A
Dat	B	B	B		B
Akk	B	A	A		A

Table 1

Sg.	masc	fem	neutr	Pl.	M/F/N
Nom	*da(r)*	*d*	*s*		*d*
Dat	*(a)n*	*da(r)*	*(a)n*		*(a)n/de*
Akk	*(a)n*	*d*	*s*		*d*

Table 2

Though the case system of Middle Bavarian is reduced to some extent, it has not arrived yet at the English or Dutch level because there is a morphological difference between structural and oblique case (at least in the standard case).

III. Word order in (Middle) Bavarian

Let us assume that the primary function of the three cases in question is the identification of the syntactic functions subject, indirect and direct object. As is known, there is a straightforward relation between case morphology and word order at least in one direction: free word order needs morphological case marking.[2] That accounts for the fact that SG allows scrambling, but English or Dutch do not.

When we now look at Bavarian, we see that it precisely obeys the above mentioned relation between case morphology and word order as well. That means it patterns with English and Dutch in distinguishing syntactically subject and direct object (cf. 3a vs. b), whereas - unlike English or Dutch - the relative order of indirect and direct objects is apparently free. Their ordering can be due to discourse functions: for instance, the unfocused part precedes the focused one (cf. 3c, d), or definites precede indefinites (3e, f). Thus Bavarian partly resembles both English/Dutch and SG.

(3) a wia d'Frau s'Kind sehgd
as the woman-NOM the child-ACC sees
b wia s'Kind d'Frau sehgd
as the child-NOM the woman-ACC sees

2 This seems to be only a tendency, since Afrikaans exhibits word order variation to some extent, although it completely lacks morphological case (Molnárfi 2000).

c wia'e da Mare s'Biachl geem hob
as-I the Mary-DAT the book-ACC given have
d wia'e s'Biachl da Mare geem hob
as-I the book-ACC the Mary-DAT given have
e wia's da Lehrarin an neia Schüla vorstäin woid
as-she the teacher-DAT a new pupil-ACC introduce wanted
f wia's d'Mare ana Lehrarin vorstäin woid
as-she the Mary-ACC a teacher-DAT introduce wanted

Of special interest for our concern is the above mentioned peculiarity of the Middle Bavarian case system found in masculine singular, where the dative and accusative forms are identical and both constrast with nominative. In addition, even the definite and indefinite article forms of dative and accusative have fallen together: The form *an Hund* thus corresponds to SG *dem/den* as well as to *einem/einen Hund*. The resulting interpretative differences of the IO-DO vs. DO-IO word order are illustrated in (4a) and (4b).

(4) a wai'e an Hund an Knochn geem hob
because-I the dog a bone given have
b wai'e an Knochn an Hund geem hob
because-I the bone the dog given have

(4a) represents the canonical ordering indirect before direct object: the interesting point to be made here is that the direct object can only receive an indefinite interpretation, despite its ambiguous morphology. In order to get a definite interpretation, the direct object must scramble to the left of the indirect object, as in (4b).
To summarize and complete the picture, the standard word order in Bavarian can be charactarized by the following generalizations: (i) the basic word order is subject before indirect before direct object; (ii) indirect and direct object can or must invert in certain cases. Evidence for the basic order mentioned in point (i) can be drawn from clitic clusters where the order subject before indirect before direct object is the only one which is possible, as can be seen in the contrast between (5a) and (5b). Though clitics are not in base position, there is no conceivable reason why reordering should occur in their raising up to the Wackernagel position. Therefore, it can be assumed that they replicate the ordering of their VP-internal base positions. This basic order can be accounted for in a Larsonian double VP structure as in (6), where the indirect object occupies the specifier of the lower VP and the direct object is the complement of V.

(5) a wai'e'da'n geem hob
because-I-you-him given have
b *wai'e'n'da geem hob
because-I-him-you given have

(6) $[_{vP}$ SU $[_{VP}$ IO $[_{V'}$ DO V]]]

Though in base position the IO precedes the direct one, inversion of both is possible or in certain cases even necessary, as said in number (ii). This inversion is part of the phenomen called scrambling which will be discussed in the following section.

IV. Some Theoretical Considerations

1. Object Scrambling: Data

In what follows, I will restrict myself to this 'object scrambling' (Bayer & Kornfilt 1994).[3] There are at least two cases which should be distinguished, i.e. optional and obligatory inversion of both objects. I will only discuss these two kinds of 'short' scrambling, ignoring other forms of movement classified as scrambling by other authors. The reason for restricting myself to optional and obligatory inversion of both objects is that their movement operations result in minimally marked or unmarked constructions, respectively. The idea behind this is that movement in MP is a costly operation (as compared to Merge) and should thus be avoided as long as possible. On the other hand, some movement seems to be necessary for checking requirements. Sentences generated by those absolutely necessary movements will thus be unmarked constructions, as those sentences with obligatorily inverted objects are. Supposing that this is the case, each further movement operation which is forced by the requirement of checking additional features not belonging to the features of the core computational system (CS) (say, topic or focus),[4] has - metaphorically spoken - to pay its price: it adds markedness to the resulting construction. In this conception, marked constructions violate economy as defined by Reinhart (1997), though not exactly in her sense. In the case of optional inverted definite objects, the markedness is only marginal. Though there is a difference in markedness, it is a very small one. Their comparison could probably reveal interesting properties of CS and other mental systems co-operating with it. On the other hand, the greater the difference in markedness, the smaller the significance of the results of comparison will be.

Consider first obligatory inversion which must take place in case of an indefinite IO and a definite DO, as the contrast between (7a) and (7b) shows. The unscrambled version in (7b) is ungrammatical despite the fact that it exhibits the basic ordering which in turn is fully grammatical if both objects are either definite or indefinite (8a-c).

(7) a wia's d'Mare ana Lehrarin vorstäin woid
as-she the Mary-ACC a teacher-DAT introduce wanted
b *wia's ana Lehrarin d'Mare vorstäin woid[5]
as-she a teacher-DAT the Mary-ACC introduce wanted

(8) a wia's da Lehrarin an neia Schüla vorstäin woid
as-she the teacher-DAT a new pupil-ACC introduce wanted
b wia's da Lehrarin den neia Schüla vorstäin woid
as-she the teacher-DAT the new pupil-ACC introduce wanted
c wia's ana Lehrarin an neia Schüla vorstäin woid
as-she a teacher-DAT a new pupil-ACC introduce wanted

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3 Due to lack of space I cannot discuss existing scrambling theories, cf. Corver & Riemsdijk (1994a), Haider & Rosengren (1998), Molnárfi (2000), Müller (1999), or Neeleman & Weerman (1999) among many others.

4 What counts as a core CS-feature can vary between languages, an assumption which follows naturally if (the faculty of) language is a biolgical system where variation occurs.

5 As W. Abraham (p.c.) rigtly observed, (7b) - just like (12b) - improves somewhat, when one stresses the noun of the indefinite DP, cf. (i):
(i) ?wia's ana LEHRARIN d'Mare vorstäin woid
Stressing results in a 'focused predicate reading' of the indefinite, meaning that Mary was introduced to someone whose property of being a teacher is focused. Note that there is a fundamental difference to focus scrambling of definite NPs: f-scrambled definites escape focus! See also Molnárfi's (2000) concept of antifocus.

This kind of object scrambling is therefore obligatory. However, there are other instances of object inversion which lack this obligatoriness. Consider, for example, (9a) and (9b) where both objects are definite and can be ordered freely without yielding ungrammaticality.

(9) a wia's da Lehrarin de neia Sekretärin vorstäin woid
as-she the teacher-DAT the new secretary-ACC introduce wanted
b wia's de neia Sekretärin da Lehrarin vorstäin woid
as-she the new secretary-ACC the teacher-DAT introduce wanted

The ordering of the two objects in (9a, b) is governed by focus: in both sentences it is the unfocused part which precedes the focused one. Though this focus scrambling is not free in the sense that it has no consequences whatsoever, because it does change the information structure, I will nevertheless assume that it is optional, since its not happening does not make the sentence ungrammatical. And that is the crucial difference to obligatory inversion (cf. 7b).
To summarize, we have considered two kinds of object scrambling which differ with respect to obligatoriness: (i) a definite DO must scramble to the left of an indefinite IO; (ii) two definite objects scramble due to their focus values. However, since indefinites are also part of sentential focus, it looks as if in Bavarian the surface order of the objects is entirely governed by the information structure requiring unfocused material to precede the focus domain. This picture fits well into current theories of focus à la Cinque (1993) and many others according to which „scrambling is a type of focus construction that moves D-linked material away from a preferred position" (López & Winkler 2000: 645). As Abraham (1995) has shown for German, the D-structurally deepest-embedded lexical constituent carries the grammatical accent and is therefore the focus exponent. This holds for Bavarian as well, as we have seen.

2. *Object Scrambling: Explanation(s)*

Now the crucial question is how to implement these discourse-functionally driven movements into a theory like the Maximal Projection (MP). The MP assumes, for instance, that the CS is 'semantically myopic' (Hornstein 1995), and therefore it would be surprising if the CS were sensitive to discourse functions. The central issue is to explain why definites scramble obligatorily (Molnárfi 2000). Since in the MP the driving force for movement is feature checking, one possibility is to propose a focus phrase, say above VP. But this does not work, simply because it is the unmoved object, not the moved one which carries the focus feature, and even the broadest definition of Lasnik's (1999a) enlightened self interest would not account for it.[6] A further analysis is to propose that in German as well as in Bavarian there is no scrambling at all, and all possible constituent orders are base generated, for instance in the sense of Bayer & Kornfilt (1994). However, this account is in conflict with the rigid order in clitic clusters and with indefinite objects which never invert. Furthermore, it would not necessarily predict the observed difference between obligatory and optional inversion (which is no proper inversion in this approach!).
I think there is an analysis within the MP conceivable which captures the observed facts. Assume that definite NPs always move to their appropriate AGRPs and indefinites never do so (unless they are interpreted generically or specifically). This can be captured, for instance, by proposing that definite NPs carry a feature which indefinites lack: since the former are referential and the latter are not, one can assume that only definites carry a D-feature which

6 To circumvent this problem, Molnárfi (2000) proposes an analysis where movement is driven by an antifocus feature. Though it would be very interesting, I cannot discuss the antifocus concept due to lack of space. But I think there are ways conceivable to accommodate the analysis presented here and Molnárfi's antifocus, if restricted to focus scrambling as defined above.

must be checked before Spell-Out.[7] Another possibility is to assume with Uriagereka (2000b) that non-referential indefinites have only a partial D-feature, therefore being invisible for the feature searching component of CS. This approach explains the different behaviour of definite and indefinite NPs as a result of a difference in their feature-equipment and it therefore remains within the lines of the MP.
Definite objects are always in a derived position, even when they show the canonical ordering indirect before direct object. That means a sentence like (10a) has a structure as indicated in (10b). Evidence for this mostly invisible movement comes from adverbs like *oft* 'often' or modal particles like *fei* (which cannot be translated into English). Given that both can occupy varying positions above VP (see below), the fact that they can follow definite objects as in (11a, b) is evidence for the latter to have left their VP-internal base positions. Note that in case of an indefinite object as in (11c), quantificational adverbs or modal particles must precede it.

(10) a wia'e da Mare s'Biachl geem hob
as-I the Mary-DAT the book-ACC given have
b wia'e [$_{AGRP}$ da Mare$_i$ [$_{AGRP}$ s'Biachl$_j$ [$_{VP}$ t$_i$ t$_j$ geem hob]]

(11) a wai'a (oft) am Sepp (oft) s'Biar (oft) vosteckd hod
because-he (often) the Joe (often) the beer (often) hidden has
b wai'a (fei) am Sepp (fei) s'Biar (fei) vosteckd hod
c wai'a (oft/fei) am Sepp (oft/fei) a Biar (*oft/fei) zoid hod
because-he (often/MP) the Joe (often/MP) a beer (often/MP) paid has

Unlike most literature (cf. Corver & van Riemsdijk 1994b), I take the relative order of adverb and object not necessarily to reveal anything about the objects being scrambled or not. On the contrary, I assume that adverbs can occupy various positions above VP (in accordance with Haider 2000), and that they are, say, left adjoined to VP or to functional projections like both AgrPs of the objects (the precise nature of their structural implementation does not matter for our purpose). So, in (11a) the positions of indirect and direct object do not vary as to whether the adverb precedes or follows. Therefore, the different ordering of adverb before object vs. object before adverb is no instance of scrambling. Neeleman & Weerman (1999) assume as well that adverbs may freely be inserted in the sentence, yet they differ from the analysis presented here in that they let adverbs occupy various positions within VP. Their hypothesis is clearly in conflict with indefinite objects which cannot be separated from the verb by most adverbs.[8]
However, adverb position is a diagnostic ex negativo: given that the lowest possible position of a quantificational adverb is the left edge of VP, any argument NP which cannot precede it,

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7 This account is admittedly against the spirit of Chomsky's original feature checking theory in which a (functional) category with an uninterpretable feature attracts some matching feature into its checking domain. In the case concerned here it must be the D-feature of the moving item which needs checking, otherwise derivations without definites would inevitably crash at LF. But this modification assumed here is necessary for other cases as well, for instance for DP-internal concord (cf. Carstens 2000) or negative concord constructions (cf. Weiß 2001b, c).

8 Neeleman's & Weerman's (1999) analysis is only correct for manner adverbs which can separate an indefinte object from the verb in Bavarian as well, cf. (i). Yet, temporal or quantificational adverbs are not allowed to intervene between an indefinite object and the verb, cf. (ii).
(i) wai da Hans a Biachl langsam glesn hod
because the John a book slowly read has

must be inside of VP. And that's exactly the case with (existentially interpreted) indefinites: the indefinite DO in (11c) cannot scramble to the left of the adverb.
Further evidence for proposing a movement approach for definite NPs comes from focus scrambling. The crucial point - still unnoticed in literature, as far as I know - is that focus scrambling is only possible in case of definite objects, as shown in (9a) and (b) above. With indefinite objects it is never permitted, see (12a, b). Note that there is no conceptual necessity for this prohibition since it is very well conceivable to make one of two newly introduced discourse referents salient in an appropriate discourse situation, i.e. to focus it.

(12) a wia'e ana Lehrarin a Schülarin vorstäin woid
as-I a teacher-DAT a pupil-ACC introduce wanted
b *wia'e a Schülarin ana Lehrarin vorstäin woid

The second kind of scrambling considered here delivers an illustrative contrast. In my approach, focus scrambling and scrambling of definite DOs do not form a natural class (as already assumed by Bayer & Kornfilt 1994).[9] Whereas the latter is an instance of A-movement, driven by feature checking, the former is a kind of rearrangement, presumably XP-adjunction, which takes place after the operations belonging to the core computational system are completed (cf. Chomsky 1995: 324ff.). And for this reason, focus scrambling is both optional (in the sense defined above) as well as resulting in at least slightly marked constructions (see also Holmberg & Rijkhoff 1998). Therefore, focus scrambling does not belong to the core computational operations, and it may be due to this that it could only start from derived positions, as is the case with definite NPs, which are in derived positions.

3. *CS and the information structure*

One of the most fascinating aspects of the MP is that it attributes an indirect functionality to the CS (Hinterwimmer 2000). Though the CS is „dumb" (Martin 1999) in the sense that it cannot see whatever semantics or discourse pragmatics require, it nevertheless derives expressions which are readable by other mental systems. This indirect functionality should not surprise us, because it is precisely what one could expect from a complex natural system evolving within the lines of Darwinian evolution.
This means for our purpose that the core computational operations derive representations which could either get a discourse functional interpretation or can be subject to further discourse functionally driven operations. Take for example a simple twofold partition of sentences, as assumed by many discourse theories. In the discourse representation theory (DRT), for instance, we partition the domain into existential closure of the the nuclear scope, and a restrictor, into which presupposed material is mapped. In accordance with Diesing's (1992) Mapping Theory they can be identified with the VP and the layer of functional projections, respectively. As I hope to have shown above, the distribution of arguments onto both domains can be analyzed as following from core computational operations without recourse to requirements coming from discourse functions. That the CS-output converges on them is an example of the indirect functionality mentioned above, but informational demands do not trigger any movement within what Chomsky calls narrow syntax. The bipartite information structure is, in the sense of Chomsky (1999), only „a property of the resulting configuration".

(ii) *wai da Hans a Biachl gesdan/oft glesn hod
because the John a book yesterday/often read has

9 In Weiß (2001b), I proposed to restrict the term 'scrambling' to focus scrambling.

Assume, as is standard within MP, that all movements occurring in the course of derivations within narrow syntax are triggered by feature checking, however, their output can be read off by multiple interfaces where systems of thought which are not part of the CS have access to CS representations.[10] In the standard case, the representation can be read off as it is delivered by CS without requiring further rearrangements. This is, for instance, the case in (13) where the DO has moved to the specifier of $AGR_{DO}P$ to get its D-feature checked away. Ignoring further details (e.g., movement of V to C° and of the subject to SpecCP) for the moment, this single feature driven movement suffices to derive a well-formed structure for CS as well as for the interface from which the discourse representation (DR) is read off, because the definite DO has already moved into the layer of functional projections which corresponds to the restriction at the level of DR. The crucial point is that the DR-structure is the result of an interpretation process: the DR-system only interprets a CS representation, but does not control its derivation. I take it in this sense that information structure is „a property of the resulting configuration" (Chomsky 1999).

(13) ea hod s'Auddo ana Bekanndn glieng
he has the car an acquaintance lent

On the other hand, focus scrambling is an instance of a discourse functionally driven movement which takes place after the core computational operations. This can be obtained if one assumes a multiple Spell-Out mechanism (as developed by Uriagereka 1999) which allows rearrangement operations to take place secondarily in addition to CS operations. This is the case in (14a) where the DO scrambled to the left of the IO. Thus, the derivation of (14a) contains one movement operation which is not triggered by feature checking in narrow syntax, i.e. focus scrambling. The optionality of focus scrambling - cf. (14b) - is evidence for it not being a CS operation, because movements in order to check core CS-features are always obligatory.

(14) a ea hod s'Auddo am Sepp glieng
he has the car the Joe lent
b ea hod am Sepp s'Auddo glieng
he has the car the Joe lent

This assumption delivers a simple and natural explanation of most properties of focus scrambling. Optionality has lead some researchers to propose a base generation account (Bayer & Kornfilt 1994, Neeleman & Weerman 1999) which is unnecessary under the present approach. It accounts further for the A-properties of scrambling (Neeleman & Weerman 1999): the structure where scrambling starts off is derived by A-movement and scrambling being a post-CS rearrangement operation is no A'-movement (as wh-movement is), so there is no possibility to acquire A'-properties. It also explains why focus scrambling is local (Neeleman & Weerman 1999) because it is restricted to the layer of functional I-projections.
Interestingly, this kind of rearrangement is neither independent of nor entirely determined by grammar (since focus assignment follows, for instance, intonational rules which are not part of CS). The point which is of special concern for my purpose is the dependence on case morphology. In this respect Bavarian resembles many other languages: if it is possible for the language parser to identify syntactic functions by case morphology, objects can be rearranged

10 There exist some proposals for more than just two interface levels (see Platzack 2000, or Uriagareka 2000a). My own proposal corresponds to them in spirit, though not in the details.

according to focus. This is the case in languages as diverse as Icelandic (cf. Holmberg & Rijkhoff 1998) and Malayalam (see below).
A major issue which seems to be problematic for the present approach is the observable cross-linguistic variation between languages which either allow for scrambling (like Bavarian) or do not (like English). A possible answer to this could be the principle of strong morphology. As said above, the CS system (Chomsky 1999) can be thought of as being a formal feature detecting system. Suppose additionally that uninterpretable formal features must be checked before Spell-Out in case they are not morphologically encoded, and that they can delay checking to LF in case they are. Since morphological strength triggers syntactic behaviour, which is contrary to the one claimed to follow from feature strength, these two cannot be the same.[11] However, I think the principle of morphological strength could be a plausible way to avoid the concept of feature strength (as Chomsky 1999 did as well) without the necessity of dispensing with the empirical consequences of Pre- or Post-Spell-Out movement. Furthermore, this principle of strong morphology seems to be a natural addition to the *Virus theory* (VT) (cf. Lasnik 1999, Uriagereka 2000b): according to VT, uninterpretable features must be checked off via movement before Spell-Out, unless they are associated with strong morphology or deleted.
That means for our purpose that in Bavarian (a language with morphological case), the case feature can be checked after Spell-Out, and in English (a language without morphological case), it must be checked before Spell-Out. On the other hand, the D-feature, being uninterpretable as well as not being morphologically encoded, must be checked before Spell-Out in both languages. Given these assumptions, it follows that there is no syntactic difference between definite and indefinite DPs in English, since indefinite DPs move as well to their AGRPs because of their morphologically weak case. In contrast to that, indefinites do not have to raise in Bavarian, since their case features are morphologically strong. So the difference between Bavarian and English could be explained by the concept of morphological feature strength.[12]
It appears to be the case that the presence or absence of morphology plays an important role in other grammatical domains as well as in other languages. Consider first AUX movement in WF (Haegeman 1998): a finite AUX in IPP constructions can appear in two different positions, to the right (15a) or to the left (15b) of the IPP complement. This positional alternation corresponds to a morphological difference: *eet* vs. *ee*. Though Haegeman (1998) regards it as a mere phonological alternation, I think it could well be that it reflects a difference in morphological strength. If this is the correct assumption, the raising of the morphologically weak *ee* follows automatically as well as that the morphologically strong *eet* can stay in its base position.[13]

(15) a da Valère willen Marie dienen boek geven *eet*
that V. want Marie that book give has

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11 Though it is not uncommon to equate feature strenth with rich morphology (e.g., Haegeman 1998), there are exceptions like van Gelderen (1997) who also argues for the difference between both kinds of strength.

12 The principle of morphological strength is thought of as an addition to Chomsky's (1999) Phase and Uriagareka's (1999) multiple Spell-Out (though admittedly it has to be worked out in greater detail in future research).

13 Haegeman (1998) herself offers a different analysis. Note that some of the cases, analyzed by the strong-weak difference, are better explained by a more traditional analysis based on absence or presence of features, e.g. the finite/non-finite asymmetry of verb movement in French (cf. Haegeman 1998 for a different proposal).

b da Valère *ee* willen Marie dienen boek geven
that V. has want Marie that book give has

In Scandinavian DP syntax (cf. Santelman 1993) there is a phenomenon which seems to be showing the relevance of the morphological feature strength concept, as well. Take for example Danish, where definite articles occur post-nominally (16a) which can be explained by N°-to-D° raising. However, noun raising is blocked, if a adjective intervenes between D° and N° (16b): in this case a pre-nominal article is inserted in D° in order to support morphologically the D-feature. A possible analysis within the concept presented here is that the 'weak' suffixal article needs (DP-internal) checking of the D-feature, hence N°-to-D° raising. The insertion of the strong article when noun raising is impossible could be seen as a last resort mechanism to prevent the derivation from crashing.

(16) a hus-et
house-the
b det gamle hus
the old house

Bavarian DP syntax has a similiar pattern in that it exhibits an alternation between unstressed and stressed articles showing the same distribution as their Danish counterparts (cf. 17a, b). Interestingly, in the case of masculine singular where the unstressed article is not clitical, the presence of an attribute does not trigger any difference (cf. 17c), although a stressed form does exist (cf. 17d). This is a strong evidence for the principle of strong morphology, since the only difference between (17b) and (17c) is the morphological strength of the article forms.

(17) a d'Muadda
the mother
b de guade Muadda
the good mother
c da (guade) Vadda
the (good) father
d dea guade Mã
this good man

V. Other languages showing similar properties

As was briefly mentioned above, the phenomena discussed here for Bavarian also occur in other languages to varying extents. Let us consider some of them.

Malayalam, a Dravidian language spoken in South India, is an interesting example as it exhibits all the same phenomena as shown here for Bavarian, that is, the IO-DO inversion and focus scrambling of definite objects.[14] In Malayalam, an SOV language, the basic word order is IO before DO, since the IO precedes the DO, when both are either definite (18a) or indefinite (18b), or the IO is definite and the DO indefinite (18c), whereby adverbs are free to precede or to follow definite objects (18a), but must precede indefinite ones (18c).

(18) a amma (palappoozhum) kuTTi-kkൽ (palappoozhum) aa katha
mother often child-DAT often that story

14 Many thanks to Hany Babu who informed me about the Bavarian-Malayalam parallels and who supplied me with the data on which the following is based. See also Hany Babu (in progress).

paranju-koTutt-iTT-untൻ
said-gave-PERF-AUX

b Josef oru kuuTTukaaran-ൻ oru chinakkaaran-e paricayappeTutti
Josef one friend-DAT one Chinese-ACC introduced

c Josef (palappoozhum) Hans-inൻ (palappoozhum) oru beer
Josef often Hans-DAT often one beer
(*palappoozhum) waangi-kkoTutt-iTT-uNTൻ
often bought-gave-PERF-AUX

Interestingly, Malayalam shows the same inversion effects as Bavarian. First, when the DO is definite, it must move to the left of an indefinite IO (19a vs. b), so that its D-feature gets checked off. Since it possesses strong case morphology, there is no case driven movement in Malayalam either. Second, Malayalam allows for focus scrambling (20a vs. b): a definite DO can scramble to the left of a definite IO which then is in the focus position. Therefore, Bavarian and Malayalam are similar to a great extent with respect to argument order.

(19) a amma oru kuTTi-kkൻ oru mittaa-yi kotutto
mother one child-DAT one sweet-ACC gave

b amma aa mittaa-yi oru kuTTi-kkൻ kotutto
mother that sweet-ACC one child-DAT gave

(20) a Josef director-kkൻ secretary-ye paricayappeTutti
Josef director-DAT secretary-ACC introduced

b Josef secretary-ye director-kkൻ paricayappeTutti
Josef secretary-ACC director-DAT introduced

Even in Chinese, one can find reflexes of the morphological scrambling parameter.[15] Chinese D/NPs appear in two forms, either as bare nominals or as a classifier construction. Assume for the moment that this difference can be analyzed as a weak-strong difference according to our proposal and consider the sentences in (21).[16] Since Chinese is a language without any morphological case marking system, it is reasonable to assume that overt checking of the case feature plays no role.[17] Yet, the D-feature can be marked morphologically, namely with a classifier construction, or not, hence we can expect a difference of (c)overt checking. The sentences in (21) confirm these predictions: indefinite NPs do not have to move, regardless of weak (21a) or strong (21c) morphology, but definite NPs must raise in case of weak morphology (21b) and can remain in base position when they are morphologically strong (21d).

(21) a wo mai shu le
I buy book ASP

b wo shu mai le
I book buy ASP

c wo mai yi ben shu le
I buy one CL book ASP

d wo mai zhe ben shu le

15 Many thanks to Lyih-Peir Luo for supplying me with Chinese data.

16 Surely, there is much more difference between the two NP types, e.g. in semantics (cf. Chierchia 1998).

17 Note that if this is correct, the failing of a 1-to-1 correlation between case system and flexible/ rigid word order (as mentioned in Holmberg 1998) is not necessarily a counter-argument.

I buy that CL book ASP

VI. Conclusion

Now let us return to languages with case systems and summarize. According to our proposal, those languages which do not have a case morphology distinctive enough do not display a difference between the syntax of definite and indefinite NPs, since the case feature must be checked overtly. This seems to be the case with English, Dutch and the Mainland Scandinavian languages. On the other hand, in a language like Bavarian which has strong case morphology, checking of the case feature can be delayed to LF. Yet what must be overtly checked is the d-feature, hence definite NPs must move and a difference in the (in)definite syntax arises in such languages.[18]

As for focus scrambling, its occurrence depends on case morphology as well, since case has to identify syntactic functions. This entails that focus scrambling is allowed in languages with a rich enough case morphology, whereas it is not permitted in languages with weak morphological case. This explains, e.g., why focus scrambling occurrs in Icelandic, but not in the Mainland Scandinavian languages (Holmberg 1998).

However, languages with weak case morphology permit operations similar to focus scrambling, for example dative shift in Dutch, English, or the Mainland Scandinavian languages, or object shift in the Mainland Scandinavian languages (Platzack 2000).[19] All these discourse functionally driven displacement operations, which obey the laws of UG concerning movement, are additionally dependent on language specific properties, and as far as focus scrambling is concerned, it is the richness of case morphology.

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18 The example of Icelandic shows that there must be some additional factor(s) governing argument order: although it has a rich case morphology, it seems not to display the (in)definite dichotomy (Holmberg 1998). It may well be that obligatory V-to-I raising or the VO base structure which are both properties of Icelandic in contrast to Bavarian are such factors (e.g., demanding a different status of AGR features). Note that according to Haider & Rosengren (1998) scrambling is restricted to OV-languages. There are interesting data from the acquisition of negation in French (Déprez & Pierce 1993: 41) showing that verb raising can trigger subject raising: only in tensed sentences with V-to-I raising, may the subject leave its VP-internal base position resulting in a S-V-Neg pattern. In contrast, subject raising seems never to occur in untensed sentences, as indicated by the Neg-(S)-V-(S) pattern (note that the V-S order is due to the fact that French allows for short movement of the verb, cf. Déprez & Pierce 1993).

19 According to Holmberg (1998), object shift depends on case morphology, too. In Mainland Scandinavian, object shift is restricted to pronouns, whereas in Icelandic it applies to all NPs.

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