Second, consider Adger's own account. His solution is to posit a complex feature structure for Agr given below as (4a), and the parameter in (4b) (my formulation):

(4)

a. Agr A-phi-feature F-phi-features
   pers
   num
   gend

b. Coalesce A- and F-features in Celtic

The features in A are matched against those in F, which is reminiscent of matching DP against Agr in a Spec–Head configuration. As a result of (4b), "the agreeing element and the argument are competing for the same slot in a morphological representation of the functional head Agr" (p. 52). Hence agreement and overt DPs are in complementary distribution. This is exactly the same result as would obtain under an incorporation account. Thus, it does not come as a surprise that (4) cannot account for (2) either. Hence, if (2) is a counterexample to incorporation, it is also a counterexample to Adger's morphological slots analysis.

**3.3** All other things being equal, there is a conceptual reason why the incorporation analysis should not be easily given up. Consider first that the alternative Adger proposes, morphological slots in some lexical representation, is a mechanism which basically does the same work as Spec–Head agreement.

Note now that this type of analysis is an *addition* to the theory of syntax. If incorporation can obviate the addition, then the incorporation option is to be preferred since we know that incorporation is *anyhow* necessary, and movement must *anyhow* be assumed.

Finally, as Adger adopts the minimalist framework, it seems to me that he might just as well sell all of his soul to the devil, instead of just a part of it. In this respect, then, marriage of minimalist syntax to a HPSG view of agreement seems unsuccessful: here the two views cannot both be correct. More generally, it seems to me to be desirable to treat features as heads, whenever possible, so that restrictions on heads will apply in full force and a separate theory of features is superfluous.

## 4. Concluding Remarks

It is remarkable that this thesis has only 136 pages. Surely, a tendency can be perceived over the years towards shorter theses. This may be taken as an indication that linguistics is moving out of the Faculty of Letters and into the Faculty of Sciences, in order words, it is becoming an exact science. After all, short theses of 100–200 pages are the rule in the exact sciences, whereas the humanities still seem to need to justify themselves by bulk. (This is not to say that *within* linguistics short theses are more exact than longer ones, but there surely is a correlation between the length of a thesis and the "exactness" of the discipline from within which it originates.) As to Adger's thesis, I find that he has done an excellent job by resisting the temptation to merely fill pages. The shortness of this thesis is more than justified by the interest its ideas arouses and the clear style in which the arguments are made.

**Acknowledgements**

I would like to thank Marcel den Dikken and Jan-Wouter Zwart for comments and discussion.

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# COORDINATION: A MINIMALIST APPROACH

by *Janne Bondi Johannessen*

Reviewed by
*Jan-Wouter Zwart*

## Summary *by the author*

### 1. Data

Most theories of coordination can handle the archetypical case where two categories of the same syntactic and semantic kind are coordinated. However, there are two challenging kinds of coordination which have not been seriously discussed in the past, in spite of the fact that they occur in a variety of different languages. They will be presented and accounted for below. The first kind is what I call unbalanced coordination (UC), while the second one is extraordinary balanced coordination (EBC). They are exemplified in the Norwegian (1) and the English (2), respectively:

(1)
Ska [æ og dæ] gå?
shall I.NOM and you.ACC go
'Shall you and I go?'

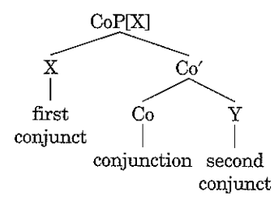
(2)
[Them and us] are going to the game together

It can be seen that of the conjuncts in UC constructions, one is of the expected kind, and one is deviant. In (1), the conjunction phrase (CoP) is in a subject position, which makes one expect nominative Case. However, only the first conjunct has nominative Case, the other has the deviant accusative. In a non-coordinated structure, accusative would be impossible in subject position. The EBC construction in (2), again a CoP in subject position, is one where both conjuncts have accusative Case, i.e., both are deviant.

### 2. Analysis

Many theories of coordination take the view that the conjuncts have the same status in the overall structure, and thus present a symmetric analysis. Furthermore, they often hold that coordinated constructions are composed of grammatical subcomponents which then undergo some kind of deletion. I propose an analysis in which the conjunction is a head in its phrase. This is in line with the development of functional categories, and the idea of applying it to coordination has been taken up by other linguistis as well. However, in the present analysis, the interplay between the conjunct in specifier position and the conjunction in head position is of vital importance. This, to my knowledge, is not a topic in other analyses. Consider first the structure of the CoP.

(3)




One conjunct is in the specifier conjunction (X). The other is in the complement position (Y). As can be seen, the CoP itself has the same specification as the specifier conjunct (indicated by X). In other words, the CoP inherits all its syntactic features from the specifier conjunct alone. The mechanism by which this happens is specifier-head agreement, in accordance with the minimalist approach which requires local X-bar theoretic relations. The fact that the specifier alone is responsible for the features of the CoP means that there is no need for any unification of features between the conjuncts, a mechanism having been suggested in the past. This is an advantage, since conjuncts often have very few, if any, features in common. E.g., in (4), one conjunct (the AP) has the features [+N,+V], while the other has [-N,-V].

(4)
The piano is [$_{AP}$ very nice] and [$_{PP}$ in marvellous condition]

### 2.1 Unbalanced coordination

The structure of CoP gives an immediate explanation of the UC phenomenon. Basically, what happens is that it is the CoP as such which gets the syntactic features from the position in which it is situated. The features, here Case-features, given to the maximal projection are inherited by the head of that projection, i.e. the conjunction. This, in turn, is in a Spec-head agreement relation with the specifier, which hence inherits the features of the maximal projection. The complement conjunct is not in a position where it can receive features. It thus stays without them or is given some kind of default value.

Since the complement conjunct in UC-constructions is deviant, it is clear that there is no possibility of regarding coordination as sticking together grammatical sentences and then deleting the identical material. In other words, (5) could never be regarded as an acceptable sentence on its own.

(5)
*Ska dæ gå?
shall you.ACC go
'Shall you go?'

UC-constructions therefore gives us the clue that constraints on coordination must not be given in terms of the acceptability of the individual component-sentences. The present theory suggests instead that the conjuncts originate as crude syntactic-semantic objects that have been projected from the lexicon. In other words, the conjuncts are not originally single words or phrases, but raw material for sentences, i.e., a verb and its arguments. The minimalist approach is visible in that coordination can happen at any point in the derivation of the syntactic component ("S-structure" as well as "D-structure").

The components are stuck onto the CoP by a generalised transformation, coordinate-alpha. Coordinate-alpha can attach itself to the top of

the component structures (in which case the result is clausal conjuncts) or to anywhere further down. In the latter case, a merging operation which fuses like material and rearranges the CoP to be the daughter of the merged structure comes into action. If the material above the attaching points is not identical, the whole structure will have more than one root, and be unacceptable from an X-bar theoretic point of view. I.e., it is acceptable for coordinate-alpha to attach itself to the subjects of e.g. (6a,b), which after merging of the identical modal verbs results in (1). If, however, coordinate-alpha attaches itself to the subject of (6a) and the main verb in (6b), there would no longer be identical material to merge, and the resulting structure would be out because of its three roots (those of the two components plus that of the CoP).

(6)
a. Ska æ gå
b. Ska dæ gå

**2.2 Extraordinary balanced coordination**

Extraordinary balanced coordination is not uncommon in colloquial speech and child language. Its explanation is very much the same as the one for UC. Like in UC, the complement conjunct is not in a position where it can communicate with anything else. Furthermore, the specifier is of course in the same position as the specifier of CoPs in UC. However, it does not get the relevant features. I suggest the reason is that even when the CoP is in a Case position, it is unable to receive Case, and hence to let its head have it and, in turn, its specifier.

There are several reasons for this view. One is that we should expect a CoP to behave differently from other, single phrases, even if the other phrase is e.g. DP and the CoP is a $CoP_{[DP]}$, for the simple reason that they have different heads. Another is that we know from elsewhere that a $CoP_{[X]}$ can have a different distribution than a single category X (e.g. Norwegian single pronouns vs. coordinated pronouns in certain contexts). A third reason is that we could then explain why clauses and DPs seem to have overlapping distribution and yet only DPs should be regarded as receiving Case. If we assign the reason for this difference to the fact that only DPs, not CPs, can have Case, then we have established the possiblity of different categories behaving differently in the same syntactic position. Given this it is reasonable to assume that for some people, and especially for children, a $CoP_{[X]}$ is simply not the same as the category X.

**3. Arguments for the CoP analysis**

The lack of interest in and knowledge about UC and EBC constructions have led to the fact that important cross-linguistic, universal generalisations have remained hidden. In my thesis, I have looked at examples of UC constructions from 33 languages. In at least 26 of them, it turns out that the order between conjunction and deviant conjunct is the same as that between verb and complement in each language (some of the remaining 7 languages are difficult to assess with respect to word order). This is strong evidence for the analysis in which the conjunction is a head of its construction and the deviant conjunct its complement, just as a verb is the head of its construction and the object its complement.

Furthermore, it seems that the way the deviant conjunct differs from the normal one can be predicted; Case-wise, it will have the default Case of the language, and tense-aspect-wise, it will have the most general tense-aspect, if any. I have not found many EBC constructions, but there, too, it seems that the way the conjuncts differ is the same as that of the deviant conjunct of UC constructions. Again, these observations support the suggested analysis, where the complement conjunct is not assigned features by its conjunction (as some theories would claim), but is instead simply left unaffected, thereby getting whatever is default in that language.

**4. Further remarks**

I have presented the main points of my thesis. There are of course many more arguments for the analysis, not the least for the claim that the conjunction is a head. Furthermore, some important discussions about thematic properties and about extraction out of CoP have been left out here. The theory obviously also has a way of accounting for ordinary balanced coordination (OBC). It is outside the scope of the present summary to say anything about these points.

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## Review
## *by Jan-Wouter Zwart*

Janne Bondi Johannessen's thesis *Coordination* is presumably the first thesis to have come out in Europe that is adorned with the subtitle *A minimalist approach*. The fact that this work has developed independently from Chomsky's and Kayne's recent work (see Johannessen 1994: 113) testifies to the clear-headedness of J's approach.

I see it as the most important contribution of the research reported in this thesis, that coordinated structures are analyzed within the boundaries of a highly restrictive theory of phrase structure. In this respect, C is an implementation of a research program initiated by Munn (1987), and subsumed in Kayne (1993). It deviates from earlier approaches in which coordination was analyzed in terms of ternary branching or multi-dimensional representations.

The second important contribution of this book is of an empirical nature. Partly through a query on the Linguist List, J has collected an impressive amount of data of coordination in a large variety of languages. As far as I have been able to ascertain, J has carefully analyzed the data, eliminating several cases which on closer scrutiny turned out not to be relevant.

This is not to say that J's analysis of the data is beyond discussion. For instance, she consistently analyzes serial verb constructions as involving coordination rather than subordination (p. 33). I also disagree with the judgment that Dutch *ik heb zij die elders wonen voor ogen* 'I am referring to they who live elsewhere' is less grammatical than when this sentence would be the second conjunct of a coordinated construction (p. 10). It is significantly worse however than *Ik heb niet alleen de Kroaten voor ogen maar ook zij* 'I am not only referring to the Croats but also they (i.e. to them)', which is hopeless. Also, (56b) on p. 100, which should include a conjunction *en* in front of the second conjunct, must be considered grammatical, rather than marginal. I'm not sure that additional cross checking would have eliminated the discrepancies, however. For many languages, cross checking was probably not even a possibility within the limits of the research project leading to this thesis.

In presenting her material, J has managed to convince me that what everyone knows as an oddity of individual languages, the unbalanced coordination, is a structural phenomenon of language that should not remain cast aside. Undoubtedly, this descriptive part by itself will be of service to linguists of all persuasions for many years to come. (In this connection, J must also be complimented for the useful language index.)

What is most gratifying, however, is that the empirical material has been put to excellent use as part of an argumentation for the conceptual point mentioned earlier, namely that coordination structures ought to be analyzed in a restrictive theory of phrase structure. Precisely the phenomenon of unbalanced coordination, which presents solid proof of the asymmetry within a coordinated structure, makes it hard to settle for less than a two-dimensional, binary branching analysis.

The argumentation is very elegant. A coordinated structure [A&B] has a syntactic function in the sentence. Assume that this syntactic function is expressed by morphology, e.g. Case-marking by a licenser. It is the relation between the licenser and the conjuncts that is relevant here. In the normal case, A and B both show the morphology that relates them to the licenser. This, J calls *ordinary balanced coordination*. Crosslinguistically, however, there turn out to be more possibilities: either none of the conjuncts shows the expected morphology (which J calls *extraordinary balanced coordination*) or the expected morphology shows up on just one of the conjuncts (*unbalanced coordination*). In the latter case, there turns out to be a correlation between the VO/OV status of the language and the choice of the conjunct carrying the expected morphology: in VO languages, this is the first conjunct, and in OV languages, the second. This leads one to conclude that in unbalanced coordination constructions, only the conjunct closest to the licenser is in construction with the licenser (in a pretheoretical sense).

The generalization concerning unbalanced coordination favors a two-dimensional analysis over a three-dimensional analysis (unless morphology is considered to be regulated after linearization of the multi-dimensional structure). It also favors a binary branching analysis over a ternary branching analysis. In a ternary branching analysis, one conjunct is not hierarchically superior to the other. The favored position of one of the conjuncts in unbalanced coordination, then, must be an effect of adjacency. But adjacency, unless derived from specifier-head agreement configurations or head-complement configurations, does not play a role in present day conceptions of licensing relations. Therefore, given the present state of the art, the phenomenon of unbalanced coordination can only be analyzed in terms of hierarchic, binary branching, two-dimensional structures.

Assuming that licensing relations involve specifier-head configurations, and accepting the possibility of features percolating up or down the main projection line, unbalanced coordination is not at all an unexpected phenomenon. (Percolation appears to have been introduced in grammatical terminology by Dougherty (1968), as part of an analysis of coordination.)

If [A&B] occupies the specifier position of a projection headed by some licenser C, and & is the head, and A the specifier, of [A&B] (more properly represented as [A[&B]]), we expect A to be licensed by C via Spec–head agreement of A and & and Spec–head agreement of the projection of &, [A&B], and C. Crucially, what we do not expect is for B to be in construction with C in the same way as A is. As J shows, B typically receives default morphology in unbalanced coordination constructions.

From the same perspective, extraordinary balanced coordination, in which both A and B show default morphology, can be described if we assume that something goes wrong in this "transitive" licensing process, in which A agrees with C because A agrees with &, the projection of which agrees with C. J (p. 92) assumes that in this type of constructions, [A&B] itself cannot enter into the relevant licensing relation, which somehow sounds less plausible to me. Stahlke's (1984: 360) example *Them and us are going to the game together* (quoted on p. 58) shows that there is agreement between the coordinated construction and the head licensing number agreement. This makes it hard to maintain that [A&B] is not in construction with a functional head (or, in minimalist terms, is not involved in checking N-features). Rather, it seems the case

that the individual members A and B are not assigned Case, perhaps because of a failure of percolation of the relevant features. But these are technicalities. The point remains that the structure assumed by J makes it easy to account for what have appeared to be weird phenomena for a long time.

J presents her case so convincingly that it becomes hard to understand how ordinary balanced coordination (in which both A and B are in construction with C) can be a phenomenon of language at all. J's account of ordinary balanced coordination is less satisfactory (p. 94f.). Basically, J considers it to be a lexical feature of the conjunction that the features of A are required to be on B as well. This is little more than a rephrasing of the phenomenon. A more interesting approach might have capitalized on the possibility of there being actually two conjunctions in a simple coordinated construction, as in (1).

(1)
[ A & [ B & ]] (order irrelevant)

Agreement between A and B (and with the licenser C outside the coordinated construction) can then be analyzed as being parasitic on the head-head agreement of the two conjunctions.

Multiple coordination, as in (1), is a familiar phenomenon from languages like Latin and Greek. Although I know of no languages where multiple coordination is actually obligatory, the wide-spreadedness of the phenomenon might be taken to suggest that coordinations actually contain as many conjunctions as conjuncts. This possibility is not explored in the thesis.

J briefly discusses "discontinuous conjunctions" of the type *both A and B* (p. 105). She shows that the *both* element in this type of construction has a funny status, as it may be moved away from the *A and B* part. This, however, does not in principle argue against an analysis in which *both* originates as a head within the coordinated construction (as is also argued by Kayne 1994). Still, *both* adds a distributive reading to *A and B*, which suggests that it should be treated separatedly from an ordinary *A and B* construction, which might originate as a complement to the distributive head *both*.

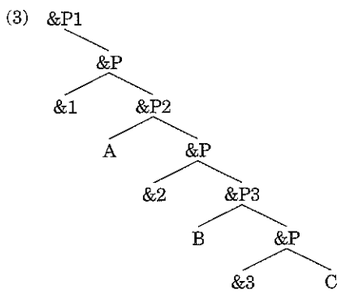
It would be interesting to study multiple conjunction on a larger scale. If ordinary balanced coordination is a matter of concatenation of Spec-head agreement and head-head agreement, all coordinated constructions might show multiple coordination (and the Latin type coordination must be regarded as prototypical). This would lead one to believe that the complement of *both* is in fact something like (1). This predicts that not all multiple conjunction structures in the world's languages have a distributive reading, something worth looking into.

Multiple conjunction phenomena have led Grootveld (1993) to conclude that the proper representation of coordination involves multiple dimensions. But if we assume that there is a conjunction for each conjunct, no such conclusion is warranted. Consider the following facts from Dutch.

(2)
a. en A en B en C kochten een auto
and A and B and C bought a car
b. en A en en B en C kochten een auto
and A and and B and C bought a car

(2a) has at least two interpretations: one in which A, B, and C each individually buy a car, and one in which (for instance) B and C together buy a single car. In the first case, we end up with three cars being sold, in the second case, with two. In other words, B and C form a group in the second reading of (2a), something we wish to represent in the X-bar structure of *en A en B en C*.

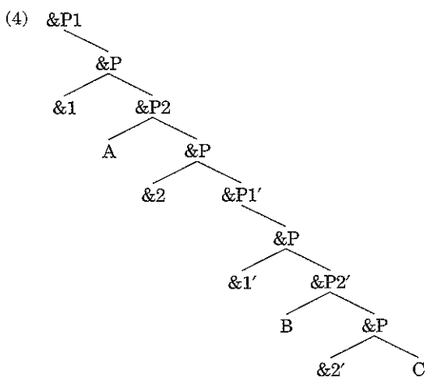
A plausible binary branching structure of (2a) is (3) (the structure in (3) abstracts away from the surface ordering of the elements involved, in which the agreement relations would be more properly expressed):

(3)



How can we read the different readings of (2a) off of the structure in (3)? &P3 is a complement of &2. The two readings of (2a) can now be formulated as follows: &P3 is transparent in the distributive reading of (2a), in which we end up with three cars being sold, and &P3 is opaque in the group reading of (2a), leading to only two cars being sold. However, the structure in (3) does not allow us to derive this difference, since the relation between &2 and &P3 is the same in both cases.

I believe that the construction in (2b) provides the clue to the solution of this problem. The interpretation of (2b) is that B and C constitute a group of which each member individually buys a car. For some reason, which does not concern us here, the group B and C is set apart from A (perhaps indicating that there have been only two buying events), just like in the group reading of (2a). But unlike the group reading of (2a), and like the distributive reading of (2a), we end up with three cars being sold. Let us call the reading of (2b) a "layered distributive" reading.

Structurally, the second *en* conjunction from the left in (2b) takes the group *en B en C* as its complement. There is, then, a one-to-one correspondence between the number of conjuncts and the number of conjunctions. This leads to a structural representation like (4):

(4)



In (4), *&P1′* is the second conjunct of the root coordinated structure, just like *&P3* in (3), but *&P1′* itself is a coordinated structure, unlike *&P3* in (3).

If (4) is a correct representation of the group character of *(en) B en C* in (2b), the group reading of (2a) should be represented in the same way. This implies that (2a) is actually structurally ambiguous between (3) and (4), the distributive reading corresponding to (3), and the group reading corresponding to (4).

If this is correct, we are led to two conclusions. First, the difference in interpretation between the group reading of (2a) and the layered distributive (2b) is not a matter of structure. In both cases *(en) B en C* is structurally represented as a group. This contrasts the group reading of (2a) and the layered distributive (2b) on the one hand with the distributive reading of (2a) on the other. Consequently, the difference between the group reading of (2a) and the layered distributive (2b) must be expressed in terms of the nature of the conjunction *&1′* (cf. (4)). In the layered distributive (2b), this must be a distributive conjunction, comparable to English *both*. In the group reading of (2a), *&1′* must be a non-distributive conjunction, which remains empty in Dutch and English.

The second conclusion is, that since this empty conjunction is needed to express the non-distributive group interpretation of *B en C* in (2a) (i.e., *&P1′* in (4)), simple non-distributive conjunctions like *A and B* must involve an empty non-distributive conjunction as well. Hence, *A and B*, in the non-distributive reading, is more properly represented as *∅ A and B*.

This supports the idea that the number of conjunctions always equals the number of conjuncts. On this analysis, ordinary balanced coordination can simply be analyzed as involving an additional step, namely head-head agreement between the two conjunctions.

The proper analysis of agreement within the coordination phrase presumably requires the adoption of functional projections inside the coordination phrase, allowing conjunctions and conjuncts to move in order to generate word order variation. As the structures in (3) and (4) stand, the rightmost conjunct cannot agree with the rightmost conjunction, since conjunct and conjunction are in a head-complement relation. This aspect has been ignored in the discussion above.

Word order variation within coordinated constructions is also a topic which J's thesis clearly puts on the research agenda. The generalization that the position of the agreeing conjunct in unbalanced coordination correlates with the position of the head in the general phrase structure schema looks extremely strong. Of the 6 potential counterexamples, Afrikaans, Dutch, Estonian, German, Homeric Greek, and Vedic, 3 are Germanic OV languages which have recently been reanalyzed as VO languages (Zwart 1992). This clearly strengthens the typological generalizations made in J's book.

It would have been interesting to see a discussion of the word order variation in coordination, and of the variation regarding which of the conjuncts is the regular one in unbalanced coordination, in the context of Kayne's (1993) conjecture that heads and specifiers are invariably to the left. J crucially relies on the reality of a basic OV/VO distinction in her analysis of unbalanced coordination. Thus, in an OV-language, it is the second conjunct which is in construction with the licenser outside the coordinated construction. To account for this, J assumes that the relevant languages have a specifier position to the right, occupied by the second conjunct, which then agrees with the outside head, also positioned to the right.

If Kayne is right, the OV order must be derived by movement, and so must the order of the conjuncts within the coordinated construction. It is not immediately clear how this can be worked out, which makes it understandable, though regrettable, that J refrained from tackling this question.

J's laudable preoccupation with issues of phrase structure extends to the rather tricky question of how coordinate structures come into being (in a phrase structural sense). It seems to me that here J's approach is not as compatible with the approach to phrase structure building in Chomsky (1992) as we are led to believe.

First off, simple coordinations like *A and B* can easily be derived in the bottom-up structure building procedure of Chomsky (1992). Insertion of such a chunk in a larger structure, for instance in the complement position of a verb, is a possibility that the structure building procedure does not exclude (contrary to what J suggests on p. 129). The question that arises, however, is whether *all* coordination phenomena can be described in terms of this bottom-up structure building process.

J argues that coordination always involves two or more CPs (see also Van Oirsouw 1987,

Wilder 1994). Of the elements of these component sentences, those that match are *merged*, and those that do not match are *coordinated* (by a process called *coordinate alpha*). ("Merging" in this sense should not be confused with "merging" in the sense of Chomsky 1994, in which it is used as a different term for "generalized transformation".) Van Oirsouw and Wilder, on the other hand, assume that matching elements *delete*. The merging approach and the deletion approach may be viewed as two opposing trends in theorizing about coordination. In opting for merging, J essentially sides with the factorization approach of Williams (1978) and the linearization approach of Goodall (1987).

It is unfortunate that the thesis does not contain an extensive discussion of the merging approach as compared with the deletion approach (see e.g. p. 113). Merging and coordinate alpha cannot but be viewed as additions to the structure building process of generalized transformation, whereas deletion merely makes use of zero copies of material elsewhere expressed.

There is much more that could be said about this thesis. For example, J's claim that extraction from coordinated constructions is constrained on grammatical rather than syntactic grounds (p. 133), does not seem to be supported by an adequate analysis of the relevant data. Since anything can be coordinated with anything in the coordinate alpha approach, there is no reason to analyze the conjunction reduction facts studied in Höhle (1983), Zwart (1991), and elsewhere as involving extraction out of the first conjunct (see p. 137). (J's analysis of these constructions on p. 118, illustrating the merge operation, also ignores the possibility of coordinating unlike categories.)

In all, however, the exploratory nature of much of the analysis is counterbalanced by the wealth of new material for the linguistic community to think about.

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# COMPLEX PREDICATES

by *Ad Neeleman*

Reviewed by
*Guido Vanden Wyngaerd*

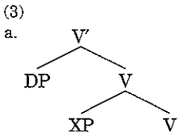
## Summary
### *by the author*

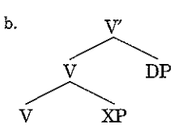

As an alternative to the well-known small clause analysis of Stowell (1981), Hoekstra (1984) and subsequent work, this study reintroduces Chomsky's (1955) complex predicate analysis for Dutch and English verb-particle constructions, verb-resultative constructions and constructions in which verbs like *consider* take a non-CP complement:

(1)
a. Dat Jan zijn moeder **op belt**
that John his mother up calls
b. Dat Jan de deur **groen verft**
that John the door green paints
c. Dat Jan zijn vader **intelligent vindt**
that John his father intelligent considers

(2)
a. John **calls** his mother **up**
a′. John **calls up** his mother
b. John **paints** the door **green**
c′. John **considers** his father **intelligent**

That is, it is argued that the non-verbal predicate in these constructions is base-generated adjoined to the verb, and that the V′-internal DP is in fact the object of this verbal complex, as in (3). This structure immediately derives Dutch surface order, as well as English examples like (2a′), in which the non-verbal predicate shows up adjacent to V.

(3)
a. 

b. 


Direct evidence for structures of the type in (3) comes from cases where the non-verbal predicate remains in situ. In Dutch, verb-predicate combinations behave as a unit for certain processes affecting $V^0$-categories. They can be the landing site for P-incorporation, they can undergo verb raising, nominalization, and topicalization, they can be coordinated with a simplex verb, and they form an inseparable unit for scrambling (see also Hoeksema 1991). Below, these arguments are illustrated for verb-particle constructions:

(4)
a. (Dit is de telefoon) waar$_i$ Jan zijn moeder
this is the telefoon that John his mother
[$t_i$ $t_j$] [$_V$ mee$_j$ [$_V$ op belt]]
*with up calls*
b. Dat Jan [zijn moeder $t_i$] [$_V$ wil [$_V$ op bellen]$_i$]
that John his mother wantsup call
c. dat voortdurende opbellen van zijn moeder
that constant upcalling of his mother
d. [Op bellen]$_i$ [0$_i$ wil Jan zijn moeder niet $t_i$]
up call wants John his mother not
e. Dat Jan zijn moeder vaak [schrijft en
that John his mother often writes and
[op belt]]
up calls
f. Dat Jan zijn moeder op (*gisteren) belde
that John his mother up yesterday called

In English, such direct evidence is harder to find, since many non-verbal predicates must be extraposed. However, in those cases where extraposition does not occur, the verb-predicate combination behaves as a unit with respect to, amongst other things, pseudo-passivization and coordination with simplex verbs:

(5)
a. John$_i$ was [[walked out] on] $t_i$ by Mary
b. John [[wrote up] and published] his dissertation last year

Assuming that non-verbal predicates are adjoined to the verb in verb-predicate constructions, one may wonder how English word order is derived. In English, the non-verbal predicate usually shows up to the right of the object. Following Chomsky (1955), English surface order can be argued to be is the result of a short rightward movement of the non-verbal part of the complex predicate; presumably it is adjoined to V′:

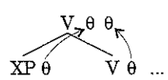
(6) 


Arguments for rightward predicate movement can be construed on the basis of the distribution of adverbials, the impossibility of rightward predicate movement if the verbal complex is coordinated with a simplex verb (as a result of the coordinate structure constraint) and the blocking effect predicate movement has on extraction out of the object (as a result on the ban on crossing A′-dependencies). The last two arguments are illustrated by the data in (7).

(7)
a. *John [[wrote $t_j$] and published] his dissertation up$_i$ last year
b. *What$_j$ did John look $t_i$ [information about $t_j$] up$_i$

If the complex predicate analysis is correct, three important questions have to be addressed: (A) How are the semantics of verb-predicate constructions derived; or, more precisely, how is the argument structure of a complex predicate composed? (B) What triggers predicate movement in English? (C) What is the relation between complex predicate formation and word formation? (C) has already been discussed by Neeleman & Weerman (1992). With respect to the first two questions the following proposals are made.

(A) It is argued that the argument structure of complex predicates is the result of θ-role percolation. That is, both the verb and the non-verbal predicate attribute θ-roles to the complex predicate:

(8) 


The composition of a new θ-grid for the complex predicate explains, amongst other things, why the addition of a non-verbal predicate has a transitivizing effect (i.e. intransitive verbs may head transitive VPs in verb-predicate constructions), while such an effect is lacking with depictives and other predicates that are arguably not part of a complex predicate:

(9)
a. Dat Jan *(zich) kapot werkt
that John himself broken works
(under a resultative reading)
b. Dat Jan (*zich) naakt slaapt
that John himself nude sleeps
(under a non-resultative reading)