Chapter 7

Assumptions about asymmetric coordination in German

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1 Symmetric and asymmetric coordination

Consider an S-structure configuration containing a coordinate structure such as (1):

(1) ${}^{1}\text{A} \ldots {}^{k}\text{A}\ [(\&\ )\ {}^{1}\text{B} \ldots \&\ {}^{n}\text{B}]\ {}^{k+1}\text{A} \ldots {}^{m}\text{A}$

where each ^{i}B is a conjunct, each & is a coordinating particle such as *und* 'and', and each ^{i}A is an element external to the conjuncts ($m \geq 0$; $n \geq 2$). The fundamental principle of coordination that I will assume is (2):

(2) *Conservation Condition:*
Each ^{i}B is a constituent
   a. whose structure and whose combinatorial properties follow from general rules that are independent of coordination, or
   b. which conforms to the coordination scheme (1).

Prototypical coordinate structures are symmetric in the sense that they comply with some principle like (3):

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(3) *External Homogeneity Condition*:
The combinatorial properties of each ^{i}B are satisfied by ^{1}A, … , ^{m}A in the same way as the combinatorial properties of every ^{j}B are.

I will not attempt here to make this rather vague statement precise. Under appropriate specifications it should follow from (3) that in the typical case all conjuncts are members of the same syntactic category and that each conjunct stands in the same grammatical relations to the external elements just as every other conjunct. Specifically, the Coordinate Structure Constraint with its 'Across-The-Board exception' (4) should follow from (3):

(4) *CSC/ATB*:
If there is an ^{i}A in a nonA-position that binds a trace in one ^{j}B, it binds a trace in every ^{k}B.

It follows, then, that each single conjunct ^{i}B may be substituted for the whole constituent "(&) ^{1}B … ^{n}B" salva grammaticalitate. See Neijt (1979: Ch. 1) and Sag et al. (1985) for detailed discussion of symmetric coordination.[1]

There are, however, certain types of coordinate structures in German that are asymmetric in that they do not comply with (3) and its corollaries. Compare, e.g., (5a) and (6a):

(5) a. wenn [[jemand nach Hause kommt] und [da der
when someone to home comes and there the
Gerichtsvollzieher vor der Tür steht]], …
bailiff at the door stands
b. wenn [jemand nach Hause kommt], …
c. wenn [da der Gerichtsvollzieher vor der Tür steht], …

(6) a. wenn [[jemand nach Hause kommt] und [da steht der
when someone to home comes and there stands the
Gerichtsvollzieher vor der Tür]], …
bailiff at the door
b. * wenn [da steht der Gerichtsvollzieher vor der Tür], …

[1]Split conjuncts as in (i) will not be considered here:

(i) Sie hat gestern einen Hund gekauft oder einen Kater.
she has yesterday a dog bought or a cat

I will also disregard reductions such as Gapping and Right Periphery Ellipsis (alias Right Node Raising) that operate on symmetric coordinate structures.

The coordination in (5a) is symmetric; and consequently the first conjunct (5b) or the second conjunct (5c) can be substituted for the whole coordinate structure. The coordination in (6a) is asymmetric; hence, substituting the second conjunct for the coordinate structure, as in (6b), is not possible.

There is also another type of asymmetric coordination. Compare (7a) and (8a):

(7) a. wenn jemand [[nach Hause kommt] und [den Gerichtsvollzieher
when someone to home comes and the bailiff
sieht]], ...
sees
b. wenn jemand [den Gerichtsvollzieher sieht], ...

(8) a. wenn jemand [[nach Hause kommt] und [sieht den
when someone to home comes and sees the
Gerichtsvollzieher]], ...
bailiff
b. * wenn jemand [sieht den Gerichtsvollzieher], ...

The coordination in (7a) is symmetric, and the second conjunct can be substituted for the whole coordinate structure, as in (7b). The coordination in (8a) is asymmetric, and the coordinate structure cannot be replaced by the second conjunct.

In this contribution I will sketch a set of assumptions that seem jointly to be able to account for the major syntactic properties of asymmetric coordinations such as (6a) and (8a).[2]

2 German clause structure

Traditionally three major topological types of clauses are distinguished according to the position of the finite verb. Embedded clauses typically (but not invariably) conform to the scheme (9):

(9) CMP – X – VK

where CMP corresponds to what used to be called the 'COMP-position' in English. The finite verb as well as infinite verbs (if any) are in VK. All other elements of the clause (if any) are in X. (Extraposition will be disregarded throughout.)

[2]For earlier inquiries into asymmetric coordination in German see Wunderlich (1988) and Höhle (1983). The latter paper was based on a talk given at Tilburg University in February, 1983. It is a pleasure to acknowledge here useful discussions I had over the years with Jan Koster, Klaus-Dirk Smolka, Craig Thiersch, Hubert Truckenbrodt, Marc van de Velde and, of course, Henk van Riemsdijk.

Ordinary declaratives and direct *wh*-interrogatives deviate from (9) in the way indicated in (10), where FINIT is the position of the finite verb and K is a *wh*-phrase in the case of interrogatives and some other kind of phrase in the case of declaratives:

(10) K – FINIT – X – VK

Direct polar interrogatives, certain conditionals and concessives, and some other functional types differ from (10) in that they lack a K-position:

(11) FINIT – X – VK

To fix terminology, I dub clauses of type (9) 'E-clauses' ("E" for 'elementary'); those of type (10), 'F2-clauses'; and those of type (11), 'F1-clauses'. F1-clauses and F2-clauses are 'F-clauses', i.e., clauses where the finite verb is fronted.

As to the categorial structure of clauses, I will assume that FINIT can always be identified with I^0, in one of the current conceptions of I, and that the base position of the subject is contained in V^m. In German this position can be case-marked. The abstract structure of clauses then is as given in (12). Examples are analysed accordingly in (13).

(12) a. *E-clauses*: $[_{C^m}$ CMP $[_{V^m}$ X VK]]
b. *F2-clauses*: $[_{I^2}$ K $[_{I^1}$ I^0 $[_{V^m}$ X VK]]]
c. *F1-clauses*: $[_{I^1}$ I^0 $[_{V^m}$ X VK]]

(13) a. $[_{C^m}$ [mit wem]$_i$ $[_{V^m}$ Karl gestern t_i gesprochen hat]]
with whom Karl yesterday spoken has
b. $[_{I^2}$ [mit wem]$_i$ $[_{I^1}$ hat$_j$ $[_{V^m}$ Karl gestern t_i gesprochen t_j]]]
c. $[_{I^1}$ hat$_i$ $[_{V^m}$ Karl gestern mit dir gesprochen t_i]]
has Karl yesterday with you spoken

Some of these assumptions will be modified later on.

Following arguments by Safir (1985), I will assume that the subject position of the clause is obligatory. This implies that German has an expletive *pro*, as in (14):

(14) $[_{C^m}$ daß $[_{V^m}$ *pro* vielen Leuten geholfen wurde]]
that many people.DAT helped was

I furthermore assume that the K-position in (12b) is neither governed nor case-marked. It follows correctly that ordinary declarative variants of (14) can appear as (15a–c), but not as (15d), since *pro* must be governed (and case-marked) in S-structure:

(15) a. $[_{I^2}$ [vielen Leuten]$_i$ $[_{I^1}$ wurde$_j$ $[_{V^m}$ *pro* t_i geholfen $t_j]]]$
b. $[_{I^2}$ geholfen$_i$ $[_{I^1}$ wurde$_j$ $[_{V^m}$ *pro* vielen Leuten t_i $t_j]]]$
c. $[_{I^2}$ es $[_{I^1}$ wurde$_i$ $[_{V^m}$ *pro* vielen Leuten geholfen $t_i]]]$
d. * $[_{I^2}$ *pro*$_i$ $[_{I^1}$ wurde$_j$ $[_{V^m}$ t_i vielen Leuten geholfen $t_j]]]$

(The *es* in (15c) is an expletive particle whose occurrence is restricted to the SpecI-position.)

With this terminology at hand we can describe asymmetric coordination in slightly more detail. In (16) (= (6a)) the first conjunct is a V^m. The second is an F2-structure, hence an I^2:

(16) wenn $[_\alpha$ $[_{V^m}$ jemand nach Hause kommt] und $[_{I^2}$ da $[_{I^1}$ steht$_i$ $[_{V^m}$ der Gerichtsvollzieher vor der Tür $t_i]]]]$

This is unusual in two ways: First, *wenn* usually must introduce E-clauses, cf. (6b). Second, conjuncts typically are of the same category type. Coordinate structures whose conjuncts are of the same category are symmetric. Following traditional insights (e.g., Hockett 1958), I assume that in symmetric coordination each conjunct is a head of the coordinate structure. Making the natural complementary assumption for asymmetric coordination, I suggest that only the normal conjunct is a head of the coordinate structure, whereas the asymmetrically added second conjunct is a non-head. Since the category of the head and the category of the head's mother are identical, I will assume that in (16), $\alpha = V^m$. Hence the combinatorial properties of *wenn* are satisfied in the way we would expect them to, in that *wenn* here is a sister of V^m. Coordinate structures with a non-head F2-conjunct I will call (asymmetric) F2-coordination.

In (17) (= (8a)) the first conjunct is a V^1, hence $\alpha = V^1$:

(17) wenn $[_{V^m}$ jemand $[_\alpha$ $[_{V1}$ nach Hause kommt] und $[_\beta$ sieht$_i$ $[_{V^m}$ da den Gerichtsvollzieher $t_i]]]]$

The second conjunct is similar to an F-clause, but it lacks the subject that is required by the predicate. It is not obvious whether β is I^1 or I^2 (or something else). Coordinate structures with a non-head β conjunct of this kind I will call SLF-coordination ('Subject Lacking in F-structure').

3 Asymmetric F2-coordination

In (16) an F2 conjunct occurs in an E-clause. This construction is very common with conditional *wenn*-clauses and temporal *als*-clauses. With other types of E-

clauses it is less common, although there does not seem to be any type where it is strictly excluded.

Asymmetric F2-coordination is also very common with conditional F1-clauses, as in (18a), and similar types:

(18) a. kommst du nach Hause und da steht der Gerichtsvollzieher vor
come you to home and there stands the bailiff at
der Tür, …
the door

b. [$_{I^1}$ kommst$_i$ [$_{V^m}$ [$_{V^m}$ du nach Hause t_i] und [$_{I^2}$ da steht der Gerichtsvollzieher vor der Tür]]]

I will assume that the coordinate structure of (18a) is basically identical with the structure of (16), i.e., I^2 conjoined with V^m, as shown in (18b). Notice that the first conjunct – but not the second – contains a trace nonA-bound by the finite verb *kommst*, thus violating the CSC/ATB (4). We expect this to be possible, because (4) is a corollary of the External Homogeneity Condition (3), adherence to which would constitute a defining property of symmetric coordination, not of asymmetric coordination.

With many speakers, asymmetric F2-coordination can also be observed with F2-clauses, as in the interrogative (19a):

(19) a. Wann holst du die Fahrkarten und Heinz packt sein Zeug ein?
when get you the tickets and packs his stuff up

b. [$_{I^2}$ wann$_j$ [$_{I^1}$ holst$_i$ [$_{V^m}$ [$_{V^m}$ du t_j die Fahrkarten t_i] und [$_{I^2}$ Heinz packt sein Zeug ein]]]]

At this point one may ask why it is possible to conjoin I^2 and V^m. Given the fact that it is possible, in principle, to asymmetrically conjoin categories of different types, we certainly expect this possibility to be restricted in accordance with some general principle. As a minimal restriction I assume that for any kind of coordination the constituents to be conjoined must be functionally similar with respect to their degree of saturation. In German, V^m and I^2 are completely saturated in the sense that they are complete functional complexes. In (16) this is visibly true. In (18) and (19) it is true under the assumption that nonA-bound traces as they appear there are evaluated, for the purpose under discussion, in the way that overt linguistic expressions are.

If these assumptions are correct, one may try and substitute a V^m without traces for I^2 in (16), (18) and (19). For (16) the result of substitution is, of course, an ordinary symmetric coordination, i.e., (5a). For (18a), the result is (20):

(20) * kommst du nach Hause und da der Gerichtsvollzieher vor der Tür steht, …

(21) a. [$_{\beta}$ kommst$_i$ [$_{V^m}$ [$_{V^m}$ du nach Hause t_i] und [$_{V^m}$ da der Gerichtsvollzieher vor der Tür steht]]]

b. [$_{\beta}$ [$_{\beta}$ kommst du nach Hause] und [$_{V^m}$ da der Gerichtsvollzieher vor der Tür steht]]

Why is (20) impossible? Consider some candidate structures for (20). In structure (21a) a V^m is conjoined with a V^m. Conjunction of like categories is a sufficient condition for symmetric coordination, and as such (21a) would have to comply with the CSC/ATB, which it does not. This is as it should be. But it seems that (21b) must be regarded as being wellformed, according to our assumptions. If it were, we would not have an account for the unacceptability of (20). Intuitively speaking, (21b) seems to be incorrect because β (β = I^1) should be a full clause, which should not be able to be conjoined with V^m, a non-clause. If so, we have to specify assumptions that enforce this result.

To this end I would like to adopt some suggestions made by Kathol (1989). Modifying and extending ideas of Fukui & Speas (1986) and Travis (1988), he proposes the set of assumptions (22):

(22) i. V^m is a sister of I^0. In German, I^0 is to the left of its sister.

ii. In German, I^0 is empty if and only if I^1 is a sister of C^0.

iii. In German, I^0 contains a lexical element if and only if there is a SpecI, i.e., I^1 projects to I^2.

From (22i,ii) it follows that E-clauses must contain an empty I^0, and from (22iii) it follows that in F1-clauses the finite verb is in C^0, with I^0 empty. (12a,b) must then be replaced by (23a,b):

(23) a. *E-clauses*: [$_{C^m}$ CMP [$_{I^1}$ I^0 [$_{V^m}$ X VK]]]

b. *F1-clauses*: [$_{C^m}$ C^0 [$_{I^1}$ I^0 [$_{V^m}$ X VK]]]

I will assume, furthermore, that the special semantic properties of F1-clauses – i.e., their being conditionals, direct polar interrogatives, etc. – are associated somehow with the verb being in C^0.

Under these assumptions (21b) is impossible, as it does not comply with (22i). We have now to consider two new structures for (20):

(24) a. [$_{C^1}$ kommst$_i$ [$_{I^1}$ [$_{I^1}$ e_i [$_{V^m}$ du nach Hause t_i]] und [$_{I^1}$ e [$_{V^m}$ da der Gerichtsvollzieher vor der Tür steht]]]]

b. [$_{C^1}$ [$_{C^1}$ kommst du nach Hause] und [$_{I^1}$ *e* [$_{V^m}$ da der Gerichtsvollzieher vor der Tür steht]]]

Structure (24a) is ungrammatical as it violates the CSC/ATB. (24b) does not comply with (22ii), thus accounting for the intuition that the conjunction of the non-clause I^1 with the full clause C^1 is the source of this structure's ungrammaticality. With (21) and (24) the set of potential candidate structures for (20) is not exhausted, of course, but one can easily see how other structures fail to be grammatical.

Basically the same results obtain when V^m is substituted for I^2 in (19):

(25) a. * Wann holst du die Fahrkarten und Heinz sein Zeug einpackt?

b. wann$_i$ [$_{I^1}$ holst$_j$ [$_{V^m}$ [$_{V^m}$ du t_i die Fahrkarten t_j] und [$_{V^m}$ Heinz sein Zeug einpackt]]]

c. wann$_i$ [$_{I^1}$ holst$_j$ [$_{V^m}$ [$_{V^m}$ du t_i die Fahrkarten t_j] und [$_{I^1}$ *e* [$_{V^m}$ Heinz sein Zeug einpackt]]]]

d. wann$_i$ [$_{I^1}$ [$_{I^1}$ holst du t_i die Fahrkarten] und [$_{I^1}$ *e* [$_{V^m}$ Heinz sein Zeug einpackt]]]

Structure (25b) is a CSC/ATB violation. Both (25c) and (25d) are in violation of (22ii). In addition, (25d) is a CSC/ATB violation.[3]

Much like an F2-clause (i.e., an I^2) and a V^m, a full F1-clause constitutes a complete functional complex. When we substitute an F1-clause for I^2 in asymmetric coordinations, we get examples such as (26):

(26) a. * als Karl nach Hause kam und stand da sein Vater vor der Tür, …
when Karl to home came and stood there his father at the door

[3] The same is true, of course, when the subject of V^m is lacking:

(i) a. * Holst du die Fahrkarten und [$_\alpha$ dein Zeug einpackst]?
get you the tickets and your stuff up.pack

b. * Wann holst du die Fahrkarten und [$_\alpha$ dein Zeug einpackst]?

c. * Vielleicht holt er die Fahrkarten und [$_\alpha$ sein Zeug einpackt].
perhaps gets he the tickets and his stuff up.packs

Under any analysis of examples like these (with $\alpha = V^1$, V^m or I^1) we get either a symmetric coordination violating the CSC/ATB, or a violation of (22ii), or both. This is in contrast with wellformed SLF-coordinations such as (29)–(31) below.

b. kommt Karl nach Hause und steht da sein Vater vor der Tür, …
c. Wann holt Karl die Fahrkarten und packt Heinz sein Zeug ein?

None of these examples is a wellformed asymmetric coordination. An F1-conjunct within an E-clause as in (26a) is strongly unacceptable. An F1-conjunct within an F1-structure as in (26b) is unobjectionable; but this is an ordinary (symmetric) coordination of two conditional F1-clauses, just as (27) is a (symmetric) coordination of two conditional *wenn*-clauses:[4]

(27) [[wenn Karl nach Hause kommt] und [wenn da sein Vater vor der
when to Karl home comes and when there his father at the
Tür steht]], …
door stands

The structure of (26c) is an ordinary symmetric coordination of two I^1-conjuncts, as shown in (28):

(28) wann$_i$ [$_{I^1}$ [$_{I^1}$ holt Karl t_i die Fahrkarten] und [$_{I^1}$ packt Heinz t_i sein Zeug ein]]

There is no reason whatsoever for assuming an asymmetric coordinate structure for (26c).

Why is it that full F1-clauses, as opposed to F2-structures such as (16), (18) and (19), cannot be asymmetrically conjoined with V^m? The reason, I propose, is the special semantics associated with the structure of F1-clauses. When we try and give (26) analyses in accordance with (23b), the second conjunct will always be a C^1. That C^1 conjunct must receive the interpretation of a conditional (or a direct polar interrogative, and so on), but there is of course no way of integrating this interpretation into the containing structure of (26a) and (26c). The only way of integrating it into (26b) is by assuming that the first conjunct is a C^1. There are exactly two possible structures for full F1 expressions: they can be analysed as a C^1 clause, as in (26b), or as an I^1 which according to (22iii) must project to I^2, as in (28). Hence there is no asymmetric F1-coordination.

[4]One might expect that coordination of a conditional *wenn*-clause and a conditional F1-clause, as in (i), should be possible in the way of (26b) and (27). For reasons unknown, however, (i) is bad:

(i) a. * [[kommt Karl nach Hause] und [wenn da sein Vater vor der Tür steht]], …
comes Karl to home and when there his father at the door stands
b. * [[wenn Karl nach Hause kommt] und [steht da sein Vater vor der Tür]], …

4 SLF-coordination

In (29) (= (17)) an SLF-conjunct occurs in an E-clause:

(29) a. wenn jemand nach Hause kommt und sieht da den
when someone to home comes and sees there the
Gerichtsvollzieher, …
bailiff

b. [$_{C^m}$ wenn [$_{I^1}$ *e* [$_{V^m}$ jemand [$_{V^1}$ [$_{V^1}$ nach Hause kommt] und [$_{\beta}$ sieht$_i$ [$_{V^m}$ da den Gerichtsvollzieher t_i]]]]]]

Just like asymmetric F2-coordination, SLF-coordination also occurs in F1-clauses, as in (30), and in F2-clauses, as in (31):

(30) a. kommst du nach Hause und siehst da den Gerichtsvollzieher, …
come you to home and see there the bailiff

b. [$_{C^1}$ kommst$_i$ [$_{I^1}$ e_i [$_{V^m}$ du [$_{V^1}$ [$_{V^1}$ nach Hause t_i] und [$_{\beta}$ siehst$_j$ [$_{V^m}$ da den Gerichtsvollzieher t_j]]]]]]

(31) a. Hoffentlich kommt keiner nach Hause und sieht da den
I.hope comes no one to home and sees there the
Gerichtsvollzieher.
bailiff

b. [$_{I^2}$ hoffentlich [$_{I^1}$ kommt$_i$ [$_{V^m}$ keiner [$_{V^1}$ [$_{V^1}$ nach Hause t_i] und [$_{\beta}$ sieht$_j$ [$_{V^m}$ da den Gerichtsvollzieher t_j]]]]]]

The structures given under (29b), (30b), (31b) are based on the assumption that constituents can only be (symmetrically or asymmetrically) conjoined if they are similar with respect to their degree of saturation. The β conjunct in each case is unsaturated with respect to its grammatical subject; hence, I assume, it must be conjoined with a constituent that is similarly unsaturated, i.e., with V^1.

The assumption that the coordinate structure as a whole is a V^1 is confirmed by recursive embedding of coordinate structures such as (32):

(32) a. wenn jemand [$_{\alpha}$ in die Wüste zieht und lebt dort von
when someone into the desert moves and lives there off
Heuschrecken] oder [$_{\alpha}$ sich im Wald verirrt hat und nährt
locusts or himself in.the wood lost has and nourishes
sich von Wurzeln und Beeren], …
himself from roots and berries

b. Vielleicht hat Karl [$_{\alpha}$ den Kindern ein Buch geschenkt und liest
perhaps has Karl the children a book given and reads
ihnen jetzt daraus vor] oder [$_{\alpha}$ seinen Eltern ein Radio gekauft und
them now it.from out or his parents a radio bought and
erklärt ihnen jetzt, wie es funktioniert].
explains them now how it works

Here the conjuncts are of the form [$_{\alpha}$ V^1 *und* β]; hence $\alpha = V^1$.

As for the identity of β, it might seem possible that $\beta = I^2$. We would then have to assume that the K-position is somehow ellipsed under identity with the subject of the first conjunct, or that it is occupied by a PRO which is controlled by that subject. Note, however, that the notion of ellipsis or controlled PRO is not identical with the notion of unsaturatedness that I appealed to above. It is not obvious, therefore, why an I^2 conjunct should be conjoined with V^1 as opposed to, say, V^m or I^1, whereas this follows naturally from the assumption that β is unsaturated in the same way as V^1 is.

The assumption that $\beta = I^2$ might be based on the existence of examples such as (33):

(33) a. ____ bist ja heute mal pünktlich.
[you] are today once on.time

b. _____ sind grade erst angekommen.
[we/they] are just now arrived

Under appropriate conditions unembedded sentences like these can be used as declaratives. They clearly are F2-clauses with a non-overt K-position; and as they are lacking an overt subject, we must assume that the subject (i) is represented by PRO in the K-position, or (ii) occupies the K-position in S-structure, but is ellipsed at surface structure. However, this same construction type provides strong evidence against the assumption that $\beta = I^2$. Not only subjects, but many different types of constituents can be ellipsed in the K-position, e.g., an object, as in (34):

(34) ___ finde ich nicht.
[that] find I not

None of these types can occur in asymmetric coordinations. Compare, e.g., the impossible object ellipsis in (35) with the wellformed SLF-coordination in (36):

(35) a. * wenn ich den Hund suche und finde ich nicht, …
when I the dog look.for and find I not

b. * Vielleicht sucht sie den Hund und findet sie nicht.
perhaps looks.for she the dog and finds she not

(36) a. wenn ich den Hund suche und finde ihn nicht, …
when I the dog look.for and find him not
b. Vielleicht sucht sie den Hund und findet ihn nicht.
perhaps looks.for she the dog and finds him not

It is exclusively the subject that can be lacking in asymmetric conjuncts. Assuming that $\beta = I^2$ does not even provide a basis for expressing this fact; much less does it suggest a principled account for it. I conclude from this that $\beta = I^1$.

If this conclusion is correct, this is a case where I^1 with a non-empty I^0 does not project to I^2, thus falsifying (22iii). There are various possibilities for resolving this conflict. I would like to suggest here that (22iii), although it is slightly too strong as it stands, is correct in implying that I^1 with a lexically filled head position is looking for something to complete it. Thus I assume that (22iii) may be replaced by (37):

(37) In German, I^0 contains a lexical element if and only if there is an argument of which I^1 is predicated, or there is a specifier position of I^1.

But how is it possible for I^1 to be unsaturated, i.e., to be a predicative category? Recall that I^0 must be a sister of V^m and that the subject position in V^m is obligatory. In SLF-conjuncts, the subject position is empty. What kind of empty category does it represent?

The answer is provided by a modification of case theory and theta theory. Notice that the theta theory proposed by Chomsky (1982: 333ff) has two interrelated special characteristics. It assumes that a position can be theta-marked without being case-marked and furthermore, that a subject argument may get its theta-role by two different mechanisms, i.e., by predication or by transmission mediated by NP trace. I suggest that these assumptions be replaced by (38):[5]

(38) i. A position can be theta-marked only if it is case-marked.
ii. If in a given constituent a theta-role R cannot be assigned, R must be externalized.
iii. A constituent can assign at most one external theta-role.
iv. Assignment of structural case is optional.

For an illustration, consider some examples:

[5] This modification may also contribute to a principled account for certain properties of infinitival constructions in German, which I cannot discuss here. See also Williams (1987) for a similar set of assumptions. As for the position of PRO, I will leave open here whether it should be exempted from (38i) or whether it should be case-marked.

(39) a. * Vielleicht [$_{I^1}$ hat$_j$ [$_{V^m}$ Karl$_i$ [$_{V^1}$ e_i beobachtet t_j]]]
perhaps has Karl watched

b. Dich$_i$ [$_{I^1}$ hat$_j$ [$_{V^m}$ Karl [$_{V^1}$ e_i beobachtet t_j]]]
you [$_{I^1}$ has Karl watched

c. * e_i [$_{I^1}$ hat$_j$ [$_{V^m}$ Karl [$_{V^1}$ e_i beobachtet t_j]]]

d. Karl$_i$ [$_{I^1}$ hat$_j$ [$_{V^m}$ e_i [$_{V^1}$ dich beobachtet t_j]]]

e. * e_i [$_{I^1}$ hat$_j$ [$_{V^m}$ e_i [$_{V^1}$ dich beobachtet t_j]]]

In (39a), assume that the position of *e* is not case-marked, hence not theta-marked. Then the object theta-role of *beobacht-* 'watch' must be externalized. But the subject theta-role must also be externalized, yielding a violation of (38iii). For the same reasons (39b) is ungrammatical if the position of *e* is not case-marked; it is grammatical if the positions of *Karl* and *e* are case-marked (and hence theta-marked). (39c), again, is ungrammatical according to (38iii) if the second *e* position is not case-marked. If it is case-marked, it is ungrammatical, too, because the first *e*, although it correctly nonA-binds the second *e*, would have to be nonA-bound by itself. (39d) is grammatical if (and only if) the position of *e* is case-marked. If the subject position of (39e) is case-marked, it is ungrammatical because its nonA-binder would have to be nonA-bound by itself. If it is not case-marked, and hence not theta-marked, the subject theta-role must be externalized. I assume that a projection of I (but not, e.g., of C) is able to take up and externalize a theta-role that a daughter constituent seeks to assign. But in (39e) there is no case-marked position that the theta-role can be assigned to by I^1.

In German, nominative assignment by I^0 is to the right (if there is any); hence the SpecI-position is a nonA-position. In English, nominative assignment by I^0 is to the left. Hence the subject position in V^m cannot be case-marked, and *John* in (40) must receive case in the SpecI-position:

(40) [$_{I^2}$ John$_i$ [$_{I^1}$ may [$_{V^m}$ e_i follow you]]]

The subject theta-role cannot be assigned to the position of *e*; it must be assigned by I^1 to the SpecI-position. In English, hence, the SpecI-position is an A-position.

Application of (38) to SLF-coordination is straightforward. Consider (41):

(41) a. [$_{C^m}$ wenn [$_{I^1}$ *e* [$_{V^m}$ Karl$_j$ [$_{V^1}$ [$_{V^1}$ den Hund sucht] und [$_{I^1}$ findet$_k$ [$_{V^m}$ e_j ihn nicht t_k]]]]]]

b. [$_{I^2}$ vielleicht [$_{I^1}$ sucht$_i$ [$_{V^m}$ Karl$_j$ [$_{V^1}$ [$_{V^1}$ den Hund t_i] und [$_{I^1}$ findet$_k$ [$_{V^m}$ e_j ihn nicht t_k]]]]]]

Assume that the empty subject position is case-marked, hence theta-marked. Under the given coindexation *e* is A-bound by *Karl* and the structure is ungrammatical. Assume instead that *e* is not case-marked. Then the subject theta-role must be externalized, and the I^1 conjunct must assign it to a case-marked position, much like the English I^1 regularly does; cf. (40). Hence, both the (first) V^1 conjunct and the (second) I^1 conjunct assign a theta-role to the position of *Karl*, just like the two V^1 conjuncts in the symmetric coordination (42) do:[6]

(42) [$_{C^m}$ wenn [$_{I^1}$ *e* [$_{V^m}$ Karl [$_{V^1}$ [$_{V^1}$ den Hund sucht] und [$_{V^1}$ ihn nicht findet]]]]]

The assumptions (38), then, allow us to see how it is possible for an I^1 conjunct to be a predicative category and why it is exclusively the subject that can (and must) be lacking in an asymmetric I^1-conjunct.[7]

Given that an SLF-conjunct is an I^1 and that, in general, extraction out of I^1 (as opposed to I^2) is possible, the question arises why extraction out of an SLF-conjunct is impossible. Consider (43) and (44):

(43) a. Seine Bücher verkaufte er und wandte sich der Malerei zu.
his books sold he and turned himself the painting to

b. [seine Bücher]$_i$ [$_{I^1}$ verkaufte$_j$ [$_{V^m}$ er$_k$ [$_{V^1}$ [$_{V^1}$ t_i t_j] und [$_{I^1}$ wandte$_l$ [$_{V^m}$ e_k sich der Malerei zu t_l]]]]]

(44) a. * Seine Bücher wandte er sich der Malerei zu und verkaufte.

b. [seine Bücher]$_i$ [$_{I^1}$ wandte$_l$ [$_{V^m}$ er$_k$ [$_{V^1}$ [$_{V^1}$ sich der Malerei zu t_l] und [$_{I^1}$ verkaufte$_j$ [$_{V^m}$ e_k [$_{V^1}$ t_i t_j]]]]]]

In (43) the object *seine Bücher* 'his books' is extracted out of the (first) V^1-conjunct, hence out of the containing I^1. A violation of the CSC/ATB such as this is

[6] This is not a violation of the theta-criterion as proposed in Chomsky (1982: 335), since in (42) as well as in (41) the position of *Karl* is the only position involved in the relevant chains that is theta-marked, according to (38).

[7] I assume that an I^2 is fundamentally different from an I^1 in that the former, being a 'closed' projection of a functional category, is in principle unable to assign an external theta-role. It follows correctly that in an F2-structure the subject cannot be missing; cf. (i) vs. (ii):

(i) Vielleicht hat$_j$ Karl$_i$ [$_{V^1}$ [$_{V^1}$ den Kindern ein Buch geschenkt t_j] und
perhaps has Karl the children a book given and
[$_{I^1}$ liest$_k$ [$_{V^m}$ e_i ihnen jetzt daraus vor t_k]]]
reads them now it.from out

(ii) * vielleicht hat$_j$ Karl$_i$ [$_{V^1}$ [$_{V^1}$ den Kindern ein Buch geschenkt t_j] und
[$_{I^2}$ jetzt [$_{I^1}$ liest [$_{V^m}$ e_i ihnen daraus vor t_k]]]]

unobjectionable with asymmetric coordination. But when the order of conjuncts is reversed, as in (44), the result is strongly unacceptable.

There seems to be a simple reason for this asymmetry. We naturally expect a head conjunct to behave just as it would if it were substituted for the whole coordinate structure; hence extraction out of a head conjunct, as in (43), is possible. A non-head conjunct cannot be substituted for the whole coordinate structure. Extraction out of a non-head constituent α, in general, is possible only if α is governed. But there is nothing within a coordinate structure that a conjunct could be governed by. Hence, extraction out of a non-head conjunct, as in (44), is impossible.[8]

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[8] One might expect parasitic gaps to occur in SLF-conjuncts, but they do not:

(i) a. [Die Akten]$_i$ nahm er t_i mit ins Büro und zeigte sie$_i$ seinen
the documents took he with into.the office and showed them his
Kollegen.
colleagues

b. * [Die Akten]$_i$ nahm er t_i mit ins Büro und zeigte e_i seinen Kollegen.

Unfortunately, it is difficult to ascertain whether this is a special property of SLF-conjuncts requiring special explanation, since parasitic gap constructions of the kind known from SVO languages do not occur in German anyway.

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