

Syntactic and phonological properties of wh-operators and wh-movement in Bavarian

Josef Bayer
University of Konstanz

ABSTRACT

Wh-movement is less uniform than suggested by the standard theory of generative grammar. Bavarian provides evidence that word-size wh-operators have syntactic as well as phonological properties of functional heads rather than genuine phrases. At the core of the analysis is the intuition that wh-words embrace the role of the complementizer, and that as a consequence merger of a separate complementizer is suspended. Theoretical reasoning which comes to this conclusion is supported by judgment as well as production experiments with native speakers of the language. It is argued that from the economy-driven perspective of minimalist syntax, head-style wh-movement, as supported by Bavarian syntax, should actually be the preferred choice.

1. Introduction

Bavarian is a southern German dialect which is known for its freedom to ignore the Doubly-Filled Comp Filter (DFCF) as originally suggested by Chomsky and Lasnik (1977). The Bavarian dialect allows or sometimes even demands simultaneous filling of the C-position and of the SpecCP-position in embedded questions and relative clauses. Bavarian is by no means exotic in this respect. Our impression is rather that standard languages which obey the DFCF such as Standard German, Standard English, Standard Dutch, French, Italian etc. do so for normative reasons and not for grammar-intrinsic reasons.¹ Various dialects as well as older stages of these languages show far more variation in this respect than the DFCF, conceived of as a UG-constraint, would make us expect. Bavarian is confined to the spoken and auditory modalities but sometimes it is also written. (1) is one of many examples that can be found on the internet.

- (1) Schaugn S zua, **durch wiavui verschiedene Stationen** **dass** d Bio-Milch
watch you_{PL} at through how.many different stages that the.bio-milk
durche muaß, **bis dass** ois abguillts Andechser Natur Spitzenprodukt
through must until that.it as up.filled Andechs nature top.product
bei Eahna aufm Tisch steht
at you on.the table stands
„Watch how many stages the natural milk must pass through before it lands as a
finished natural Andechs top product on your table“
<http://www.andechser-natur.de/bar/bioproducte/herstellung/milch/> 09.04.2013

The example shows that the wh-phrase (*durch wieviele verschiedene Stationen*) co-occurs with the complementizer *dass*. The example also shows a remarkable fact about the temporal clause headed by the preposition *bis* (“until”). In Standard German (SG), *bis* is a preposition-based complementizer for adverbial clauses and does not as such rely on the presence of a separate complementizer. One knows that it has been grammaticalized in such a way as to

¹ Cf. Weiß (2001).

cover also the subordinating function of a complementizer.² In Bavarian, on the other hand, an older historical stage seems to be retained in which *bis* is nothing but a preposition and as such relies on spell-out of the complementizer *dass* if it should head a sentence. In SG, (1) would come out as (2).

- (2) Schauen Sie zu, **durch wieviel verschiedene Stadien** Bio-Milch hindurch muß, **bis** sie als abgefülltes Andechser Natur Spitzenprodukt vor Ihnen auf dem Tisch steht.

The contrast between (1) and (2) shows quite nicely that the left clausal periphery is subject to variation. It is an important question how this variation should be captured in syntactic theory. A popular answer within the GB-framework would have been that SG is exactly like Bavarian but does not, for some reason, spell out *dass*. This answer is too simple to be true. In addition it does not explain anything. As some traditional as well as some recent empirical work has shown, however, it is not even descriptively adequate. The fact is rather that there is much variation, even within Bavarian but that within this variation there is a very strong tendency of the following sort: While uncontroversially phrasal wh-operators tend to require an overt complementizer, wh-words like *was* tend to reject it.³

- (3) a. *I mecht wissn, wos dass-a g'macht hod⁴
 I want know what that-he done has
- b. I mecht wissn, wos-a g'macht hod
 I want know what-he done has
 "I want to know what he has done"

In other words, the DFCF appears to be suspended in the presence of the wh-operator *was*. If Bavarian would simply follow a shallow parameterization of ignoring the DFCF, the contrast between (3a) and (3b) would be unexpected.

In this contribution, I will argue that Bavarian syntax reveals an important fact about complementation in general and wh-movement in particular that is all too often obliterated by normative grammar. I will claim that word-size wh-operators do not move to SpecCP but rather to a position which can be identified as the head position of the CP, while genuine wh-phrases move to SpecCP as in the model of X'-theory extended to functional heads that had initially been suggested in Chomsky (1986). The paper is organized as follows: §2 will introduce the idea that certain wh-elements may actually move to C rather than to SpecCP. §3 will present conceptual as well as theoretical motivation for this idea. In §4 and in §5 judgment data and production data from speakers of Bavarian will be presented respectively. §6 considers constraints on long distance extraction from wh-CPs. In §7, the findings from §6 will be compared with yet another construction, namely with cases of so-called "emphatic topicalization". The discussion then shifts to phonological and morphological aspects of wh-complements. §8 considers processes of cliticization and consonantal epenthesis that have been attested in Bavarian. In §9, I will turn to the notable and fairly exotic phenomenon of complementizer inflection. The article closes with conclusions in §10.

² See Pittner (1996) for relevant discussion.

³ See Weiß (2004) for Bavarian and Schönenberger (2006) for varieties of Swiss German.

⁴ The * is suggested by the philological studies of Schiepek 1899; Merkle 1984; Noth 1993; Steininger 1994. Grewendorf 2012 marks it as ?*

root node. In order to stay within the confines of the theory, one has to resort to the strategy of Sideward Movement.⁷

Bayer and Brandner (2008) and in Bayer (in press) propose an economical derivation in the sense of (6ii). In their proposal, a wh-word is endowed with a “latent” C-feature, αC , which is activated, i.e. set to +, only if wh is remerged with a finite TP. Otherwise αC will be set to –C and will as a consequence delete. In a wh-phrase like *was für ein Buch* (what for a book; “what kind of book”), the wh-item is sister of the *für*-PP and can as such not activate the C-feature. In this case, Bavarian requires an overt complementizer.⁸

In generative grammar, the proposal of wh-movement as head-movement invokes various questions. The GB-version of X-bar theory that has adopted functional categories suggests a clear division of heads and specifiers. However, *Bare Phrase Structure* (BPS) as suggested in Chomsky (1995) and following work, does not and cannot insist on a pre-established division. In BPS, the decision of what is a head and what is a complement or a specifier is made in the course of the derivation. Given the fact that a lexical item X may embrace more than a single feature, we end up with the possibility of a complex feature structure X [wh, ..., αC]. These features must be activated or – in selected cases – deleted in the course of a derivation. Assuming that α can be set to +, one can speak of X as undergoing syntactic recycling until all its features have been licensed.⁹ The simplest and in my view most minimalist assumption is that the tree, here TP, may get extended by internal merger and nothing else. If there is no zero complementizer with an unvalued wh-feature in the numeration, the wh-word may nevertheless raise to TP, grab TP and project a +wh CP. This has been suggested under the notion of “self attachment” by various researchers.¹⁰ For reasons of semantic convergence, the wh-element is only relevant with respect to its operator feature. If the wh-word embraces a semantic restriction such as PERSON, PLACE etc., this restriction is normally not relevant in the operator position. The minimalist theory of copy movement and distributed deletion suggests that the restrictor part actually remains in the underlying position of the wh-element. If so, the wh-complementizer decomposes into a pure subjoiner feature C and a pure wh-feature both of which require nothing but repeated attachment of the wh-word to TP:

$$(7) \quad [{}_{wh-CP} \text{wh} [{}_{CP} \text{wh} [{}_{TP} \dots \text{wh} \dots]]]$$

In (7), the first step creates the CP-layer by virtue of remerging a head that embraces αC . Due to this head’s wh-feature, there will be another step by which the head is remerged a second time. This step creates a +wh CP and deactivates the wh-feature (scope freezing).

⁷ For reasons of space I cannot elaborate on this. The reader is referred to Nunes (2001) and to Hornstein et al. (2006).

⁸ Notice as a caveat that by far not all Bavarian speakers insist on an overt C. The reason for the choice of an overt C are still not quite clear although there are indication in an interesting direction as I will explore below. Another caveat is that C is usually seen as a category and not as a feature. On the other hand, the evidence for C as a category on a par with N and V is shaky. C-elements seem to be derived from rather heterogeneous sources. Thus C as such may turn out to be compatible with features. I cannot pursue this line of thought here.

⁹ I would like to avoid a narrower discussion of feature licensing in terms of interpretability and non-interpretability as such a discussion would complicate the issue while not adding much substance to what I have to say here.

¹⁰ Cf. Platzack (1996), Koenenan (2000; 2002), Bury (2002), Fanselow (2002a), Surányi (2003), Brandner (2004) and van Craenenbroek (2006). Donati (2006) assumes wh-head-movement for independent reasons. For a comprehensive overview and detailed theoretical discussion see Georgi and Müller (2010).

3. Conceptual and theoretical motivation

On the basis of the Chomskyan minimalist approach to syntax, van Gelderen (2004a,b) proposes an economy principle which dictates projective parsimony whenever it leads to a converging structure, the Head Preference Principle in (8).

- (8) Head Preference Principle
Be a head rather than a phrase! van Gelderen (2004b: 10)

Echoing earlier proposals in generative grammar as well as research on grammaticalization, this principle finds a theoretical foundation within BPS. In van Gelderen (2004a), for example, the subject pronoun in English is analyzed as an N which raises to D and from there adjoins to I. Provided that the pronoun is a head, as has been suggested by various linguists since Postal (1966), see especially Abney (1987), there is no necessity to create a specifier. In fact, van Gelderen shows in a host of cases how derivations change in history from phrasal movement to head-movement, and how this development can be made sense of within BPS.

In their discussion of feature movement and checking domain, Hornstein, Nunes and Grohmann (2006: 315) ask why the checking domain of a head H should necessarily involve elements adjoined to H and specifiers of H, and why head-adjunction alone should not be sufficient. According to them,

[A] *Spec-head configuration doesn't seem to be an optimal configuration in the sense that it can be reached only after the head merges with its complement, but the complement is not participating in the checking relation between the specifier and the head. According to the Move-F approach, head adjunction is the optimal checking configuration. [...] If head adjunction does not lead to convergence because of morphological restrictions, the system then resorts to the second most optimal configuration, which is the Spec-head configuration.*

This argument is in agreement with both van Gelderen's principle in (8) and with the analysis of wh-movement as head movement suggested in Bayer and Brandner (2008) and in Bayer (in press). The only difference is that Bayer and Brandner (2008) and Bayer (in press) do not assume external merger of a C head to which the wh-pronoun adjoins but rather head-raising as re-projection. Apart from this difference, which will not be in the focus of the current article, the approach is the same. It is driven by the minimalist requirement of stripping derivations down to the bare essentials as provided by the lexicon. The word-size wh-operators which are said to move to C rather to SpecCP are arguably pronominals or other pro-forms. *Was, wer, wen, wem* are pronouns, *wie, wo, wann* are pro-adverbs. Following Postal (1966), Abney (1987) has argued that personal pronouns are actually D-elements and ergo functional head. There is no comparable analogy for adverbial pro-forms but they are undeniably closed-class elements of the same morpho-syntactic type as personal pronouns. Direct evidence for their head status is provided by the fact that they appear in pronominal PPs. The pronoun *wo*, which was *wâ* in Middle High German, i.e. a form of "what", appears as a so-called "R-pronoun" in words like *woran, worauf, worin, worunter* etc.¹¹ But also oblique pronouns such as Genitive *wes* can be found as in *weshalb, weswegen* ("why"). Wh pro-forms can also be found in other lexical items as seen in the examples *wieso* ("why"), *inwiefern* ("in which way", "to what extent"), *inwieweit* ("up to what extent"), *wieviel* ("how much") which inte-

¹¹ See also the wh *r*-pronouns of Dutch which retain the original vowel: *waarbij, waarover waarmee* etc.

grate the wh-adverb *wie* (“how”). These fossilized lexical items must have X^o-status. The fact that they integrate wh pro-forms is independent proof of the head status of the wh-series.

Pronominal wh-PPs are absent in Bavarian with one exception:¹² *warum* (“why”). It is in all likelihood a PP composed of a wh-pronoun *wa(r)* and the adposition *um*. Even if pronominal PPs have X^o-status, they are potentially phrasal in nature. In Dutch as well as in many German dialects one finds P-stranding. Although *warum* is not separable, and although Bavarian does not allow P-stranding at all, one cannot exclude parsing of *warum* as a PP. Depending on the speaker’s intuition about an internally complex structure, [PP *wa(s)+* [P’ *um was*]], or a holistic representation, this element could be analyzed as a head or as a genuine phrase. If the wh-pronoun bears a latent C-feature as argued here, merger with the adposition will set αC to –C, and merger of *dass* will be expected. If *warum* lacks such a parse, it is likely to behave like unanalyzed or unanalyzable pro-forms.

Wh-phrases like *durch wieviel verschiedene Stadien* („through how many stages”), *was für einen Unsinn* (“what kind of nonsense”) clearly do not permit a head analysis. For them we expect in the Bavarian dialect merger of *dass* and movement to SpecCP.

Coming back to the minimal pair in (3), which is repeated in (9) for convenience, it should be clear now that (9a) is not actually “ungrammatical” although it is deviant.

- (9) a. *I mecht wissn, wos dass-a g’macht hod
 I want know what that-he done has
- b. I mecht wissn, wos-a g’macht hod
 I want know what-he done has
 “I want to know what he has done”

(3a)/(9a) contains a redundancy which can be avoided if the word-size operator *was* is used in the derivation as what it really is, namely a potential complementizer.¹³ Thus, (3b)/(9b) is the preferred form because it rests on a more parsimonious derivation than its competitor.

In the rest of this article it will be shown that various syntactic as well as phonological properties of Bavarian strongly support the revision of wh-movement as a type of head-movement that I have sketched above, and which is “conceptually necessary” – to echo Chomsky – once the minimalist approach to syntax is fully adopted.

4. Judgments

Grewendorf (2012: 55f.) presents examples of violations of DFCE in Bavarian which suggest the following squish in (10).

- (10) D-linked wh-phrases > {warum/wem > wer > wen > wo > wia} > wos
 why who_{DAT} who_{NOM} who_{ACC} where how what

¹² Schmeller (1877) does not list a single example under the entries of *wo*.

¹³ As pointed out in Bayer and Brandner (2008) and Bayer (in press), it cannot be an accident that in many languages, including dialects of German, the pronoun *was* and its correspondents have been recruited as the unmarked complementizers.

D-linked wh-phrases are what I call here genuine phrasal expressions, i.e. multi-word expressions, expressions which standardly cannot be associated with a head position. According to Grewendorf they have the lowest operator status whereas *wos* has the highest operator status. The other elements are subject to variability.¹⁴ I agree with this assessment partially but not completely. Without doubt, D-linked wh-phrases are the most likely to co-occur with the overt complementizer whereas the pronominal *was* is the most unlikely one. It is also true that *warum* and the dative pronoun *wem* run a higher chance to occur with *dass*. For the case of *warum* the reason was already given above. Why would the dative pronoun *wem* be more phrase-like or – to speak in Grewendorf’s terms – less “operator-like”? According to the theory of dative Case proposed in Bayer, Bader and Meng (2001), the dative pronoun *wem* is more complex than a nominative or accusative pronoun. The latter two can be morphologically primitive as shown by the syncretic form *was*; the dative, however, must be overtly Case-marked.¹⁵ Bayer, Bader and Meng (2001) propose an underlying structure by which dative Case is syntactically represented as the head of a Kase-phrase (KP), i.e. [_{KP} K^o [_{NP} *wem*]]. If so, the expectations are as in the case of *warum*. Depending on the speaker’s intuition about an internally complex structure, [_{KP} K^o [_{NP} *wem*]] or a holistic representation, *wem* could be analyzed as a head or as a genuine phrase. If the wh-pronoun bears a latent C-feature as argued here, merger with the K-head will set αC to $-C$, and merger of *dass* will be expected. If *wem* lacks such a parse, it is likely to behave like an unanalyzed pro-form.

The following data from the empirical study of Bayer (in press) involve too few speakers to be fully conclusive but they nevertheless show a trend. Judgment studies were carried out with Bavarian speakers from different regions and different age/education groups. The sentences involved undressed wh pro-forms as well as wh-phrases in contrast with wh pro-forms as well as wh-phrases in the context of the overt complementizer *dass*. The task was to value spoken sentences according to the six-point scale of German school grades. According to this system, 1 = best and 6 = worst. The data are reported according to the experiments that were carried out with different groups of subjects.

¹⁴ It is not clear to me why in this case they should be ranked at all. It is also not clear to how a wh-expression can be more or less operator-like. Van Craenenbroek (in press) assumes a two-stage CP; he proposes that wh-words including P+wh-word are operators which move to the specifier of the upper CP whereas real wh-phrases, i.e. D-linked wh-XPs are externally merged into the upper CP-shell and are coindexed with an empty operator which moves only into the specifier of the lower CP-shell.

¹⁵ Consider the contrast in (i).

(i) { *Welch-em Vorschlag / *was* } *hast du widersprochen?*
 which-DAT proposal what have you objected
 “Which proposal / what did you object to?”

The morpheme *was* is nominal but lacks a Case paradigm. Thus it is unfit to represent dative Case. For a fuller understanding of the situation, the interested reader should consult Bayer, Bader and Meng (2001) or Bayer and Bader (2007).

Table 1: 10 speakers of Middle Bavarian, age: 40-78, lower educational background; 12 sentences with wh-words; 12 sentences with wh-phrases.

	WITHOUT COMPLEMENTIZER	WITH COMPLEMENTIZER
<i>was</i> ('what')	1	3,5
<i>wie</i> ('how', 'as') etc.	1,1	3,6
<i>wem</i> ('who-DAT')	1,1	2,5
<i>warum</i> ('why')	1,25	1,25
P+wh-word, e.g. with what	1,1	1,25
P+wh-phrase, e.g. which NP	1,3	1,5

Some speakers in this study had a tendency not to give bad grades at all. Nevertheless, *was* and *wie* are the worst in combination with the complementizer *dass*; *wem* and *warum* are intermediate. This is expected if the above considerations about the enhanced structural richness of *warum* and *wem* hold water. A similar task with slightly different pronominals was given to younger dialect speakers with university education.

Table 2: 3 speakers of Middle to Eastern Bavarian, age: 25-35, university education.

	WITHOUT COMPLEMENTIZER	WITH COMPLEMENTIZER
<i>was</i> ('what')	1,3	5,7
<i>wer</i> ('who-NOM')	1	4,9
<i>wo</i> ('where')	1	5
<i>wem</i> ('who-DAT')	1,2	3,9
P+wh-word	1	1,9

According to these speakers, *was*, *wer* and *wo* are close to unacceptable with *dass*. Again, *wem* takes an intermediate status.

Table 3 reports a questionnaire study in which 13 younger dialect speakers participated.

Table 3: 13 young speakers from Regen (Middle to Eastern Bavarian), mixed educational backgrounds.

	WITHOUT COM- PLEMENTIZER	WITH COMPLE- MENTIZER
<i>was</i> ('what')	1.5	4.6
<i>wer</i> ('who-NOM')	1.3	4.7
<i>wo</i> ('where')	1.6	4.5
<i>wem</i> ('who-DAT')	2.2	4.4
P+wh-word	1.5	2

The dative pronoun *wem* cannot be distinguished in this group. Rather all word-size wh-operators obtain equally bad grades in the context of *dass*. This changes dramatically when the wh-word appears in a PP. Thus, the main effect of wh-word versus wh-phrase remains as stable as in the results shown in tables 1 and 2.

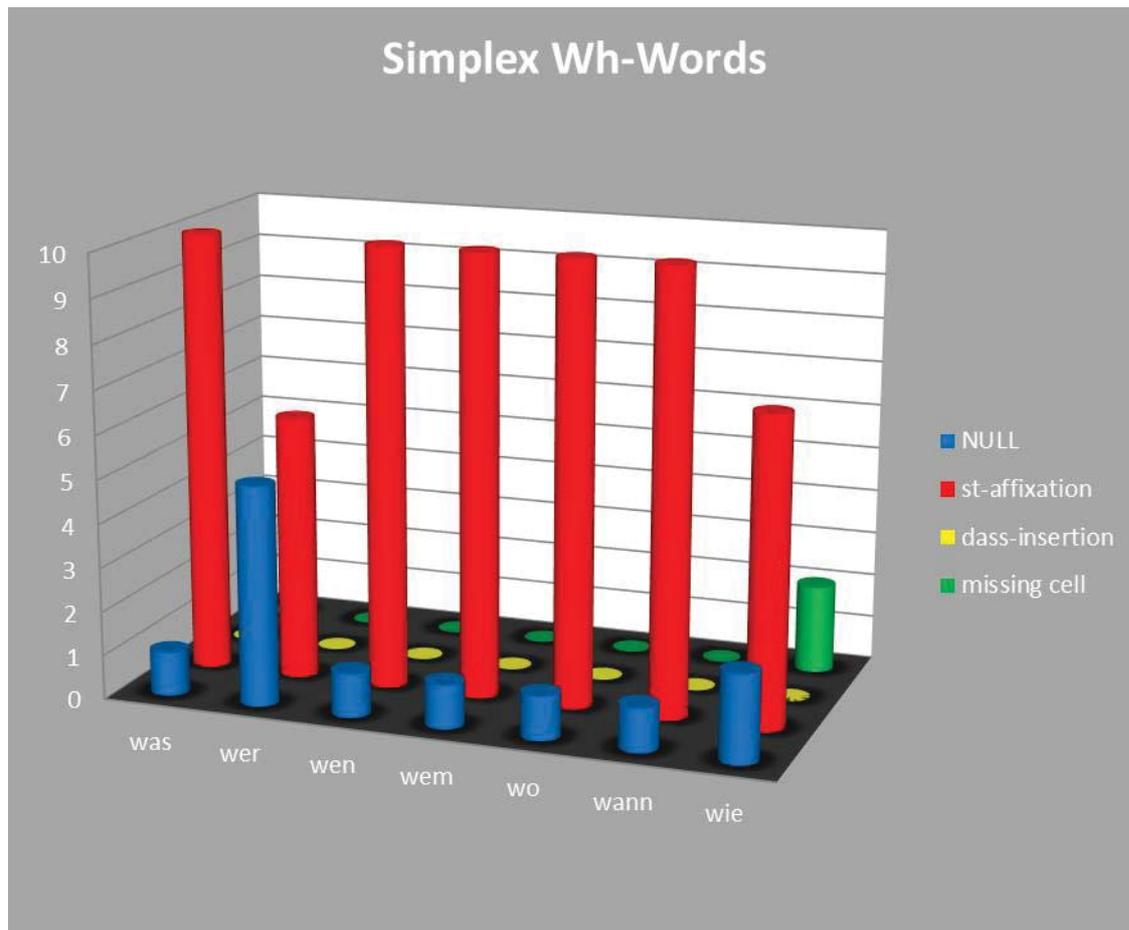
There is a clear trend which supports a division between wh-phrases and wh-words. The squish we expect from (10) is only replicated with respect to *warum* and *wem* both of which weakly tolerate the vicinity of *dass* more than the other wh-words.¹⁶ It is thus likely that there is a structural explanation for why certain complex wh-items behave differently from the simplex wh-items. For the time being, the data do not suggest any further differentiation.

5. Production

In order to reduce methodological artifacts that may arise from grammaticality judgments, dialect speakers were also asked to translate SG input into their Bavarian dialect. Materials were designed in such a way as to involve wh-simplizia as in (10) next to wh-PPs and some other full wh-phrases such as *wieviel Bier* ("how much beer"). In addition, the materials required 2nd person, i.e. the familiar trigger for 2nd person inflection on C. The participant of the study reported here were 11 students of the University of Passau were asked to write down their translation into the dialect. The SG-example *Der Wirt möchte wissen, wieviel Bier du bestellt hast* („The inn-keeper wants to know how much beer you have ordered“) was consistently translated with *dass*-insertion. This proves that the speakers follow the appropriate rule.

¹⁶ Due to the fact that Bavarian is not a written language, searches in the internet are unreliable. The impression is that *was+dass* never occurs, that there are rare occasions of *wer+dass*, *wen+dass*, *wem+dass* etc., and that there are more occurrences of *warum+dass*. Since no systematic study has been carried out, these remarks have to be taken with a caveat.

Figur 1: Translation of sentences with simplex wh-operators by 11 students, age 18-30



The translations show rather consistently 2nd person inflection on all wh-words. Interestingly, *dass*-insertion does not arise in any example. Some cases of *dass*-insertion can be found with complex wh-elements such as *warum*, not represented in fig.1, and increasingly many with wh-PPs. No special status of *was* can be derived from these data. It is rather the case that monomorphemic wh-operators fail to trigger *dass*-insertion indiscriminately.

6. Extraction from wh-CPs

A classical observation about extraction from an embedded CP in German is Fanselow's (1987) case of A'-topicalization out of wh-clauses as seen in (11a) with the tentative structure given in (11b).

- (11) a. Radios weiß ich nicht **wer** repariert
 radios know I not who repairs
 "As for radios, I don't know who repairs them"
- b. [_{CP} Radios₂ [_{C'} weiß [_{TP} ich nicht [_{CP} t₂' wer₁ [_{TP} t₁ t₂ repariert]]]]]

I find this example slightly marked but fully acceptable. If I am right, a violation of strict cyclicity, a subjacency violation, must be excluded.¹⁷ According to my judgments, (11a) is entirely on a par with the examples in (12).

- (12) a. Den Opa weiß ich nicht **was** geärgert haben könnte
 the grandfather know I not what enraged have could
 “As for grandfather, I don’t know what could have irritated him”
- b. Eueren Hund wüßte ich schon **wie** man erziehen kann
 your dog know I absolutely how one educate can
 “Your dog, I absolutely know how one can educate”
- c. Den Präsidenten sage ich euch gleich {**wann / wo**} ihr abholen sollt
 the president tell I you immediately when / where you pick-up should
 “As for the president, I’ll tell you directly when/where you should pick him up”
- d. Das Haus weiß ich nicht **wem** man anvertrauen kann
 the house know I not whom_{DAT} one can entrust
 “As for the house, I don’t know who one can entrust it to”
- e. Der Regierung weiß ich schon **warum** niemand mehr vertraut
 the government know I absolutely why nobody more trusts
 “As for the government, I absolutely know why nobody trusts is any longer”

According to my own judgments, the examples in (11) and in (12) are at variance with cases of topicalization out of CPs with a full wh-phrase in its specifier.¹⁸

- (13) a. ?*Radios weiß ich nicht **welcher Fachmann** repariert
 radios know I not which specialist repairs
- b. ?*Den Opa weiß ich nicht **welches Benehmen** geärgert haben könnte
 the grandfather know I not which behavior enraged have could
- c. ?*Eueren Hund wüßte ich schon **mit welchen Methoden** man erziehen kann
 your dog know I absolutely with which methods one educate can
- d. ?*Den Präsidenten sage ich euch gleich {**um wieviel Uhr / von welchem Flughafen**} ihr abholen sollt
 the president tell I you immediately at what time from which airport you pick-up should
- e. ?*Das Haus weiß ich nicht **welchem Mieter** man anvertrauen kann
 the house know I not which tenant one entrust can

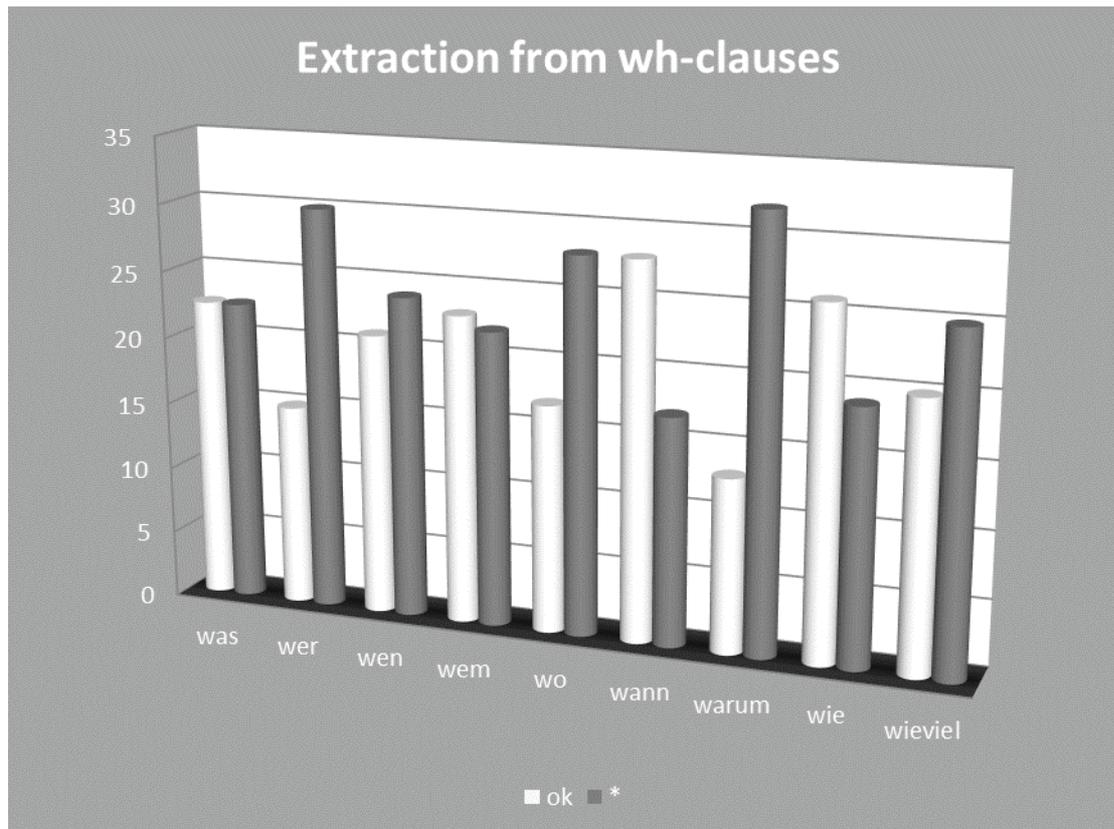
¹⁷ Müller and Sternefeld (1993: §3.9) find examples of this type “only slightly marginal” and witness “only weak Subjacency effects”. In their account, they suggest two different escape hatches, SpecC for wh-phrases and SpecT – not to be confused with the T(ense) P(hrase) of the minimalist program – for topics. Thus the “size” of the wh-phrase should not have any effect.

¹⁸ Notice that in these cases the wh-phrase could appear with the overt complementizer *dass*. According to my intuitions this would not change the result, neither to the better nor to the worse.

- f. *Der Regierung weiß ich schon **aus welchem Grund** niemand mehr vertraut
 the government know I absolutely for which reason nobody more trusts

While I agree with Grewendorf (2012) that extraction from wh-CPs as in (13) are rather degraded, I disagree about graded differences he reports for cases like those in (11) and (12) and which according to him follow from the scale in the curly bracket of (10). Judgment data from 46 Bavarian speakers, again students from the University of Passau, can be seen in Fig.2.

Fig. 2 Judgments about topic extraction from wh-CPs by 46 students, age 18-30



The result for *was* should be highly asymmetrical but it is 50/50. On the other hand, the results for *wem* and presumably also for *wann* should show a disadvantage w.r.t. extraction. A special disadvantage cannot be observed though. In general the extraction test turned out to be rather unreliable. Judgments of examples with genuine wh-phrases, not reported here, did not yield a clear picture of disadvantage either. Thus, nothing of much relevance for the status of wh-operators can be derived from cases of topic extraction from wh-clauses.

7. Extraction to the specifier of wh-CPs: Emphatic topicalization

As has been pointed out in Bayer (1984; 2001), Bayer and Dasgupta (2014), Lutz (1997; this volume), Weiß (1998) and elsewhere, topical XPs can in Bavarian stop in SpecCP.

- (14) a. An Fünfer dass-e krieg haid-e ned g'moant
 a five that-I get had-I not thought
 "I didn't think I would get grade five (i.e. a very bad one)"

- b. Da Hans ob kummt woass-e ned
 the Hans whether comes know-I not
 “As for Hans, I don’t know whether he will come”

The construction has become known as *Emphatic Topicalization* (ET) since Bayer (2001). A focused constituent is moved from TP across a complementizer to SpecCP. The semantic effect is approximately what has been described in recent literature as “mirative fronting”.¹⁹ To my knowledge ET is also attested in adverbial clauses headed by the adverbial subordinators *wenn* or *wann* (“if”, “as soon as”), *wia* (“as”), and *bal* (truncated from *sobald*, “as soon as”). I have never come across an example of ET from a wh-clause. Nevertheless, some native speakers of Bavarian seem to find a contrast between sets of examples in (15) and in (16).²⁰

- (15) a. (?)An Fünfer **wer** kriagt hod woass-e ned
 a five who gotten has know-I not
 “I don’t know who got grade five”
- b. (?)Z’Predlfing **warum**-s koan Gasthof mehr hom, kann-a-da scho song
 in-Predlfing why-they no inn more have can-I-you absolutely tell
 “I can tell you right away why they don’t any longer have an inn in Predlfing”
- (16) a. *An Fünfer **wiavui Schüler** (dass) kriagt hom woass-e ned
 a five how.many students that gotten have know-I not
 “I don’t know how many students got grade five”
- b. *Z’Predlfing **aus was fiar-an Grund** (dass)-s koan Gasthof mehr
 in-Predlfing for what for-a reason that-they no inn more
 hom, kann-a-da scho song
 have can-I-you absolutely tell
 “I can tell you right away for which reason they don’t any longer have
 an inn in Predlfing”

According to my own judgments, (15a,b) are tolerable whereas (16a,b) are bizarre. No systematic investigation is available. Therefore it would be futile to speculate about differences that might or might not emerge from different word-size wh-operators.

We will next turn to morpho-phonological properties of embedded wh-clauses in Bavarian which constitute independent evidence for the correctness of the account suggested here. For the time being, the data do not suggest any further differentiation.

8. Cliticization and consonantal epenthesis

Bavarian is widely known for its clitic system. Unlike SG, which distinguishes between weak and strong pronouns, cf. Cardinaletti (1999), Bavarian has genuine clitics which target the C-position, often referred to as the “Wackernagel position”. Detailed information about the syntax of pronouns in Bavarian can be found in Weiß (1998, ch.3). To see the relevance of the C-

¹⁹ Cf. Frey (2010) for German, Cruschina (2011) for Sicilian among various others.

²⁰ As Lutz (this volume) points out, some speakers seem to permit ET across simplex wh-items but not across genuine wh-phrases.

position, consider first the word order in (19), which is a realistic albeit not the only possibility in SG.

- (17) Ich glaube, dass neulich **ihn** jemand dort gesehen hat
 I believe that recently him someone there has
 “I believe that recently someone saw him there”

This order is sharply impossible in Bavarian. To retain the order by which the pronoun follows an adverb, only the strong pronoun *eam* could be used. If we ignore this option, the only option is shown in (20).

- (18) I moan, dass-**n** neili(*-**n**) wer do g’seng hod
 I believe that him recently someone there seen has
 “I believe that recently someone saw him there”

Here the landing site for the clitic element is C, i.e. a functional head position. This fact has immediate relevance for the topic of this article. The question is how clitics behave in embedded wh-interrogatives. Two options can be considered:

- (19) a. the clitic targets CP-initial wh-elements unconditionally
 b. the clitic targets only CP-initial word-size wh-items

The choice between (21a) and (21b) is not easy. That clitics target word-size wh-items is undisputed but it is less than crystal clear whether (19a) can be dismissed.

- (20) Mia wissn no ned, wann-**ma** kumma deafa
 we know yet not when-we come may
 “We don’t know yet when we are allowed to come”
- (21) ?Mia wissn no ned, um wiavui Uhr-**ma** kumma deafa
 we know yet not at how.much clock-we come may
 “We don’t know yet at what time we are allowed to come”

Example (20) is perfect. Host and clitic contract to /*vam:a/* by progressive assimilation of the host to the bilabial nasal. (21) is dubious but to my ears not completely bad either.²¹ The question is why. One can ignore syntactic solutions according to which the target of the clitic is an empty complementizer. The phonological side of cliticization would lose the core of its determination. A clitic is a weak element that cannot stand alone and thus needs a spelled-out host. This rules out the empty complementizer solution.²² One can also exclude the possibility that clitics in Bavarian are phrasal affixes as this would be incompatible with the established fact that clitics in this dialect target the Wackernagel position.²³ Cases like (21) may therefore rest on an analogical generalization by which the linear position of the constituent has been

²¹ Helmut Weiß (p.c.) finds it simply ungrammatical.

²² Helmut Weiß (p.c.) suggests that cliticization to an empty C head is still viable if there is a parallel process of phonological phrasing. To me it is unclear what remains of the syntactic concept of a clitic in this case; and secondly the syntactic-phonology interface becomes an issue of even more complicated mapping rules. It is worth noting here that the explanation of the ill-formedness of *wanna* contraction in raising constructions like **Who do you wanna win?* (from: *Who₁ do you want t₁ to win?*) started exactly from the assumption that phonology somehow operates on syntactic structure. Cf. Goodall (2005) for an overview.

²³ Cf. (18). Clitics can also target P, arguably a functional head. We speak only of enclitics. Proclitics show rather different properties.

exchanged for the syntactic category which normally arises in this position. Given that most current speakers of the dialect are “bilingual”, with quasi full competence in SG and not to seldomly weakened intuitions about their dialect, this should not be surprising. In this case, the clitic *-ma* is syntactically treated like a weak pronoun.

In order to probe more closely into the clitic system of the dialect, we can resort to mandatory phonological processes which apply under cliticization. One such process is epenthesis. The obvious reason for epenthesis is avoidance of hiatus. Relevant lexical host items are those which in many Middle Bavarian varieties terminate in the falling diphthongs [iɐ] and [uɐ]. Attachment of a vocalic clitic to such items triggers *r*-epenthesis.²⁴ Let us consider the wh-word *wia* (“wie”, how, as), /viɐ / and the nominal *Schua* (“Schuh” or “Schuhe”, shoe or shoes, /ʃuɐ/).

(22) *wia-r -e* hinte schau sich-e an Sepp
 as -R-I back look see -I the Sepp
 “As I look back, I see Joseph”

(23) *Sog-ma [wos fia Schua]-r -e ð:ziang soi
 tell-me what for shoes -R -I on-put should
 “Tell me which shoes I should put on”

It turns out that *r*-epenthesis is the only solution in (22) whereas it leads to a deviant output in (23). How is the conflict in (23) resolved then? Speakers have the option of avoiding cliticization altogether and then, of course, also epenthesis. Then the embedded clause is pronounced as *wos fia Schua i ð:ziang soi* with a marked break between *Schua* and the strong pronoun *i*. Given that Bavarian normally insists on clitics, this option is marked.²⁵ Clitic avoidance actually amounts to temporarily “stepping out” of the dialect. There is, of course, a better solution, and this solution is selection of the overt complementizer *dass*. The result shown in (24) is perfect.

(24) Sog-ma [wos fia Schua] dass -e ð:ziang soi
 tell -me what for shoes that -I on-put should
 “Tell me which shoes I should put on”

Why is (24) perfect? Of course it is because *dass* is a spelled-out functional head to which the clitic can gravitate; *r*-epenthesis does not apply here because the vocalic clitic meets the coda of /das/, which results in a desirable syllabification: /da.se/.

This short excursion into the phonology of cliticization has a twofold impact on our understanding of Bavarian syntax: First, cliticization and *r*-epenthesis in the context of a word-size wh-operator as seen in (22) is direct evidence for the head status of this operator. According to the present theory, the +wh-words *was*, *wer*, *wie* etc., perhaps including also the critical cases *wem* and *warum*, and the –wh-word *dass* occupy the very same position in the CP. Both types can be head of a CP. Secondly, this may be the beginning of a more explanatory account of DFC. If we speculate in the right direction, the rationale for DFC may be found in the dialect’s clitic system. The idea is that the dialect retains DFC because as a spo-

²⁴ Cf. Gutch (1992) for detailed discussion. A parallel of *r*-epenthesis can be found in Alemannic with *n*-epenthesis, cf. Ortmann (1998) and Bayer and Brandner (2008).

²⁵ It is especially used when the speaker has not been understood or is getting angry.

ken language it insists on clitics, and clitics can converge in the phonological interface only if the syntax provides the appropriate landing sites.²⁶

Under the simplest assumption about the syntax-phonology interface in which phonology interprets the linearized output of syntax, the understanding of DFC as a “spell-out restriction” is stipulative and should be replaced by an explanation. A theory in which wh-elements themselves can be exponents of C provides an explanation. Let me add that within the tradition of German grammar this observation is not entirely new. In fact, Reis (1985) has already pointed out that in the spoken standard language wh-words attract clitic and weak pronouns, and that this is a problem for a strongly positional theory by which the wh-word is not in the comp position.²⁷

9. Complementizer inflection

As has been pointed out in Pfalz (1918), Altmann (1984), Bayer (1984), Weiß (1998; 2005), Fuß (2005) and many others, Bavarian shows signs of inflecting the complementizer. In the Middle Bavarian varieties which are in the center of the present discussion, comp inflection affects 2nd person singular and plural consistently. The respective morphemes are exactly those of the verbal paradigm, namely *-st* and *-ts*.²⁸ The key properties which distinguish comp inflection from cliticization is obligatoriness and doubling. Clitics are not obligatory and do not double in the dialect. This is seen in (25a,b). However, the exponents of 2nd person do. This is seen in (26a,b). 2nd person inflection on C is obligatory, and it is present no matter whether the following pronoun is present or – as in the case of pro-drop – is absent.

- (25) a. Er is-sa ned sicher, ob-e (*i) des kapiert hob
 he is-REFL not sure whether-I (I) this understood have
 “He isn’t sure whether I have understood this”
- b. Er is-sa ned sicher, ob i des kapiert hob
 he is-REFL not sure whether I this understood have
 “He isn’t sure whether I have understood this”
- (26) a. I bin-ma ned sicher, ob *(-st) du des kapiert ho -st
 I am-REFL not sure whether-2SG (you-SG) this understood have-2SG
 “I’m not sure whether you have understood this”
- b. I bin-ma ned sicher, ob *(-ts) es des kapiert hab-ts
 I am-REFL not sure whether-2PL (you-PL) this understood have-2PL
 “I’m not sure whether you have understood this”

²⁶ A narrow functional view would suggest that DFC applies only in the presence of a clitic. This is unrealistic though. Sentences like (i) are well-formed and lack any sign of markedness despite the absence of a clitic following *dass*:

(i) I woaß nemma an wos fia Leid dass letzts Joahr Mahnungen vaschickt woan san
 I know no-longer at what for people that last year reminders sent been have
 “I don’t recall which people last year reminders have been sent to”

Thus, a phonological motivation for the retention of DFC must be seen as affecting the grammar as a whole and not individual constructions.

²⁷ Similar criticism has been formulated in Kathol (2000) but partially with suggestions that would assign wh-words and genuine wh-phrases the same status in phrase structure.

²⁸ In certain varieties one finds in addition the morpheme *-ma* for 1st person pl.; I will ignore it here because all of what I have to say here about comp inflection holds for this case in full generality.

What is remarkable about comp inflection in the present context is the fact that it applies to word-size wh-operators in the same way as to *bona fide* complementizers, and that it must not apply to genuine wh-phrases.²⁹

- (27) a. I woass scho, wia-st du ausschau-st
I know already how-2SG you_{SG} out-look-2SG
“I already know what you_{SG} look like”
- b. I woass scho, wann-ts es in-s Bett geh-ts
I know already when-2PL you_{PL} in-the bed go -2PL
“I already know when you_{PL} go to bed”
- (28) a. *I woass scho, was fia Schua-st du õ:zong ho -st
I know already what for shoes-2SG you-SG on-put have-2SG
“I already know what kind of shoes you_{SG} have put on”
- b. *I woass scho, wia oft -ts es g'fäit hab -ts
I know already how often -2PL you-PL be-absent were-2PL
“I already know how often you_{PL} have been absent”

It was erroneously assumed in Bayer (1984) that wh-phrases of any kind can be associated with comp inflection, although it was already noted then as a theoretical problem. Inflection is limited to stems. Wh-words are morphologically indistinguishable from stems. Inflection is selective with respect to categories such as V or N. In Bavarian comp inflection we see N next to ADV. The reason for this is explained by the fact that comp inflection stems from cliticization. The clitic had only later been reanalyzed in such a way that the clitic nature of the morpheme has become opaque to the speaker. In other words, there was reanalysis. Thus, comp inflection is to a large extent on a par with cliticization. Nevertheless, there is a strong difference. Comp inflection is no longer a competitor of a corresponding 2nd person pronominal whence the possibility of coexistence alias “doubling”. The fact that word-size wh-operator are a target for comp inflection adds another piece of support to the central proposal of the current article: wh-words are potential functional heads and behave as such in their landing site. At this stage it is not surprising to see that the insertion of the complementizer *dass* is the

²⁹ Here are some findings from mainly Austrian web pages on which dialect speakers try to write their dialect, all found on 4 May, 2013. Examples include *was*, *wo*, *wie* and *warum*.

- (i) Des is so witzig, was-ts ihr do gschriebn hob-ts
this is so funny what-2PL you_{PL} there written have-2PL
“What you have written there is so funny”
http://www.seasons.2page.de/guestbook_131.html
- (ii) i was wo-st du wohn-st....vasteck die liawa!
I know where-2SG you-SG live-2Sg hide yourself better
“I know where you live. You better go hiding!”
<http://www.meme-generator.de/meme/eavdzy>
- (iii) hert si jo super an, wo-st du überall bi-st
hear REFL PART super at where-2SG you-2SG overall are-2SG
“Sounds fantastic in how many places you are”
http://72715.net/guestbook.com/st_570.htm
- (iv) des kimmt drauf au wia-st du reit-st
this comes thereupon on how-2SG you-SG ride-2SG
“It depends how you are in horse riding”
<http://www.sms.at/community/talkbox/index.php?showtopic=17140&mode=threaded&pid=732269>
- (v) des woas i soiba ned warum-ts es ned mit mir klarkemmts
this know I self not why-2PL you-PL not with me clear.come
“I myself do not know why you guys don’t get along with me”
http://www.bsmparty.de/forum2.php?start=60&fodi_id=52172&grup_id=

natural way to repair miss-attachments of 2nd person inflection like those seen in (28). The following versions of (28a,b) turn out to be perfect.

- (29) a. I woass scho, wos fia Schua daß-**st** du õ:zong ho -**st**
 I know already what for shoes that-2SG you-SG on-put have-2SG
 “I already know what kind of shoes you_{SG} have put on”
- b. I woass scho, wia oft daß-**ts** es g’fäit hab -**ts**
 I know already how often that-2PL you-PL be-absent were-2PL
 “I already know how often you_{PL} have been absent”

Comp inflection and *dass*-insertion was controlled in an oral production experiment in which native speakers of Bavarian had to translate SG input into their dialect. The speakers’ version was tape-recorded for evaluation.³⁰ The experiment was designed in such a way that the subjects were forced to produce 2nd person singular inflection (-*st*). The input contained wh-complements which started with the wh-phrases [*was für* DP], [*wie* ADV] and [*wieviel* NP]. The results of this experiment could not be any clearer: There was not a single case of 2nd person inflection on a wh-XP. For the [*was für* DP] examples, the leading strategy was to extract *was* and strand the rest. In this case, *was* was inflected for 2nd person throughout. Subjects who were faithful to the pied-piping version of the input used *dass*-insertion and applied 2nd person inflection to *dass*. Some simply echoed the input in SG. Examples with [*wie(viel)* XP] attracted predominantly *dass*-insertion. Again, some speakers resorted to SG, i.e. they avoided comp inflection altogether. On the basis of these results, which replicate the results seen in §5 rather closely, one can be sure that speakers distinguish between wh-words and wh-phrases; *was* patterns with regular complementizers but wh-phrases do not. In the latter case, the inflection dilemma is resolved by means of *dass*-insertion.

10. Conclusions

The nine short paragraphs which have led us to this point convey a single message: Wh-movement is more diverse than X’-theory has made us believe for many years since Chomsky’s (1986) Barriers framework. Some modifications have been around for a while but *grasso modo* current theorizing still follows rather closely the standard account by which wh-operators move to SpecCP. Bavarian has been interesting for this theory because it spells out the C-head simultaneously with the wh-phrase. I have argued above that the data do not actually lead to this streamline conclusion. I have argued that Bavarian shows a rather sharp division between the movement of word-size wh-operators and full-fledged wh-phase operators. While the latter follow the Barriers style X’-model, the former show very consistently a picture according to which the wh-word itself behaves as a complementizer. Syntactic evidence has been presented from constraints on *dass*-insertion, i.e. variability of the Doubly-Filled Comp Filter. We could also show that word-size wh-elements behave by and large like a natural class. No evidence was found for the unrestricted default wh-item *was* to show more complementizer behavior than the restricted wh-items *wer*, *wann*, *wo*, *wie* etc. Topic-extraction from wh-complements was likewise shown to be insensitive to such a distinction. These results are strongly corroborated by findings about the PF-interface. Cliticization and complementizer inflection are processes which in Bavarian require a functional head as a host category. Wh-words of all types can be shown to establish such a category in their landing site-while wh-phrases do not. It would be surprising if the syntactic distributional properties and

³⁰ The experiment was carried out by Michael Merz with 9 speakers from Regen (Lower Bavaria). More details can be found in Bayer (in press).

the morpho-phonological properties of Bavarian wh-complements were accidental. The properties conspire under elementary and conservative assumptions about the syntax-to-phonology mapping. According to my analysis of the data, the conclusion from this should be that wh-items can move in the style of head movement. If the economy of derivation and projection as conceived in the Minimalist Program and its sub-theory of Bare Phrase Structure is operative in the grammar of movement and complementation, the diversification we find in Bavarian syntax is what one expects.

References

- Abney, Steven P. (1987). *The English Noun Phrase in its Sentential Aspect*. MIT dissertation.
- Altmann, Hans (1984). Das System der enklitischen Personalpronomina in einer mittelbairischen Mundart. *Zeitschrift für Dialektologie und Linguistik* 51 (2): 191-211.
- Bayer, Josef (1984). COMP in Bavarian syntax. *The Linguistic Review* 3: 209-274
- (2001) Asymmetry in emphatic topicalization. In: C. Féry and W. Sternefeld (eds.) *Audiatur Vox Sapientiae*. Akademie-Verlag, Berlin. 15-47.
- (in press). Doubly-Filled Comp, wh head-movement, and derivational economy. ms. Universität Konstanz.
- and Eleonore Brandner 2008. On wh-head-movement and the doubly-filled-comp filter. In *Proceedings of the 26th West Coast Conference on Formal Linguistics*, Charles B. Chang and Hannah J. Haynie (eds.), 87-95. Somerville: Cascadilla Proceedings Project.
- and Markus Bader (2007), On the syntax of prepositional phrases. In *Interface and Interface Conditions*, Andreas Späth (ed.), 157-179. Berlin: Mouton de Gruyter.
- , Markus Bader and Michael Meng (2001), Morphological underspecification meets oblique case: Syntactic and processing effects in German. *Lingua* 111: 465-514.
- and Probal Dasgupta (2014), Emphatic topicalization and the structure of the left periphery: Evidence from German and Bangla. to appear in *Syntax*.
- Brandner, Eleonore 2004 Head-movement in minimalism and V2 as force-marking. In *The Syntax and Semantics of the Left Periphery*, Horst Lohnstein and Susanne Trissler (eds.), 97-138. Berlin: Mouton de Gruyter.
- Bury, Dirk. 2002. Particles, V2 and the ungrammaticality of verb-initial structures. *UCL Working Papers in Linguistics* 12: 368-387.
- Cardinaletti, Anna. 1999. Pronouns in Germanic and Romance languages: an overview. In *Clitics in the Languages of Europe*, Henk C. van Riemsdijk (ed.), 33-81. Berlin: Mouton de Gruyter.
- Chomsky, Noam A. (1986). *Barriers*. Cambridge, MA: MIT Press.
- (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.
- and Howard Lasnik. 1977. Filters and control. *Linguistic Inquiry* 8: 425-504.
- van Craenenbroeck, Jeroen (2006). Transitivity failures in the left periphery and foot-driven movement operations. *Linguistics in the Netherlands* 23: 52-64.

- (2010) Complex wh-phrases don't move: On the interaction between the split CP-hypothesis and the syntax of *wh*-movement. In *The Complementizer Phase: Subjects and Operators*, Phoevos Panagiotidis (ed.). New York: Oxford University Press.
- Cruschina, Silvio. 2011. *Discourse-related Features and Functional Projections*. Oxford: Oxford University Press.
- Donati, Caterina (2006). On wh-head movement. In *Wh-movement: Moving on*, Lisa Cheng and Norbert Corver (eds.), 21-46. Cambridge/MA: MIT Press.
- Fanselow, Gisbert (2004). Münchhausen-style head movement and the analysis of verb second. In *Linguistics in Potsdam 22*, [Ralf Vogel (ed.), Three Papers on German Verb Movement]: 9-49.
- (1987), *Konfigurationsalität. Untersuchungen zur Universalgrammatik am Beispiel des Deutschen*. Tübingen: Narr.
- Frey, Werner. 2010. \bar{A} -movement and conventional implicatures: About the grammatical encoding of emphasis in German. *Lingua* 120/ 6: 1416-1435.
- Fuß, Eric (2005) *The Rise of Agreement. A Formal Approach on the Syntax and Grammaticalization of Verbal Inflection*. Amsterdam: John Benjamins.
- van Gelderen, Elly (2004a), Economy, Innovation, and Prescriptivism: From Spec to Head and Head to Head. *Journal of Comparative Germanic Linguistics* 7: 59–98
- (2004b), *Grammaticalization as Economy*. Amsterdam: John Benjamins.
- Georgi, Doreen and Gereon Müller (2010). Noun-phrase Structure by reprojection. *Syntax* 13:1-36.
- Goodall, Grant (2005), Contraction. In *The Blackwell Companion to Syntax*, Vol. 1. Martin Everaert and Henk van Riemsdijk (eds.) 688-704. Blackwell, Oxford.
- Grewendorf, Günther (2012), Wh-movement as topic movement. In: Brugè, Laura / Cardinaletti, Anna / Giusti, Giuliana / Munaro, Nicola / Poletto, Cecilia (eds.): *Functional Heads. The Cartography of Syntactic Structures*. vol.7. Oxford. Oxford University Press. 55-68.
- Gutch, Donald (1992). Linking and intrusive *r* in English and Bavarian. In *Language and Civilization: A Concerted Profusion of Essays and Studies in Honor of Otto Hietsch*. Vol. 1. Claudia Blank (ed.), 555-611. Frankfurt a. Main: Lang.
- Hornstein, Norbert, Jairo Nunes and Kleanthes K. Grohmann (2006), *Understanding Minimalism*. Cambridge: Cambridge University Press.
- Kathol, Andreas (2000). *Linear Syntax*. Oxford: Oxford University Press.
- Koenenman, Olaf (2000). *The Flexible Nature of Verb Movement*. Utrecht: LOT Publications.
- (2002). The distribution of declarative verb second in Germanic. In *Studies in Comparative Germanic Syntax*, Jan-Wouter Zwart and Werner Abraham (eds.), 175-201. Amsterdam: John Benjamins.
- Lutz, Ulrich: 1997, „Parasitic gaps und Vorfeldstruktur,“ in Franz-Josef d'Avis and Ulrich Lutz (eds.), *Zur Satzstruktur des Deutschen, Arbeitspapiere des Sonderforschungsbereichs 340*, 90, 55-80.
- this volume. Structures of 'Emphatic Topicalization' in Bavarian
- Merkle, Ludwig. 1975. *Bairische Grammatik*. [Reprint. 2nd ed. 1984München: Hugendubel.]
- Müller, Gereon and Wolfgang Sternefeld (1993), Improper Movement and Unambiguous Binding. *Linguistic Inquiry*, 24, 461-507.

- Noth, Harald. 1993. *Alemannisches Dialekthandbuch vom Kaiserstuhl und seiner Umgebung*. Freiburg im Breisgau: Schillinger.
- Nunes, Jairo (2001), Sideward Movement. *Linguistic Inquiry*. 303-344 |
- Ortmann, Albert (1998). Consonant epenthesis: Its distribution and phonological specification. In *Phonology and Morphology of the Germanic Languages*, Wolfgang Kehrein and Richard Wiese (eds.), 51-76. Tübingen: Niemeyer.
- Pfalz, Anton (1918). Suffigierung der Personalpronomina im Donau-Bairischen. *Kaiserliche Akademie der Wissenschaften in Wien, philosophisch-historische Klasse, Sitzungsberichte* 190.
- Pittner, Karin (1996). Attraktion, Tilgung und Verbposition. Zur diachronen und dialektalen Variation beim Relativpronomen im Deutschen. In: Ellen Brandner/Gisella Ferraresi (eds.), *Language Change and Generative Grammar*. Sonderheft *Linguistische Berichte* 1995/96, 120-153.
- Platzack, Christer (1996). Germanic verb second – attract versus repel: On optionality, A-bar movement and the symmetrical/asymmetrical verb second hypothesis. In *Deutsch – typologisch*, Ewald Lang and Gisela Zifonoun (eds.), 92-120. Berlin: Mouton de Gruyter.
- Postal, Paul (1966), On so-called 'pronouns' in English. In David Reibel and Sanford Schane (eds.) *Modern Studies in English*. Englewood Cliffs, NJ: Prentice Hall.
- Reis, M. (1985): Reis, Marga (1985): Satzeinleitende Strukturen im Deutschen. Über COMP, Haupt- und Nebensätze, w-Bewegung und die Doppelkopfanalyse. In: W. Abraham (1985): *Erklärende Syntax des Deutschen*. Tübingen: Narr, 271-311.
- Schiepek, Josef. 1899. *Der Satzbau der Egerländer Mundart*. Prag: Verlag des Vereines für Geschichte der Deutschen in Böhmen.
- Schmeller, J. Andreas (1872, 1877) *Bayerisches Wörterbuch*. 2 volumes. [reprint 2008. München: Oldenbourg Verlag]
- Schönenberger, Manuela (2006). A glimpse of doubly-filled COMPs in Swiss German. In *Organizing Grammar: Studies in Honor of Henk van Riemsdijk*, Hans Broekhuis, Norbert Corver, Riny Huybregts, Ursula Kleinhenz, and Jan Koster (eds.), 572-581. Berlin: Mouton de Gruyter.
- Steininger, Reinhold. 1994. *Beiträge zu einer Grammatik des Bairischen*. Stuttgart: Franz Steiner Verlag.
- Surány, Balázs (2003). Head movement and reprojection. *Annales Universitatis Scientiarum Budapestinensis de Rolando Eötvös Nominatae. Sectio Linguistica. Tomus XXVI*: 313-342. Budapest: ELTE.
- Weiß, Helmut (1998). *Syntax des Bairischen. Studien zur Grammatik einer natürlichen Sprache*. Tübingen: Niemeyer.
- (2001). On two types of natural languages. Some consequences for linguistics. *Theoretical Linguistics* 27: 87-103.
- (2004). Vom Nutzen der Dialektsyntax. In: Patocka, F./Wiesinger, P. (Hgg.), *Morphologie und Syntax deutscher Dialekte und historische Dialektologie des Deutschen*. Beiträge zum 1. Kongress der Internationalen Gesellschaft für Dialektologie des Deutschen, Marburg/Lahn, 5.–8. März 2003. Wien: Edition Präsens, 21–41.
- (2005). Inflected complementizers in continental West Germanic dialects. *Zeitschrift für Dialektologie und Linguistik* 72: 148-166.

Acknowledgments

I would like to thank the organizers and the audience of the Frankfurt workshop on Bavarian Syntax. Too many colleagues to be listed here have contributed to shape my ideas about Bavarian syntax and its relevance for linguistic theory. For essential communications over the years I want to mention Ellen Brandner, Helmut Weiß, Uli Lutz, Günther Grewendorf and Elly van Gelderen. For logistic and experimental help to improve my work empirically I owe much to Hans-Werner Eroms, Rüdiger Harnisch, Rosemarie Spannbauer-Pollmann and to Michael Merz. All errors and misconceptions are in my responsibility.