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German Complex Complementizers[*]

0. Introduction

This paper discusses complement phrases (CPs) in continental Germanic, primarily in the dialect of German spoken in Diezhölztal in the Nassau-Oranien region of Hessen. This paper analyses the structure of CPs, including a discussion of evidence from the Bavarian dialect of German, and extends this structure to an analysis of relative clauses in Dietzhölztal Hessian which addresses a problematic aspect of Kayne's 1994 general approach to the syntax of relative clauses. While the facts concerning CPs in D.-Hessian are largely similar to those of other dialects of German, extensions of the structure of CPs to relative clauses is particularly felicitous in D.-Hessian due to properties of relativizations of objects of prepositions, which the discussion in this paper will focus on. The paper concludes with some general observations about the structure of CPs proposed here and possible extensions to phrases other than CP and DP.

0.1 Distributional Facts

German dependent clauses may follow the matrix clause, or be preposed and appear before it. All dependent clauses display verb-final word order when they are preposed. Clauses which are not optionally or obligatorily verb-final may therefore not be preposed. Complementizers fall into four classes along two parameters: (1) whether they require verb-third word order in the clause they head (C XP V. . .), verb-final word order (C. . .V), or appear optionally with either of the two word orders, and (2), whether they require verb-second (CP V. . .) or verb-third (CP XP V. . .) in the matrix clause when they are preposed.

The first class, exemplified by *daß* ('that'), is characterized by obligatory verb-final word order in the dependent clause and verb-second in the matrix clause when the dependent clause is preposed, e.g.:

(1)   a.   Hans hat behauptet daß Maria den Thomas trifft
             H.   has claimed   that M.   the   T.   meets
             'Hans claimed that Maria is meeting Thomas.'
   b.   *Hans hat behauptet daß Maria trifft den Thomas
   c.   Daß Maria den Thomas trifft, hat Hans behauptet
   d.   *Daß Maria trifft den Thomas, hat Hans behauptet
   e.   *Daß Maria trifft den Thomas, Hans hat behauptet
   f.   *Daß Maria den Thomas trifft, Hans hat behauptet

The second class, exemplified by *denn* ('because'), is characterized by obligatory verb-third word order in the dependent clause. Since verb-second is obligatory, and preposed dependent clauses must display verb-final word order, a clause headed by *denn*

may never be preposed. Thus the issue of matrix clause word order in the preposed context is not relevant.

(2)   a.   *Hans hat das Buch gelesen, denn es von seinem Lieblingsschrifsteller ist
                    H.   has the book read, because it from his   favorite author   is
                    'Hans read the book because it's by his favorite author'
     b.   Hans hat das Buch gelesen, denn es ist von seinem Lieblingsschrifsteller
     c.   *Denn es von seinem Lieblingsschrifsteller ist, hat Hans das Buch gelesen
     d.   *Denn es ist von seinem Lieblingsschriftsteller, hat Hans das Buch gelesen
     e.   *Denn es ist von seinem Lieblingsschriftsteller, Hans hat das Buch gelesen
     f.   *Denn es von seinem Lieblingsschriftsteller ist, Hans hat das Buch gelesen

The third class, exemplified by *weil* ('because'), is characterized by optional verb-third or verb-final word order in the dependent clause, and verb-second in the matrix clause when the dependent clause is preposed, e.g.:

(3)   a.   Hans hat das Buch gelesen weil es von seinem Lieblingsschriftsteller ist
                    H.   has the book read, because it from his   favorite author   is
                    'Hans read the book because it's by his favorite author'
     b.   Hans hat das Buch gelesen, weil es ist von seinem Lieblingsschriftsteller
     c.   Weil es von seinem Lieblingsschriftsteller ist, hat Hans das Buch gelesen
     d.   *Weil es ist von seinem Lieblingsschriftsteller, hat Hans das Buch gelesen
     e.   *Weil es ist von seinem Lieblingsschriftsteller, Hans hat das Buch gelesen
     f.   *Weil es von seinem Lieblingsschriftsteller ist, Hans hat das Buch gelesen

Lastly, the fourth class, exemplified by *obwohl* ('although'), is characterized by optional verb-third or verb-final word order in the dependent clause, as well as optional verb-second or verb-third word order in the matrix clause when the dependent clause is preposed, e.g.:

(4)   a.   Hans hat das Buch gelesen obwohl es schlecht ist
                    H.   has the book read, although it bad is
                    'Hans read the book, although it was bad'
     b.   Hans hat das Buch gelesen, obwohl es ist schlecht
     c.   Obwohl es schlecht ist, hat Hans das Buch gelesen
     d.   *Obwohl es ist schlecht, hat Hans das Buch gelesen
     e.   *Obwohl es ist schlecht, Hans hat das Buch gelesen
     f.   Obwohl es schlecht ist, Hans hat das Buch gelesen

This paper discusses the structure of these dependent clauses, and in particular the Complement Phrase (CP), that syntactic domain which houses the complementizer itself. The above complementizer phrase classes will be shown to fall out from the structure of CP, albeit with distinct lexical feature specifications on complementizers of different classes. The analysis will be shown to extend to relative clauses on a somewhat elaborated Kaynean phrase structure for relatives (Kayne, 1994), and to so-called transitive expletive constructions--sentences with a pre-verbal pleonastic subject and a post-verbal thematic subject and an object.

1. The Structure of German Complementizers

1.1 Matrix Clauses

I follow the work of Den Besten (1983) and many others in postulating that verbs in verb-second position in V2 languages occupy C^0, and preverbal elements in such constructions occupy [spec,CP], viz.:

(5)   [$_{CP}$ Hans [$_C$ hat][$_{IP}$ das Buch [$_{VP}$ gelesen]]]

This hypothesis explains the generalization that many complementizers prohibit V2 in the complement clause. In lieu of a complementizer, verb-second always obtains in such languages. Therefore, an occupied C^0 rules out verb movement to C^0, and an unoccupied C^0 requires verb movement to C^0, and scrambling of any available XP to [spec,CP], yielding verb-second. The fact that not all complementizers prohibit verb-second, as demonstrated in §0.1, shows that this is not the complete story. However, this is the generalization I will begin with and elaborate on in the course of the present study.

1.2 Dependent Clauses

1.2.1 Class I

Complementizers of class I are those which are responsible for the analysis of verb-final word order in German dependent clauses according to which verbs fail to raise because their landing site is filled by the complementizer. I adopt this view, although I will reformulate it slightly as I go on. On this view, verb-second arises from verb-movement to C^0. Thus, any element occupying C^0 will block raising of another head into that position, as demonstrated by (1) a. and b. A verb in a clause introduced by an overt complementizer in C^0 will therefore fail to raise and will remain in VP, out of which all other material scrambles before spell-out, leaving the verb in final position, e.g.:

(6)   [$_{CP}$ daß [$_{IP}$ Maria den Thomas [$_{VP}$ trifft]]]

Such a CP may be preposed. The difference in grammaticality between (1) c. and f. shows that the position into which it raises is the matrix [spec,CP]. Since Class I complementizers prohibit verb-third in the dependent clause, (1) d. and e. are ungrammatical alone because they display verb-third, not necessarily because they are preposed. On the analysis of V2 offered in §1.1, matrix verbs occupy C^0 of the matrix CP. When a non-subject such as a preposed CP occupies matrix [spec,CP], the position is not available for the subject, and the subject appears in IP. This pattern is displayed in (1) c. and f. In (1) c., the dependent clause occupies matrix [spec,CP], the matrix verb occupies C^0, and the matrix subject appears in IP. In (1) f., the dependent clause and the matrix subject are competing for the same position, which leads to ungrammaticality.

The adjacency of the complementizer and subject is not absolute. Definite indirect objects, particularly dative pronouns, occur felicitously before indefinite subjects in verb-final dependent clauses, in which case an IP adverb may also appear between the indirect object and the subject, as in (7) below.

(7)   Ich habe gehört daß dir gestern ein Junge eine Blume geschenkt hat
       I have   heard that you yesterday a boy   a flower given   has
       'I heard that a boy gave you a flower yesterday'

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Constraints on multiple adjunction rule out the adjunction of both *dir* and *gestern* to IP. Thus, at least one more projection must be available between CP and IP. The matter is complicated by the fact that *ein Junge* might not occupy the canonical subject position in (7). *Dir* may not intercede between the complementizer and a definite subject, suggesting the position of subjects co-varies with definiteness. I assume therefore at least a position XP below CP to house the dative pronoun *dir*, as diagrammed in (8), and I do not rule out the possibility of more structure between CP and IP.

(8)   [CP daß [XP dir [IP gestern ein Junge eine Blume geschenkt hat]]]

1.2.2   Class II

The class II complementizers require verb-third in the dependent clause. Two structures plausibly account for this fact. In one, the complementizer occupies C^0, as class I complementizers do, while the verb raises out of its base position into I^0 and the subject raises to [spec,IP], rendering the word order Comp-S-V-X, as in (9) a. In another structure, the verb occupies C^0 and the subject raises to [spec,CP], as in matrix V2 clauses per Den Besten 1983, and the complementizer *denn* occupies a still higher position, therefore also rendering the word order Comp-S-V-X, as in (9) b.

(9)   a.   [CP denn [IP es [I ist] [von seinem Lieblingsschriftsteller]]]
       b.   [CP1 denn [CP2 es [C2 ist] [IP von seinem Lieblingsschriftsteller]]]

In matrix V2 clauses, XP-V-S word order is felicitous, as in (10) a., b., c. and d. In dependent clauses with verb-third, Comp-XP-V-S word order is slightly constrained. A temporal adverb like *gestern* ('yesterday') may appear before the verb, as in (11) a., as well as an indirect object, as in (11) c. Both force the subject to appear post-verbally. A direct object, though, may not felicitously appear before the verb in verb-third embedded clauses, as (11) b. shows, nor any verbal complement, as (11) d. shows.

(10)   a.   Gestern hat er den Zug versäumt
             yesterday has he the train missed
             'Yesterday he missed the train'
       b.   Den Zug hat er gestern versäumt
       c.   Dem Thomas haben die Mächen Küsse gegeben
             the-DAT T. have the girls   kisses   given
             'The girls gave me kisses'
       d.   Von seinem Lieblingsschriftsteller ist das Buch
             by his   favorite author   is the book
             'The book is by his favorite author'

(11)   a.   Er ist heute nicht gekommen, denn gestern hat er den Zug versäumt
             he is today not   come   because yesterday has he the train missed
       b.   ??Er ist heute nicht gekommen, denn den Zug hat er gestern versäumt
       c.   Er war erbost, denn   dem   Thomas haben die Mädchen Küsse gegeben
             he was furious, because the-DAT T. have the girls kisses   given
             'He was furious, because the girls gave me kisses'
       d.   ??Er liest das Buch eifrig, denn von seinem Lieblingsschriftsteller ist es
             He reads the book diligently, because by his favorite author   is it
             'He is reading the book diligently, because it's by his favorite author'

These facts complicate the picture in (9) somewhat. The fact that material other than the subject may intervene between the complementizer and the verb suggests that the position

between the complementizer and the verb is not an argument position, but rather an A-bar position such as [spec,CP]. However, word order in the complement clauses is not completely parallel to matrix clauses, since verbal complements are problematic before the verb in embedded V2 contexts, unlike in matrix clauses. Nonetheless, the fact that the position in question is available for material other than the subject rules out the hypothesis that it is the subject-licensing case position [spec,IP], as represented in (9) a. The notion that the intervening position is the XP diagrammed in (8) is not supported by evidence which follows in §1.2.3. I believe that topicalization in embedded clauses is militated against by pragmatic factors. (11) b. and d. are licensed in an appropriate context, but such contexts are unusual. I adopt (9) b. as the structure for class II complementizers, and leave the issue of the problem with of (11) b. and d. unresolved. Thus, word order in dependent clauses headed by class II complementizers arises in the same manner as word order in matrix clauses. Main verbs move to C^0_2, and the subject or other XP moves to [spec,CP_2]. The complementizer appears in the head of CP_1. The structure in (9) b. represents a complex complementizer. The following section discusses the unification of simple class I complementizers and complex class II complementizers in a single phrase structure.

1.2.3 Class III

Word order in class III dependent clauses is optional between verb-third and verb-final. When they are verb-third, they display the properties of class II dependent clauses, including the restriction on the pre-verbal XP position to non-verb-complements, and failure of preposing. When they are verb-final, they display the properties of class I dependent clauses, including the word order facts described in 1.2.1, and possibility of preposing. The fact that dependent clauses optionally displaying a certain word order share all the properties of clauses that obligatorily display that word order suggests the conclusion that this optionality arises from the fact that class III complementizers are complementizers that belong to both classes I and II, or are ambiguous between classes I and II.

The descriptive account given of the distinction between class I and class II verbs as a structural distinction does not account for what motivates the difference in structure. It amounts to a descriptive claim about the subcatagorization frames of the two classes. Class I complementizers subcategorize for an IP, while class II complementizers subcategorize for another CP. A technical problem arises in connection with the re-iterative CP analysis of class II complementizers. Namely, nothing in the grammar prevents the CP from re-iterating repeatedly, to generate sentences such as (12), which are ungrammatical though they are semantically parsable.

(12) *Er ist heute nicht gekommen, denn daß er gestern den Zug versäumt hat
he is today not come because that he yesterday the train missed has

Both the empty complementizer that motivates V2 in matrix clauses and the class I complementizer *daß* subcategorize for an IP. They belong to the same category and have the same subcategorization frame. Only a stipulation can insure that only the empty complementizer and not *daß* may appear as a complement of *denn*.

In terms of the descriptive account discussed so far, class III complementizers have more than one subcategorization frame. In the spirit of the approach to the syntax of subcategorization exemplified by Hale and Keyser, 1994, in which distinct subcategorization frames reduce to a single syntactic lexical argument structure, the surface form of which is determined by syntactic operations, I propose that CPs are uniform in structure but not in the syntactic operations that apply within them. Namely, the data presented up to this point support the notion that the two CPs in the complex CP

construction posited for class II complementizers are asymmetric. They each have different properties. The distinction between class I and class II complementizers reduces to this asymmetry in the manner explained below.

The hypothesis which I will investigate here is that all Hessian complementizers share the structure in (13) (to be elaborated on in §2). The distinct properties of class I and class II complementizers relate to the position in which each is base generated within the complex CP.

(13) $[_{CP1}$ C_1 $[_{CP2}$ C_2 $[_{IP}$ $\cdots\cdots]]]$

The relevant asymmetry which distinguishes CP_1 and CP_2 is that between feature checking and feature generating categories. An inquiry into the semantic nature of the feature involved in this dependency is outside the scope of this paper. Without therefore committing to what, if any, interpretive qualities this feature might have I arbitrarily name it [+comp] to emphasize its association with the CP system. [+comp] may be manifested in C_1 in the form of any of the class II complementizers, in which case the lower CP is empty and may be filled by a verb raised from lower in the structure. Verb movement to CP_2 creates an extended domain for the movement of an available XP from lower in the clause into [spec,CP_2] to yield Comp-XP-V word order, as in (14) a. below. Or, the feature [+comp] may be generated on a complementizer generated in CP_2 in the form of any of the class I complementizers. In this case, the complementizer must raise to CP_1 in order to license the feature [+comp], as in (14) b. In this case, the lower C^0 is filled by the trace of the raised complementizer, and is not a potential landing site for a main verb, either because it is occupied by the trace, on the substitution view of head-movement, or because of an across-the-board ban on adjunction to traces, on the head-adjunction view of head-movement. Failure of verb movement into C^0_2 makes C^0_2 opaque for XP raising into [spec,CP_2]. Object shift and verb raising are also notated in the diagrams below.

(14)   a. $[_{CP1}$ denn[+comp] $[_{CP2}$ er $[_C$ hat $][_{IP}$ den Zug $[_{VP}$ t   t   versäumt   t $]]]]$
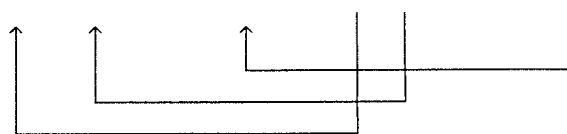
(14)   b. $[_{CP1}$ daß[+comp] $[_{CP2}$ $[_C$ t $][_{IP}$ er   den Zug $[_{VP}$ versäumt   hat   t   t   t $]]]]]$
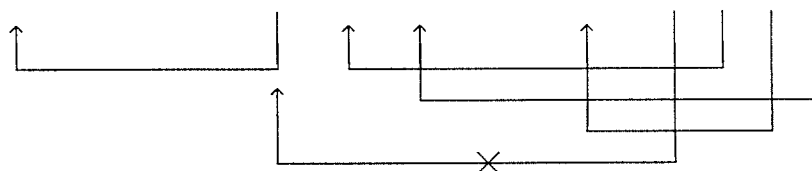
The claim that complementizers base generated in CP_2 raise into CP_1 is based on the ungrammaticality of (12). Given (13), (12) is ungrammatical because the appearance of an overt complementizer in CP_1 blocks movement of the complementizer in CP_2 into the head of CP_1 for feature checking. The lower complementizer's unchecked [+comp] feature causes the derivation to crash.

(13) characterizes class III complementizers as well. Class III complementizers are ambiguous with respect to the position in which they are base generated. They may be base generated in CP_1 and allow verb raising to CP_2, yielding verb-third, or they may be

base generated in CP_2 blocking verb raising to CP_2 and prohibiting verb-third. They then raise to CP_1 to check the feature [+comp].

This picture also provides a descriptive generalization regarding which dependent clauses may be preposed and which may not. Namely, dependent clauses may be preposed in which head-movement links CP_1 and CP_2. Those clauses in which CP_1 and CP_2 are not linked by head-movement may not be preposed. From this generalization falls out the fact that preposed dependent clauses always display verb-final word order. Complementizers generated in CP_2 force verb-final word order in the manner described above. It is questionable how much explanatory adequacy this generalization has, since both complementizer types express the feature [+comp] and appear clause initially. Though I do not provide an explanation for why chain formation licenses preposing, the generalization itself has broad empirical coverage and strong theoretical desirability, since it reduces dependent clause word order and possibility of preposing to a single dependency.

1.2.4   Class IV

Class IV complementizers are parallel to class III complementizers in that they are optional between verb-third or verb-final word order in the dependent clause. They differ from class III complementizers in that they do not require verb-second in the matrix clause when they are preposed. Class IV complementizers therefore differ from class III in their landing site. Preposed class III complementizers block movement of another element to the pre-verbal XP position, indicating they occupy this position. In §1.2.3 this position was posited to be [spec,CP_2]. Class IV complementizers may block XP movement to the pre-verbal position, indicating that in these cases, they occupy [spec,CP_2]. Alternatively, they may allow XP movement to the pre-verbal position, indicating that in these cases, they do not occupy [spec,CP_2]. They may then adjoin to CP_2, or move to [spec,CP_1], or adjoin to CP_1. The Kaynean approach points to the specifier position. In any case, which of these options is correct does not bear on the main point of this paper, so I will leave the matter unresolved.

2.   AgrP$_{(CP)}$

Evidence exists that the structure of complex CPs in (13) is deficient, in that complex CPs also contain an Agr projection. I argue in 2.1 for an Agr projection in complex CPs in Hessian, and demonstrate in 2.2 that this analysis is supported by evidence from the Bavarian dialect of German.

2.1   Case of *Es*

Hessian has, like all other dialects of German, a construction in which an expletive pronoun *es* occupies the sentence initial position of a transitive matrix clause. This pronoun is followed by a verb, followed usually directly by the thematic subject, e.g.:

(15)   a.   Es hat ein Student einen Professor getroffen
                it has a   student   a professor   met
                'A student met a professor'

       b.   Es haben drei Studenten einen Professor getroffen
                it have three students   a professor   met
                'Three students met a professor'

Like all matrix clauses, these sentences display verb-second. I argued in §1 that main verbs are housed in the CP superstructure in matrix clauses. The surface position of the expletive subject is to the left of the verb, thus also in the CP superstructure. Agreement marking on the verb is with the thematic subject, not with the expletive subject, indicating that *es* is not in an agreement configuration with the verb at any point in the derivation, that is, at no level of representation is the expletive subject within IP. These sentences are therefore not parallel to sentences such as (16):

(16)　Es macht denen nichts aus, wenn ihr nicht kommt
　　　it makes them nothing out, if　you　not　come
　　　'It doesn't matter to them if you don't come'

Insofar as *macht* occupies the head of a CP, *es* also appears inside CP at the level of surface syntax. Unlike the sentences in (15), the verb agrees with the expletive subject, indicating that *es* occupies the agreement licensing position [spec,IP] at some level of representation. Its surface position in CP is a derived position. Further evidence supporting this conclusion is that no other subject may appear in such sentences. Since a trace of *es* occupies [spec,IP], the position is not available to license another subject. Further, if an element other than the expletive subject appears in the sentence initial CP internal position, the *es* appears post-verbally, as in (17) a. When an element other than *es* occupies the sentence initial CP internal position in transitive expletive sentences such as those in (15), *es* is illicit in any position, as in (17) b.

(17)　a.　Denen macht es nichts aus, wenn ihr nicht kommt
　　　　　them　makes it nothing out, if　you　not　come
　　　　　'It doesn't matter to them if you don't come'

　　　b.　*Einen Professor haben es drei Studenten getroffen
　　　　　a　　professor　have　it　three　students　met

The appearance of *es* as an expletive subject in contexts such as (16) is regularly explained as fulfilling a case requirement. The case position [spec,IP] must be filled; case may not be assigned to an empty position. In lieu of a thematic subject, an expletive subject is base generated in [spec,IP] to receive nominative case. It may or may not move to [spec,CP], as may any other available constituent. It is not interpreted because it is not related to a thematic position through movement.

This analysis of expletive subjects does not hold for the sentences in (15). In these sentences, a thematic subject may appear in addition to the expletive subject, the expletive subject may not appear in any other position other than its CP internal surface position, and subject verb agreement never obtains between the verb and the expletive subject, but rather only between the verb and the thematic subject. These facts indicate that in the sentences in (15), [spec,IP] is not occupied by the expletive subject at any level of representation, since the position is available to license a thematic subject, and necessarily so, since agreement obtains with the thematic subject. In light of these facts, the expletive subject in (16) and the expletive subject in (15) do not occupy parallel syntactic positions.

By analogy with the analysis of the expletive subject in (16) I propose that the expletive subject in (15) fills a case position. But it is not a case position associated with the verb, but rather with the complementizer. If *es* in (15) requires case, and it is unambiguously unassociated with the matrix IP, then a case position must exist outside IP. That this case position is associated with CP is demonstrated by (18) below.

(18) a. *Ich dachte daß es ein Student einen Professor getroffen hat
          I   thought that it a   student a   professor met   has

b. Ich laufe jetzt, denn es ist ein Zug gerade angekommen
    I   run now because it is a   train just now arrived
    'I have to go now, because a train just arrived'

Es is illicit with class I complementizers such as *daß*, but licit with class II complementizers such as *denn*. The case position of *es* covaries with complementizer type. Class I complementizers do not license *es*, but class II complementizers do. The dependency between complementizer type and the grammaticality of *es* indicates that the case position of *es* is local to the complementizer. (18) also indicates the distribution of the *es* licensing projection within CP. It is dominated by the class II complementizer projection CP_1, since class II complementizers precede *es*, as in (18) b. *Es* is incompatible with class I complementizers. This incompatibility is captured in a CP phrase structure in which the case licensing Agr projection is in the checking domain of the class I complementizer position CP_2. It is not captured in a phrase structure in which the case licensing Agr projection is outside the checking domain of the class I complementizer position CP_2, i.e., one in which CP_2 dominates AgrP. On the basis of (18) therefore, the structure of CP in sentences such as those in (15) is that in (19) below.

(19) $[_{CP1}$ C_1 $[_{AgrP}$ Agr $[_{CP2}$ C_2 $[_{IP}$ · · · · ·]]]]

A thematic subject cannot intervene between the expletive subject and the verb, as sentences such as (20) show.

(20) *Ich laufe jetzt, denn es ein Zug ist gerade angekommen
       I   run now because it a train is just   arrived

The position [spec,CP_2] is not available for a thematic subject or other element. The ungrammaticality of strings such as (20) follows if [spec,CP_2] is occupied by another element. An element occupying that position will block movement of an element such as the subject *ein Zug* in (20), to that position. The only available candidate for the position [spec,CP_2] in for example (20) is *es*. These facts point to the conclusion that *es* is base generated in [spec,CP_2], and then raises into the case position [spec,AgrP]. Movement of other elements into [spec,CP_2] is blocked by the trace of *es* in [spec,CP_2]. Main verbs in transitive expletive constructions have the same distribution as in other matrix clauses, i.e., they occupy C^0_2.

2.2   Evidence from Bavarian

I point out here further evidence for a CP-internal Agr projection in continental Germanic. This evidence comes from the Bavarian dialect of German, though dialects throughout Austria, western Germany, and the low countries seem to share properties of Bavarian. In Bavarian, the verbal suffix expressing agreement with the subject may be copied onto a preceding complementizer, e.g.:

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(21) a. Ihr soi-ts sagn ob-ts ihr kimm-ts
you (pl) should-2p say if-2p you (pl) come-2p
'You should tell us if you're coming'

   b. Du soi-st sagn ob-st du kimm-st
you (sg) should-2s say if-2s you (sg) come-2s
'You should tell us if you're coming'

A wh-word introducing an embedded clause also bears a copy of the verbal suffix, as in (22) a. However, a matrix clause wh-element does not bear an agreement marker, as (22) b. shows.

(22) a. Ihr soi-ts sagn wann-ts ihr kimm-ts
you (pl) should-2p say when-2p you (pl) come-2p
'You should tell us when you're coming'

   b. Wann(*-ts) kimm-ts ihr?
when(*-2p) come-2p you (pl)
'When are you coming?'

This property of complementizer agreement marking is compatible with the structure in (19). Class I complementizers such as *ob* are base generated in C^0_2 with a phi-feature marker and license this morphology in a spec-head relation with an element in AgrP. They then raise to C^0_1 to license the feature [+comp]. (23) below indicates that the subject does not move to [spec,AgrP] at LF. Rather, the element in [spec,AgrP] that licenses complementizer agreement inflection is an operator bound to the subject.

(23) a. Er soi-t sagn ob-t er kimm-t
he should-3s say if-3s he come-3s
'He should tell us if he's coming'

   b. Maria soi-t sagn ob(*-t) Hans kimm-t
M. should-3s say if(*-3s) H. come-3s
'Maria should tell us if Hans is coming'

If the relation between the elements in [spec,AgrP] and [spec,IP] is a binding relation, (23) b. with complementizer inflection falls out as a Principle C violation. An operator may not bind an R-expression. It may bind another variable, however, as in (23) a. If the relation is a movement relation, then no independent principle explains the ungrammaticality of complementizer inflection in (23) b. The fact that subordinate clauses introduced by a wh-element are verb-final indicates that such wh-elements are associated with a class I complementizer with a trace in C^0_2 blocking verb movement into C^0_2. This hypothesis explains the association of the wh-element with agreement inflection. The wh-element may not occupy CP_2, since the position is not in the checking domain of Agr. It may not occupy AgrP since that is the position of the operator bearing the phi-features of the subject that licenses complementizer agreement. It must therefore occupy [spec,CP_1]. However, CP_1 is not local to Agr^0, the checking position for agreement inflection. However, the null complementizer whose trace in CP_2 blocks verb-second in such clauses forms a chain by head movement to CP_1 between Agr^0 and C^0_1. This chain makes the two positions local on Chomsky's 1995 definition of locality and allows Agr^0 to license agreement inflection on a wh-element in [spec,CP_1].

The absence of complementizer inflection in (22) b. shows that a class I complementizer is not present in matrix wh-clauses. Matrix wh-clauses are therefore either formed on the structure in (5), or on the structure in (19) with a null class II complementizer and wh-movement to [spec,CP$_2$]. In lieu of evidence for one or the other, I assume for the sake of uniformity across clauses that matrix wh-clauses are formed in a complex CP with a null class II complementizer; also see §3.2. It is worth noting that the complementizer agreement paradigm is defective; only the second person singular and plural and third person singular agreement markers are doubled on complementizers. However, this shows definitively that there is not a copying mechanism at work in (21). It is not the case that whatever suffix appears on the verb appears on the complementizer. It also supports the notion that there is no LF movement of the subject to AgrP. The subject always licenses full verb agreement; it would presumably always license full complementizer agreement.

In dependent clauses headed by a class II complementizer in $C^0{}_1$, the position of the complementizer is not local to Agr^0, nor does raising from $C^0{}_2$ to $C^0{}_1$ take place, therefore no chain is formed between Agr^0 and $C^0{}_1$. Therefore Agr^0 may not license agreement morphology on a class II complementizer. The analysis of Bavarian complementizer agreement inflection proposed here therefore makes the prediction that class II complementizers do not bear agreement inflection. This prediction is borne out, as (24) shows.

(24)   I hab mi   geärgert   denn(*-ts)   ihr   sei-ts net g'kimme
       I have myself made-angry because(*-2p) you (pl) are-2p not come
       'I was angry because you didn't come'

Further, those complementizers which are ambiguous between classes I and II bear agreement morphology when they act as class I complementizers, i.e., when they occur with verb-final word order in the dependent clause, as in (25) a., and do not bear agreement morphology when they act as class II complementizers, i.e., when they occur with verb-third word order in the dependent clause, as in (25) b.

(25)   a.   I hab mi   geärgert   weil-ts   ihr   net g'kimme sei-ts
            I have myself made-angry because-2p you (pl) not come   are-2p
            'I was angry because you didn't come'

       b.   I hab mi   geärgert   weil(*-ts)   ihr   sei-ts net g'kimme
            I have myself made-angry because(*-2p) you (pl) are-2p not come
            'I was angry because you didn't come'

Thus, the properties of Bavarian complementizer agreement inflection support both the structure of complex CP diagrammed in (19) and the properties of this structure evident in the typology of complementizers summarized in §3 below.

3.   Preliminary Summary

3.1   Dependent Clauses

The various word orders of dependent clauses and of complementizer-licensed *es* initial matrix clauses are generated on (19) as follows.
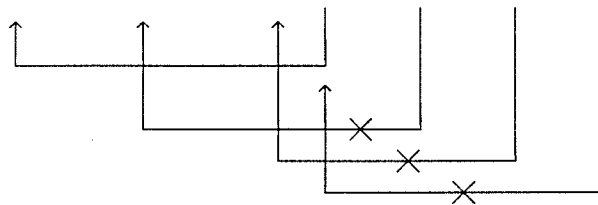
I   Class I complementizers are generated in CP$_2$ with the feature [+comp]. In order to license [+comp], they raise through Agr^0 into the [+comp] checking position $C^0{}_1$. The

trace of the complementizer in C^0_2 blocks movement of the main verb into C^0_2, thus prohibiting verb-third word order in the dependent clause. The fact that dative pronouns may intervene between the complementizer in its surface position C^0_1 and the subject, as in (26) below, shows that the subject does not occupy [spec,AgrP$_{(CP)}$], which directly follows the surface position of the complementizer, C^0_1. Dative pronouns do not occupy this position either, because it is not a dative case position.

(26) Er sagte daß mir der Thomas die Karten bringen würde
   He said that me the T. the tickets bring would
   'He said that Thomas would bring me the tickets'

Since *mir* cannot occupy [spec,AgrP], the highest position *mir* could occupy is [spec,CP$_2$]. Hence, the highest position the subject could occupy is [spec,IP]. In section 3.2, I will argue that *mir* does not occupy [spec,CP$_2$], but rather the specifier of a projection intervening between CP$_2$ and IP, as I proposed in connection with simple CPs in §1.2.1. Insofar as this promissory note holds true, no XP may raise into the CP-complex of a class I complementizer. Thus, the structure of class I complementizer phrases is as follows:

(27) [$_{CP1}$ daß [$_{AgrP}$ [$_{CP2}$ t [$_{IP}$ Maria Hans trifft]]]]

II Class II complementizers are generated in CP$_1$, where they manifest the feature [+comp]. AgrP and CP$_2$ are empty. Since non-arguments may occur pre-verbally in class II complement clauses, these XPs do not occupy the CP-internal case position [spec,AgrP], nor the main clause case position [spec,IP]. They must therefore occupy [spec,CP$_2$]. The fact that no material may intervene between the preverbal XP and the verb indicates that the verb occupies the adjacent head position C^0_2. Thus, the structure of class II complementizer phrases is as follows:

(28) [$_{CP1}$ denn [$_{AgrP}$ [$_{CP2}$ Maria [$_C$ trifft] [$_{IP}$ t t Hans]]]]
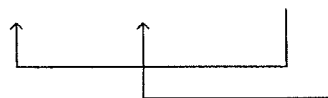
   Class II complementizers also license the expletive *es* in transitive constructions. They are parallel to other class II complementizer clauses, except that *es* is generated in [spec,CP$_2$] and raises to [spec,AgrP] to license its case feature. Thus, though main verbs move into C^0_2, no element from the main clause may move into [spec,CP$_2$], which is occupied by the trace of *es*, or for that matter, [spec,AgrP], which is occupied by *es*. Such a derivation is illustrated in (29).

(29) $[_{CP1}$ denn $[_{AgrP}$ es $[_{CP2}$ t haben $[_{IP}$ drei Studenten einen Prof. $[_{VP}$ t getroffen]]]]]
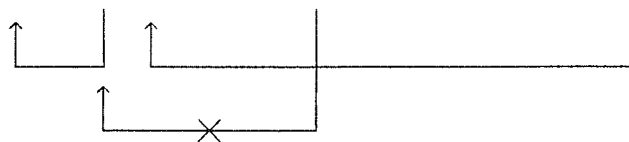
Matrix sentences with transitive expletive *es* share the properties of transitive expletive *es* clauses with class II complementizers. They therefore differ in the overtness of the complementizer. In matrix transitive expletive *es* sentences, C^0_1 is occupied by a null class II complementizer. Empirical parallels indicate that they are formed otherwise in the same manner as dependent clauses with expletive transitive *es*. Such a derivation is illustrated in (30).

(30) $[_{CP1}$ Ø $[_{AgrP}$ es $[_{CP2}$ t haben $[_{IP}$ drei Studenten einen Professor $[_{VP}$ t getroffen]]]]]
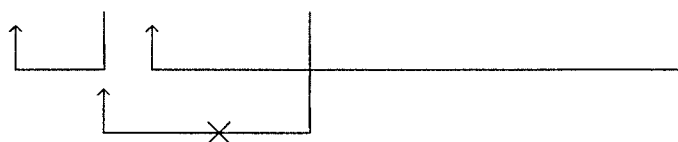
3.2 Matrix Clauses Again

The plausibility of a null class II complementizer for transitive expletives suggests an analysis along these lines for matrix clauses. Matrix clauses do not fit as cleanly into this paradigm as the two types of dependent clauses. There are at best loose restrictions on what may appear in the pre-verbal position in verb-second main clauses. But there is an restriction on what may appear in the pre-verbal position in verb-third dependent clauses, namely the restriction against verb complements, though again, it is unclear to what extent this restriction reduces to pragmatic considerations. This asymmetry may cause one to hesitate to analyze matrix clause verb-second parallel to dependent clause verb-third, i.e., as main verb movement to C^0_2 with a null class II complementizer in C^0_1.

Nonetheless, an important piece of evidence lends credence to the hypothesis that main clauses are generated with a complex CP with a null class II complementizer and verb movement to CP_2. The indirect object position described in §1.2.1 that immediately follows the complementizer, also immediately follows the verb in main clauses, as illustrated in (31) a. Crucially though, it also immediately follows the verb in transitive *es* constructions, as for example in (31) b. below.

(31) a.   Ein Mädchen hat mir gestern eine Blume geschenkt
            a   girl   has me yesterday a flower given
            'A girl gave me a flower yesterday'

      b.   Es hat mir gestern ein Mädchen eine Blume geschenkt
            it has me yesterday a girl   a   flower given
            'A girl gave me a flower yesterday'

I argued in §2.1 on the basis of the ungrammaticality of (20) that the position [spec,CP_2] is filled by the trace of *es*. On the basis of this evidence therefore, (31) b. cannot represent a structure in which *mir* occupies [spec,CP_2] and the verb raises above C^0_2. *Mir* must therefore occupy a position lower than CP_2, as in the preliminary analysis given in §1.2.1 that dative pronouns occupy the specifier position of a projection between CP_2 and IP, as

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illustrated in (8). In light of the word order parallels between the verb and the dative pronoun in (31) a. and b. and the complementizer and the dative pronoun in (7), I propose that the structural relation between the position of the verb and the position of the dative pronoun is identical in (31) a. and b., and that this structural relation is identical to that between the position of the complementizer and the position of the dative pronoun in (7). That is, the XP shown in (8) bears the same structural relation to the main verb in matrix clauses and expletive transitive clauses as it does to the complementizer in (8):

(32)   [$_{CP}$ ein Junge hat [$_{XP}$ dir [$_{IP}$ gestern eine Blume geschenkt]]]

That is, the main verb *hat* in (32) raises past XP to CP_2. Further, the fact that main verbs in expletive transitive constructions appear to the right of the expletive pronoun *es* suggests that main verbs in these constructions do not move beyond CP_2. The parallels between clauses in the position of verbs and complementizers with respect to expletive pronouns and dative pronouns indicate that the position of verbs in second position is uniform across clauses, thus that main clause verbs in matrix clauses raise into CP_2, like main verbs in expletive transitive constructions. This evidence suggests that the theoretical problems regarding restrictions on verb complement raising to [spec,CP_2] in matrix clauses relate to other than the position of the verb, though the present analysis does not offer insight into what kind of dependency these restrictions represent.

I have argued above that main clauses are dominated by a complex CP on the basis of word order parallels across clauses, in spite of the one problematic asymmetry, that between main clauses and dependent clauses with respect to verb complement raising. Nonetheless, these parallels do not crucially argue against the analysis from §1.1, that main clauses are dominated by a simple CP. One piece of evidence suggests that main clause CPs are not simple, namely the ungrammaticality of (4) e. and the grammaticality of (4) f. *Obwohl* may co-occur with verb-third or verb-final in the dependent clause. The ungrammaticality of (4) e. shows that the dependent clause has been preposed, since preposing is the only operation that forces verb-final word order in clauses in which verb-final is optional. (4) f. shows that the preposed dependent clause does not occupy the immediately pre-verbal XP position, since this position may be filled by the subject. Therefore, the preposed dependent clause must occupy a position higher than matrix [spec,CP], indicating that the matrix complementizer does indeed provide more than one specifier position. The structure in (19) is compatible with this observation.

4.   Hessian Relative Clauses

This section discusses the relativization of objects of prepositions in Hessian. The relativization of other elements in Hessian is straightforwardly analyzable along the lines of the structure posited for relative clauses in Kayne 1994. The relativization of objects of prepositions is not as straightforward and for this reason I will devote the following discussion to only these clauses. They support the conclusion that determiner phrases in Hessian have the structure in (19). Definite articles are class II complementizers dominated by an Agr projection dominated in turn by a functional projection which licenses a lexical feature of determiners which I arbitrarily term [+det]. I begin with a brief discussion of prepositional phrases in Hessian in 4.1 and then discuss prepositional object relativization in 4.2.

4.1   Hessian Prepositional Phrases

Prepositions usually precede their objects in Hessian. The case a preposition governs is usually predicable for location prepositions, which govern the accusative in the domain of verbs denoting motion and dative in the domain of verbs not denoting motion.

Prepositional phrases with pronominal objects may be formulated in any of several ways. A personal pronoun with appropriate case morphology may appear in the object position of the prepositional phrase, as illustrated in (33) a. A definite article with appropriate case morphology may appear in the object position of the prepositional phrase, as in (33) b. In lieu of an overt object, the prefix *da-* may be affixed to the preposition, in which case an epenthetic /r/ appears in order to break up the vowel string, as in (33) c. Lastly, the morpheme *da* may double as an unbound morpheme preceding the prefixed *da-* and preposition, in which case the first vowel of the prefix elides, but not the epenthetic /r/, as in (33) d.

(33)   a.   Ich sitze schon auf dem Sofa/auf ihm
              I   sit   already on the sofa/on him-DAT
              'I'm already sitting on the sofa/on it'

        b.   Ich sitze schon auf dem
              I sit already on the-DAT
              'I'm already sitting on it'

        c.   Ich sitze schon darauf
              I   sit already da-on
              'I'm already sitting on it'

        d.   Ich sitze schon da drauf
              I   sit   already da da-on
              'I'm already sitting on it'

Semantic distinctions exist between these forms that relate to the referentiality of the object of the preposition, but they are outside the scope of this paper, as I will only be considering (33) d.

The unbound *da* in (33) d. is separable from the prepositional phrase, and is among the elements which may occupy clause initial [spec,CP], as (34) a. shows. The bound *da-* in (33) c. is not separable, as (34) b. shows.

(34)   a.   Da sitze ich schon drauf
              da sit I already da-on
              'I'm already sitting on it'

        b.   *Da sitze ich schon auf
              da   sit I already on

The sentences in (34) indicate that unbound *da* occupies a specifier position from which movement is licit, and that bound *da* occupies a head position, which explains both its inability to extract and its association with the prepositional head. The properties are parallel to those of the Dutch particle *er*, for which Koopman 1993 has proposed an analysis that I will adopt here for Hessian. By analogy to Koopman's analysis of Dutch prepositional phrases and the position of the Dutch particle *er*, I propose that both bound and unbound *da* occupy a projection PlaceP, immediately dominating PP. Bound *da-* is licensed as prepositional morphology in Place^0, and unbound *da* occupies [spec,PlaceP], from which it may scramble into [spec,CP]. The whole PP may also scramble into [spec,CP], as (35) shows.

(35)   Da drauf sitze ich schon
        da da-on sit I   already
        'I'm sitting on it already'

According to Koopman's account, this fact indicates that the PlaceP-PP complex is dominated by a CP, the only category type that may undergo phrasal movement. Thus the structure of the prepositional phrase in (33) d. is that in (36).

(36)   [$_{CP}$ [$_{PlaceP}$ da [$_{Place}$ drauf][$_{PP}$ t   ]]]

4.2   Object of Preposition Relatives

Relativizations of objects of prepositions may be derived from the forms in (33) b., as in (37) a., or (33) c. with the wh-particle *wo*, as in (37) b.

(37)   a.   Das Sofa auf dem   ich sitze
              the sofa on the-DAT I   sit
              'The sofa on which I am sitting'

        b.   Das Sofa wo   drauf ich sitze
              the sofa which da-on I   sit
              'The sofa on which I am sitting'

The occurrence of the wh-element *wo* in (37) b. blocks the appearance of *da* in the prepositional phrase, as (38) a. shows. *Wo* shares another dependency with *da* as well, namely, *wo*, like *da*, may raise without pied piping of its constituent, as in (38) b.

(38)   a.   *Das Sofa wo   da drauf ich sitze
              the Sofa which da da-on I   sit

        b.   Das Sofa wo   ich drauf sitze
              the sofa which I da-on sit
              'The sofa on which I am sitting'

In some German dialects, the construction in (38) b. represents a non-restrictive relative. This and all of the relative clauses I will discuss here are restrictive relative clauses in Hessian. *Wo* and *da* therefore share the same distribution, and they are also in complementary distribution. These two facts imply they share the same base position, [spec,PlaceP].

Kayne 1994 analyses relative clauses as expressing the structure in (39) below.

(39)   [$_{DP}$ D^0 [$_{CP}$ C^0 [$_{IP}$ . . . . . .]]]

English noun phrases such as *the hammer with which he broke it* are analyzed as base generated on the structure in (39), in which the determiner is base generated in D^0, as illustrated in (40) a. The prepositional phrase in IP raises to [spec,CP] as illustrated in (40) b. The object of the preposition then raises to [spec,PP], yielding surface word order, illustrated in (40) c.

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(40)   a.   the [C^0 [he broke it with which hammer]]

           b.   the [with which hammer [C^0 [he broke it [e]]]]

           c.   the [$_{CP}$ [PP hammer$_i$ [with which [e]$_i$]][C^0 [he broke it [e]]]

Kayne's structure in (39) straightforwardly generates Hessian prepositional object relatives with the word order illustrated in (37) a., which I will not discuss here, and the word order in (37) b., illustrated below with the complex prepositional phrase discussed in 4.1.

(41)
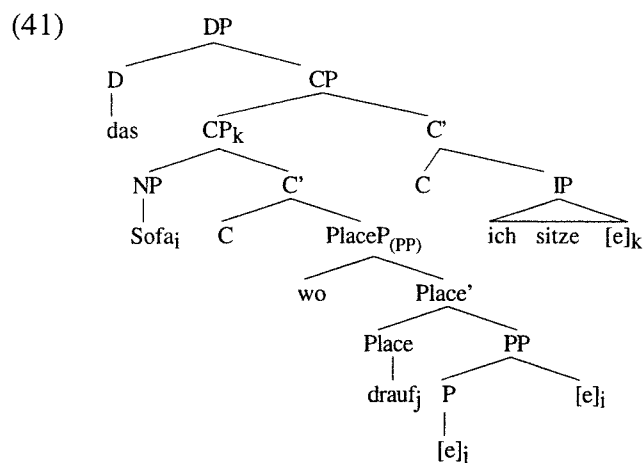
Wo remains in situ in [spec,PlaceP], and *drauf* raises into Place^0 as in clauses other than relatives. *Sofa* raises from the complement position of PP into [spec,CP$_{(PP)}$], the only specifier position available to the left of *wo*, and a position independently motivated by evidence requiring CP$_{(PP)}$ discussed in 4.1. Again per Kayne, the entire CP$_{(PP)}$ raises from within IP into [spec,CP$_{(IP)}$].

    There is, first of all, the problem of case matching between the determiner in D^0 and the noun in [spec,CP$_{(PP)}$]. A class of German nouns bear the suffix -*n* in cases other than nominative. The dependency, illustrated in (42) below, between case morphology on such nouns and case morphology on the determiner is not expressed in the structure in (39).

(42)   Maria liebt   den   Junge-n   der   nach Köln gefahren ist

           Maria loves the-ACC boy-ACC the-NOM to   Köln driven   is

           'Maria loves the boy who drove to Köln'

In (42), the marker -*n*, which marks non-nominative case, concords with the accusative article *den*, not the nominative article *der*, the article it is base generated local to. Yet, it is not in a checking relation with *den* within Kayne's syntax. Second, the structure in (39) does not as clearly subsume the word order variant of relativized objects of prepositions in which *wo* raises and the preposition fails to pied pipe, as illustrated in (38) b.

    Another observation points to a possible solution. Relative clauses display verb-final word order. (43) below shows this clearly, as the noun phrases above are not decisive on this point.

(43)   Das Sofa wo   drauf jemand gestern eine Kiste Bier gelegt hat

           the sofa which da-on someone yesterday a case beer put   has

           'The sofa on which someone put a case of beer yesterday'

In dependent clauses, verb-final word order is associated with class I complementizers. The notion that DP in (39) is complex along the lines of the complementizers discussed in

2.1 is inviting, for one because it reduces verb-final word order across clauses to a filled class I complementizer position (CP$_2$, here DP), and also because it provides an Agr projection in which the head noun raised out of PP may check its case morphology against that of the determiner.

Crucial data for this hypothesis comes from noun phrases such as (44), in which, like in (38) b., the head noun is separated from the prepositional phrase.

(44)   Das Sofa wo jemand gestern eine Kiste Bier drauf gelegt hat
        the sofa which someone yesterday a case beer da-on put hat
        'The sofa on which someone put a case of beer yesterday'
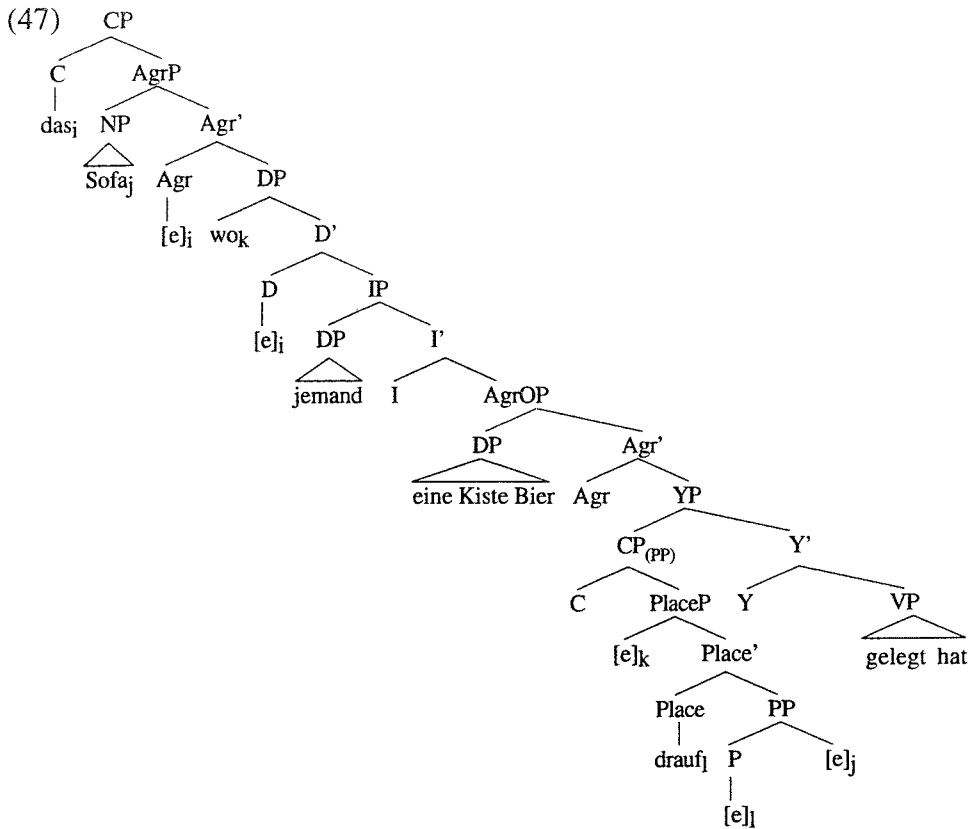
In lieu of a PP in [spec,CP], the structure in (39) does not provide enough positions for both the wh-element *wo* and the head noun *Sofa*. (45) below shows that the wh-element *wo* occupies a position parallel to class I complementizers and main verbs with respect to dative pronouns as illustrated in (7) and (31).

(45)   Die Brücke wo dir ein Mann eine Blume drauf geschenkt hat
        the bridge which you a man   a flower da-on given   has
        'The bridge on which a man gave you a flower'

I showed that *wo* and *da* share the same base position, a specifier position. The position *wo* occupies in (45) must therefore also be a specifier position due to uniformity conditions on derivations. This position is therefore not completely parallel to that of main verbs and complementizers, since they occupy head positions. It is parallel in that *wo*, main verbs and class I complementizers occupy parallel projections. In lieu of additional structure above the XP illustrated in (8) not belonging to the complex CP, the position of *wo* is parallel to [spec,CP$_2$], (here DP). *Sofa* then occupies a non-head position to the left of the landing site of *wo*. This position is a case position in the checking domain of *das*. (19) provides such a position. Verb-final word order in relative clauses, case agreement between the article and the head noun, and the possibility of failure of PP pied piping as in e.g. (44) and (45) all fall out from the analysis of determiners of heads of relative clauses as parallel to class I complementizers, that is, as base generated in a determiner phrase illustrated in (46), parallel to the complementizer phrase illustrated in (19).

(46)   [$_{CP}$ C [$_{AgrP}$ Agr [$_{DP}$ D [$_{IP}$ . . . . .]]]]

In (44), therefore, the PP moves to a pre-verbal specifier position below the object position Agr$_O$P, which I arbitrarily label YP in the diagram below. The wh-particle *wo* raises out of PP into [spec,DP], and the NP *Sofa* raises out of PP into [spec,AgrP$_{(DP)}$], where it licenses case agreement with the determiner *das*. The determiner is base generated in D^0 and raises through Agr^0, where it licenses the case of *Sofa*, into C$^0_{(DP)}$, its surface position to the left of NP. The diagram in (47) below illustrates this derivation for the noun phrase in (44).

(47)

```
CP
├─ C: das_j
└─ AgrP
   ├─ NP: Sofa_j
   └─ Agr'
      ├─ Agr: [e]_i
      └─ DP: wo_k
         └─ D'
            ├─ D: [e]_i
            └─ IP
               ├─ DP: jemand
               └─ I'
                  ├─ I
                  └─ AgrOP
                     ├─ DP: eine Kiste Bier
                     └─ Agr'
                        ├─ Agr
                        └─ YP
                           ├─ CP_(PP)
                           │  ├─ C: [e]_k
                           │  └─ PlaceP
                           │     ├─ Place: drauf_l
                           │     └─ PP
                           │        ├─ P: [e]_l
                           │        └─ [e]_j
                           └─ Y'
                              ├─ Y
                              └─ VP: gelegt hat
```

Hessian relative clauses conform to a Kaynean analysis in which Kayne's DP is a complex DP parallel in structure to the complex CP illustrated in (19) independently supported by properties of German complementizers. Determiners in relative clauses are generated in D^0, parallel to class I complementizers, and raise into the clause initial projection to check feature content, licensing an element in [spec,AgrP] on the way.

I have attempted to show that noun phrases such as (44) may be analyzed in a fashion consistent with Kayne's treatment of relative clauses in general where the determiner phrase in (44) is parallel in structure to the complementizer phrase in (19). The question of whether all DPs share the structure in (46), and of whether a determiner type exists parallel to the class II complementizers in Hessian, is outside the scope of this paper.

5. Conclusion

This paper has argued from word order facts in German dependent clauses, Bavarian complementizer agreement, and Hessian relative clauses, that a complementizer superstructure is at work in the derivation of various types of dependent clauses, transitive expletive constructions, and relative clauses in two continental Germanic dialects discussed here, Hessian and Bavarian. This complementizer superstructure has the general form in (48).

(48) [f-checking projection [agreement projection [f-generating projection]]]

Features of the feature checking projection may be manifested by a morpheme in the head of the feature checking projection, or they may be manifested on the head of the feature generating projection and be checked in the feature checking projection by head raising. This structure is manifested by complementizers, as in (19), and by determiners, as in (46).

Note that the prepositional phrase diagrammed in (36) also bears a suspicious resemblance to the outline in (48). Assuming that IP is split, let us speculate that the XP that dominates IP in (32) (in dependent clauses) and (45) (in relative clauses) is a $CP_{(TP)}$. This speculation yields the following parallels:

(49) a. [$CP_{(CP)}$ [$AgrP_{(CP)}$ [CP]]] German complementizers
      b. [$CP_{(DP)}$ [$AgrP_{(DP)}$ [DP]]] Hessian relative clauses
      c. [$CP_{(PP)}$ [$AgrP_{(PP)}$ [PP]]] (AgrP=PlaceP)
      d. [$CP_{(TP)}$ [$AgrP_{(TP)}$ [TP]]] (AgrP=AgrSP)

This apparently identical organization of phrases along the lines of (48) across several phrase types is an interesting phenomenon worthy of further study and toward an understanding of which this paper represents a few initial steps.

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Syntax at Sunset

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