

Decomposing the left periphery

Dialectal and cross-linguistic evidence

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Abstract

I will argue in this paper that the left periphery of the clause is morphosyntactically more articulate than usually revealed by its surface form, and that this form strongly resembles the surface form of languages which lack a left-peripheral encoding of the relevant features altogether. Important clues in favor of this connection are provided by dialects which show forms of so-called doubly filled COMP or forms of so-called CP-recursion. It will also be argued that the syntactic architecture of such varieties is supported by independent proposals about the semantics of questions. I will finally present evidence that verb-movement to the C-position ('I-to-C movement') is a core trigger for the activation of force features.

The article is organized as follows: Section 1 presents the elementary clausal architecture. Section 2 provides data which show that the C-position is more complex than certain standard languages reveal phonetically. Sections 3 and 4 turn to a consideration of East-Asian (Japanese and Korean) and Dutch dialectal data, respectively. Sections 5 and 6 bring into the discussion the semantics of disjunctive questions and constituent questions. Section 7 contains a preliminary synthesis. Section 8 turns to verb-first (V1) and verb-second (V2) clauses in German, showing in which way the structures looked at thus far are transformed into utterances with illocutionary force.

1. Elementary clausal architecture

According to recent syntactic theorizing, clauses are organized in roughly three layers. The lowest one is the lexical projection normally headed by V. Next, there is the inflectional layer headed by I. On top of this, there is a

layer which is headed by C, and which links the clause either to the immediately dominating clause or to the discourse.

V-PROJECTION	verb plus its arguments ...	
I-PROJECTION	tense, number, person, structural case, ...	‘INWARDS ORIENTED’
C-PROJECTION	link to a matrix sentence or to discourse	‘OUTWARDS ORIENTED’

Each field of this tripartite organization has been shown to be organized into sub-units. Larson (1988) has initiated research on a more fine-grained architecture of VP as VP-shells which has led to the proposal in Hale and Keyser (1993) and subsequently to the introduction of functional elements such as *v*. Pollock (1989) has initiated research on a more fine-grained architecture of IP with arguments in favor of splitting up I(NFL). This has led to separate projections for tense (TP), agreement (AGRsP, AGRoP), negation (NegP) and various others. Rizzi (1997) has argued extensively that the C-system needs to be decomposed accordingly. His research has led to a distinction of ForceP for the syntactic representation of illocutionary force, TopP for topical material, FocP for focused material, and FinP, which is largely motivated by the fact that complementizers are sensitive to the finiteness or non-finiteness of the selected IP and certain inflectional morphemes which may be spelled out at C.

In this article, I will limit my attention to the C-system, and even there I will have to refrain from a comprehensive discussion. I will rather concentrate on various complementizers, their co-occurrence with *wh*-phrases, and their simultaneous occurrence. Central data come from Dutch and German non-standard varieties.

2. Is the C-domain as simple as it looks?

The modern standard languages Dutch, English, French, German, Italian, etc. appear to support the view that not much can be said about the C-system of embedded clauses. CPs are either initiated by C or by a *wh*-phrase or relative *d*-/*wh*-phrase. However, as is widely known, a look at older stages of these languages and/or their dialects and colloquial varieties reveals that they frequently show simultaneous filling of SpecCP and C:

- (1) Middle English
men shal wel knowe who that I am
 ‘One shall well know who I am’
- (2) Middle High German
nu hært wa daz er mir lougent niht aller mîner leide
 now listen what that he me denies not all my pain
 ‘Now listen how much of my pain he denies’
- (3) Substandard French
Je ne sais pas quand que Marie arrivera
 I not know when that Marie arrive-will
 ‘I don’t know when Marie will arrive’
- (4) Substandard Italian
Non so quando che Mario arriverà
 (same as 3)
- (5) South-Thuringian (German)
West duu öpper, wi lang dass di walt
 know you perhaps how long that the world
beschtenna wörd?
 exist will
 ‘Do you know how long the world will last’
 Schleicher (1858)
- (6) Bavarian (German)
Frog’s doch, wia lang dass’s no dobleim woin!
 ask-them PRT how long that-they still stay want
 ‘Ask them how long they still want to stay!’

In all these examples, the C-domain shows, in addition to the wh-phrase, a featurally neutral morpheme of subordination. While in GB-theory this was initially taken to be a doubling of C(OMP) (cf. Bayer, 1984), X'-theory demands that the wh-phrase is in the specifier of C. Thus, there is a clear distinction of head and specifier. From the Barriers-framework onwards, the standard account would be to say that there is a parameterization as to whether C can be lexical or has to be zero. Starting from a base with a lexical C, (7) could either apply or not apply:

- (7) $C \rightarrow \emptyset / \text{wh} ___$ (parameterized)

Problems with the rigid separation of wh-phrase and C-head did not remain unnoticed. The problem with coordination is widely known. Witness (8):

- (8) Coordination of unlikes
- a. They begin to understand that he is crazy and why he won't change
 - b. They begin to understand that and why he won't change

It appears that in (8a) C' is coordinated with CP, and that in (8b) either IP has undergone right-node raising in an ATB-operation, or a head and a phrase have been coordinated. The problem looks as if the pre-Barriers X'-theory was more successful.¹

Another problem is the following: In Bavarian, wh and *dass* normally live in happy co-existence. In my own dialect, however, the wh-pronoun *wos* ('what'), unexpectedly, breaks out of this schema. Consider the data in (9):

- (9) *wos* ('what') in Bavarian
- a. *I woaß, wos -a gern trinkt*
I know what-he preferably drinks
'I know what he likes to drink'
 - b. *?*I woaß, wos dass-a gern trinkt*
 - c. *I woaß, wos fiar-a-Bier dass-a gern trinkt*
I know what for -a-Bier that- he preferably drinks
'I know what kind of beer he likes to drink'

Wos is only possible if it is restricted as in (9c). If it is unrestricted, it is much happier without the company of *dass*. In order to understand what is going on here, one must realize that the German pronoun *was* belong to the maximally underspecified parts of speech of the language. As Jäger (2000) and Bayer (2002) have pointed out, the lexical entry of *was* must lack the categorial feature N, it lacks Case, and it lacks the semantic feature THING (-human). If *wos/was* turns out to have any of those features, it must have acquired them contextually. But if this is true, Bavarian *wos* in (9) can be a wh-expression with the feature set {N, wh, acc, liquid, ...} and a possible form of C simultaneously.² The deviance of (9b) can then be derived from a ban against redundancy (which itself may derive from economy). This ban would require that one complementizer is sufficient if the existence of another less specific one can be inferred.

The phrase *wos fiar-a-Bier* in (9c) is different. If it is a pure wh-phrase which excludes the features of C, it is natural that C appears separately. As a corollary to this, consider modern English. Wh-phrases in modern English seem to perform two jobs: On the one hand, they are wh-operators, on the other hand, they seem to comprise features of subordination, i.e., the features which had to be spelled in Old English as *that* and have to be spelled out in certain modern dialects of French, Italian, and German as *que*, *che*, *dass* respectively. In that case, the coordination of *that* and *why* in (8b) loses its surprise effect. Both are in a sense complementizers, the difference being that, in comparison with the first, the second carries additional features.³ My solution of the contrast in (9) is then to say that (a) wh-expressions in Bavarian lack (or may lack) pure C-features and therefore have to spell out C separately, and that (b) due to its radical underspecification, *wos* adopts C-features – and in fact wh-operator features too – contextually by movement to the left edge of IP in the same way as it has adopted the features {N, acc, liquid, ...} in the process of merger with the verb *trinken*.⁴

If we are on the right track, this has two results: (i) While the PF-side of the left periphery of a CP still looks rather dull, its feature structure may not be dull at all. This is due to the trivial fact that lexical forms and their projections may have a complex feature structure according to which each feature can act as a licenser in its own right. (ii) Varieties which show the doubly-filled-COMP property are not necessarily ‘strange’ in comparison to varieties which attend to the Doubly-Filled-COMP Filter (DFCF).⁵ Once we can trace back the variation to feature structure and therefore ultimately to the lexicon, such variation is expected in the way lexical variation is expected, and there is no redundancy. The next section will give comparative syntactic evidence in favor of this sketch.

3. A look at east-asian ‘wh-in-situ’

East-Asian languages offer an interesting domain of comparison with the Western languages because they lack a left periphery, and instead distribute the pieces of information which are found in condensed form in the left periphery over different positions between the clausal center and its right edge. The following data are taken from Sohn (1999), Hagstrom (1998), and Nishigauchi (1990):

- (10) Korean
akasi -nun [[[ku-ka mwues-ul mek-kess]-nya]-ko]
 waitress-TOP he-NOM what -ACC eat -want-Q -QUOT
mwulessta
 asked
 ‘The waitress asked what he wanted to eat’
- (11) Japanese
John-ga [[Mary-ga nani-o katta] ka] sitteiru
 John-NOM Mary-NOM what-ACC bought Q knows
 ‘John knows what Mary has bought’
- (12) Korean
Bill-um [[[John-i wa -ss] -nya] -ko] mwulessta
 Bill-TOP John -NOM come-PAST-Q -QUOT asked
 ‘Bill asked whether John had come’
- (13) Japanese
boku -wa [[John-ga kuru] ka-dooka] sir-i-mas-en
 I -TOP John-NOM comes Q know -not
 ‘I don’t know if John will come’

In (10) and (11), we see a tripartite lexicalization of *wh*-phrases. Within the clause there is an element ‘in situ’, typically an argument. Disjoint from this, there is a question morpheme *Q*, which in Korean is still followed by a quotative element *QUOT* which resembles a neutral *C* such as German *dass*. Another interesting point is that disjunctive question complements are more or less identically construed, the only difference being that the in-situ element, which corresponds to a semantic variable, is missing: *Q*-morpheme and *QUOT*-morpheme remain essentially the same.

Many head-final languages with agglutinative morphology show a detailed landscape of morphemes which correspond to features one associates with the *C*-layer. For relevant data on Korean see Sohn (1999), and for a general account with respect to the hierarchy of adverbs see Cinque (1999).

The Korean and Japanese examples in (10) through (13) convey an important message, namely that these languages achieve in a more perspicuous way (from the linguists’ point of view) approximately what the Western languages achieve by moving elements to the left periphery which often embrace a number of heterogeneous features and therefore easily escape proper analysis. One highlight is the separation of elements that are nor-

mally joined together in a wh-phrase: Subordinative morpheme, interrogative morpheme, and quantification / restriction.

In the next section, I will show that certain Germanic dialects exhibit a closer resemblance to the East-Asian data than the corresponding standard languages.

4. CP-Recursion in Dutch

There are Germanic dialectal data which show overtly that the landscape of the left periphery may be even richer than the widespread phenomenon of Doubly-Filled COMP suggests. Data of this sort are at least found in colloquial substandard Dutch (cf. E.Hoekstra, 1993), Frisian (de Haan and Weerman, 1986); (Reuland, 1990), West-Flemish (cf. Haegeman, 1992), and certain varieties of Swiss German (cf. von Stechow, 1993).⁶ The following Dutch data are taken from E. Hoekstra (1993).

- (14) *Ik vraag me af* [*of* [*dat* [*Ajax de volgende ronde haalt*]]]
I ask me PRT if that Ajax the next round reaches
'I wonder whether Ajax will make it to the next round'
- (15) *Dat is niet zo gek* [*als* [*of* [*dat* [*hij gedacht had*]]]]
this is not so strange as if that he thought had
'This is not as strange as he thought'
- (16) *Hij weet* [*hoe* [*of* [*je dat moet doen*]]]
he knows how if you this must do
'He knows how you must do this'

- (17) *Ze weet [wie [of[dat [hij had willen opbellen]]]]*
 she knows who if that he had wanted call
 ‘She knows who he wanted to call’

In Standard Dutch, (14) would only contain the question complementizer *of*; it would lack the neutral complementizer *dat*. In (15), one would only find the comparative complementizer *als*. In (16), the question-type C-head *of* would be missing, and there would only be the wh-word *hoe*. Finally, both *of* and *dat* would be missing in (17) in favor of the wh-word *wie*.

At first sight, the left clausal periphery of these colloquial data seems to be hopelessly redundant. But why should such an abundance of expression hold? One hypothesis could be that for some reason *of+dat* and *wh+of+dat* are complexes which have emerged as a result of overuse or grammaticalization. In this case, they would perhaps be lexically primitive head-amalgams. Hoekstra (1993) shows, however, convincingly that this hypothesis cannot be defended. Various tests, which for reasons of space cannot be represented here, reveal that the relevant elements head individual CP-shells. This corroborates my earlier claim that the different heads differ in feature structure. *Dat* is a pure subordinator; *of* is a morpheme of disjunction; the wh-element is a complex of features which, however, lacks the features of disjunction and subordination, whereas it contains these features in the standard language. If this is true, the data in (14) through (17) contain no redundancy at all. On the contrary, they rather look like expectable compositions of discrete units of meaning.

The resemblance between these Dutch data and the Korean/Japanese data in section 3 cannot be overlooked. Apart from the fact that the wh-phrase must be moved, there is a morphological distinction between a pure interrogative or disjunctive morpheme *of* and a pure subordinator *dat*. The following table summarizes the similarity between Korean and Dutch question-type complements.

	(wh)	Q	C
Korean	unmoved	<i>-nya</i>	<i>-ko</i>
Dutch	moved	<i>of</i>	<i>dat</i>

It is an open question under which circumstances languages with an articulate left periphery of CP allow for variation of this kind. My presumption is driven by the Minimalist conjecture that there is no true optionality in natural language. Under this perspective, *of* in standard Dutch and *of* in collo-

quial substandard Dutch would differ by the fact that the first comprises a pure feature of subordination, while the latter does not. If speakers vary in their own dialect, this would mean that they can use homophonous morphemes with different feature structure. Since, to my knowledge, no empirical work on this issue seems to be around, I have to leave it as a speculation.

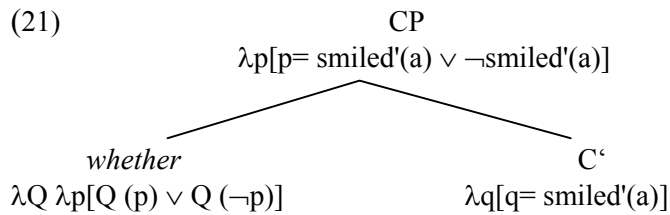
In the next section, I will consider the semantics of disjunctive questions, and I will try to connect it to the lexical choice of question markers that can be observed in various languages.

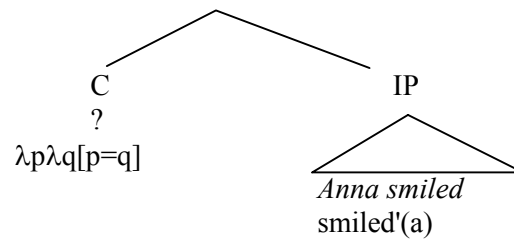
5. Disjunctive questions

Disjunctive questions are questions which leave the truth of a proposition open, i.e., to know whether p is the case is to know whether p is not the case. There is no third value. The English sentences in (18) and the German sentences in (19) can be semantically represented as in (20).

- (18) a. *John knows whether Anna smiled*
 b. *John knows whether Anna smiled or ~~whether Anna did not smile~~*
 c. *John knows whether Anna smiled or Clara cried*
- (19) a. *Hans weiß, ob Anna lächelte*
 b. *Hans weiß, ob Anna lächelte oder ~~ob Anna nicht lächelte~~*
 c. *Hans weiß, ob Anna lächelte oder Clara weinte*
- (20) a. John knows [λp [$p = \text{Anna smiled}$] \vee [$p = \neg[\text{Anna smiled}]$]]
 b. John knows [λp [$p = \text{Anna smiled}$] \vee [$p = [\text{Clara cried}]$]]

Following Karttunen (1977), various semanticists (e.g., von Stechow, 1993, 1996; Lahiri, 2002) assume a semantic representation which locates an interrogativizing element (symbolized as ‘?’) in C. Omitting certain details, this derives (18a,b) and (19a,b) as in (21).





By lambda-conversion, ? integrates the proposition [smiled' (a)]; C' denotes the set of propositions q such that Anna smiled in q, i.e., the property of being such that Anna smiled. SpecCP (*whether*) introduces the disjunction as the higher-order property of being true of p or of the negation of p. By lambda-conversion, C' is integrated; CP denotes the set of propositions p such that Anna smiled or Anna did not smile. If John knows whether Anna smiled (or not), he knows whether [smiled'(a)] = 1 or [smiled'(a)] = 0.

? is the ingredient which, according to Karttunen (1977), turns a proposition p into a so-called 'proto question'. ?p is then a function from propositions to truth values. Given that there are only the values 0 and 1, this provides a certain closeness to the semantic contribution of *whether*. Karttunen gives detailed reasons for his assumption of ? but also admits that it is a purely technical device that has no reflection in the syntax of English. We will return to it in the next section.

Let us for the time being assume that disjunctivity can enter the derivation only with *whether* or a semantically equivalent silent operator. Disjunctivity is very often morphologically signaled by lexical contaminations as in English *whether* ('wh+either'), Bengali *ki na* ('what not'), or by particles which are also used for disjunctive coordination:

- (22) Bengali
ami jani na [šita biye kor -be ki na]
 I know not Sita marrying make -FUT what not
 'I don't know whether Sita will get married (or not)'

(11) and (13) are Japanese examples which involve the morpheme *ka* as a question morpheme. (23) shows that this morpheme is also used as a disjunctive connective.

- (23) Japanese
John-ka Bill-(ka) -ga hon-o katta
 John-Q Bill -Q -NOM books bought

'John or Bill bought books' Kuroda (1965), Hagstrom (1998)

The same is true for Korean and for other languages. Consider, for example, Sinhala and Malayalam:

(24) Sinhala

- a. *mahattea- tə tee də koopi də oonə?*
 mister DAT tea Q coffee Q necessary
 'Does the mister want tea or coffee?'
 b. *Chitra ee potə kieuwa də?*
 Chitra this book read Q
 'Did Chitra read this book?' (Gair, 1970, Hagstrom, 1998)

(25) Malayalam

- a. *ñaan John-ine -(y)oo Bill-ine -(y)oo kaNDu*
 I John-ACC -Q Bill-ACC -Q saw
 'I saw John or Bill'
 b. *John wannu-(w)oo?*
 John came -Q
 'Did John come?' (Jayaseelan, 2001)

These data suggest that, if we take the embedded disjunctive question to be a single-headed CP, the head of CP is not actually the semantic device symbolized by the interrogativizer ? as in (21), but rather a disjunctive Q operator which is merged to IP.⁷ This is essentially what Jayaseelan (2001) suggests on the basis of a detailed investigation of questions and question type complements in Malayalam.

It is a morphological idiosyncrasy whether disjunctive Q is part of a wh-phrase as in the English contracted form *whether*, or appears as an independent head as in English *if*, Dutch *of*, German *ob*, Japanese *ka*, Sinhala *də*, and Malayalam *oo*), or as another complex for such as Bengali *ki na*.⁸

In the next section, we turn to constituent questions. The important point about constituent questions in the present discussion is that they seem to share much with disjunctive questions. This fact cannot be overlooked in East-Asian (cf. (10) through (13)), but is also visible in colloquial Dutch (cf. (14), (16) and (17)) and closely related languages such as Frisian and West-Flemish.

6. Constituent questions

What is the semantics of a constituent question like (26)?

(26) John knows who smiled

Seen from the surface syntax of Western standard languages, the format of a constituent question is very distinct from a disjunctive question. Therefore, we may ask whether there are intrinsic semantic reasons to see the two in close company. Disjunctive questions operate on the two truth values. Constituent questions operate on domains which are defined by the restriction of the *wh*-expression in relation to some property expressed by the rest of the sentence. Thus, the two look rather different. And in fact, the standard theory of Karttunen (1977) connects the two only via the interrogativizer *?*. Karttunen suggests that a *wh*-phrase is something like an indefinite NP which gets quantified into a proto-question, not into a *whether* question or a *yes/no* question. Although this would be technically possible, as Karttunen points out, he argues that the resulting meaning is too demanding. In his system, quantifying the meaning of *who* into a *whether*-question (in Montague-English roughly ‘whether-he₀-smiled’) would turn (26) into (27).

(27) John knows $[\lambda p \exists x [p = \text{smiled}'(x) \vee [p = \neg \text{smiled}'(x)]]$

The formula in (27) would only be true if John knows for each individual *x* whether *x* smiled or did not smile. Since John cannot have knowledge about ‘all individuals including those he has never heard of and whose very existence is unknown to him’ (p.22), Karttunen rejects it as inadequate. His solution requires quantification of the *wh*-operator into the proto-question. The reason for this is deeply affiliated with the idea that questions denote the set of propositions expressed by their *true* answers (as opposed to Hamblin’s (1973) theory which assumed the set of propositions expressed by their *possible* answers).

In fact, there are theories of the semantics of questions which indeed support an alternative view according to which disjunctive and constituent questions share the same structure in the sense that constituent questions are just special cases of disjunctive questions. The semantics of questions which links disjunctive and constituent questions as closely as possible is the PARTITION approach developed in Groenendijk and Stokhof (1982), Higginbotham (1993; 1997), and Lahiri (2002). (See also Eden and Lohnstein and Bredel, this volume). The central idea is to assume precisely

what Karttunen (1977) thought needs to be rejected. For *yes/no*-questions, there is agreement that they rest on the partition of truth and falsity, which can be expressed as $\{\{p\} \mid \{\neg p\}\}$. Alternative questions conform by and large to the same apparatus and should not concern us here. How do constituent questions fare with respect to the partition approach? Constituent questions rest on partition as well, the difference being that *p* contains a VARIABLE. This amounts to quantifying into *p* such that the computation runs through the set of individuals which are suitable to replace the variable in *p*. (26) – *John knows who smiled* – is then true iff John knows for each individual that may be a potential smiler whether he/she smiled or not. In case there are only two discourse relevant individuals, say, Anna and Clara, (26) means that John knows for each of them whether he/she smiled or not. This leads to the set of alternatives in (28):

- (28) Set of alternatives
 $\{\text{smiled (Anna) \& smiled (Clara), smiled (Anna) \& } \neg \text{smiled (Clara),}$
 $\neg \text{smiled (Anna) \& smiled (Clara), } \neg \text{smiled (Anna) \& } \neg \text{smiled (Clara)}\}$

As Karttunen has already pointed out, the problem of this approach seems to be its rigidity. If I know where I can find a gasoline station in my neighborhood, I may be able to identify only one such location although there may be others which I have not seen or heard about before. And, of course, there are lots of places where one cannot find gasoline at all, and which are therefore totally irrelevant. We would still not wish to say that in such a situation the statement *I know where I can find a gasoline station in my neighborhood* is wrong. I believe (with others) that examples of this kind are not a serious challenge to the partition approach if one tries to develop a semantic account without mixing in pragmatics directly. Consider the statement of a police inspector who says *I know who killed the victim*. In that case, he better knows the EXACT set of people who have committed the crime and be able to exclude other relevant persons (i.e., potential suspects). All that follows from such examples is that the standards of what we are willing to see as knowledge are not independent of general values we attribute to states of affairs. In my view, this does not undermine the partition approach. It rather shows that model theoretic semantics does not (and perhaps should not try to) provide an exhaustive theory of meaning. For relevant discussion of this point, see Groenendijk and Stokhof (1982).

Considering example (26) again and ignoring the pragmatic problems associated with propositional attitudes, the partition approach gives an interesting result because the propositions which are yielded by replacing the variable by a constant are disjunctively connected, as can be derived from the simple example in (28): If both Anna and Clara smiled, it cannot be true that Anna smiled and Clara did not smile, etc. Given that the semantics of constituent questions involves disjunction, the relation to disjunctive ('yes/no' and 'alternative') questions is quite obvious. Both types of questions rest on the same basic mechanism, namely the alternative of true and false, essentially the law of the excluded third. Thus, it is expectable that ANY type of question carries a disjunctive operator, be it openly spelled out as a morpheme or covertly expressed as a feature which is part of a more comprehensive expression such as a wh-phrase.

In the next sections, I want to reconsider the data presented so far under the perspective that disjunctive questions and constituent questions essentially rest on the same syntactic and semantic architecture, and that constituent questions appear to be more complex for the simple reason that they involve an operator-variable relation which alternative questions lack.

7. Capturing syntactic variation

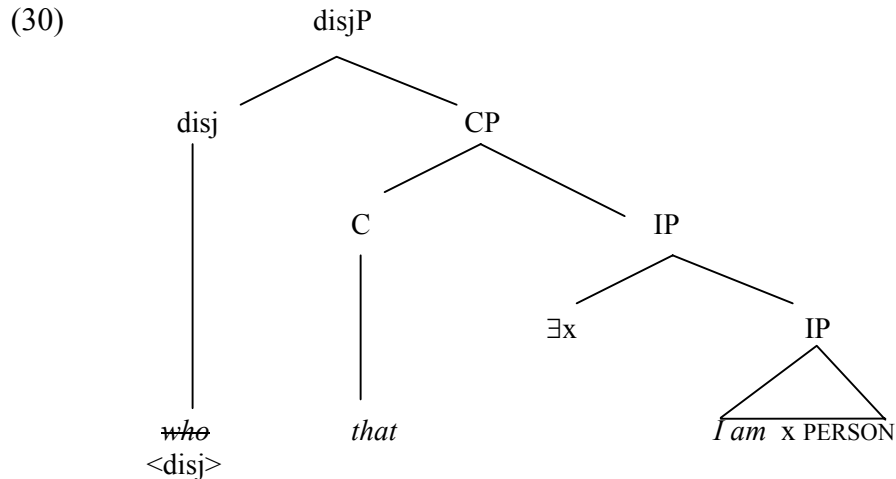
7.1. Doubly-Filled-Comp (DFC) Languages

In languages which disobey the DFCF, wh is unspecified for the categorial feature <C>. Thus, a separate lexical element – *that*, *daz*, *che*, *que*, *dass* – is merged before wh-movement takes place.

(29) men shal wel knowe **who that** I am (=1)

According to the semantic considerations in the previous section, the wh-phrase is a complex of a number of things: It is a variable which is restricted by the feature <PERSON>; secondly, this variable seems to be bound by an existential operator; third, there is a feature for disjunction which I will call <disj> in order to distinguish it from ? in the tree (21). If the wh-phrase comprises <disj> in the numeration, one may say that the wh-phrase moves to a scope position in order for <disj> to become interpretable. Alternatively, <disj> could be generated in SpecCP and attract a wh-phrase.⁹ The pure complementizer *that* cannot achieve proper typing. Let us assume with Chomsky (1995) that the wh-phrase moves as a whole for

reasons of morphological integrity, and that the operator actually leaves a copy behind which then serves as a variable that gets bound by an operator that is ultimately adjoined to IP. (29) is then represented by the tree in (30), in which we also assume that the variable in IP is bound by an existential operator.



In languages like modern standard English, which obey the DFCE, the wh-phrase is assumed to be specified for <wh,disj,C>. Thus, the wh-phrase is moved to the left edge of IP where it does different things: It assigns a wh-type to the clause as in (30), an operation we suggested should be identified by <disj> taking scope; but it also identifies C. This amounts to saying that there is actually no empty C. In languages which follow the DFCE, C is nothing else but a feature inherent in the wh-phrase. This conclusion should not strike us as strange, given that any phrase is a complex of features. The only novelty here is that C is not necessarily encoded in a lexical head. Thus, while the PF-side looks superficially simpler in such languages, the LF-side is presumably close to what is seen in (30).

One consequence of the Minimalist relaxation of X'-theory is that the problems mentioned in section 2 can be solved more easily. If German *was* and Bavarian *wos* (both meaning 'what') are radically underspecified, they may be able to acquire the feature <C> by being moved to the left edge of IP. In the face of much cross-linguistic evidence that morphemes corresponding to 'what' are simultaneously used as complementizers (cf. Bayer, 1999), this assumption is not far-fetched at all. The fact that Bavarian *wos*

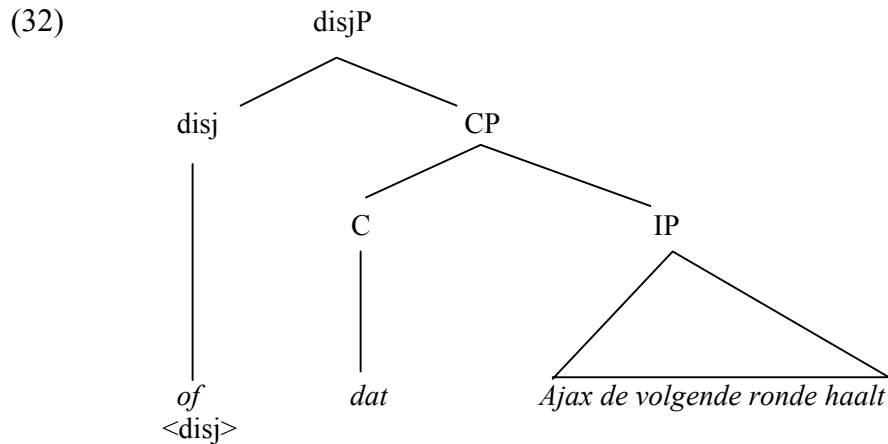
cannot co-occur with *dass* although Bavarian is generally a DFC-dialect initially looks like a strange exception. However, once we begin to see that projections may be guided by variable sets of features inherent in lexical items, there seems to be a motivation. Given the lack of lexical properties of *was*, it is expected that it is this item which breaks out of the DFC-schema.

7.2. Dutch CP-Recursion

In substandard Dutch, *of* may be unspecified for the feature <C>. Thus, *of* can co-occur with *dat* which is specified for <C>. Consider (14), which is repeated here as (31):

- (31) *Ik vraag me af [of [dat [Ajax de volgende ronde haalt]]]*
 I ask me PRT if that Ajax the next round reaches
 ‘I wonder whether Ajax will make it to the next round’

The CP-complement of (31) is then syntactically represented as in (32):

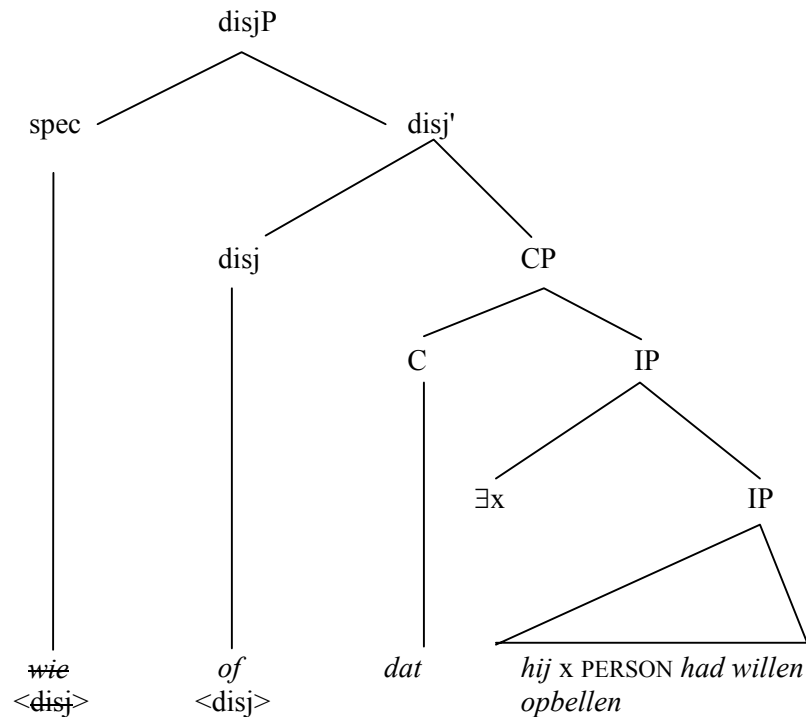


We have so far assumed that the wh-phrase may be unspecified for the feature <disj>. Therefore, we said, it can co-occur with *of*, which is specified for <disj> but which in turn may be unspecified for <C> (cf. 8.2):

- (33) *Ze weet [wie [of [dat [hij had willen opbellen]]]]*
 she knows who if that he had wanted call

Data like (33) lead to the question why wh-movement should apply at all if the disjunctive complementizer *of* already heads the clause. Recall that there is a generalization according to which languages with a typing particle for questions do not move the ‘wh-phrase’ to the (left) edge of the clause.¹⁰ Given that Dutch *of* acts like such a particle, one could expect non-movement of the wh-phrase. However, the sentence *Ze weet [of [dat [hij wie had willen opbellen]]]* does not sound quite acceptable (unless it is intended as an echo, perhaps). If *of* carries an optional EPP-feature, it is expected that this will be checked by a wh-phrase. There is evidence that the Dutch wh-elements, unlike their German counterparts, are lexically endowed with the core question feature <disj> which would be checked by *of*, in case *of* is present. While many (not all!) German wh-words can be used as indefinites, Dutch indefinites belong to a distinct morphological class.¹¹ Since both *of* and the wh-phrase carry the feature <disj>, the wh-phrase will have to lose it in the process of checking. This leads to the tree representation in (34), which shows the structure after feature checking and reconstruction of the wh-phrase:

(34)



A corollary of this account is that, in standard Dutch, *of* and *wh*- are specified as *<C,disj>* and *<C,disj,wh>* respectively. Thus, these items fulfill simultaneously what the substandard variety achieves by extra steps of merge. Insertion of these items in the left periphery is driven by the familiar processes. *Of* is merged with *IP* because it is a complementizer and as such incorporates *<C>*; it has selectional features which require *IP* to be +finite. Movement of a *wh*-phrase achieves various things simultaneously. Since *wh*- incorporates *<C,disj>*, *wh*-movement activates these features in the derivation. Although neither *C* nor *<disj>* materialize at the PF-side of the derivation, these elements lead to an LF-representation as in (34). Of course, the feature *<disj>* will not be checked off in this case because there is no *of*-complementizer. This leads to the desired result because *<disj>* is an interpretable feature whose single occurrence must not be lost.

7.3. Wh-in-situ

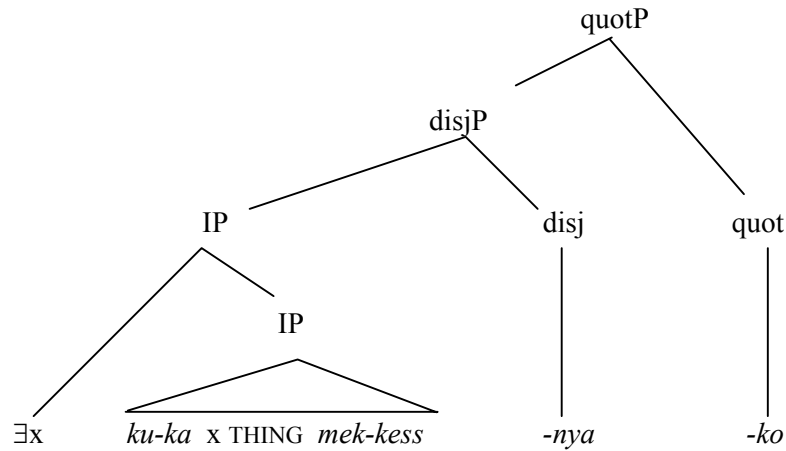
The East-Asian languages, and to some extent also South-Asian languages, do not move wh-phrases to the clausal periphery. The wh-phrase appears to remain ‘in situ’.¹² This fact obviously correlates with the presence of morphemes which correspond to <disj> and <C>. Consider the Korean data (10) and (12), which are repeated here as (35) and (36).

- (35) *akasi -nun* [[[*ku-ka mwues-ul mek-kess*]-*nya*]-*ko*]
 waitress-TOP he-NOM what -ACC eat -want-Q -QUOT
mwulessta
 asked
 ‘The waitress asked what he wanted to eat’
- (36) *Bill-um* [[[*John-i wa -ss*]-*nya*]-*ko*] *mwulessta*
 Bill-TOP John -NOM come-PAST-Q -QUOT asked
 ‘Bill asked whether John had come’

The complement of (36) shows a mirror image of the colloquial Dutch data in (14)/(32): What we have glossed with Q corresponds to the feature <disj> and has scope over IP. This complex is itself in the scope of QUOT, which corresponds to C. A noticeable difference is that the scope between Q and QUOT is reversed in comparison with Dutch *of* and *dat*. Why should this be so? I believe the reason is that *-ko* is really a quotative element rather than a complementizer such as *dat*. As can be expected, the quotative suffix marks the highest layer of structure in an embedded clause which is selected by a verb of speaking.¹³

In (35), we see essentially the same constellation, the difference being that there is a wh-phrase in situ. Why does this element not move to the specifier of Q? I assume this follows from the fact that heads in strictly head-final languages like Korean remain syntactically inactive in the sense that they do not license specifiers into which material has to move for reasons of feature checking (especially EPP-checking).¹⁴ If this is true, the wh-element in situ should lack the feature <disj> which we have claimed is part of wh-phrases in the standard Western wh-movement languages.¹⁵ Let us now take the liberty of replacing Q by disj. Then, the LF-side of the complement clause of (35) looks as in (37):

(37)



Ignoring the difference that derives from the difference of C and QUOT, this representation is structurally the same as the one in (34).

7.4. Intermediary conclusion

If we were on the right track so far, the PF-shape of the CP's left periphery is the result of the lexical ingredients which a language or dialect has at its disposal. Depending on what kinds of features can be integrated into a single item, the left periphery may look more or less complex. Comparison with East-Asian languages reveals surprising similarity. These languages show at the PF-interface structures which are close to structures at the LF-interface, and which are often obliterated in the Western languages due to morphological packing. We have seen that certain non-standard varieties of Germanic show a closer resemblance to these Eastern languages, albeit differences which relate to independent parametrical differences. This result conforms to Borer's (1984) hypothesis about parametric variation which locates the source of parametric variation in the lexicon and in the morphology. It also conforms to the *Feature Scattering Principle* of Giorgi and Pianesi (1997), which says that each feature can head a projection. In line with my own assumptions, Giorgi and Pianesi suggest features can also appear in bundles, in which case they may conform to a single node in phrase structure. Our consideration of a limited amount of variation in the organization of the left periphery of embedded clauses leads to the conclu-

sion that feature scattering or joint projection is a consequence of the lexicon and the morphology of a language. As a case in point we have looked more closely at question complements. It could be observed that invariable ingredients of question complements can be packed in wh-phrases or scattered over positions which can be identified as different forms of C and a feature that was characterized as a disjunctive operator <disj>, as well as the restrictive terms that come along with wh-phrases. The analysis is strongly supported by Jayaseelan's (2001b) analysis of questions and question-word incorporating quantifiers in Malayalam, in which it is shown that the language has a clause peripheral head which is occupied by a disjunctive operator (-oo) that is associated with a focused variable. Although the semantics of questions has hardly been touched, it became quite clear that the partition approach is especially equipped to fruitfully combine with our syntactic and morphological findings.

In the rest of this article, I will sketch out in a somewhat more speculative fashion how the architecture we have observed in the embedded clause may be expanded in the root clause.

8. How does Illocutionary Force enter the tree?

We have committed a terminological crime by calling the embedded CPs we have discussed so far 'questions'. The terminology suggests the act of asking for missing information, but sentences in the interrogative format are not necessarily interrogatives in the sense of speech-act theory. Rather than denoting questions, they only REFER to question. We are therefore well advised to keep the two things separate. The assumption is that illocutionary force is primarily a root phenomenon, and that the embedded clause primarily does not have a layer of force at all.¹⁶ I use the qualification 'primarily' because there are apparently exceptions which will play a role in the following discussion.

How is illocutionary force represented syntactically? In (residual) V2-languages, there are clear indications that I-to-C is a core device in establishing force. We will demonstrate this below and also turn to apparent exceptions.

8.1. I-to-C

According to my knowledge, Stephen Wechsler was the first to suggest that the verb-second (V2) phenomenon should be explained as a process that visualizes features of illocutionary force; see Wechsler (1990; 1991) for an account of V2 in Swedish, which carries over to German and other V2-languages.¹⁷

8.1.1. German

Consider German. The data in (38) through (42) suggest that V2 is a root phenomenon and is blocked in the subordinate clause.

- (38) a. *Die Frage, ob das Experiment gelingen wird, ist von*
the question whether the experiment succeed will is of
entscheidender Bedeutung
decisive importance
'The question whether the experiment will succeed is of
decisive importance'
- b. **Die Frage, wird das Experiment gelingen, ist von ent-*
scheidender Bedeutung
- c. *Wird das Experiment gelingen?*
'Will the experiment succeed?'
- (39) a. *Die Frage, welches Experiment gelingen wird, ist von*
the question which experiment succeed will is of
entscheidender Bedeutung
decisive importance
- b. **Die Frage, welches Experiment wird gelingen, ist von*
entscheidender Bedeutung

- c. *Welches Experiment wird gelingen?*
'Which experiment will succeed?'
- (40) a. *Dem Befehl, von hier aus zwei Schritte nach links zu*
the order from here out two steps to left to
gehen wurde nicht nachgekommen
move was not followed
'The order to move two steps to the left from here was ignored'
- b. **Dem Befehl, gehe von hier aus zwei Schritte nach links,*
wurde nicht nachgekommen
- c. *Gehe von hier aus zwei Schritte nach links!*
'Move two steps to the left from here!'
- (41) a. *Der Ausruf, dass das Ableben des Königs*
the exclamation that the passing-away (of) the king
eine Freude sei, ist zu unterlassen
a joy be is to be-suppressed
'One should abstain from shouting that the death of the king is a reason to be happy'
- b. **Der Ausruf, ist das eine Freude, dass der König gestorben ist,*
ist zu unterlassen
- c. *Ist das eine Freude, dass der König gestorben ist!*
is this a joy that the king died has
'What good news it is that the king has died!'
- (42) a. *Der Wunsch, dass das Experiment doch endlich*
the wish that the experiment PRT finally
gelingen möge, blieb unerfüllt
succeed may remained unfulfilled
'The desire that the experiment succeed remained unfulfilled'
- b. **Der Wunsch, möge das Experiment doch endlich gelin-*
gen, blieb unerfüllt
- c. *Möge das Experiment doch endlich gelingen!*
'May the experiment ultimately succeed!'

The verb stays in final position in the a.-sentences. (38a), (41a), and (42a) are introduced by a complementizer, i.e., by an element which is classically seen as occupying the head position into which the finite verb would move

if it were empty. Since the verbal form in (40a) is an infinitive, this may be a sufficient reason to not expect V2 to apply. But what about (39a)? The standard post-GB X'-theory assumes that there is an empty C-position into whose specifier the wh-phrase has been moved. In this case, we expect the mechanics of I-to-C movement to apply blindly, but, contrary to expectation, (39b) is ungrammatical. One could say that a 'zero' complementizer blocks V2, but this would clearly be ad hoc given that there is one message that is told by all the other examples in the b.-sentences of (38) through (42), and which offers a much better explanation: Suppress I-to-C!

8.1.2. *English*

Roughly the same seems to be true for English, which also shows the V2-phenomenon albeit in a more restricted form ('residual' V2). The source of the deviant examples in (43) is McCloskey (2002).

- (43)
- a. **I found out how did they get into the building*
 - b. **The police discovered who had they beaten up*
 - c. **How many people should you invite depends on how big your place is*
 - d. **Who your friends are depends on where did you live while you were growing up*
 - e. **I usually know who might they hire*
 - f. **I remember clearly how many people did they arrest*

Following the groundbreaking work by Stephen Wechsler, my hypothesis is that I-to-C endows CP with force features that can only be interpreted if CP is a root clause. In the post-Barriers tradition, root clauses are normally called 'CP', although the head of these clauses is not C. The head is filled with the finite verb or, more exactly, with the finiteness features of the verb which – due to generalized Pied-Piping – force the minimal verb to move along. Thus, it is actually misleading to call such clauses CPs. More important, however, is the question why these features of the verb play such a central role, and why the root clause has the privilege of making them visible. In my view, something like the following seems to go in the right direction: The root clause interfaces with the discourse, and as such has to be licensed in a different way than the dependent clause. The most obvious criterion for its distinctness is that it is a potential UTTERANCE. Embedded clauses are not utterances themselves but may only REFER to utterances.

Utterances are pragmatic units which must be anchored in some situational model by which, among other things, values for speaker, hearer, place, and time are provided. At least some of these reference points are reflected in the features of the finite verb which undergoes I-to-C. Among them are tense, person, and number features. These features can be anaphorically linked to discourse referents and time units. A case in point is tense anchoring to speech time. Another piece of evidence is the fact that in German imperatives (cf. 40c), the finite verb can only occur in fronted position.¹⁸ The morphological forms of imperatives are obviously such that their features can find no interpretation unless they head the root clause.

Before I move to a speculation as to the implementation of illocutionary force by V1/V2, I want to turn to apparent counterexamples.¹⁹

8.2. Apparent exceptions

It is widely known that V2-clauses do appear as dependent clauses. In 8.2.1 and 8.2.2, we present some illustrative examples from German and Hiberno-English.

8.2.1. German

- (44) a. *Anna glaubt, 'Don Pasquale' sei die neueste Oper von*
 Anna believes 'Don Pasquale' be the latest opera by
John Adams
 John Adams
 'Anna believes 'Don Pasquale' to be the latest opera by
 John Adams'
- b. *Die Meinung, 'Don Pasquale' sei die neueste Oper*
 the opinion 'Don Pasquale' be the latest opera
von John Adams, muss einer Korrektur unterzogen werden
 by John Adams must a correction subjected be
 'The opinion that Don Pasquale is the latest opera by John
 Adams must be subjected to a correction'

Both V2-complements of (44) are in subjunctive mood. Since root clauses are normally in indicative mood, this indicates that the activation of force may be obviated. Nevertheless, many speakers can also say (44a) – not

(44b)! – with the complement in indicative mood. Therefore, subjunctive mood cannot be a reason to dismiss the example from the outset.

Notice further that it has sometimes been claimed that V2 is only possible after bridge verbs, but this would not cover (44b). As de Haan (2001) has shown on the basis of Frisian data, the correlation between bridge verb/extractability and V2 (which in Frisian can arise in the presence of the complementizer *dat*) is not perfect. So we have to ask what the relevant factor is which allows V2-complements.

8.2.2. Hiberno-English

The following Hiberno-English data have been taken from McCloskey (2002). They show a certain liberalism with subject-aux-inversion after the matrix verbs *ask* and *wonder* that is missing in standard English.

- (45)
- a. *He asked me would I cook dinner*
 - b. *I wonder what should we do*
 - c. *I wondered would I be offered the same plate for the whole holiday*
Roddy Doyle, *The Woman who Walked into Doors*, (154)
 - d. *I wondered would the place always look like an abandoned building site* ibd. (192)
 - e. *I wondered was he illiterate* ibd. (96)
 - f. *I asked Jack was she in his class* ibd. (96)
 - g. *I am sure she wasn't far from the truth when she asked was he thinking of throwing her in*
John McGahern, *By the Lake*, (40)
 - h. *I wonder how the fuck did he get in there*
Van Morrison, *Interview* 1977

Although Standard English, Hiberno-English, Frisian, and German show variation in their ability to license V1- or V2-complements, the general truth seems to be that embedded root properties, if they occur at all, are restricted to certain selecting lexical heads which denote a speech event or a propositional attitude.²⁰ Thus, certain heads of this kind set up a quasi-quotational context in which the force features which are activated by I-to-C movement can still be interpreted. If this conclusion (which I am unable to defend here with the required care, but see Meinunger (2004) for a thorough investigation) is justified, the embedded root property of V1/V2 is not

a counterexample to the claim that I-to-C activates force features, and that force features are normally absent in dependent clauses.

In sections 2 through 7, we have identified three layers of information which are responsible for the formation of a wh-complement: wh, disj, C. The question is now how the clausal architecture is expanded in order to attain force features. If the neutral complementizer C is a pure subordinator, we can ignore it, because the root clause is normally not introduced by C.²¹

What about wh and disj? Wh is certainly present in root clauses, and we can assume that it decomposes in analogy to wh in dependent clauses. Root clauses lack a distinctive disj-complementizer like Dutch *of*. So, the next conclusion could be that disj comes into play by I-to-C movement. The next section is meant to discourage this expectation.

8.3. Word order is not fully decisive

In this section, I want to show on the basis of German data that verb placement and word order in general is not decisive for the encoding of a specific speech act. In the course of this demonstration, it will also become clear that it would be unfortunate to associate wh-movement or I-to-C movement directly with the activation of the feature disj.

I will show that a direct correlation between I-to-C and force fails in two directions. We will first show that V1/V2-clauses map onto a multitude of semantic/pragmatic interpretations. We will then show that there are various kinds of root clauses which lack the V1/V2-property altogether.²²

8.3.1. V1/V2 map onto a multitude of semantic/pragmatic interpretations

(46) contains a number of V1-root clauses with heterogeneous interpretations:

- (46) a. V1-interrogative
Ist das Experiment diesmal gelungen (oder nicht)?
is the experiment this-time succeeded (or not)
'Has the experiment succeeded this time (or not)?'
- b. V1-conditional
Würde das Experiment misslingen, so wäre das
would the experiment fail so would-be this
keine Katastrophe
no catastrophe
'It wouldn't be a disaster, if the experiment would fail'
- c. V1-surprise declarative
Hat mich doch gestern beinahe ein Hund gebissen
has me PRT yesterday almost a dog bitten
'Yesterday I was almost bitten by a dog'
- d. V1-reason declarative
Otto ist sorgenfrei hat doch sein Vater ein riesiges
Otto is sorrow-free has PRT his father a huge
Vermögen
property
'His father being enormously rich, Otto does not need to worry'
- e. V1-exclamative
Ist DAS ein Trottel!
is this an idiot
'He is an idiot indeed!'

These examples show that whatever V1 does in detail, it cannot be confined to activating the head disj and interrogative force. While disj and interrogative force features could be present in (46a), they would be inappropriate in (46b) where we see a complementizer-less conditional clause, in (46c) which is a declarative with the flavor of a surprise information, (46d) which is a reason clause with root qualities,²³ and (46e) which is an exclamative, an interpretation which is guided by the emphatic stress on the demonstrative pronoun.

Consider next examples with V2-order:

- (47) a. V2-declarative
John Adams ist nicht der Komponist von 'Don Pasquale'
John Adams is not the composer of 'Don Pasquale'
- b. V2-exclamative

- Du bist vielleicht ein Trottel!*
 you are perhaps an idiot
 'What an idiot you are!'
- c. V2-exclamative
Du bist vielleicht ein Trottel!
 you are perhaps an idiot
 'What an idiot you are!'
- d. V2-wh-interrogative
Wer ist der Komponist von 'Don Pasquale'?
 'who is the composer of 'Don Pasquale''
- e. V2-wh-exclamative
Was bist du nur für ein Trottel!
 what are you only for an idiot
 'What an idiot you are!'
- f. V2-wh-exclamative
Was bist du nur für ein Trottel!
 what are you only for an idiot
 'What an idiot you are!'

(47a) is an unmarked declarative. (47b) is an exclamative due to the emphatic stress on the pronoun *du*. The non-declarative interpretation is supported by the adverb (discourse particle) *vielleicht*. If this particle is missing, the interpretation as an exclamative does not vanish but becomes more difficult and obviously relies on the invective *Trottel*. The same is true for (47c), the difference here being that the stress rests on the finite verb which can only be stressed in second position.²⁴ (47d) is a constituent question with interrogative force. Although (47e) and (47f) follow the wh-format, they have exclamative force. This interpretation is induced by stress on V2 as in (47e) or stress on the invective in (47f). As before, the exclamative interpretation is supported by a particle; in wh-exclamatives, the relevant particle is *nur* (the translation of which with English 'only' is inappropriate here because there is no sense of exclusion involved).²⁵

This list, which may not be exhaustive, shows that V1 and V2 cannot do more than prepare the clause to activate force features.²⁶ The actual pragmatic interpretation depends on additional factors among which intonation, the use of adverbial particles, and, to some extent, lexical choice play a prominent role.

8.3.2. Root clauses without I-to-C

The examples in (48) show that there are root clauses with illocutionary force in which I-to-C movement is either suppressed or impossible due to the fact that there is a complementizer or a finite verb form is missing altogether.

- (48)
- a. V-final exclamative
Was für ein Trottel du doch bist!
 what for an idiot you PRT are
 'What an idiot you are!'
 - b. V-final exhortation
Dass du mir bloß nicht zu spät nach Hause kommst
 that you me only not too late to home come
 'Make sure that you don't get home too late'
 - c. Infinitival exclamative
Neapel sehen und sterben!
 Naples see and die
 - d. Infinitival command
Alle mal herhören!
 all once listen
 'Everybody listen to me!'
 - e. Infinitival command
Nicht hinauslehnen!
 not out lean
 'Don't lean out!'
 - f. Infinitival command
Aufgepasst!
 'Attention, please!'

- g. Infinitival command
Wohlauf! Noch getrunken den funkelnden Wein!
 Well still drunk the sparkling wine
 'Now then, finish this sparkling wine!
 ('Wanderlust', Justinus Kerner)
- h. Infinitival wh-interrogative
Wo hingehen, wenn man alleine in einer fremden
 where go if one alone in a foreign
Stadt ist?
 city is
 'Where can one go if one is alone in a foreign city?'

(48a) shows that wh-clauses can be interpreted as exclamatives even without I-to-C movement. Once again, there is support by the particle *doch* and the lexical content of the utterance. (48b) is an example of an unembedded dependent V-final clause which is introduced by a complementizer. Its source may be a sentence type with an elided matrix. (48c) through (48h) are examples of more or less telegraphic speech with bare infinitives or perfective participles whose illocutionary force is likely to unfold on the basis of non-syntactic means.

8.4. Conclusion

We started section 8 with the question how illocutionary force enters the architecture of the left periphery. The German data we have considered exhibit a surprisingly diverse, if not confusing, picture. We have singled out the process of I-to-C as a key factor by which root clauses acquire force features and, thus, turn into utterances. But although I-to-C seems to have a privileged status in grammars with an articulate left periphery and full or residual V1/V2, there are two important messages that derive from our observations: First, I-to-C cannot be sufficient for the determination of force. It rather ENABLES finite clause types to activate force features on the basis of additional factors not all of which fall into core syntax. Second, there are various cases in which force features can be activated without I-to-C, i.e., there must be shortcuts by which these utterances can be accommodated to the pragmatic system. In both types, we could observe that clause-internal particles such as *doch*, *nur*, *vielleicht*, etc. play an important

role. Since these particles are not part of the left periphery, the question is how they can help in typing a clause for force.²⁷

9. General conclusion

We have shown that in languages with an articulate left clausal periphery, more goes on in syntax and semantics than occasionally meets the eye. The more perspicuous organization of the clause in head-final languages with an agglutinative morphology could be shown to be partially replicated by dialects and other non-standard varieties of Western languages. These varieties provide evidence for a split CP. With respect to question complements, we found a close link between disjunctive (as well as alternative) questions and constituent questions. It could be shown that the postulated syntactic structure is supported by independently developed results in the formal semantics of questions, especially in the co-called partition approach. Syntactic variation in the PF-realization of the CP-system could be traced back to variation in the feature structure of lexical items.

It was assumed throughout that embedded verb-final clauses lack features of illocutionary force. The question, then, is how these features enter the clausal architecture. We could isolate I-to-C movement as an important (albeit not the only) factor in accomplishing an underspecified structure through which force features of various types can be activated. Due to a number of different factors which conspire in the determination of force, the picture still looks rather gloomy. It is, in particular, not really clear how the features which play a role in question complements become effective in root clauses with interrogative force. Neither for the fronted finite verb nor for the *wh*-phrase would it be desirable to associate them directly with disjunctivity and quantification because there are similar, but competing clause types whose interpretation is incompatible with these properties.

The general impression is that root clauses leave far more space for semantic and pragmatic interpretation than dependent clauses. Therefore, a research program which aims at a comprehensive account of clause types and their interpretations seems to be well-advised to not shift the entire burden to syntax and instead leave room for underspecified structures and dynamic interpretation.

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Notes

1. Kathol (2000) even goes as far as arguing in favor of a purely linear organization of the clause by which *wh* and *C* form a natural class as typical representatives of the clausal left edge.
2. Notice that in many languages the *wh*-pronoun for 'what' serves as the most unmarked complementizer; cf. Bayer, 1999.
3. To see that this is not a radical deviation from UG-principles, consider the coordination of pronoun and DP as in [*she*] and [*her husband's former wife*] which, according to Minimalist assumptions, cannot be more than the coordination of *N* and *DP*. We do not want a theory which demands that the two have identical structures.
4. We may add as a third reason that *wos* is a morphologically simplex closed class item, and that this makes it a perfect candidate to serve as a head. Since there is no rule which prevents operators to be morphologically simplex, there is no reason why it could not simultaneously serve as a *wh*-operator.
5. Thus, we object to Schleicher (1858: 63) who claims that in such cases '*daß* steht überflüssig in abhängigen fragen'.
6. Standard varieties of German do not allow the constructions to be discussed in the text, but they allow lots of related variations in the domain of prepositional complementizers such as *anstatt* ('instead'), *bevor* ('before'), *bis* ('until'), *nachdem* ('after'), *obwohl* ('although'), etc., which may cooccur with the neu-

tral subordinator *dass*. Notice also other combinations such as *sobald* ('as soon as') with *als* or *wie* ('as'):

- (i) a. Anstatt hier zu bleiben lief das Kind davon
instead here to stay ran the child away
 'Instead of staying here, the child ran away'
 - b. Anstatt dass es hier blieb lief das Kind davon
instead that it here stayed ran the child away
 - (ii) a. Sobald er aus der Tür trat erfasste ihn die Kälte
as-soon he out the door stepped caught him the cold
 'As soon as he stepped out of the door, he was caught by the cold'
 - b. Sobald als/wie er aus der Tür trat erfasste ihn die Kälte
as-soon as/as he out the door stepped caught him the cold
7. This does, of course not exclude the possibility that ? merges with IP before the disjunctive head (corresponding to *whether* in (21)) is applied. I do not intend to take issue with the formal semantics of questions.
 8. The facts of Bengali are actually more complex. The language allows in root clauses a clitic *ki* ('what') which may be sentence-final but may also attach to constituents in clause-medial position.
 9. The fact that in-situ 'wh' phrases are often indistinguishable from indefinites (cf. German *dass er **wen** getroffen hat* (that he **someone** met has) versus ***wen** (dass) er t getroffen hat* (**who** (that) he met has) gives some credibility to the idea that <disj> is not necessarily lexically inherent in a wh-expression.
 10. Cf. Cheng (1991).
 11. Compare Dutch and German in the following examples which show that German allows among others, (iib), wh-items, (iia), while Dutch, (i), seems to insist on -wh indefinites :
 - (i) Ik heb iets / iemand gezien
 I have something / someone seen
 - (ii) a. Ich habe was / wen gesehen
 - b. Ich habe etwas / jemanden gesehen
 12. The assumption that the wh-phrase remains in situ has been challenged. At least for South Asian languages, it has been argued the wh-phrase moves to a functionally defined focus field to the left of V. Cf. Jayaseelan (2001a) and Simpson and Bhattacharya (2000; 2003). For reasons of space, I have to leave this aspect aside.
 13. For details on quotatives cf. Bayer (1999) and some of the literature reported therein.
 14. Cf. Bayer (to appear).
 15. Unfortunately I cannot support this theory-driven conclusion with independent empirical evidence.

16. Note that such a distinction is missing in Rizzi (1997). Rizzi assumes a unitary force system which links the sentence either to the preceding discourse or to the immediately dominating clause.
17. Cf. Brandner (2004) for detailed discussion of V1 and V2 in terms of force activation.
18. According to my knowledge, there is no grammatical expression (outside perhaps poetry) with an imperative finite verb form in clause-final position: *... *von hier aus zwei Schritte nach links **gehe!***
19. For details on embedded V2-clauses which show that, in fact, nothing is exceptional here, cf. Meinunger (this volume).
20. Interestingly, the selective force of the matrix predicate can operate across an intervening *dat*-complementizer in Frisian; cf. de Haan (2001).
21. For a refinement of this statement, cf. section 8.3.
22. In the following examples capital letters are meant to signal emphatic stress.
23. Both the surprise and the reason reading disappear when the adversative particle *doch* is missing. Needless to say that the surprise declarative is odd, if the truth of the proposition is already expected by the hearer.
24. This is an instance of what Höhle (1992) has identified and described as 'VERUM-Fokus'.
25. For details about German exclamatives, cf. d'Avis (2001) and Hasegawa (1999) among others.
26. One of my intuitions is that V1 may have something to do with non-veridicality in the widest sense. With respect to negative polarity licensing, only the interrogative in (46a) and the conditional clause in (46b) would qualify, but in each of the other types which have been introduced here, it seems justified to say that the truth of the proposition expressed is under debate (in a certain way). For extensive discussion of non-veridical contexts cf. Giannakidou (1998). Quoting from Önnarfors (1997) and Reis (2000), Brandner (this volume) presents V1-sentences which seem to be very close to declaratives such as
 - (i) Soviel zu diesem Argument. Bleibt nachzutragen ...
so much to this argument remains to add
 - (ii) Dies war merkwürdig. War es doch der Staatschef, der ...
this was strange was it PRT the prime-minister who
 Nevertheless, the impression remains even here that the assertive force is not the issue but rather something beyond. *Bleibt nachzutragen ...* in (i) can be characterized as a quasi adversative statement. *War es doch der ...* in (ii) is clearly more than assertive as shown by the obligatory presence of the particle *doch*. None of these examples would be felicitous outside the particular discourse environment in which it occurs.
27. For an interesting suggestion cf. Hasegawa (1999). Hasegawa suggests that there is clause-internal particle phrase (PrtP) through whose specifier a wh-

phrase may move and to whose head the finite verb may adjoin on their way to the left periphery of the clause. In this way, force features can be passed on to the layer of structure in which force seems to be activated.

References

- d'Avis, Franz-Josef
 2001 *Über w-Exklamativsätze im Deutschen*. Niemeyer: Tübingen.
- Bayer, Josef
 1984 COMP in Bavarian syntax. *The Linguistic Review* (3): 209-274.
 1999 Final complementizers in hybrid languages. *Journal of Linguistics* (35): 233-271.
 2002 Minimale Annahmen in Syntax und Morphologie. *Linguistische Arbeitsberichte* 79. Department of Linguistics, University of Leipzig. 277-297.
 to appear Non-nominative subjects in comparison. In Peri Bhaskararao and Karumuri Venkata Subbarao (eds.), [title to be announced]. John Benjamins. Amsterdam.
- Borer, Hagit
 1984 *Parametric Syntax: Case Studies in Semitic and Romance Languages*. Foris: Dordrecht.
- Brandner, Eleonore
 2004 Head-movement in Minimalism and V/2 as force-marking. This volume.
- Cheng, Lisa
 1991 *On the Typology of Wh-Questions*. Ph.D. thesis. Massachusetts Institute of Technology.
- Chomsky, Noam
 1995 *The Minimalist Program*. Cambridge, Massachusetts: MIT-Press.
- Cinque, Guglielmo
 1999 *Adverbs and Functional Heads: A Cross-Linguistic Perspective*. Oxford: Oxford University Press.
- Eden, Jan
 2004 Uniformity and variation: On the relation of wh-phrases and sentence moods in German. This volume.
- Giannakidou, Anastasia
 1998 *Polarity Sensitivity as (Non)veridical Dependency*. Amsterdam: John Benjamins.
- Giorgi, Alessandra and Fabio Pianesi
 1997 *Tense and Aspect. From Semantics to Morphosyntax*. Oxford: Oxford University Press.

- Groenendijk, Jeroen, and Martin Stokhof
 1982 Semantic analysis of wh-complements. *Linguistics and Philosophy* (5): 175-233.
- de Haan, German
 2001 More is going on upstairs than downstairs: Embedded root phenomena in West Frisian. *The Journal of Comparative Germanic Linguistics* (4): 3-38.
- de Haan, German, and Fred Weerman
 1986 Finiteness and verb fronting in Frisian. In *Verb Second Phenomena in Germanic Languages*, Hubert Haider and Martin. Prinzhorn (eds.), 77-110, Dordrecht: Foris.
- Haegeman, Liliane
 1992 *Theory and Description in Generative Syntax: A Case Study in West Flemish*. Cambridge: Cambridge University Press.
- Hagstrom, Paul
 1998 *Decomposing Questions*. MIT-dissertation. Cambridge, Massachusetts.
- Hale, Kenneth and Samuel J. Keyser
 1993 On argument structure and the lexical expression of syntactic relations. In *The View from Building 20*, Ken Hale and Samuel Jay Keyser (eds.), 53-110, Cambridge, Massachusetts: MIT-Press.
- Hasegawa, Kei
 1999 *Exklamativsätze im Deutschen und im Japanischen*. MA-thesis. Friedrich-Schiller University Jena.
- Higginbotham, James
 1993 Interrogatives. In *The View from Building 20*, Ken Hale and Samuel Jay Keyser (eds.), 195-228, Cambridge, Massachusetts: MIT-Press.
 1997 The semantics of questions. In *The Handbook of Contemporary Semantic Theory*, Shalom Lappin (ed.), 361-383, Oxford: Blackwell.
- Höhle, Tilman N.
 1992 Über Verum-Fokus im Deutschen. In *Informationsstruktur und Grammatik*, Joachim Jacobs (ed.), (Special issue #4 of *Linguistische Berichte*). 112-141, Opladen: Westdeutscher Verlag.
- Hoekstra, Eric
 1993 Dialectal variation inside CP as parametric variation. In *Dialekt-syntax*, Werner. Abraham and Joseph. Bayer (eds.), (Special issue #5 of *Linguistische Berichte*), 161-179, Opladen: Westdeutscher Verlag.
- Jäger, Agnes

- 2000 *Unterspezifikation am Beispiel des Pronomens 'was': Zur Grammatik eines w-Elements*. MA-thesis. Friedrich-Schiller University Jena.
- Jayaseelan, K. A.
 - 2001a IP-internal topic and focus phrases. *Studia Linguistica* (55): 39-75.
 - 2001b Questions and question-word incorporating quantifiers in Malayalam. *Syntax* (4): 63-93.
- Karttunen, Lauri
 - 1977 Syntax and semantics of questions. *Linguistics and Philosophy* (1): 3-41.
- Kathol, Andreas
 - 2000 *Linear Syntax*. Oxford: Oxford University Press.
- Lahiri, Utpal
 - 2002 *Questions and Answers in Embedded Contexts..* Oxford: Oxford University Press.
- Larson, Richard
 - 1988 On the double object construction. *Linguistic Inquiry* (14): 223-249.
- Lohnstein, Horst, and Ursula Bredel
 - 2004 Inflectional morphology and sentence mood in German. This volume.
- McCloskey, James
 - 2002 Embedding the Root. Handout, University of Konstanz.
- Meinunger, André
 - 2004 Verb position, verbal mood and the anchoring (potential) of sentences. This volume.
- Nishigauchi, Taisuke
 - 1990 *Quantification in the Theory of Grammar*. Dordrecht: Kluwer
- Önnerfors, Olaf
 - 1997 *Verb-erst Deklarativsätze. Grammatik und Pragmatik*. Stockholm: Almqvist and Wiksell.
- Pollock, Jean-Yves
 - 1989 Verb movement, Universal Grammar, and the structure of IP. *Linguistic Inquiry* (20): 365-424.
- Reis, Marga
 - 2000 Review of Önnerfors 1997. *Studia Linguistica* (54): 90-100.
- Rizzi, Luigi
 - 1997 The fine structure of the left periphery. In *Elements of Grammar*, Liliane Haegeman (ed.), 281-337, Dordrecht: Kluwer.
- Reuland, Eric

- 1990 Head movement and the relation between morphology and syntax. In *Yearbook of Morphology* 3, Geert. Booij and Jaap. van Marle (eds.), 129-161, Dordrecht: Foris.
- Schleicher, August
1858 *Volkstümliches aus Sonneberg im Meininger Oberlande*. Weimar: Böhlau.
- Simpson, Andrew and Tanmoy Bhattacharya
2000 Wh CP-raising in Bangla. In *Proceedings of NELS* 30, Masako Hirotani, Andries Coetzee, Nancy Hall and Ji-yung. Kim (eds.), 583-596.
2003 Obligatory overt wh-movement in a wh-in.situ language. *Linguistic Inquiry* (34): 127-142.
- Sohn, Ho-min
1999 *The Korean Language*. Cambridge: Cambridge University Press.
- von Stechow, Arnim
1993 Die Aufgaben der Syntax. In *Syntax. An International Handbook of Contemporary Research*, Joachim Jacobs et al. (eds.), Berlin: de Gruyter.
1996 Against LF pied-piping. *Natural Language Semantics* (4): 57-110.
- Wechsler, Stephen
1990 Verb second and illocutionary force in Swedish. In: *Parametric Variation in Germanic and Romance. Edinburgh Working Papers in Cognitive Science*, #6, Elisabeth Engdahl, Mike Reape, Martin Mellor, and Richard Cooper (eds.), 229-244.
1991 Verb second and illocutionary force. In *Views on Phrase Structure*, Katherine Leffel and Denis Bouchard (eds.), 177-191, Dordrecht: Kluwer.

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