

Restoring Exotic Coördinations to Normalcy*

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There are coördinations, found in many of the Germanic languages, that show such a bizarre mix of properties that they seem to make it impossible to hold certain well-established and very natural beliefs about coördinations in general. One of these constructions, illustrated by the German cases in (1), appears to be a straightforward violator of one of John Ross's constraints, for example.

- (1) a. Die Suppe₁ wird der Hans [_{VP} t₁ essen] und [_{VP} sich hinlegen]. (Topicalization)
the soup will the Hans eat and self down-lie
(The soup, Hans will eat and lie down.)
- b. Äpfel₁ ißt der Hans [_{DP} drei t₁] und [_{DP} zwei Bananen]. (Split NP)
apples eats the Hans three and two bananas
(Hans eats three apples and two bananas.)
- c. Von den Sängern₁ kennt er [_{DP} alle t₁] und [_{DP} viele von den Musikern]. (Partitive Split)
of the singers knows he all and many of the musicians
(He knows all of the singers and many of the musicians.)
(Schwarz 1998 (1):191; (6)&(10):195)

To judge from the strings that follow *und* in these examples, it looks as if VPs in (1a) and DPs in (1b,c) have been coördinated, as indicated by the brackets. But if this is correct, then material from the left VP or DP has moved to Specifier of CP by way of the process named in parentheses in violation of the Coördinate Structure Constraint.¹

The same apparent difficulty for the Coördinate Structure Constraint is found in the coördinations in (2), which Höhle 1990 calls Subjektücke in finiten Sätzen (or SLF) coördinations.

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¹Which prohibits movement out of either of the phrases coördinated unless it is matched by material moved out of the other coördinate in across-the-board format. See Ross 1967 (84):161 and much subsequent literature. I state this constraint more explicitly in (32).

- (2) a. Den Hund [\bar{C} hat einer gefüttert] und [\bar{C} hat ihn geschlagen].
 the dog has someone fed and has it hit
 (Someone has both fed the dog and hit it.)
 (Schwarz 1998 (54b):213)
- b. Nach Angaben der Polizei [\bar{C} kennt kein Opfer seinen Peiniger] und [\bar{C} schweigt stille].
 after the description by the police knows no victim his tormentor and remains silent.
 (After the Police bulletin, no one recognizes his tormentor and remains silent.)
 (Büring and Hartmann 1998 (17a): 179)

Again judging from the strings that follow *und*, it appears that \bar{C} s have conjoined in these examples. But if that is correct, then a Topicalized DP in (2a) and a Topicalized PP in (2b) have moved from just one of these \bar{C} s, in violation of the Coördinate Structure Constraint.

These examples pose an additional problem, however. The subjects of the second conjuncts are missing, but are understood to be related in some fashion to the subjects in the first conjunct. Further, the subjects in the left conjunct appear to have scope over the entire coördination, although this does not accord with the usual means by which semantic scope is expressed syntactically. In (2a), for example, the favored interpretation is one in which *einer* ('someone') refers to an individual of whom the properties named by both conjuncts are predicated. Similarly, in (2b) *kein Opfer* ('no victim') scopes over both conjuncts: it has an interpretation in which it denies that there is a victim that both recognizes his tormentor and remains silent. Consider, by contrast, the interpretations that the coördinations in (3) get, in which each coördinate overtly contains its subject.

- (3) a. Einer hat den Hund gefüttert und einer hat ihn geschlagen.
 someone has the dog fed and someone has it hit
 (Someone fed the dog and someone hit it.)
- b. Kein Opfer kennt seinen Peiniger nach Angaben der Polizei
 no victim knows his tormentor after the description by the police
 und kein Opfer schweigt stille.
 and no victim stays silent
 (No victim recognizes his tormentor after the police bulletin and no victim remains silent.)

These sentences, in which the subjects of the coördinations are transparently different, mean something quite different from the examples in (2). In (3a) the properties denoted by the two VPs are predicated twice, allowing for the possibility that they hold of different individuals. And in (3b) there are two separate denials which, because they are conjoined, end up communicating the proposition that there is no victim that either recognizes his tormentor or remains silent. What this comparison seems to recommend, then, is that we find a way of letting the two constituents that

are coördinated in (2) together take the nominative term that materializes in the left conjunct as subject. This, however, is inconsistent with the bracketing we have given to these examples.²

There is a certain tension between the two problems. The difficulty associated with the Coördinate Structure Constraint violations has been argued to have a solution if the size of the coördinates is larger than shown in (1) and (2). Schwarz 1998 shows that certain properties of the constructions in (1) can be captured if they are seen as formed from SLF coördinations like (2), but with material elided from the second conjunct. SLF coördinations, in turn, can be viewed as coördinated CPs, rather than \bar{C} s, and this would allow the material that has moved in the left conjunct to remain within that coördinate. This would solve the problem for the Coördinate Structure Constraint by avoiding it altogether. Thus, the Coördinate Structure Constraint drives us towards seeing the conjuncts in these constructions as being big.

On the other hand, the fact that the subject in the left conjunct is an argument of both predicates in (2) suggests that we need to find a way of coördinating constituents *smaller* than bracketed in (2) in order to bring the predicates within the c-command domain of the subject. Indeed, the subjects in (1) also have scope over the coördinates, and this similarly recommends taking the conjuncts in (1) to be rather small.

Thus, one of these problems has a solution if the conjuncts are larger than shown in (1) and (2), and the other problem would seem to have a solution only if smaller conjuncts can be found. Let's call this the "Size Paradox." There is, so far as I know, no escape from the Size Paradox that preserves standard assumptions about the syntax of coördinations.

There is, however, a way of fashioning from the literature a resolution to the Size Paradox that denies that the coördinations in these constructions do have normal syntax. It essentially follows the path that credits these constructions with large conjuncts, and so I will call it the "Big Conjuncts" solution. I sketch this resolution of the paradox in the following section, and then highlight some of the ways in which it is incomplete. The final section offers a different attack on the paradox, one that selectively relaxes the Coördinate Structure Constraint and follows the direction of giving these constructions small coördinations. This "Small Conjuncts" solution rests on an unorthodox syntax for German clauses, and so has implications that spread beyond these constructions. Unlike the Big Conjuncts solution, however, it leaves the syntax of coördinations unmolested.

1. THE BIG CONJUNCTS SOLUTION

Let's begin with Schwarz's argument for relating (1) and (2) by way of ellipsis. What Schwarz observes about coördinations like (1), for which I will adopt his label "odd coördinations," is that the string that precedes the coördinator must always have the shape of a well-formed sentence on its own. There is a contrast, therefore, between the cases in (1) and the examples in (4).

²Because subjects always c-command the predicates of which they are arguments.

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- (4) a. *Die Suppe soll der Hans zu essen und sich hinzulegen versuchen. (Topicalization)
 the soup should the Hans to eat and self down-to-lie try
 (The soup, Hans should try to eat and lie down.)
- b. *Die Suppe lehnt der Hans zu essen und sich hinzulegen ab.
 the soup turns the Hans to eat and self down-to-lie down
 (The soup, Hans refuses to eat and lie down.)
- c. *Äpfel₁ wird der Hans drei t_1 und zwei Bananen essen. (Split NP)
 apples will the Hans three and two bananas eat
 (Hans will eat three apples and two bananas.)
- d. *Äpfel₁ dost der Hans drei t_1 und zwei Bananen ein.
 apples cans the Hans three and two bananas in
 (Hans cans up three apples and two bananas.)
- e. *Von den Sängern₁ sollte er alle t_1 und viele von den Musikern kennen. (Partitive Split)
 of the singers should he all and many of the musicians know
 (He should know all of the singers and many of the musicians.)
- f. *Von den Sängern₁ schnauzt er alle t_1 und viele von den Musikern an.
 of the singers yells he all and many of the musicians at
 (He yells at all of the singers and many of the musicians.)
 (Schwarz 1998 (41c):208; (46a):209; (15a,b):197; (17a,b):197)

What is wrong with (4a), for example, is that the string *die Suppe soll der Hans zu essen* is not a complete sentence; in fact, it would be complete if the verb that is found at the end of the second conjunct, *versuchen*, were added to it. Similarly, in (4b), the separable prefix verb *anlehnen* fails to have its prefix in the string before *und*: the sentence *Die Suppe lehnt der Hans zu essen* could be made complete if the prefix that is found at the end of the second conjunct were added to it. All of the other examples in (4) are similarly afflicted. In each case the string preceding *und* is fatally incomplete, but could be repaired by including in it material that is found at the end of the string following *und*.

Schwarz argues that this property of odd coördinations is expected if we refuse to let movement to Specifier of CP escape the Coördinate Structure Constraint in German. It is expected because the Coördinate Structure Constraint will then force the left coördinate to be a CP, and therefore to fit the well-formedness conditions on independent sentences. That the second coördination does not look like a CP can be misleading, he points out, because Gapping, among other ellipsis processes, can make the second of two conjunctions look smaller than it

actually is. So the examples in (1) could have the parses in (5) (in which strike-outs indicate material that has Gapped).³

- (5) a. [_{CP} Die Suppe₁ wird der Hans t_I essen] und [_{CP} ~~wird~~ sich hinlegen]
 b. [_{CP} Äpfel₁ ißt der Hans drei t_I] und [_{CP} ~~ißt~~ zwei Bananen]
 c. [_{CP} Von den Sängern₁ kennt er alle t_I] und [_{CP} ~~kennt~~ viele von den Musikern]

By contrast the ungrammatical examples in (4) would be forced into something like the parses in (6), if they were to invoke Gapping and obey the Coördinate Structure Constraint.

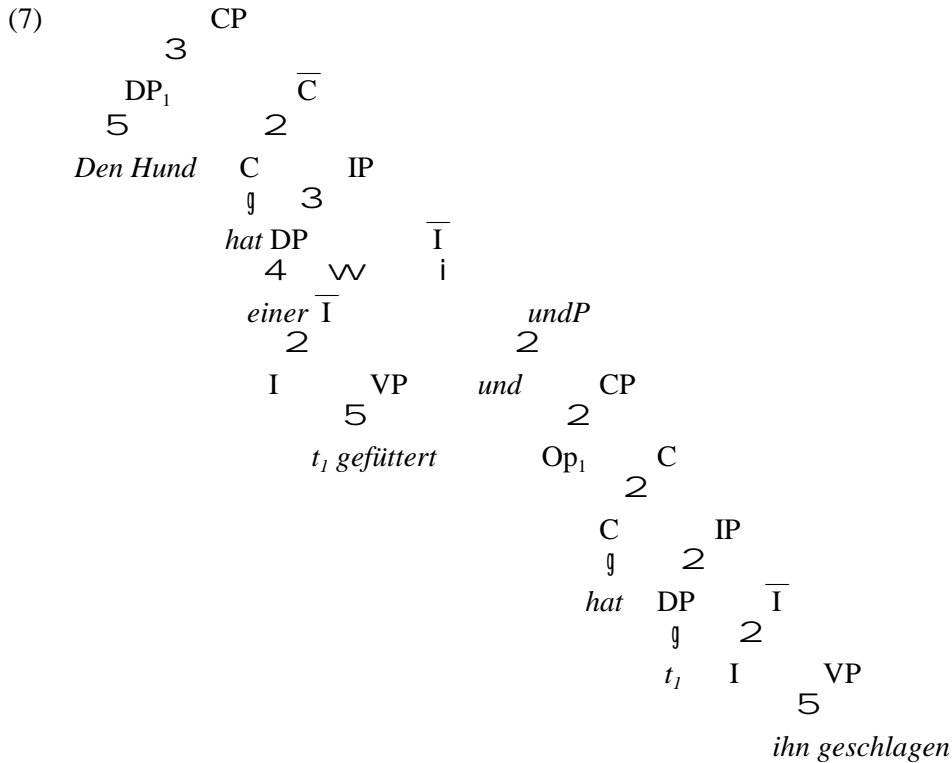
- (6) a. *_{CP} Die Suppe₁ soll der Hans t_I zu essen] und [_{CP} ~~soll~~ sich hinzulegen versuchen]
 b. *_{CP} Die Suppe₁ lehnt der Hans t_I zu essen] und [_{CP} ~~lehnt~~ sich hinzulegen ab]
 c. *_{CP} Äpfel₁ wird der Hans drei t_I] und [_{CP} ~~wird~~ zwei Bananen essen]
 d. *_{CP} Äpfel₁ dost der Hans drei t_I] und [_{CP} ~~dost~~ zwei Bananen ein]
 e. *_{CP} Von den Sängern₁ sollte er alle t_I] und [_{CP} ~~sollte~~ viele von den Musikern kennen]
 f. *_{CP} Von den Sängern₁ schnauzt er alle t_I] und [_{CP} ~~sollte~~ viele von den Musikern an]

The first conjunct of each of these sentences is incomplete, and that's why they're bad.

What we learn from Schwarz's paradigm is that whatever releases SLF and odd coördinations from the Coördinate Structure Constraint is very fragile: it requires that the string before *und* be a complete sentence. Consequently, we do not want to abandon the Coördinate Structure Constraint. We should instead discover what it is about SLF and odd coördinations that allows the Coördinate Structure Constraint to be circumvented in just these narrow circumstances. The Big Conjuncts solution does precisely this. Unfortunately, as foreshadowed in the introduction, it runs directly opposite to what is needed to solve the problem concerning the subject. Recall that the problem with the subject requires that we see it as outside the two constituents which are joined with *und*. How can these two needs be resolved in a way that preserves the Big Conjunct solution's virtues?

The proposal in the literature that best fits Schwarz's analysis and answers to this need is one that denies that *und* is a coördinator in these cases. Instead, see it as a subordinator, one that selects clauses, like *while* does, and place the clause it subordinates within the clause that seems to form the left conjunct. In Büring and Hartmann 1998 for example, the clause following *und* in SLF coördinations is a CP whose subject has Topic Dropped. This would give to (2a) a representation like that in (7).

³An idea that has a precedent in Wilder 1994. I follow here Schwarz's suggestion that odd coördinations be derived (through Gapping) from SLF coördinations, because of the properties they share (which we will review below). Thus, the second conjuncts in (5) are verb initial. An alternative would be to see the second conjuncts as beginning with a topicalized term, matching the term that has topicalized in the left conjunct, and let Gapping remove it as it does the verb. This, in essence, is the approach taken in Steedman 1990, though with very different machinery than is used here.



The “Op” in (7) represents the subject of the second “conjunct,” which has gone missing. As Büring and Hartmann note, there is a direct analogy on this analysis with parasitic gap constructions, or perhaps *tough*-constructions, in which the empty operator is construed as an argument in the higher clause. In these cases, the argument that the empty operator is construed with is the subject.

As can be seen from (7), this parse correctly places the subject of the left conjunct high enough to have the second conjunct in its scope. But it also preserves most of the attributes needed for Schwarz’s account. Because *und* adjoins the second clause to the first, the first will always have to be a well-formed sentence, accounting then for the contrast between (1) and (4). And because there is no true coördination in (7), there is no danger that the Coördinate Structure Constraint will be violated by topicalizing *den Hund*. The only worry is whether (7) provides a good source for Gapping, which is what Schwarz suggests leads to odd coördinations. Gapping is a form of ellipsis that is restricted to coördinations,⁴ and since *und* is a subordinator in (7), it isn’t expected that Gapping should be able to apply to it. Here, then, is the first difficulty for treating *und* as something other than a coördinator in these cases.

But there are other virtues for this analysis of SLF coördinations. Büring and Hartmann note that it correctly captures the fact that in coördinations of this sort, the subject found in the

⁴And most likely comparatives too, see Lechner 1998.

left conjunct is not moved out of the right conjunct. We would not want to find a way of moving the subject across the board out of the coordinated material, for instance. This, they argue, is shown by reconstruction facts. It is normally possible to understand an indefinite DP that has moved across the board to reconstruct into each of the conjuncts it has moved out of.⁵ So in (8), the indefinite *eine Frau* has moved out of each conjunct and can still be understood as introducing independent subjects for each conjunct.

- (8) Eine Frau [ist in Amerika Außenministerin] und [bekleidet in Deutschland
a woman is in America foreign-minister and holds in German

sogar das zweithöchste Amt des Staates].
even the second-highest office of the country

(It's a woman that is foreign minister of the USA and holds the second highest office in Germany.)

(Büring and Hartmann 1998 (48):188)

That is, (8) allows for an interpretation in which the woman that is America's foreign minister and the woman that is the second highest office holder in Germany are different. But SLF coordinations do not have this property. An example like (9) claims that there is one woman who is both the American foreign minister and holds the second highest office in Germany.

- (9) In Amerika ist eine Frau Außenministerin und bekleidet in Deutschland
in America is a woman foreign-minister and holds in Germany

sogar das zweithöchste Amt des Staates.
even the second-highest office of the country

(In the USA, there is a woman foreign minister and (she) has the second highest office in Germany.)

(Büring and Hartmann 1998 (46):187)

Because their proposal never puts the subject that shows up in the left conjunct inside the right conjunct, there is no possibility of across-the-board movement of the subject from both conjuncts, and this fact follows.

If odd coordinations are derived from SLF coordinations, as we have followed Schwarz in assuming, then odd coordinations should inherit this property. And, in fact, the subject in an odd coordination cannot be understood as introducing independent subjects for each conjunct. In (10), for example, *einer* introduces a subject that must both have fed the dog and beaten it.

⁵A fact discovered by Höhle 1991.

- (10) Den Hund hat einer gefüttert und ihn geschlagen.
 the dog has someone fed and it beaten
 (Someone fed the dog and beat it.)

(Schwarz 1998 (54a):213)

What (10) can't mean is that someone fed the dog, and someone else beat it.

Another virtue of parsing cases like (2) with a subordinating *und*, is that it captures the fact that the second coördinate appears to be an island for extraction. This is indicated by the surprising fact that across the board movement of the object in (11) is not possible.⁶

- (11) *Einen Wagen_i kaufte Hans *t_i* und meldete sofort *t_i* an.
 a car bought Hans and registered immediately
 (Hans bought a car and registered it immediately.)

(Büring and Hartmann 1998 (14):178)

This, of course, can't be because the topicalized term fails to c-command the traces in both conjuncts; we've already seen that these conjuncts are within the scope of the, presumably lower, subject. Further, in examples such as (12), the *wh*-phrase in Specifier of CP can bind a pronoun in the second conjunct, again indicating that material in Specifier of CP can have the second conjunct in its scope.

- (12) Welchen Hund_i hat sie gefüttert und ihn_i geschlagen?
 which dog has she fed and it hit
 (Which dog has she fed and hit it?)

(Schwarz 1998 (51a):211)

Instead, it must be that the second conjunct is an island for extraction; and this is precisely what the Büring and Hartmann proposal makes of it. To the extent that adjunct clauses are islands, so also will the second conjunct in these constructions be on their analysis.⁷

⁶A fact also reported in Kathol 1995 p. 56 .

⁷A problem that Kathol 1995 observes for treating the string that follows *und* as an adjunct clause is that they continue to “stack” in a way that is characteristic of coördinations:

- (i) In den Wald ging der Jäger, fing einen Hasen und kam am Abend wieder zurück.
 in the woods went the hunter, found a hare and came in the evening back again
 (The hunter went into the woods, found a hare and came back again in the evening.)

(Kathol 1995 (9):57)

This could be added to the reasons offered in the next section for abandoning the Büring and Hartmann approach.

It's difficult to see whether odd coördinations also have this attribute. To design examples of odd coördinations in which an across-the-board movement has occurred requires invoking two separate movements: one to guarantee that we have an odd coördination, and another to produce the across-the-board configuration. Something like (13) is the right sort of case.⁸

- (13) ??Den Schlüssel hat dem Hans einer gegeben und ihn dann wieder abgenommen.
 the key has to-the Hans someone given and it then again away-taken
 (Someone gave the keys to Hans and then took it away again.)

For *den Schlüssel* to topicalize successfully in (13), this must be an odd coördination of the VPs [*gegeben*] and [*ihn dann wieder abgenommen*]. If we understand these VPs to both include *dem Hans* as their indirect object, then we have an across-the-board movement of this DP.⁹ And the result is, as expected, ungrammatical.

Unfortunately, the badness of (13) cannot be considered conclusive, since a parallel “even” coördination is apparently also rather degraded:

- (14) ??Einer hat dem Hans den Schlüssel gegeben und ihn dann wieder abgenommen.
 Someone has to-the Hans the key given and it then again away-taken
 (Someone gave the key to Hans and then took it away again.)

In (14), it is the subject *einer*, that shows up in Topicalized position and, as a consequence, there is no reason to see a Coördinate Structure Constraint violation in (14). In fact, given the reconstruction facts in (8), we should expect that *einer* has successfully moved out of both these conjuncts in across-the-board fashion. But if that is correct, there is no particular reason to believe that *dem Hans* should be incapable of moving across-the-board out of these conjuncts. And yet,

⁸My discussion of these cases, and the examples themselves, I owe entirely to Bernhard Schwarz.

⁹We can be reasonably certain that *dem Hans* has moved from the second conjunct because of the presence of *ihn* in this conjunct. In general accusative pronouns, like *ihn*, prefer standing to the left of dative arguments. Thus, in simple clauses, there is a contrast between *Einer hat ihn dem Hans gegeben* and **Einer hat dem Hans ihn gegeben*. Thus, it is likely that the second conjunct in (13) is large enough to include the position that *dem Hans* gets its θ -role from. Compare this situation to one in which *ihn* is replaced with a full DP, as in (i).

- (i) Den Schlüssel hat dem Hans einer gegeben und das Gerät dann wieder abgenommen.
 the key has to-the Hans someone given and the tool then again away-taken
 (Someone gave the keys to Hans and then took away the tool.)

There is no constraint preventing full accusative DPs from following Dative arguments in German (*Ich habe das Gerät dem Hans abgenommen* (I have the tool from Hans taken) is perfectly grammatical), and as a consequence, the second conjunct in (i) could be so small that it does not include its indirect object. As expected, (i) is an improvement on (13).

something is marring (14). Until that thing is discovered, we cannot be sure that it is not also responsible for the ungrammaticality of (13).

Whether odd coördinations prohibit across-the-board movement, like their putative SLF sources, is a question that must remain unanswered at the moment, therefore.

So far as I can see, this stands as the currently best resolution of the Size Paradox. It correctly captures the fact that material cannot move across-the-board out of SLF coördinations, and that the subject cannot similarly distribute into each coördinate. And, through Schwarz's analysis, we explain why odd coördinations inherit these attributes of SLF coördinations. Moreover, we explain through Schwarz the fact that odd coördinations must begin with a string that constitutes a complete sentence, for otherwise the Coördinate Structure Constraint will cause ungrammaticality. Overall, a reasonably satisfying account.

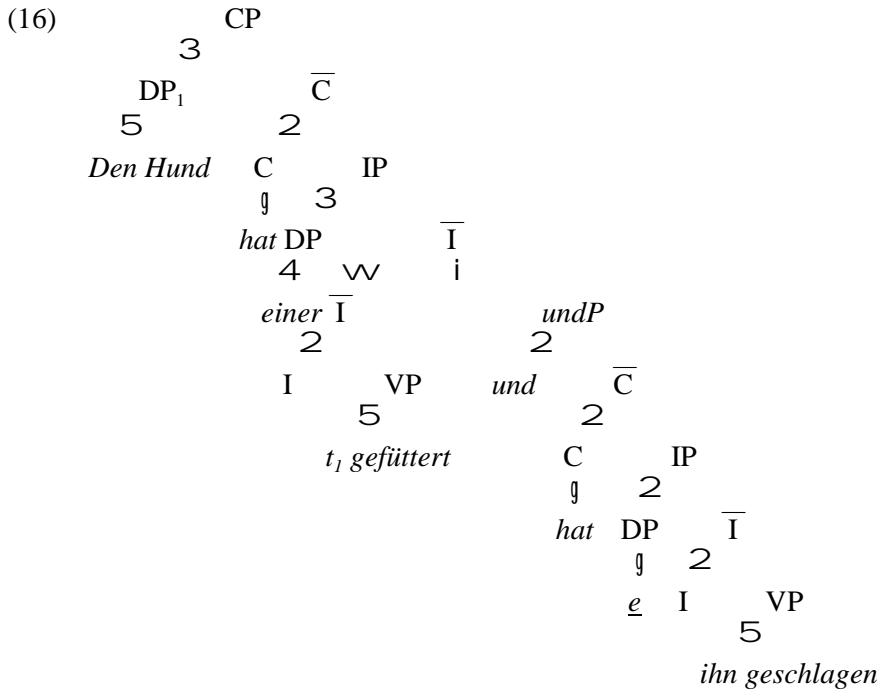
But there is still room for improvement.

2. NOTHING BUT PROBLEMS

One simple problem for Buring and Hartmann's analysis of SLF constructions is in the mechanism they propose for giving the second conjunct its relation to the subject. They do this by forcing the subject of the second conjunct to Topic Drop. But there is nothing in their account that explains why this should have to be so. Moreover, Topic Drop is a process that can affect objects or embedded subjects as well, and yet in SLF constructions only the highest subject of the second conjunct is missing. Neither an object (as in (15a)) nor an embedded subject (as in (15b)) may be missing.

- (15) a. *Den Hund hat keiner gefüttert und [_{CP} Op₁ [_{C̄} hat er *t*₁ geschlagen]].
 the dog has no one fed and has he beaten
 (No one has fed the dog and he has (it) beaten.)
- b. *Den Hund hat keiner gefüttert und [_{CP} Op₁ [_{C̄} habe ich *t*₁ ihn schlagen lassen]].
 the dog has no one fed and have I it beat let
 (No one has fed the dog and have I let (him) beat it.)

What's needed is a way to construe the second conjunct as a predicate which takes the same subject that the first conjunct does. Maybe the smallest modification to Buring and Hartmann's proposal that will have this consequence is to borrow an idea from Heycock and Kroch 1994, where it is suggested that the second conjunct in SLF constructions is a \overline{C} which predicates of the subject in the first conjunct. The particular formulation of this idea in Heycock and Kroch 1994 has the \overline{C} which forms the second conjunct coördinate with the \overline{I} of the first conjunct. This, unfortunately, would create a configuration in which the Coördinate Structure Constraint would be violated, however, and so does not help relieve us from the Size Paradox. However, we could combine their idea with Buring and Hartmann's proposal to let *und* be a subordinating conjunction in these circumstances, changing (7) to (16).



But this doesn't truly remove the problem. It merely relocates it into a puzzle about the status of the empty Specifier of IP in (16). Finite clauses cannot normally go without subjects in German,¹⁰ and so we should not expect something like (16) to be grammatical. To complete an account that represents SLFs with something like (16), an explanation for why in SLFs, and only in SLFs, the Specifier of the highest IP in the second conjunct may go empty. I don't know of such an explanation.

As promising, therefore, as the Big Conjuncts solution is, it leaves us with the disquietingly unique structure in (16) (where else do we find *und* subordinating verb-initial clauses?), and provides no answer for the question of what the "e" in (16) is, and why it doesn't make its appearance elsewhere in German syntax.

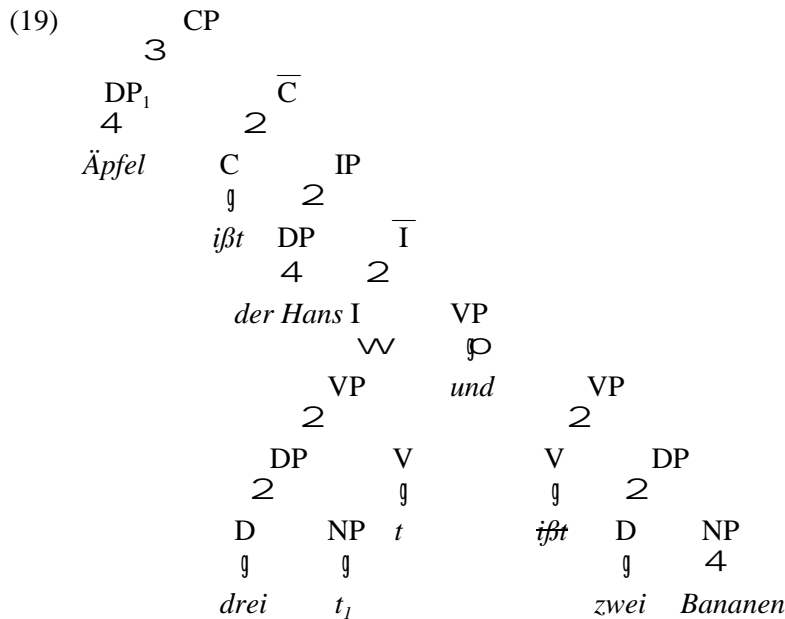
At root, I think the problem with the Big Conjuncts solution is that it requires the string that follows *und* in SLF constructions to be a \bar{C} or CP. It must, as a consequence, find a way of emptying that \bar{C} of its (highest) subject and explain why this is possible in SLF constructions but nowhere else. Since no such way has yet been found, I suggest that we give up this assumption.

This is the conclusion that Kathol 1995 reaches, and for very similar reasons. He suggests that the second conjunct is a VP. Indeed, if we assume that VPs are coordinated in these constructions, we will have a straightforward solution to the problems associated with the relationship between the subject and the coordinates. The subject would fall outside the coordination, as shown in (17), and correctly have wider scope.

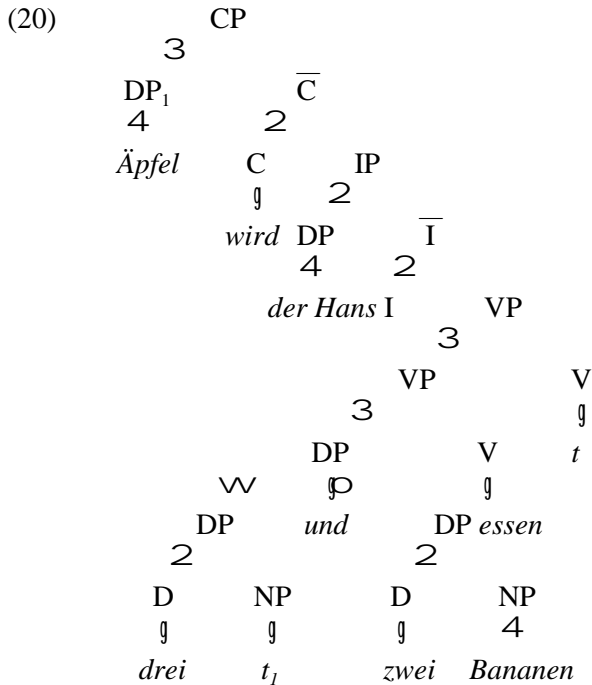
¹⁰Unless they have a non-thematic subject.

predicates on *einer*. To prevent this, we must find a way of prohibiting subjects from moving across-the-board out of each VP.

And finally, (17) would seem to offer no way of deriving Schwarz's observation that the string preceding the coördinator in odd coördinations must constitute a well-formed sentence on its own. If we follow Schwarz and assume that odd coördinations are derived from SLFs, then a grammatical odd coördination like (1b), for example, would arise from an SLF which, if modeled on (17), would look like (19). (Placed in strike-outs is the material that would elide from (19) to form the corresponding odd coördination.).



But if (19) is grammatical, then why shouldn't one of the bad instances of odd coördinations in (4) be grammatical. Something like (4c), for instance, might get a parse like that in (20).



There are many differences between (19) and (20), of course, but none that are known to cause the Coördinate Structure Constraint to be enforced in one but not the other.

A solution to the Size Paradox based on (17), then, would not seem to compare favorably with the problems that the Big Conjuncts solution does solve. Moreover, it poses problems of its own: why can German VPs have the word-order shown in the second conjunct in SLF coördinations, but not, so far as I know, anywhere else?

Kathol's own response to these problems is to loosen the relationship between dominance and linearization that standard phrase structure rules enforce in such a manner that it builds in the relationship these coördinations have to the subject and prevents across-the-board movement. Moreover, it allows VPs to have the shape of C's, just in case they are conjoined with another VP which has been thrown into the Verb Second configuration. It therefore meets some of the desiderata just reviewed,¹¹ though the cost is a wholesale revision to the simple mapping from dominance to linearization found in standard phrase structure trees.

Here, then, is the Size Paradox in its full glory. Neither strategy for unraveling the mysteries of odd and SLF coördinations is problem-free. So which should be pursued? Despite the relative successes of the Big Conjuncts solution, my hunch is that it will never be able to overcome the problem it has with subjects. Therefore, I will attempt to rehabilitate the relatively unsuccessful idea that (17) embodies, a species of the Small Conjuncts solution. I will depart from Kathol's

¹¹However, I can't see how Kathol's proposals would capture Schwarz's contrast between (1) and (4). See Kathol 1995 Chapter 4.

strategy of dismantling the commonplace relationship between linear order and hierarchy, however, and try something else.

3. A SMALL CONJUNCTS SOLUTION

If (17) is to be our model for SLFs and odd coördinations, then it makes sense to start with the question why the second of the coördinated VPs has the unusual shape that it does. In plainer contexts, German VPs never have this shape. If they could, examples such as (21) would be grammatical.

- (21) * ...weil einer hat ihn geschlagen.
 ...since someone has him beaten

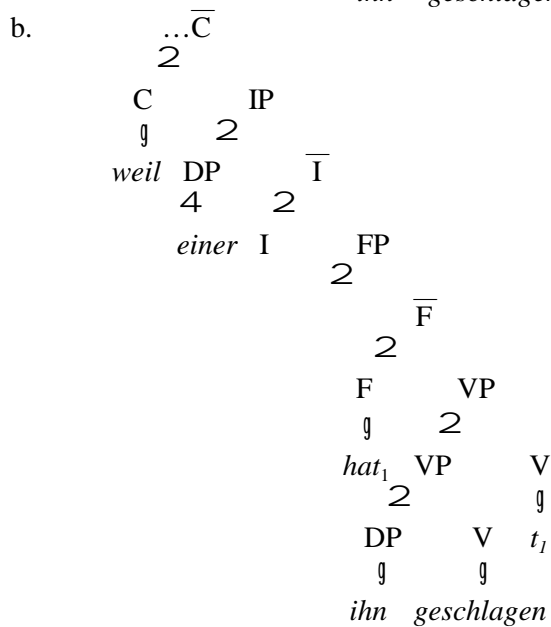
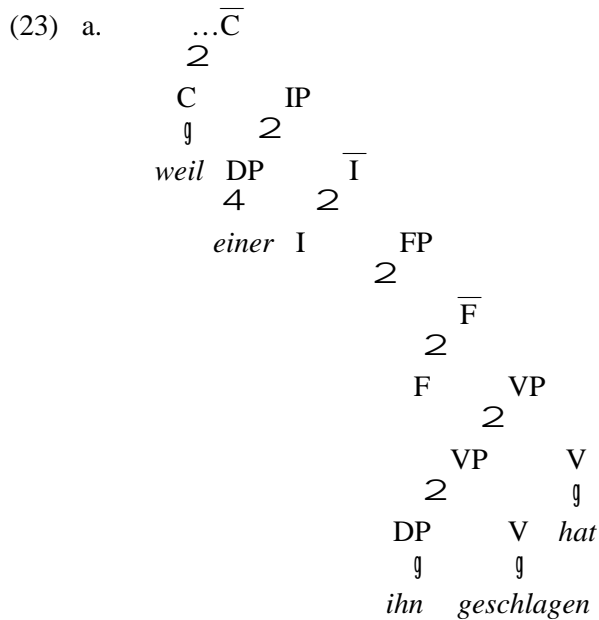
But, interestingly, a VP with this shape is possible in some verb-final Germanic languages under various conditions. West Flemish is famously able to produce VPs of this sort:

- (22) ...da Jan wilt dienen boek kuopen.
 ...that John wants that book buy
 (...that John wants to buy that book.)

This word-order is credited to a process called “Verb Projection Raising,” which has been the focus of some controversy in recent years.¹² The leading idea of the proposal I will make here is that coördinations in German are able to reveal the Verb Projection Raising word-order that is otherwise normally suppressed.

How does the Verb Projection Raising word-order arise? One possibility, which builds on ideas in Kann 1992 and Zwart 1993, would give to VPs in the verb final Germanic languages a derivation like that in (23). (Of course, (23b) is not a grammatical outcome in German, since the Verb Projection Raising word-order isn’t permitted (in these contexts). I am using German words here for ease of comparison with later examples.)

¹²See Evers 1975, Haegeman and Riemsdijk 1986, Haegeman 1988, Haegeman 1994, Neeleman 1994, Zwart 1993, den Dikken 1996, Hinterhölz 1996 among many others.



Verb Projection Raising, on this view, is a massive misnomer. It is not the verb projection, i.e. the lowest VP, that has raised in these situations, but rather the higher, finite verb.¹³ Let us take the

¹³Taking the finite verb to stand in a position to the left of the VP it embeds is the respect in which (23) follows the proposals in Kann 1992 and Zwart 1993. I abandon their thesis that this is the underlying position for verbs, however. Zwart 1993, who posits the verb movement to F° that I am using here, notes that if this movement is overt, the matter of where the verb originates within the “verb final” Germanic languages is largely undetermined. (He suggests in Zwart 1997 note 15, p. 102 that movement to F° (a

I will suppose that both of these possibilities exist.¹⁴

So, summarizing, we can model the Verb Projection Raising word order as follows.

- (26) a. The verb final Germanic languages embed VP within (a head-initial) FP.
 b. F° has a strong V-feature.
 c. Strong features must be checked off by Spell Out.
 d. A feature on X° can be checked off iff something with that feature adjoins to X° , or moves into the Specifier of XP.

And we can describe the situations in which the Verb Projection Raising word-order is allowed or disallowed in terms of preferences for the options expressed in (26d):

- (27) a. In contexts where “Verb Projection Raising” is blocked, (26b) must be satisfied by bringing VP into Specifier of FP.
 b. In contexts where “Verb Projection Raising” is forced, (26b) cannot be satisfied by bringing VP into Specifier of FP.

There is one last piece to this account. We must find a way of guaranteeing that it is not just any V or VP that can satisfy FP’s need for a verb. We want only the V or VP that F° immediately embeds to be able to check off F° ’s verb feature; otherwise word-orders like those in (28a) might be generated, or contexts in which Verb Projection Raising is obligatory might be satisfied by (28b).

¹⁴One might worry about (25) that something like the Proper Binding Condition is violated, as the trace left by moving *hat* is not c-commanded by *hat*. It currently appears that the Proper Binding Condition should be replaced by a condition that guides how different types of movement operations can be combined. See Takano 1996 and Müller 1996. The derivation that leads to (25) does not violate this condition. Nonetheless, there is much left to be understood about the Proper Binding Constraint, so we should stay alert to the problem that may reside in (25).

[_{VP} *ihn geschlagen hat*] is closer to Specifier of FP than is [_{VP} *ihn geschlagen*] under the definition in (29b).

- (29) a. When X c-commands Y and Y c-commands Z, then Y is closer to X than is Z.
 b. When X c-commands Y and Y properly contains Z, then Y is closer to X than is Z.

If we want to collapse these two into one constraint, it is easiest, perhaps, to reframe the Head Movement Constraint violation into terms closer to (29b). This is because when a verb moves past a c-commanding verb, it also moves out of that verb's projection, which is how (29b) defines the forbidden situation. Let's adopt something like (30), then, which blocks both (28a) and (28b).¹⁶

- (30) Closest Attract
 X° can attract into a checking relationship only the term *closest* to it.

Let X, Y and Z be distinct¹⁷ terms in a syntactic representation, and F be a syntactic feature. An F-bearing Y is closest to an X which checks F iff there is no F-bearing ZP that properly contains Y.

If we adopt (26), and constrain it with Closest Attract, we will have a method of fixing the linear order of terms in German VPs; and, with (27), we can capture the various variants that arise through Verb Projection Raising. We are also poised, as it happens, to explain the properties of odd coördinations and SLFs we have reviewed here, and solve the Size Paradox.

The solution rests on the observation that whereas the Coördinate Structure Constraint has been amply demonstrated for instances of \bar{A} Movement, including the process of Topicalization that forms part of the problem in the Size Paradox, it has not been demonstrated to hold of all types of movement rules. So, what kinds of movement does the Coördinate Structure Constraint hold in?

There are examples which suggest that the Coördinate Structure Constraint does hold of head movement as well. It's the Coördinate Structure Constraint, probably, that is responsible for the badness of (31), in which *has* moves from the first, but not the second, coördinated IP.

- (31) *What₁ has₂ [[_{IP} Betsy [_{VP} *t*₂ [_{VP} purchased *t*₁]]]] and [[_{IP} Sally will talk about *t*₁]]]?

Therefore, let's let the Coördinate Structure Constraint hold of Verb Movement (or head movement generally) and Topicalization (or of \bar{A} Movement generally).

¹⁶See Richards 1997, and references therein, for discussion of this constraint.

¹⁷ZP is distinct from Y just in case ZP is not an \bar{X} projection of Y.

But secure demonstrations of the Coördinate Structure Constraint holding of A movement,¹⁸ or of other forms of movement, are not available. Let us specifically let movement of VP into Specifier of FP be free from the Coördinate Structure Constraint. I am also going to follow Ross 1967 in taking the Coördinate Structure Constraint to be a purely geometrical condition, one that defines the configurations which block extractions in terms of the graphs that phrase markers are.¹⁹ We can do this informally with (32).

(32) The Coördinate Structure Constraint

Let X and Y be phrases that are joined by a coördination, and Z be the phrase that the coördination forms. α Head or \bar{A} moves out of Z iff it also moves out of both X and Y.

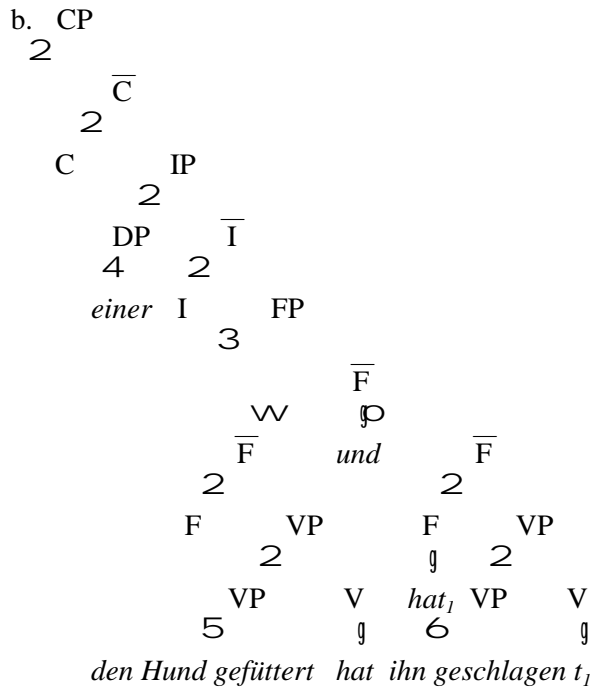
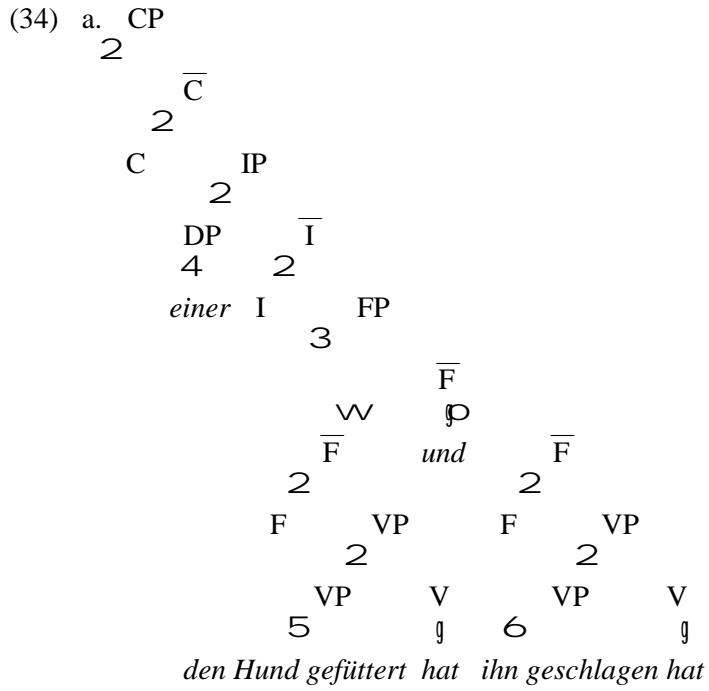
Consider now how this will produce the SLF coördination in (2a) (repeated in (33)). If we let this case involve a coördination of \bar{F} , then the derivation in (34) is permitted.

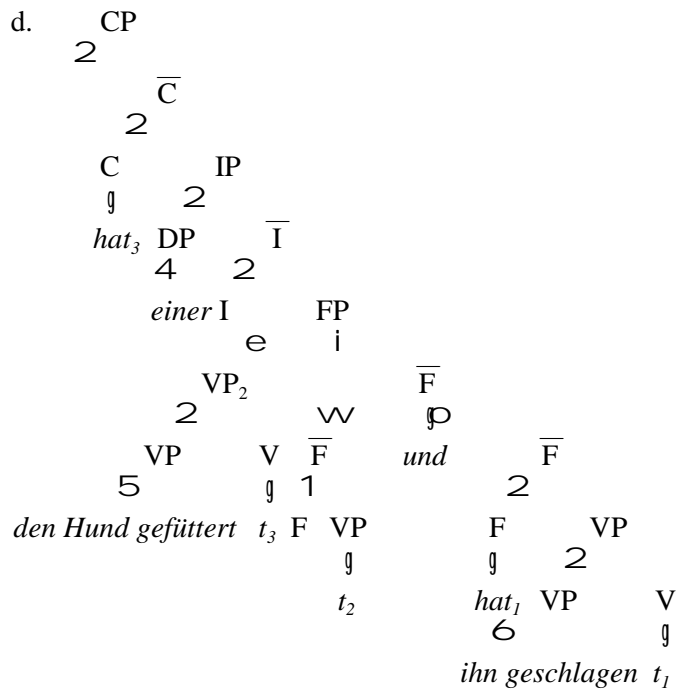
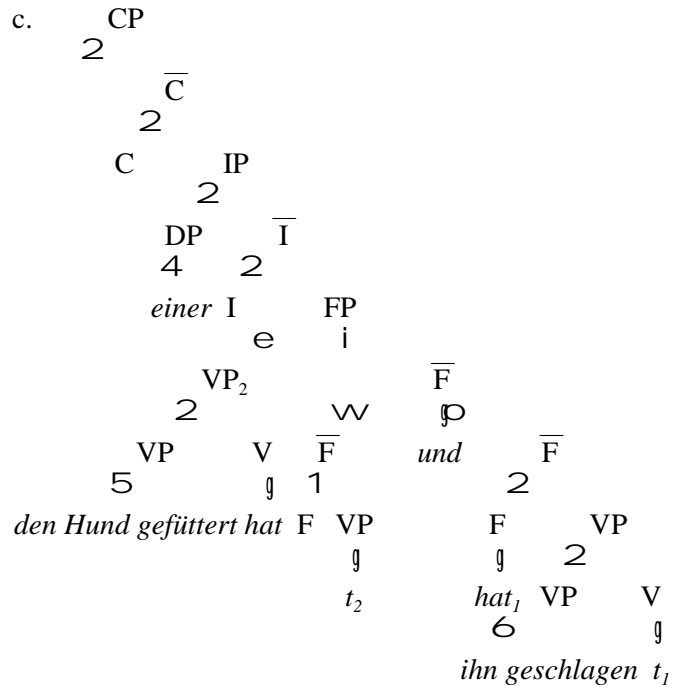
- (33) Den Hund [hat einer gefüttert] und [hat ihn geschlagen]. (= (2a))
 the dog has someone fed and has it hit
 (Someone has both fed the dog and hit it.)

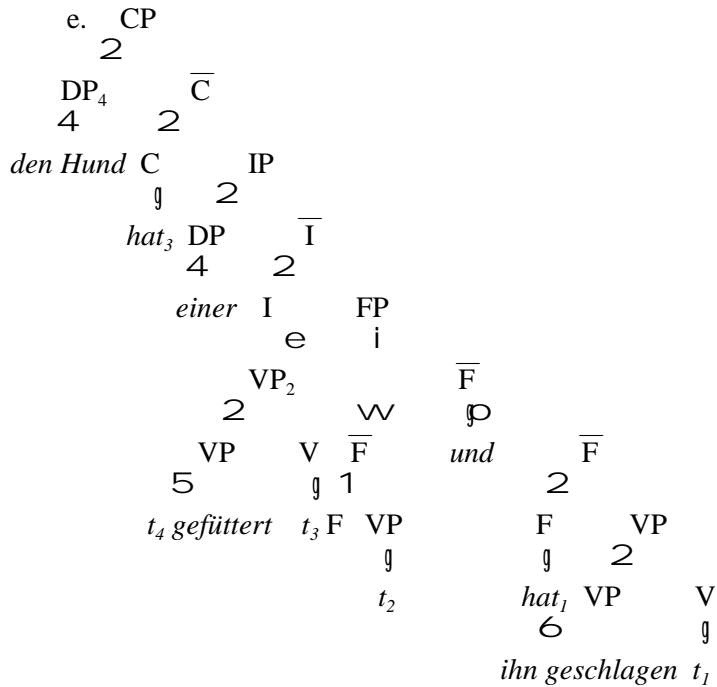
¹⁸See Burton and Grimshaw 1992 for some of the issues involved in establishing the Coördinate Structure Constraint for A Movement, and the discussion in footnote 20.

¹⁹In this, then, I am abandoning a popular alternative, one that tries to ground the Coördinate Structure Constraint in the ban on vacuous quantification and an interpretation of coördinations that forces an operator that has scope over the coördination to meet this ban for each conjunct, if it meets this requirement for any conjunct. (See Munn 1993, Ruys 1992 for recent discussion of this suggestion.) Though popular, it is not clear how this alternative would capture cases like (31), since verbs are unlikely to be quantifiers and trigger a violation of vacuous quantification.

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In this context, German does not allow the Verb Projection Raising word-order, so we are in a context in which (27a) requires Specifier of FP to be filled with a VP. This requirement has been met with the step in (34c), which brings the VP of the first, but not the second, F̄ into Specifier of FP.²⁰ In the second F̄, *hat* has moved into F, yielding the Verb Projection Raising word-order in

²⁰Because we have exempted the VP to Specifier of FP Movement from the Coördinate Structure Constraint, we must find another reason why the step in (34c) is licit, but a parallel step in which the VP of the second conjunct has moved into Specifier of FP isn't. There is nothing in what has been done here which would guarantee this. This is one important respect in which the approach in Kathol 1995 is superior, because this left-right asymmetry falls out of his formalism.

Perhaps there is independent support for something of this nature in examples like (i) and (ii).

- (i) I made Sally₁ out [[*t*₁ to be honest] and [Mark to be trustworthy]].
- (ii) *I made Mark₁ out [[Sally to be honest] and [*t*₁ to be trustworthy]].

Assuming that the particle *out* belongs to the higher clause in these cases, then it seems likely that the DP showing up between *made* and *out* has moved into the higher clause. On many accounts of this construction, this is a kind of A-movement, bringing the subject of the embedded clause into its accusative Case marked position. If all of these assumptions are correct, then the grammaticality of (i) could be seen as evidence that A Movement is not constrained by the Coördinate Structure Constraint. But if this is correct, then we need to find another cause for the ungrammaticality of (ii), in which A Movement has relocated the subject of the right conjunct into the higher clause. Thus, we might construe this contrast as evidence for the existence of a constraint that allows movement from the first, but not the second, of conjoined phrases – just the kind of constraint that is required to properly control movement of VP into

this conjunct. This, then, is how it is possible in coördinations to produce a Verb Projection Raising word-order in a context where this word-order is not otherwise available.

Because (34c) has brought the VP of the initial \bar{F} out of the coördination, it is now possible to move material out of it without violating the Coördinate Structure Constraint. As a consequence the verb heading this VP, *hat*, can move into C° , as in (34d), and the object, *den Hund*, can Topicalize, as in (34e). In this way we explain why these derivations permit apparent violations of the Coördinate Structure Constraint: the material that would violate the Coördinate Structure Constraint in a “normal” coördination can, in these cases, piggyback with the VP when it makes its journey out of \bar{F} .

This account also gives us a handle on the other properties of these constructions. The fact that across-the-board movement of objects in these constructions is blocked will follow from the fact that once the VP of the first conjunct has moved into Specifier of FP, the configuration in which across-the-board movement is licensed has been lost. I have, in fact, built into the statement of the Coördinate Structure Constraint in (32) the condition on across-the-board movement that it be found only in those situations in which movement from just one of the coördinates is blocked.²¹

Consider next how the coördinated VPs are related to the subject. What we desire is a way of letting each of these VPs combine with the subject without invoking independent predications. The syntactic method by which subjects and their predicates are brought together is the subject of some controversy, presently, and so we must consider a couple possibilities. Let’s adopt the view that subjects move into their surface position from some lower underlying spot. And, further, let’s, just for concreteness, call the projection in which subjects originate: νP . Now, one possibility is that νP embeds FP, and so is outside the coördinated \bar{F} s, as shown in (35).²²

Specifier of FP in our derivations. Unfortunately, my characterization of the (i)/(ii) contrast has not yet removed the possibility that (i) could be derived from (iii) by way of Gapping (as shown).

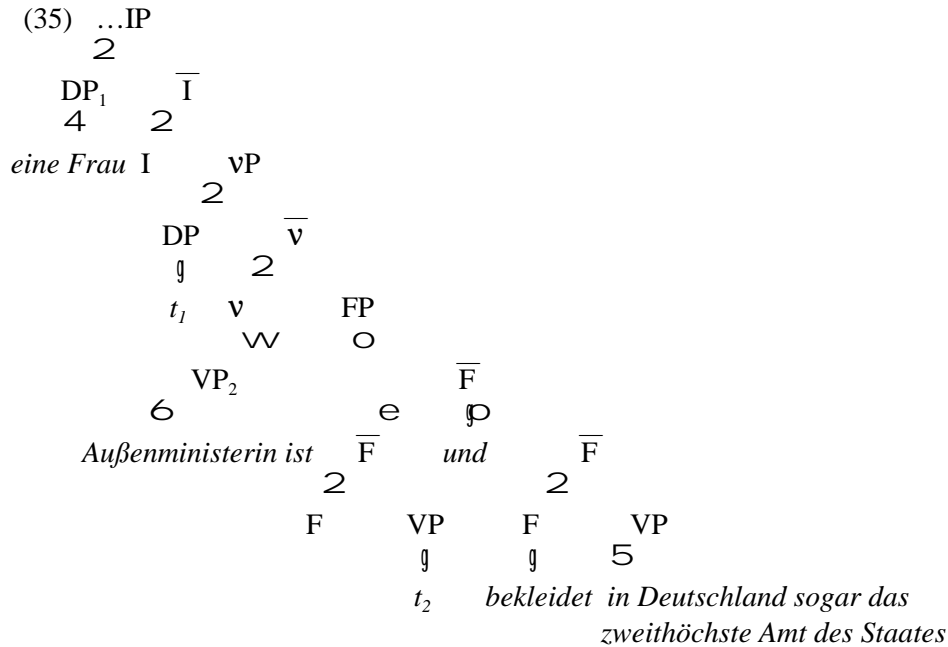
(iii) I [made Sally out to be honest] and [~~made~~ Mark ~~out~~ to be trustworthy].

²¹Note that for this explanation to be made complete, we must find a way of ensuring that across-the-board movement cannot take place at a stage in the derivation prior to when the VP has moved into Specifier of FP. It is likely, I think, that this will follow from the Principle of the Cycle.

²²(35) is how this proposal would parse a fragment of (9) (repeated in (i)), which is the example Buring and Hartmann 1998 uses to illustrate the non-reconstructability of subjects in SLFs.

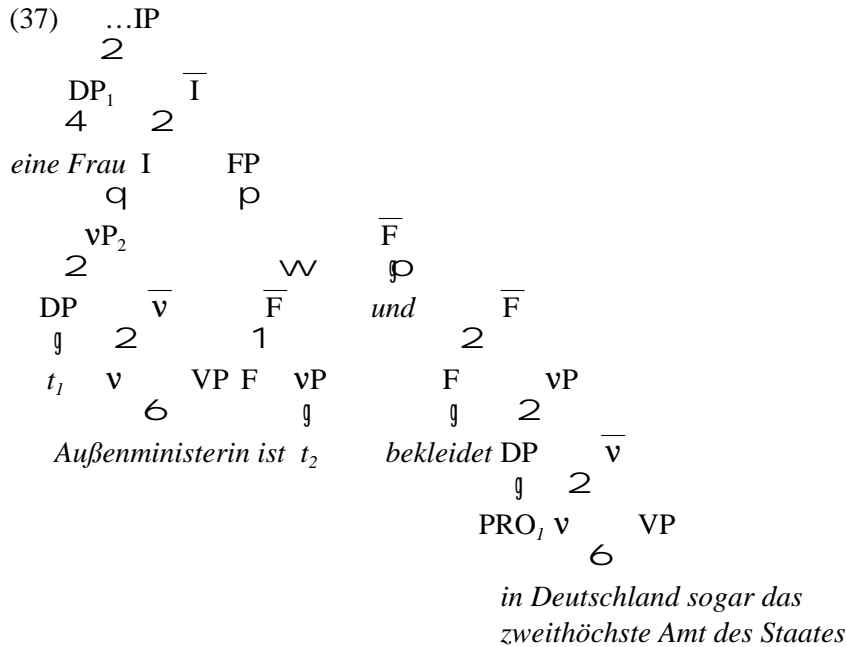
(i) In Amerika ist eine Frau Außenministerin und bekleidet in Deutschland
in America is a woman foreign-minister and holds in Germany

sogar das zweithöchste Amt des Staates.
even the second-highest office of the country



This is the least problematic possibility. Once we find a way of letting the coördinated \bar{F} s in (35) be interpreted (perhaps by “reconstructing” the VP that has moved out of the coördination), these VPs will predicate jointly on the subject. There is no way of distributing the subject across each VP.

The more problematic possibility is one in which vP is embedded with FP. This raises the possibility that SLF coördinations could get representations like that in (36), in which the vPs are part of the coördination.



The Control relationship is known to not allow reconstruction,²³ and so this representation would have the desired effect.

²³See, for example, the discussion in May 1985 p. 97ff. Kathol 1995 :71-2 raises an issue which might argue against the structure in (37). He notes that a relative clause that has been extraposed to the endfield, and is related to the subjects of a preceding coördination, is ungrammatical if the subject of the second conjunct is a pronoun:

- (i) *Dann kam ein Mädchen herein und sie begann zu reden welches ich noch nie
 then came a girl in and she began to talk whom I never
 vorher gesehen hatte.
 before seen had
 (Then a girl came in and began to talk whom I had never seen before.)
 (Kathol 1995 (45):72)

A parallel sentence without an overt subject in the second clause is grammatical, however.

- (ii) Dann kam ein Mädchen herein und begann zu reden welches ich noch nie vorher gesehen hatte.
 (Kathol 1995 (44):72)

Kathol concludes that in (ii), and in SLF coördinations generally, the missing subject of the second conjunct should not be expressed with a silent pronoun. I am not ready to reach this conclusion, however, because I do not understand yet what the source of the ungrammaticality of (i) is.

This proposal shares with Buring and Hartmann’s account that there is a silent argument in the second conjunct which corresponds to the highest subject of that conjunct. Part of my critique of Buring and Hartmann’s account was that their way of expressing that argument – as a null “topic” in Specifier of CP – did not explain why this argument can only be the highest subject. On the view that (37) expresses, this fact will have to emerge from the conditions determine where PRO appears. It is standard to take these conditions to guarantee PRO is always related to subject position, and so this will presumably follow. That the missing object of the second conjunct cannot be an embedded subject will have to emerge from the locality condition which connects PRO with its controller. This locality condition does not allow PRO to be related to a controller that is not in the immediately dominating sentence.²⁴ Together, these two constraints will ensure that the argument missing from the second conjunct is the subject of the highest clause.

We will also have to rely on the conditions governing the distribution of overt and covert subjects to guarantee the subject of the right conjunct in (37) is not overt. In particular, it will be necessary to block overt subjects from surfacing in Specifier of vP, and instead force them to surface in a higher position. This will have the consequence of forcing examples that have an overt in their second conjunct to involve coördination of something larger than FP, and this, in turn, will prevent them from appearing as SLF coördinations.

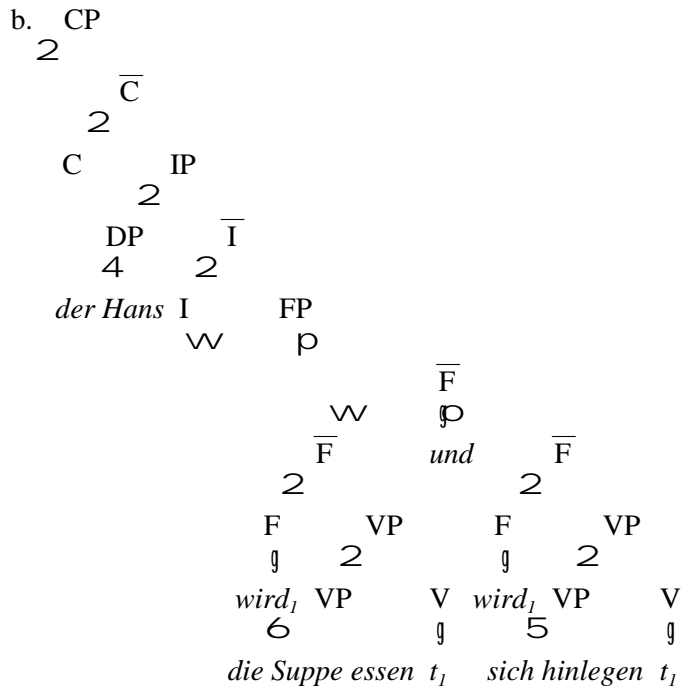
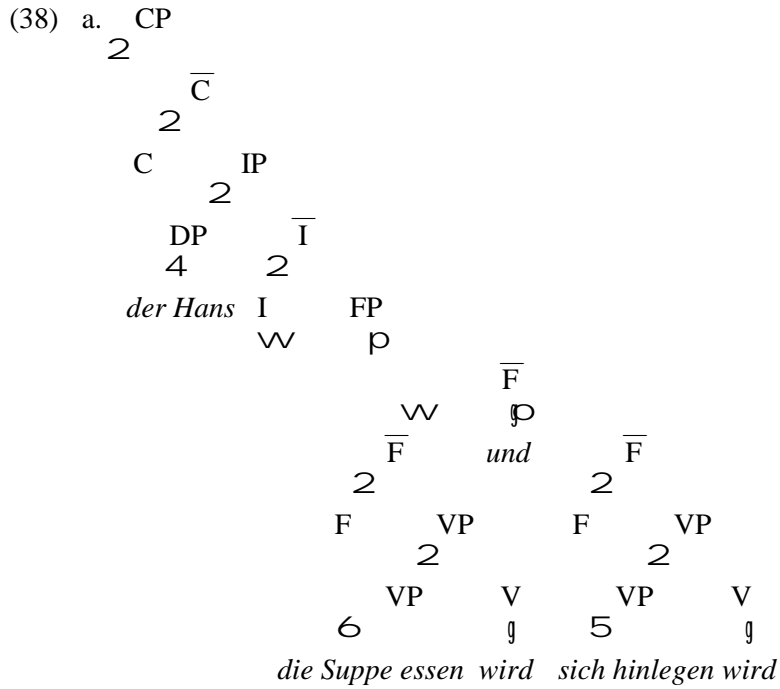
This, then, is how the system proposed in (26) derives the essential properties of the SLF coördination. What of the odd coördinations that Schwarz studied? These can be derived from SLF coördinations through Gapping, as Schwarz suggested, or by moving the finite verb across-the-board, as in (38).

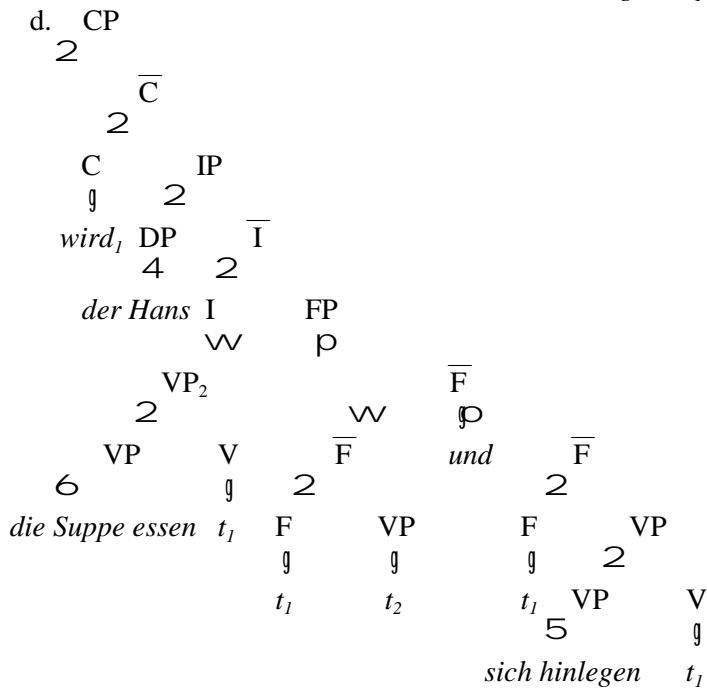
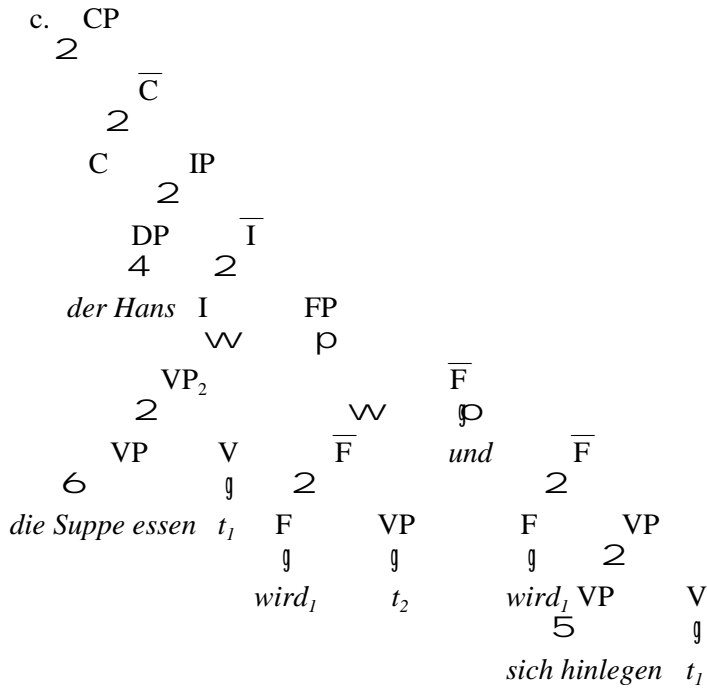
²⁴So, the PRO in (i) for example, can be controlled by *John* but not *Mary*.

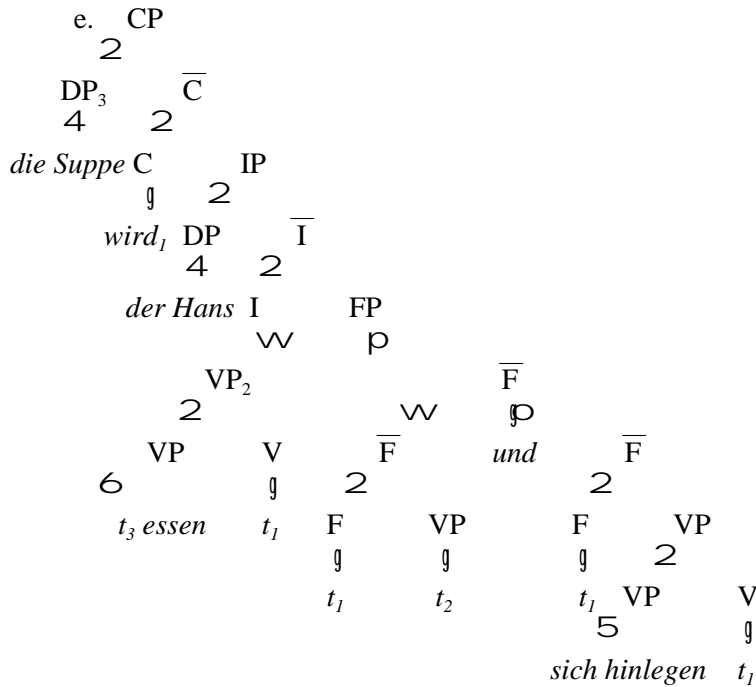
- (i) *Mary* claimed that *John* tried [PRO to leave].

There is almost certainly more than one kind of PRO, and the way they find antecedents varies. (See Manzini 1983, Koster 1984 and Broekhuis 1992 among others.) The PRO that is required in (37) is the one that gets a bound variable interpretation.

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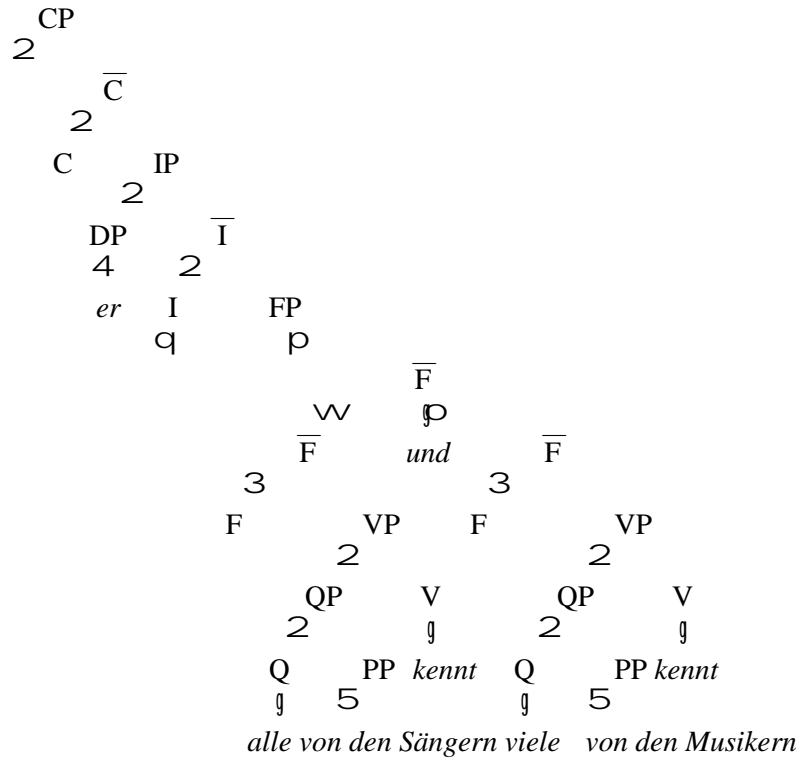
This derivation differs from the one in (34) which yields SLF coördinations as follows: rather than simply moving the VP of the first coördinate into Specifier of FP, the finite verb heading that VP moves first into F°. Recall that there are two ways of satisfying F°'s need for a verb: move VP into Specifier of FP, or adjoin a verb to F°.²⁵ The first of these options is forced in (the non-Verb Projection Raising contexts of) German; but nothing prevents the second from occurring also. So, the step in (38b) combines these movements, and as a result the finite verbs originating in each of the VPs are now in positions that (32) permits across-the-board movement from. This is how (38d) is derived from (38c). In the final step, Topicalization brings the object of the first VP into Specifier of CP, just as in the derivation for the SLF coördination in (34).

A similar derivation yields those cases of odd coördinations in which an object DP appears to be coördinated (as in (1c)). The only difference here is that across-the-board movement of the finite verb leaves nothing in the second conjunct but the verb's complement. A derivation for (1c), repeated in (39), is given in (40).

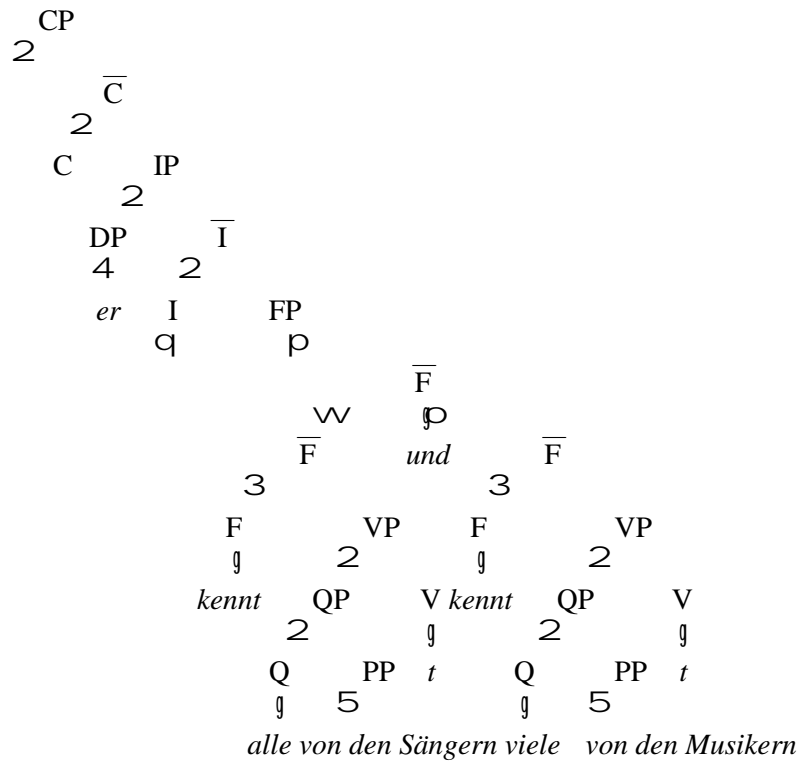
- (39) Von den Sängern₁ kennt er [_{DP} alle *t*₁] und [_{DP} viele von den Musikern]. (= (1c))
 of the singers knows he all and many of the musicians
 (He knows all of the singers and many of the musicians.)

²⁵See (27).

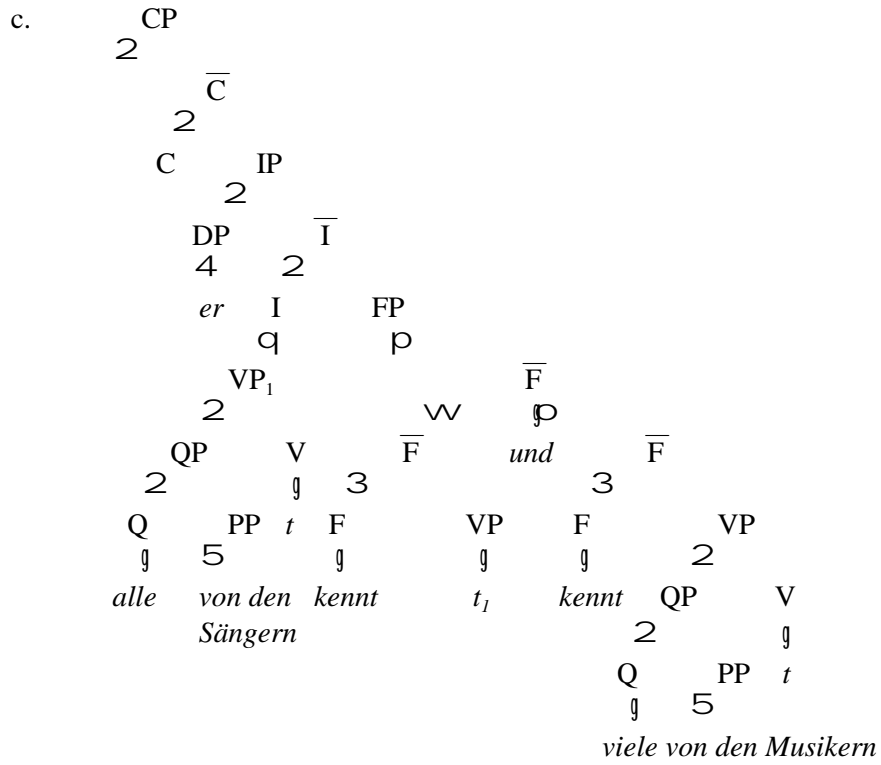
(40) a.



b.



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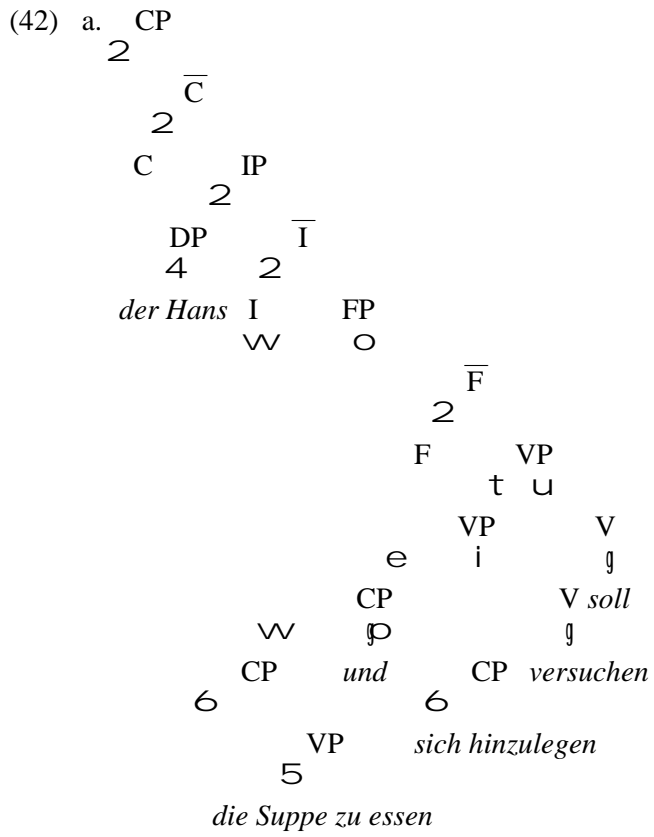


Because odd coördinations are derived from SLF coördinations, they inherit the properties we have just reviewed: the unavailability of across-the-board movement and the non-reconstructability of the subject into the second conjunct. (Recall that we have substantiated only the second of these attributes for odd coördinations.)

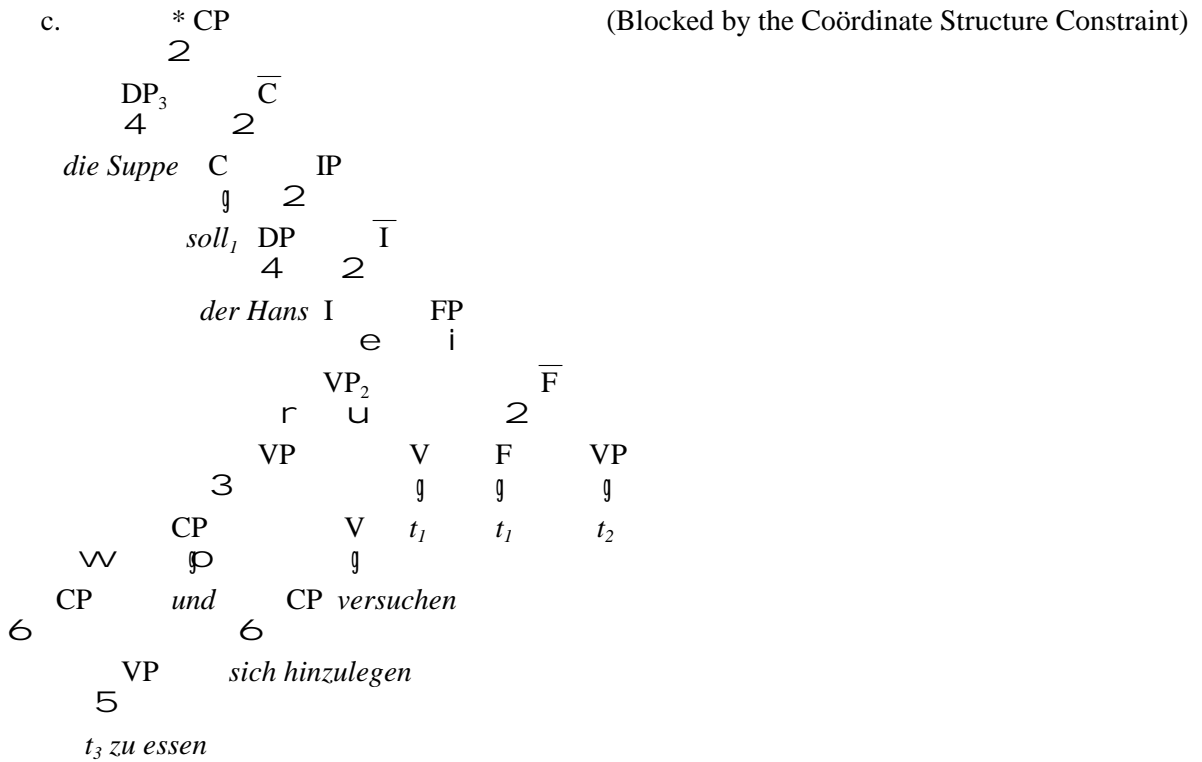
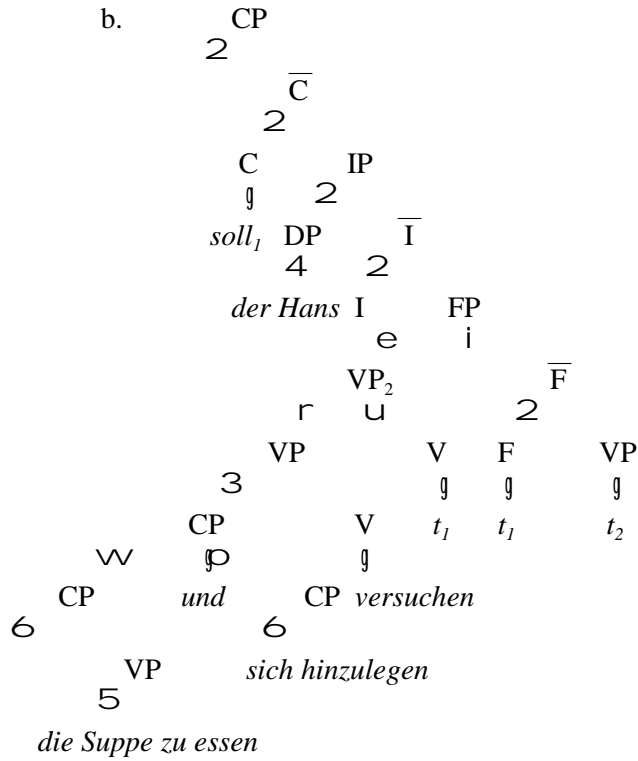
We are left, then, with one last feature of these constructions to derive. This is Schwarz's discovery that the string to the left of the coördinator in odd coördinations must, on its own, constitute a well-formed sentence. If we look back at the examples which Schwarz uses to illustrate this generalization – I have repeated one in (41) – we see that there is an alternative way of characterizing what distinguishes them from the similar, but grammatical, examples in (1).

- (41) *Die Suppe soll der Hans zu essen und sich hinzulegen versuchen.
 the soup should the Hans to eat and self down-to-lie try
 (The soup, Hans should try to eat and lie down.)

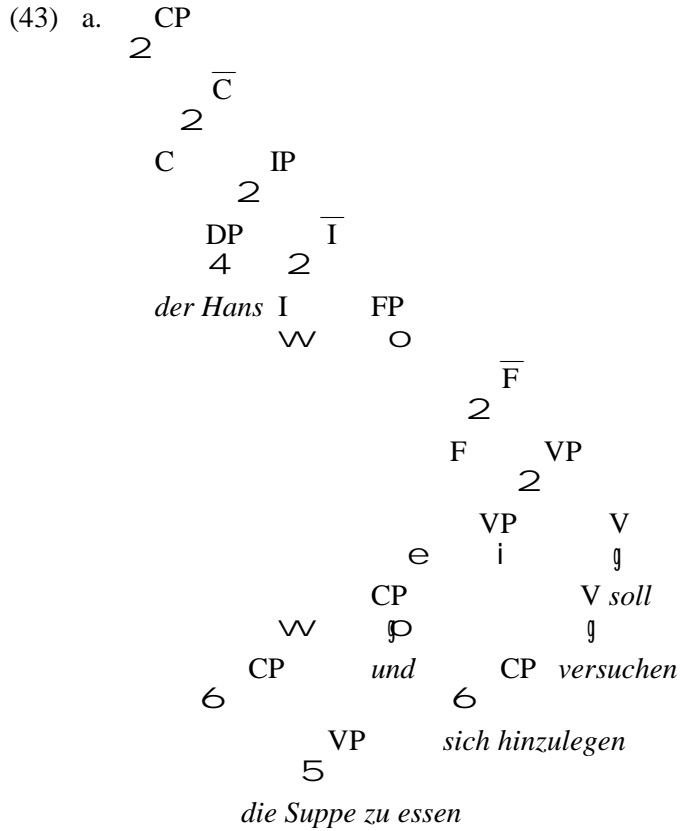
In (41), there is a level of embedding that is not present in the grammatical examples in (1). In particular, what is special about Schwarz's examples is that the coördination is embedded below a head that appears to the right of the coördination. Now, under the present proposal, this will make the phrases that are coördinated in these examples too large for the material that has extracted from the first VP to be able to escape the Coördinate Structure Constraint. Let me illustrate this for the case in (41). Under a commonplace set of assumptions (which we will revisit momentarily) the proposals here would give to (41) the derivation in (42).

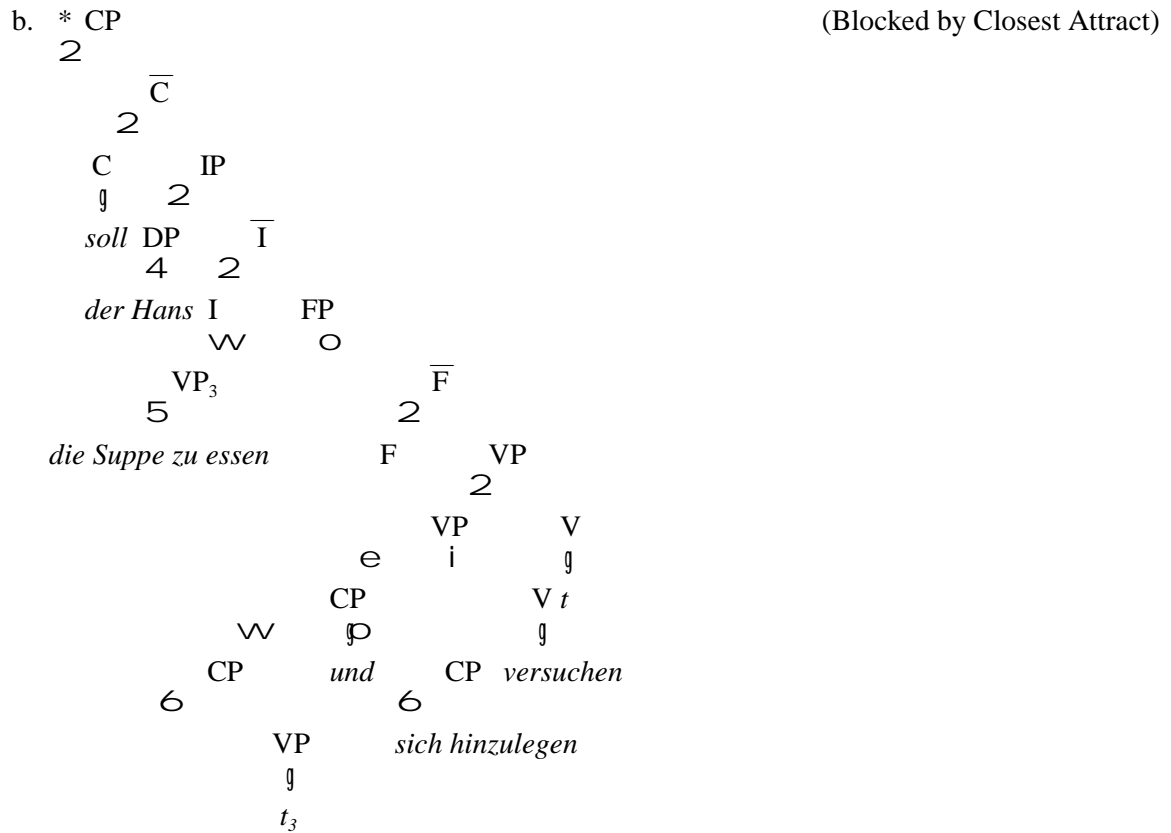


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The only way the Coördinate Structure Constraint in (42c) could be avoided is if the VP made up of [*die Suppe zu essen*] could escape the coördination by moving into Specifier of FP. This can't be done in a derivation that starts with (42a) because it would require this VP to move farther than Closest Attract allows, as (43) illustrates.

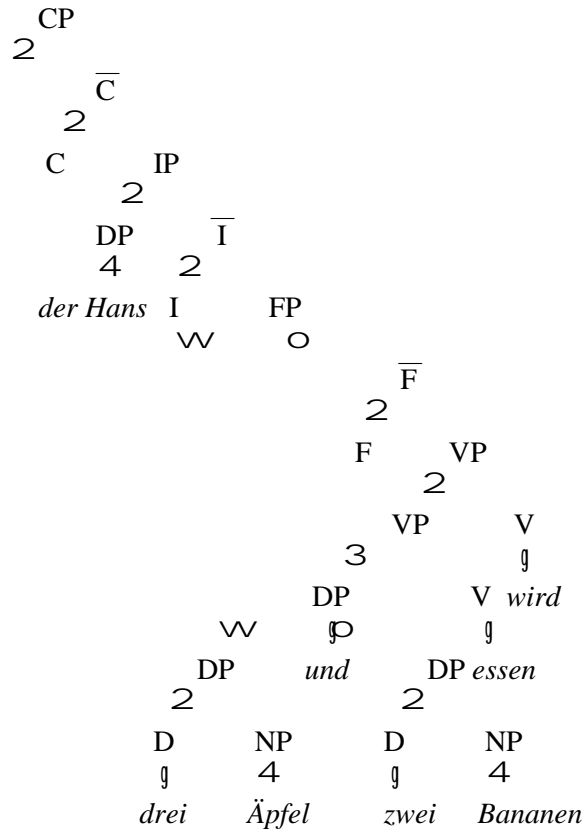




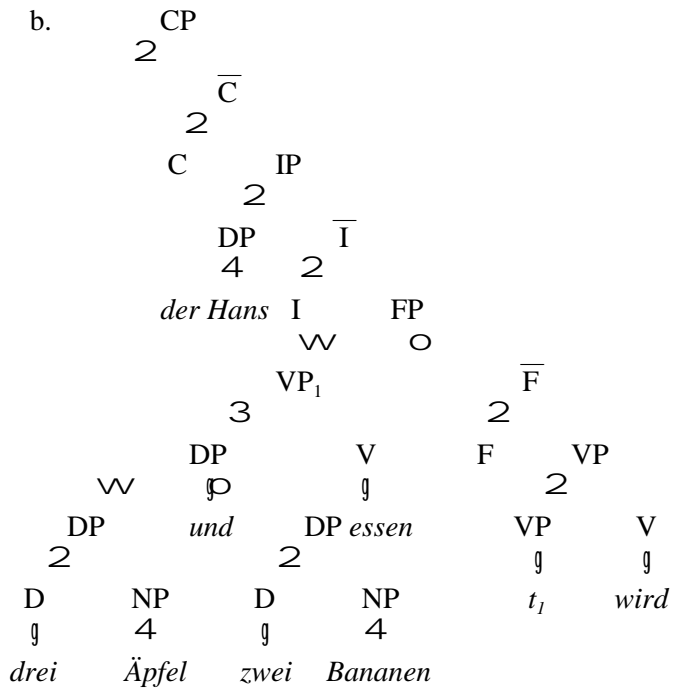
A similar malady arises in each of the other of Schwarz's examples of this constraint. I've given below the derivation that would be required to generate another one of these, (4c), just for completeness sake.

- (44) *Äpfel₁ wird der Hans drei *t₁* und zwei Bananen essen. (= (4c))
 apples will the Hans three and two bananas eat
 (Hans will eat three apples and two bananas.)

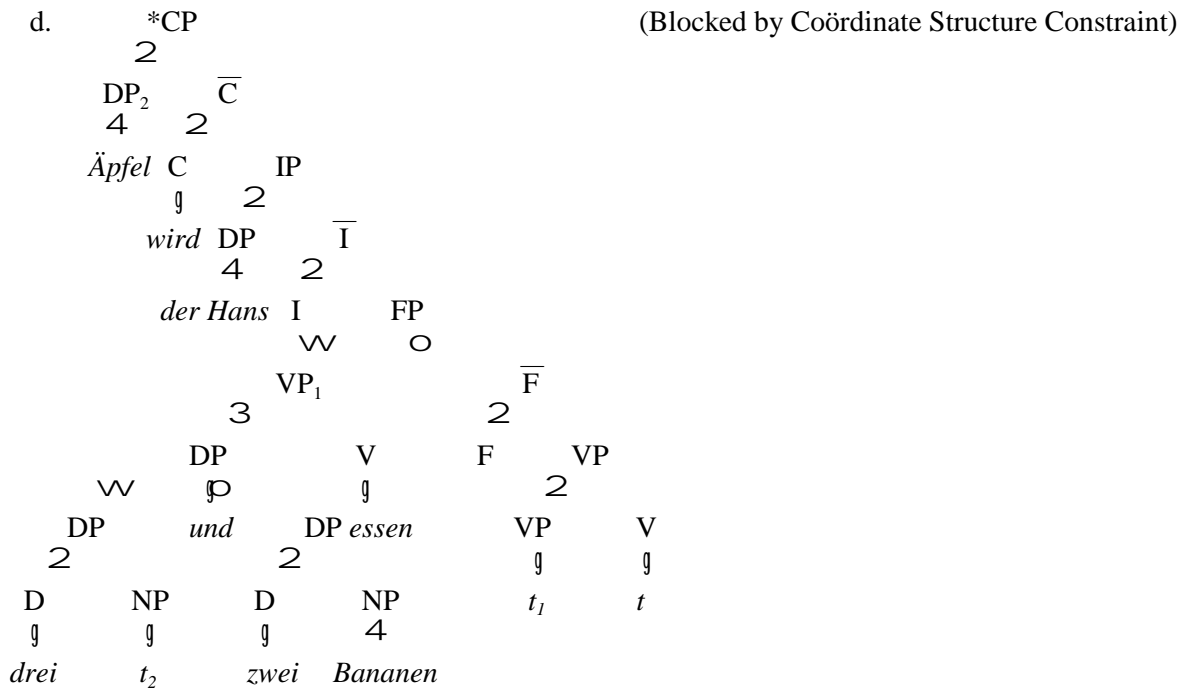
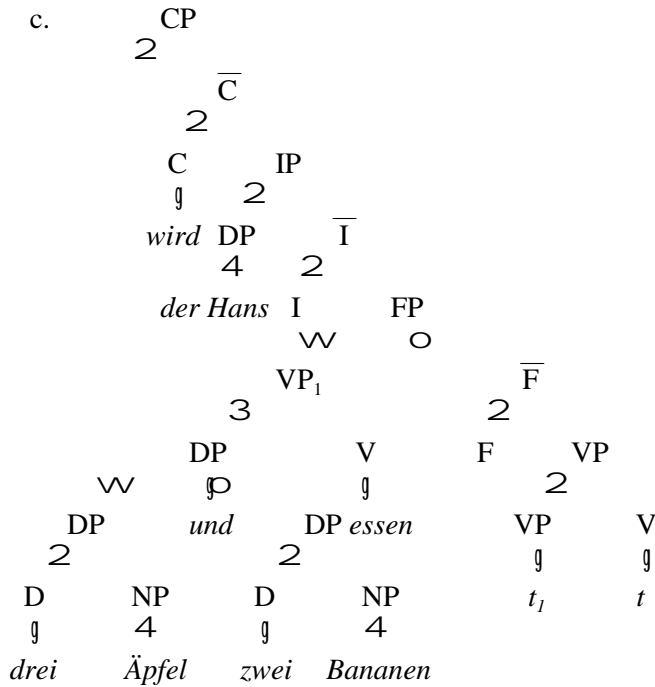
(45) a.



b.



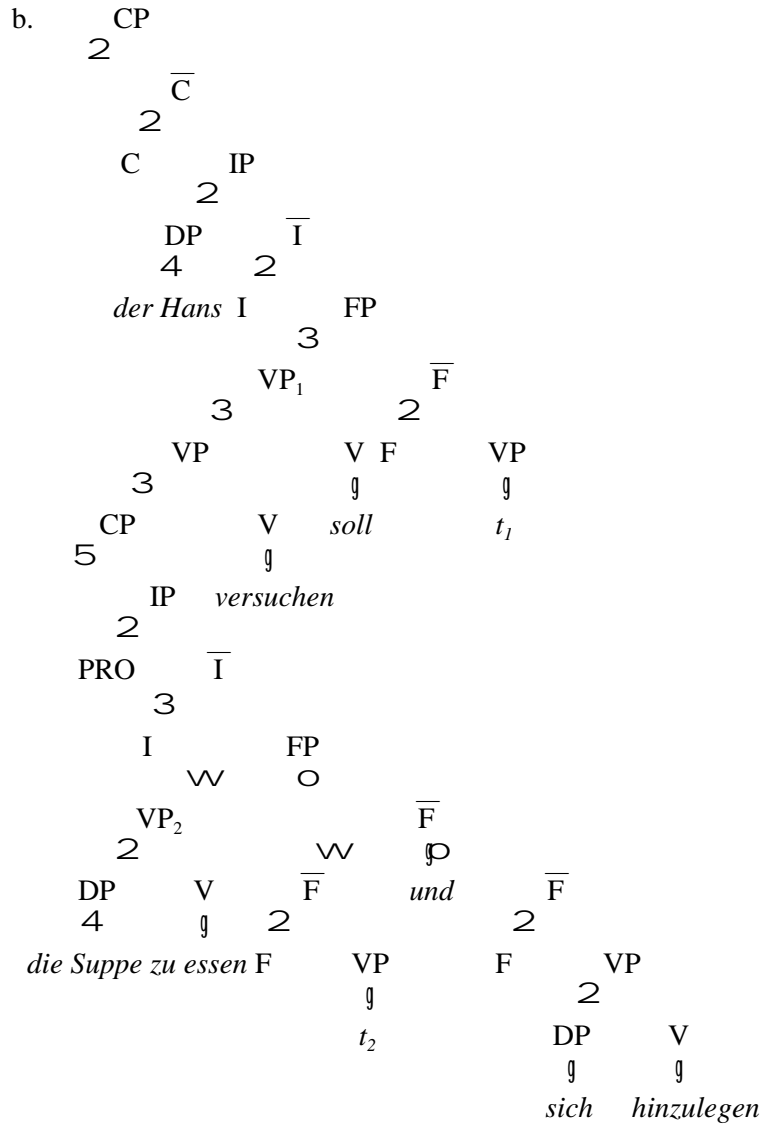
RESTORING EXOTIC COÖRDINATIONS TO NORMALCY

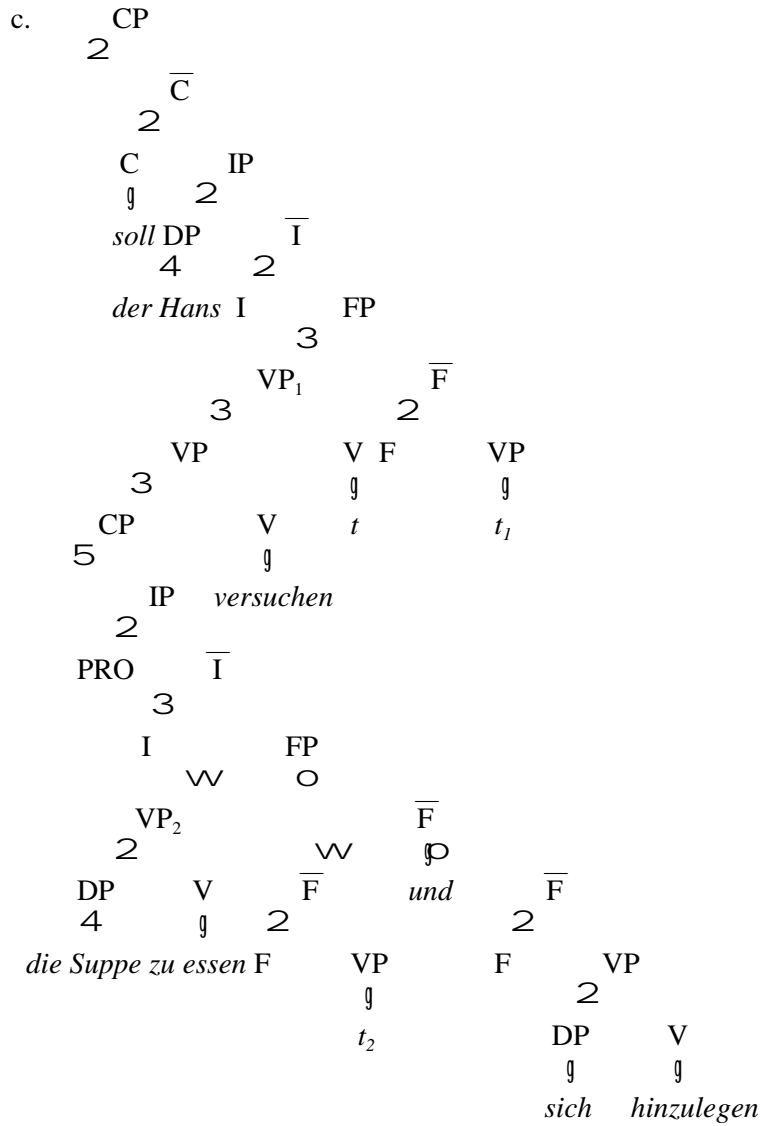


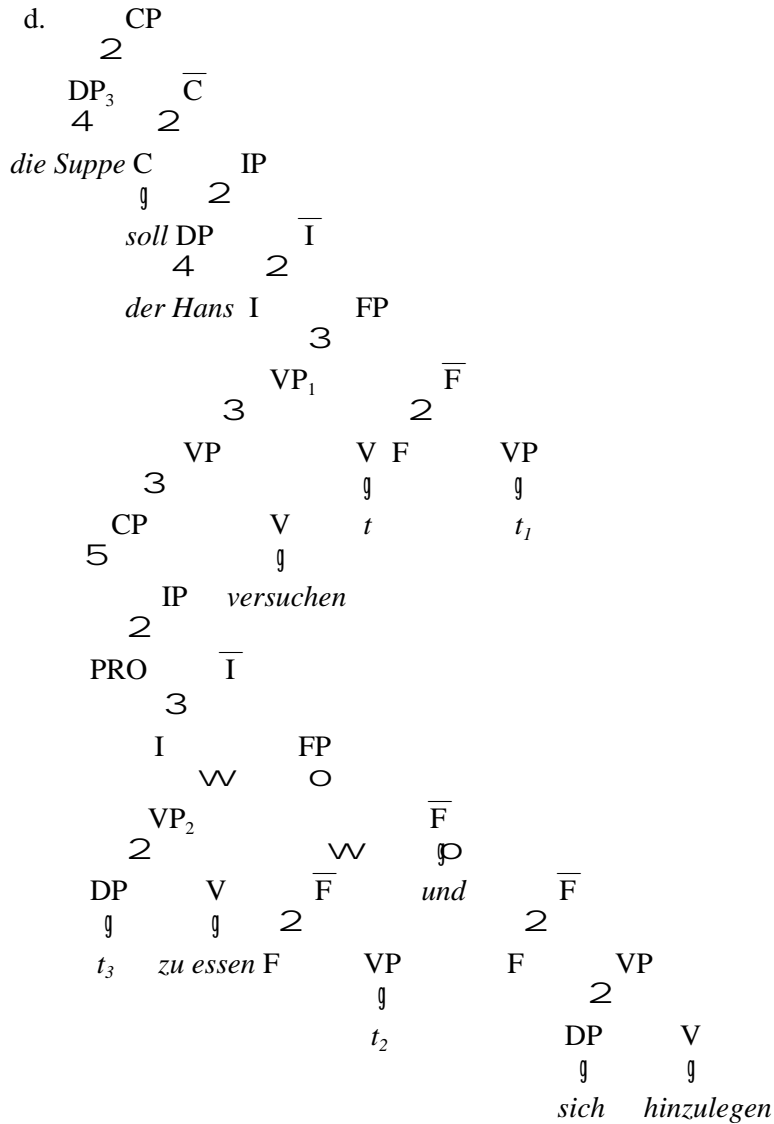
This is how I propose to derive Schwarz's fact, then.

There is something special about cases like (41), however, that needs to be considered. In (41), the material that has moved in violation of the Coördinate Structure Constraint has moved

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If we are to derive Schwarz’s observation in full, this derivation must be blocked too.

A straightforward way of doing this for the case in (41) (and the parallel (4b)) is to deny that the embedded infinitive is a clause, and thereby deprive it of FP. Indeed, treating these infinitivals as VPs has a long history (see Wurmbrand 1998 for recent arguments). In general, it is common to take the sentence-like complements that precede the verb that selects them to be less clause-like than the sentence-like complements that follow their selecting verb.²⁷ If all embedded

²⁷Broekhuis 1992 gives a good chronicle of ways in which clauses in the preverbal, middle field, position appear less clause-like than those that appear in postverbal, the endfield, position.

“clauses” that appear to the left of their selecting verb can be treated as VPs, then this will block derivations like that in (46), and complete our account of Schwarz’s observation.²⁸

4. PROSPECTUS

Much of this proposal rests on ideas that are, frankly, somewhat speculative. My way of engineering the Coördinate Structure Constraint, for instance, though consistent (so far as I know) with the facts has not been independently corroborated, and there is much about it that one might wonder about. Why should there be a difference between A Movement and movement to Specifier of FP? And why should VPs be able to move out of the first of two conjoined \bar{F} s, but not the second (see footnote 20)? Further, I have not defended the validity of the procedures outlined in (26) and (27) for fixing the word-order of the verb-final Germanic languages; and although there are methods in the current literature rather like these, there is nothing precisely like what (26) and (27) constitute. All of this is rather open-ended.

²⁸Is Schwarz’s description of the generalization that underlies the (1)/(4) contrast empirically distinguishable from the one I have offered?

I don’t know. But they are very close.

Consider the schema in (i), which is meant to represent the situation in which odd coördinations fail (and in which \underline{x} , \underline{a} , \underline{b} and \underline{y} represent strings of formatives).

(i) x a *und* b y

Under my description of this situation, \underline{a} and \underline{b} are the coördinated phrases that contain variables bound by material in \underline{x} . (For example, \underline{x} contains the subjects of \underline{a} and \underline{b} , and maybe also a phrase that has Topicalized out of \underline{a} .) This description of (i) fits Schwarz’s characterization of the situation as well. My description, however, insists that \underline{y} is a verb (or verb+particle) that embeds \underline{a} and \underline{b} : this is what makes these cases ungrammatical. Under Schwarz’s description, however, what makes this scenario ungrammatical is the fact that $\underline{x}^{\wedge}\underline{a}$ does not constitute a complete sentence. If it is the incompleteness of $\underline{x}^{\wedge}\underline{a}$ that makes this string bad, however, we can conclude that there must be something in $\underline{b}^{\wedge}\underline{y}$ that could make it complete. Otherwise, this sentence will be ungrammatical for the uninteresting reason that all of (i) is incomplete. Moreover, so far as I can see, the material in $\underline{b}^{\wedge}\underline{y}$ that would make $\underline{x}^{\wedge}\underline{a}$ complete must be found at the end of $\underline{b}^{\wedge}\underline{y}$: I cannot see how else coördination in German could place *und* between \underline{a} and \underline{b} and still legitimately place material that would make $\underline{x}^{\wedge}\underline{a}$ complete after *und*. Under Schwarz’s description, then, we can define \underline{y} as the material following *und* that would make $\underline{x}^{\wedge}\underline{a}$ complete. Finally, Schwarz shows that the ungrammaticality of sentences which fit (i) varies as a function of the susceptibility of \underline{y} to Right Node Raising. As \underline{y} becomes more susceptible to Right Node Raising, the more grammatical become sentences fitting the pattern in (i). Thus, an empirically equivalent reframing of Schwarz’s description is: odd coördinations that fit (i) in which \underline{y} is not Right Node Raisable are ungrammatical. An alarmingly broad range of things are Right Node Raisable, however. To the extent that verbs and verb+particle are the best exemplars of things that cannot Right Node Raise, Schwarz’s description and mine will pick out the same set of sentences.

There are also many special cases that need to be examined before the proposals here can be considered complete. For example, Kathol 1995 and Schwarz 1998 each report that the sentential negator, *nicht*, may have scope over the coördination in these constructions. Their examples are in (47).

- (47) a. Deshalb hörten viele Teilnehmer nicht zu und schrieben mit (sondern bohrten in der Nase).²⁹
 therefore listened many participants not and wrote along (but picking in the nose)
 (Therefore, many participants didn't listen and take notes, but picked their noses.)
 (Kathol 1995 (48):73)
- b. Den Hund hat sie nicht gefüttert und ihn geschlagen.
 the dog has she not fed and it hit
 (She has neither fed the dog nor hit it.)
 (Schwarz 1998 (53a):212)

In these examples, *nicht* is understood to negate the conjoined properties denoted by the VPs. On the account offered here, this indicates that *nicht* can stand in a position outside FP. On the other hand, it is possible for these constructions to have *nicht* within the conjoined VPs; this is indicated by the presence of *nicht* in the right conjunct of (48).³⁰

- (48) Die Tür hat er zugeknallt und hat sich nicht entschuldigt.
 the door has he banged-shut and has self not excused
 (He banged the door shut and didn't apologize.)

This would seem to indicate that *nicht* can have two different positions within German clauses; but this is not a feature that most standard treatments of German have.

Kathol 1995 also describes a case in which an object is related to two VPs conjoined into what might be considered an SLF coördination. His example is (49).

- (49) ...daß ihr das Hans [gezeigt hat] und [später an Otto verkaufen wird].
 ...that to-her that Hans shown has and later to Otto sell will
 (...that Hans showed that to her and will later sell it to Otto.)
 (Kathol 1995 (61):78)

This case differs from the ones we have so-far examined in a variety of ways. First, it is in an embedded context, and therefore does not show verb-second word-order (see below). Second, there appears to be an across-the-board movement of *das*, as it functions as the object of both coördinations. And, finally, there is movement of the indirect object of the first conjunct, *ihr*, out of the coördination in what should be a Coördinate Structure Constraint violation. Under the

²⁹Kathol credits an unpublished 1983 paper by Höhle for this example.

³⁰An example I owe to Bernhard Schwarz.

- (51) a.
- | | | | | | |
|------------|-------------|----------------|-----------------|----|-----------------------|
| | ... | IP | | | |
| | | 2 | | | |
| | DP | | \bar{I} | | |
| | 4 | | 2 | | |
| <i>der</i> | <i>Hans</i> | I | | FP | |
| | | | 3 | | |
| | | | VP ₁ | | \bar{F} |
| | | | 2 | | 2 |
| | VP | | V | F | VP |
| | 5 | | g | | g |
| <i>das</i> | <i>Buch</i> | <i>gelesen</i> | <i>hat</i> | | <i>t</i> ₁ |
- b.
- | | | | | | |
|------------|-------------|----------------|-----------------------|-------------------------|-----------------------|
| | ... | IP | | | |
| | | 2 | | | |
| | DP | | \bar{I} | | |
| | 4 | | 2 | | |
| <i>der</i> | <i>Hans</i> | I | | FP | |
| | | | 3 | | |
| | | | VP ₁ | | \bar{F} |
| | | | 2 | | 2 |
| | VP | | V | F | VP |
| | 5 | | g | g | g |
| <i>das</i> | <i>Buch</i> | <i>gelesen</i> | <i>t</i> ₂ | <i>hat</i> ₂ | <i>t</i> ₁ |

For simple clauses, then, the availability of these two options is not obviously needed.

But they are required on the account I gave for relating SLF coördinations with odd coördinations. In SLF coördinations, the verb of the first conjunct manages to escape the coördination, while the verb of the second conjunct remains inside the coördination. This requires that the option illustrated in (51a) be used in deriving these constructions, because it is necessary to lift the verb of the first conjunct out of the coördination if the Coördinate Structure Constraint is to be avoided. (The derivation in (34) is an illustration.) In odd coördinations, however, the verbs of both conjuncts surface in C° position. Because I have derived this word-order by moving these verbs across-the-board out of the conjuncts, it is necessary that they both remain in the coördination. As a consequence, the option in (51b) is used in this case. (The derivation in (38) illustrates this scenario.) It is central to the account, then, that both these options be available.

But interestingly – and now here’s the problem – these alternatives do not seem to be available in the right conjunct of SLF coördinations in the way that I have just claimed they are in the left conjunct. In all the examples we have examined so far, the finite verb belonging to the VP of the right conjunct has Head Moved and adjoined to F°. For example, (2a) ends up with a parse like (53), from which the surface order is derived by moving *hat* and *den Hund* from the first VP into C° and Specifier of CP to manufacture the V2 word-order.

Nothing in these proposals would block this.

What this problem reveals is that the system proposed here does not place enough controls on movement of verbs, or verb projections, into FP. This insufficiency arises in another guise. A feature of SLF coördinations that has gone undiscussed is that they arise only in root, verb-second word-order, environments. In embedded, non-verb-second, contexts like (56) they are blocked.³³

- (56) a. *...weil den Hund einer gefuettert hat und hat ihn geschlagen.
 ...since the dog someone fed has and has him beaten.
 (...since someone has fed the dog and beaten him.)
- b. *...weil nach Angaben der Polizei kein Opfer seinen Peiniger kennt und
 ...since after the description by the police no victim his tormentor knows and
 schweigt stille.
 remains silent.
 (After the Police bulletin, no one recognizes his tormentor and remains silent.)

There is nothing about the proposals here that would derive this, however.

It's not hard to find constraints that will answer to these problems. We might, for instance, put the problematic situations together and solve them with the constraints in (57).

³³The situation for odd coördinations is less clear. They are degraded in embedded contexts as well:

- (i) ??...weil die Suppe keiner essen wird und sich hinlegen.
 ...since the soup no one eat will and self lie down
 (...since no one will eat the soup and lie down.)
- ??...weil den Hund einer gefuettert hat und ihn geschlagen.
 ...since the dog someone fed has and him beaten
 (...since someone has fed the dog and beaten him.)

But this might be expected on the accounts entertained here. If odd coördinations are derived from SLF coördinations by way of Gapping, as Schwarz suggests, then these are expected to be marginal because Gapping of verb final finite verbs is generally degraded. If odd coördinations are derived from SLF coördinations by way of across-the-board verb movement, as I have suggested, then these may be bad because there must be a place outside of FP to which the finite verb can move. In the verb-second Germanic languages, verbs that move beyond FP are committed to moving into C° (or whatever position stands in second position). Thus, odd coördinations can only materialize in verb-second situations, in which movement into C° is licensed.

- (57) a. The head of the highest VP cannot surface within its VP.³⁴
 b. The trace left by moving X° must be c-commanded by X° at Spell Out.

(57a) will correctly favor (53) over (54): the VP in the right conjunct of (54) violates (57a). And while (57a) will force the highest verb to move (into some local X° position), (57b) will prevent that verb from moving to, and staying in, F° unless the VP it vacates is within its c-command domain. That is possible for the right conjunct of (53), but it isn't for the left conjunct. That is, (57b) will prevent *hat* from moving out of the left VP in (53) and residing in the F° of the left conjunct. To satisfy (57a), then, the verb of the left VP will have to move to some higher position. And this will only be possible in verb second contexts. Thus, (57) will provide the controls on verb movement needed.

Still, it must be admitted that (57) is somewhat more dubiously promissory than the treatments of the Coördinate Structure Constraint and Verb Projection Raising constructions I have offered.

This is not a final solution to the Size Paradox, therefore. But it is, nonetheless, a way of breathing life into the Small Conjuncts solution which I hope shows some promise. And to the extent that it is successful, it offers a reason for analyzing the verb-final Germanic languages along the lines in (26) and (27).

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³⁴A VP is “highest,” when it is not immediately dominated by another verbal projection.

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