

Notes on some particle and prepositional constructions in Swedish and English

Helen Goodluck

This paper concerns mainly the constituent analysis for particle verb constructions. In sections A-D, a complex verb analysis for particle verb constructions in Swedish is proposed, and particle constructions are distinguished from prepositional constructions with the same stress pattern. In section E, a complex verb analysis for particle constructions in English is defended against arguments by Kayne 1985 against such an analysis. A difference in the distribution of double object constructions in the two languages can be made to follow from the existence of a particle movement rule in English.

A. THREE SWEDISH SENTENCE TYPES

It is widely accepted that the 'particle' in particle verb constructions in English and Swedish should be analyzed as a member of the category preposition, or possibly adverb in some instances (Emonds 1972; Ejerhed 1979, n.d.). In what follows we will use the term 'preposition' to refer to a preposition that is head of a PP and the term 'particle' for a preposition that is part of a complex verb construction. The following three sentence types will be distinguished in Swedish:

i. Particle verb constructions, where the meaning of the verb plus particle is non-compositional in many cases and where there is compound stress (destressing to the left), resulting in primary stress on the particle,¹

1. Flickan tög av plåstret (´ = stress degree n
'the girl took off the bandaid' ∨ = stress degree <n)

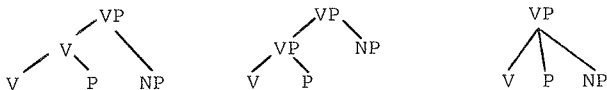
ii. Prepositional constructions that have a stress pattern similar or identical to that of the particle constructions and a fairly predictable semantic interpretation. In

2. Katten höppade bākom elefanten
'the cat jumped behind the elephant'

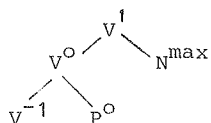
the object NP is interpreted as the location towards which the cat jumps (i.e. the interpretation is 'jump to behind').

lysis, we can infer both that the P--NP sequence to the right of the gap site in (5c) and (6c) is a PP (single constituent) and that the V--P sequence that is gapped in (4b) is a complex verb [_vtog[av]], since only members of the category verb gap in Stillings' analysis. (The relevance of gapping to complex verb status on Stillings' analysis is pointed out by Selkirk 1982, p.28). However, the facts are not more than consistent with a complex verb structure. Stillings herself must admit cases of 'reanalysis', where, for example, an NP is reanalyzed as part of the V (to allow 'John writes poems in the bathroom and Sue ~~writes poems~~ in the garden', where the material struck through is the sequence to be gapped; parallel examples exist in Swedish). Moreover, the facts in (4-6) could all be accounted for by a tighter restriction on the material to the right of the gap site, to the effect that it is not only a constituent, but an immediate constituent of a projection of V (cf. Neijt 1979, Cht 3); that will exclude deleting the head of a PP (5b/6b) and will permit a direct object to be left (4b), without any inference about the syntax of the material that is deleted.⁴

We have then three logical possibilities for the syntax of the V--P--N sequence in (1): a complex verb structure, a hierarchical structure where P is attached to a phrasal projection of V at a lower level than the object, and a flat structure analysis,



Ejerhed (1979, n.d.) opts for the third, flat structure, analysis, as opposed to a complex V analysis, on the ground that a complex V analysis assumes rules that incorrectly predict recursion of the internal V, with complexes of P on the right; such particle constructions do not occur.⁵ She notes also that this potential problem would not arise if some other symbol than plain V were expanded by the rule for forming the complex verb. Recent studies of morphology suggest that such a restriction may be accommodated within general constraints on word-formation. Thus, following Selkirk's (1982) application of X-bar theory to word-structure, we can propose that verb particle constructions are the result of a rule where the category V at bar level 0 (the level WORD) is expanded to V at level -1 (the level STEM) and P at 0. The structure for the verb phrase in (1) will thus more precisely be,



and the possibility of recursion will be excluded. This analysis is consistent with Selkirk's general constraint on word structure rules (p. 8) that a word category can only be rewritten with categories at the same or lower bar level, but is at odds with Selkirk's (tentative) analysis of verb-particle constructions as compounds, which on her theory must be composed of categories that bear the same bar level specification as the dominating category (see pp. 47-52). However, the analysis does away with the recursion problem (a problem that Selkirk fails to note for her treatment of English verb particle constructions as compounds); moreover, the removal of particle verb constructions from the inventory of compound types eliminates the one counter-example in Selkirk's analysis to the generalization that English compounds are right-headed.

It is difficult to find any clear cut ground for choosing between the two hierarchical versions of the structure for particle constructions (complex verb and phrasal projection of V). On the side of the complex verb analysis (and against both the hierarchical and flat structure phrasal analysis), the complex verb structure is consistent with a theory of X-bar word and phrase syntax where all complement positions at the phrasal level are maximal projections, with the expectation that they will show the full range of complementation for the category type (i.e. it eliminates the need for a constraint to ensure only intransitive prepositions occur between the V and object, a problem Selkirk (p. 28) notes for the flat structure analysis of particle verbs in English). A potential problem for the complex V analysis in Swedish is that the particle does not move with the verb (e.g. in subject-verb inversion, 'Tog flickan av plåstret?', '*Tog av flickan plåstret?'), this can be handled at least mechanically in the X-bar analysis above by requiring rules that move V to affect V_{min} (or the finite verb, leaving aside any problems with feature percolation). In Section E assuming some kind of hierarchical analysis in the base for both Swedish and English will contribute to

an account of a difference in distribution of double object constructions in the two languages. We will simply adopt the complex V analysis as a working hypothesis.

It might be argued that a flat structure analysis is needed, and is the correct analysis for sentences of type (2). That analysis would account for the fact that some speakers reject sentences such as (5c), on the assumption that the material to the right of the gap site must be a constituent. Additionally, when the preposition and object are preposed to initial position, the interpretation given to the object is almost invariably that of 'in location' (the reading corresponding to (3)), with stress on the preposition in the preposed phrase being rejected or interpreted as contrastive stress of some type.

7. Bakom elefanten hoppade katten.

The absence of preposition stressing and the towards-location reading would follow on the flat analysis, given the standard assumption that only constituents can be preposed.

However, I do not think a flat structure analysis is necessary for sentences of type (2). With respect to gapping, the rejection by some speakers of sentences such as (5c) may reflect an additional constraint in their dialects, that requires the eliminated materials to be a complete semantic unit. Such a constraint cannot be met in (5c) consistent with the syntactic conditions on gapping (whichever version of the conditions sketched above is adopted).

With respect to the interpretation of preposed PPs, it is worth noting that constituenthood is not a necessary condition for unifications by stress, which is the cue for the toward location reading for sentences such as (2).⁶ But linear contiguity may be. A simple solution to the absence of the 'toward location' reading for sentences such as (7) would be that the prosodic pattern of stress on the preposition is assigned at level 'after preposing'. However, given the evidence that the results of such stressing operations are frequently preserved in the outputs of reordering (see Rischel 1983 and references therein), something more sophisticated (or at least different) will need to be said about why the towards location reading is absent for (7) for most speakers. One possibility is that the stylistic function of preposing gives priority to a contrastive interpretation of stress

on the preposition, and thus indirectly promotes the in-location reading.⁷

C. SEMANTICS

Ejerhed (n.d.) describes several regularities characterizing the meaning of verb particle constructions that do not have lexicalized (completely non-compositional) meaning. The particle may perfectivize and may transitivize the verb to which it is added; it may also imperfectivize and intransitivize and it may add various completative nuances of meaning. The following are among the examples given in her paper (p. 21-22),

8.a Perfectivization

Vattnet rann	'the water was running'
Vattnet rann ut	'the water ran off'

b Transitivity and perfectivization

Hon satt	'she was sitting'
Hon satt av föreläsningen	'she sat through the lecture'

c Intransitivity

Han såg matchen	'he saw the fight'
Han såg på	'he watched'

d Completive meanings

Han åt kakan	'he ate the cake'
Han åt upp kakan	'he finished the cake'
Huset brann	'the house was on fire'
Huset brann upp	'the house burned down'
Han sköt två soldater	'he shot two soldiers (accidentally or intentionally)'
Han sköt ned två soldater	'he hit and killed two soldiers'

We can add the observation that where the meaning of the particle remains fairly transparent, the interpretation is frequently causative or resultative. Thus in 'Jan tog på hatten' (Jan put on the hat), the hat is on as a result of the action.

The alternation in meaning between the prepositional examples in (2) and (3) is different from any of these functions, and can be expressed in terms of a change in the thematic role assigned to the object NP. Following Gruber (1976) and others, we can designate the role of the object in the towards location interpretation in (2) as GOAL and the role of the object in the in-location interpretation of (3) as LOCATION. We assume that individual prepositions that permit the stress alternation are lexically speci-

fied for either a GOAL or LOC object (cf. the English prepositional equivalents, such as the gloss for (2), which are ambiguous between the two readings); preposition stressing in Swedish must then be associated for this construction with a semantic rule that selects GOAL as the thematic role of the object. Intuitively, this association of goal (rather than LOC) with the stressed preposition is non-arbitrary, in that the stress unifies the verb and the preposition, and LOC is not (canonically) assigned to non-prepositional arguments in Swedish; but since I have argued in section B that the object remains syntactically a prepositional object in sentences such as (2), such a generalization cannot be cashed out at the level of surface syntax.

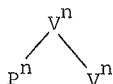
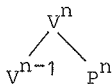
D. SUMMARY: COMPOUNDING VS. MODIFICATION IN WORD STRUCTURE

On the analysis given above, Swedish V--P--NP sequences conform to current (X-bar) conceptions of word structure and phrase structure. At the word level, words are composed of categories at the same or lower bar-level than the category of the word itself ($V^0 \rightarrow V^{-1}P^0$). At the phrasal level complements are maximal projections ($V^{n>0} \rightarrow \dots P^{\max}$). Unification by stress is not a sufficient condition for inferring particle verb syntax.

There are other facts concerning particle constructions to be examined in the context of the type of word-syntax used here, which may throw light on the relation between the structure of words and their semantic interpretation. For example, there is an alternation in some cases between a verb with particle in final vs. initial position. The initial position variant will tend to be less colloquial or to have a more abstract meaning. Thus Ejerhed (p. 23) gives the following examples:

transportera ut	=	uttransportera
'transport out';	synonymous,	transportera ut more colloquial
bryta av	≠	avbryta
'break off'		'interrupt'

If we adopt the analysis above for verb plus particle sequences and a compound analysis for particle plus verb (the latter along the lines of Selkirk's analysis of English P--V verbs), the contrast will be one of difference vs. sameness of bar levels of the constituents of the verb,



Intuitively, this difference in syntax can be made to fit with the concrete-abstract contrast in meaning in the following way. In the V--P construction the P is a modifier of the head whereas in the P--V construction it is a subconstituent of equal rank as the head (where headedness is determined by shared category features and modifier defined as a constituent of the word with bar level distinct from the head). Modifiers may be expected to add to the meaning of the head, but not to change its basic meaning; by contrast, the meaning of compounds may be determined by rules in which each constituent of the compound contributes to the basic meaning, with the possibility of a shift away from a concrete meaning of the verbal head.

E. KAYNE'S ARGUMENTS AGAINST COMPLEX V IN ENGLISH

The observations made above with respect to the syntax and interpretation of Swedish particle constructions largely apply to English particle constructions also. English particle constructions show the same pattern of gapping,

- 9.a Sue took off the bandaid and Fred took off the cast
 b Sue took off the bandaid and Fred \emptyset \emptyset the cast

and similar semantic patterns in both preverbal and post verbal position. English differs from Swedish in permitting particles to follow as well as precede the direct object,

- 10.a Fred took off the cast
 b Fred took the cast off

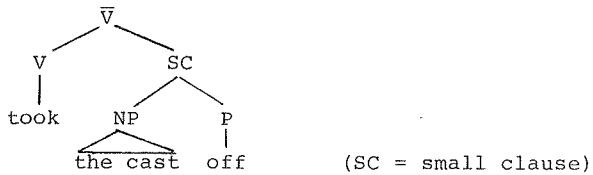
and in permitting double object particle sentences with a predicative or dative interpretation, as in (11) and (12) respectively,

11. John made Bill out a liar
 12. John handed Bill down the tools.⁸

Both the alternation between sentence pairs such as (10a, b) and the derivation of double NP particle sentences are dealt with by Kayne (1985), who analyses particle constructions in English as instances of small clause constructions, within a Government-Binding framework. Here I will outline Kayne's analysis and evaluate the arguments he makes against a complex verb analysis.

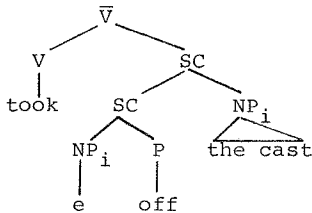
In Kayne's analysis, the D-structure for particle constructions has the particle in final position, as head of a small clause, of which the post-verbal NP is subject. Thus the D-structure of the VP for both 10a and 10b will be 13,

13.



The S-structure for 10a will be derived by rightwards movement of NP, to yield 14,

14.

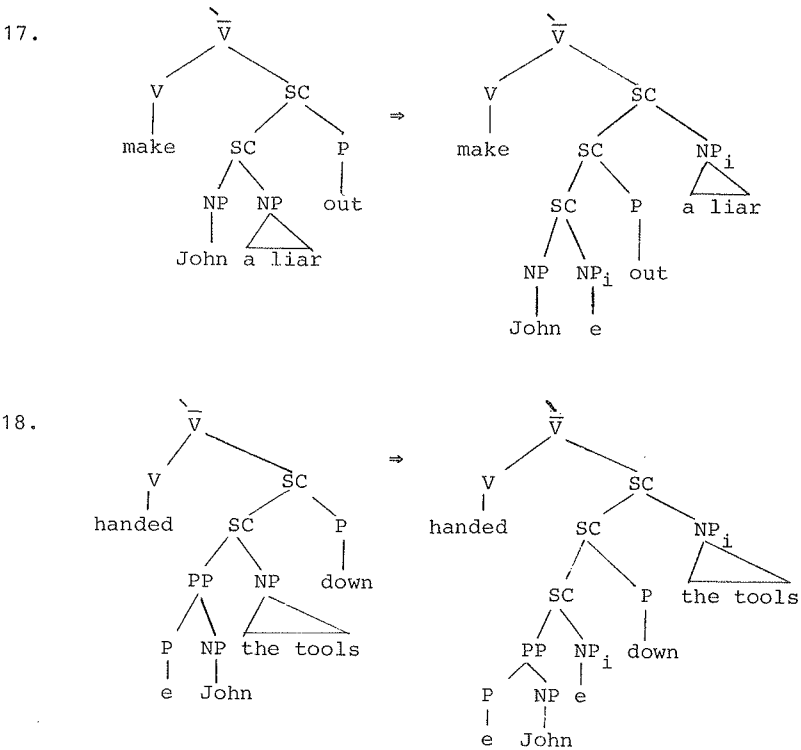


Kayne's analysis covers predicative and dative double NP constructions, in a manner that accounts for the fact that for many speakers the middle position is the only acceptable position for the particle (for all speakers it is the preferred position, cf. Emonds 1972, for discussion with respect to datives),

- 15.a John made Bill out a liar (=11)
 b *?John made out Bill a liar
 c *John made Bill a liar out

- 16.a John handed Bill down the tools (=12)
 b *?John handed down Bill the tools
 c *John handed Bill the tools down

In Kayne's analysis, both constructions involve a D-structure with a double small clause, as shown in the structures in (17) and (18). The S-structure order is derived by movement of NP, as in the case of (10b),



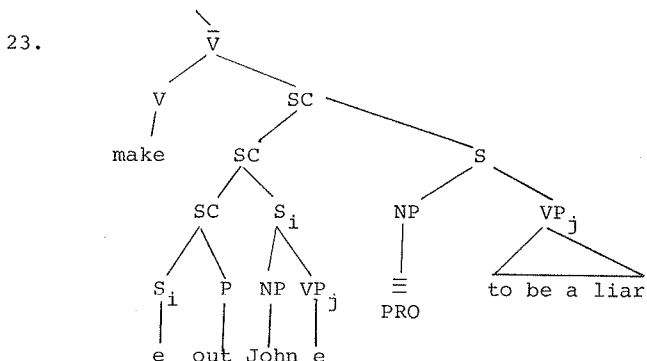
(P_e = empty preposition, source of theta-role for both NPs in Kayne's analysis).

Under Kayne's analysis, rightwards movement of the NP, as shown in (17) and (18), is necessary if the S-structures are to be such that case can be assigned to the NPs (the movement ensures that no more than one maximal projection containing lexical material intervenes between the verb and each NP, allowing case to be assigned in a way not possible in the unmoved structure; see Kayne 1985, sections 3.3 and 4.1 for details). In this manner, Kayne accounts for the fact that only the (a) version of (15) and (16) is grammatical for most speakers.

Kayne gives six points against a complex V analysis for particle verb constructions with the particle in post-verbal position; he argues that the facts that present potential problems for a complex verb analysis will follow from the alternative small-clause and NP movement analysis sketched above.

- c *They are trying to make out there to be no solution to this problem 68
- d *They are trying to make there out to be no solution to this problem 69

Kayne's analysis for (21-22) is as follows. Sentences such as those in (21a) will be derived by rightwards movement of the sentential subject of the small clause headed by out, followed by movement of the infinitival VP, with insertion of a subject that is effectively a PRO, creating a control structure. The S-structure of a sentence such as (21a) will thus be,



Sentences such as (21b) can be derived with movement of the infinitival VP only. The sentences in (22) will be ruled out by a general prohibition on idiom chunks and there as controllers (cf. from Kayne, p. 115, *'There were reptiles before being mammals'; *'Advantage was taken of John's inattention before being taken of his stupidity')

[5] Kayne's fifth argument concerns wh-movement. With plain (non-particle) verbs, the second object in a double NP construction can be questioned,

- 24.a We handed John the tools.
- b Which tools should we hand John first? 133

Kayne observes that even for speakers who accept sentences such as (16b) (=25a), (25b) is ungrammatical, in contrast to (24b),

- 25.a We handed down John the tools
- b *Which tools should we hand down John first? 134

Kayne's argument is that if (24a) and (25a) have essentially the same structure, as the complex verb analysis claims, there should be no contrast between (24b) and (25b). On Kayne's analysis, the

ungrammaticality of (25b) follows from movement of the wh-phrase from its derived structure position, adjoined to the small clause projection of down; (cf. the structure in (18) above). That position is an \bar{A} position, which may not be a variable site.

[6] Kayne's final argument concerns the intensifier right, which can occur before P in particle constructions, but not before P in compounds,

26. ?John looked right up the information 135
27. *John right upended the rocking chair 136

The argument is that the distinction is to be expected if right cannot modify constituents of complex words, and V--P sequences are not complex verbs.

The following alternatives to Kayne's points can be proposed, under a complex verb analysis of particle constructions.¹⁰

Kayne's point [1] loses some of its force if we adopt the modificational structure for verb particle constructions sketched above (section D), where the head V is at a bar level lower than that of the particle that modifies it. Inflectional endings will be placed on the head of the word (V^{-1} for particle verbs), excluding look up-ed. The right argument (point [6]) might be handled in a similar manner. The correct distribution for right could be obtained if right is a specifier to words at category level n, and particles in particle verb constructions are at the requisite level and prepositions/particles in compounds are below it. However, this would require some change in the proposal above that particles in particle verb constructions and compounds are both constituents at level 0 (word), with a concomitant change in the assumption that constituents of words are always at bar level 0 or lower (if P level 1 is admitted into particle constructions).¹¹

Kayne's argument [2], concerning the ungrammaticality of 'John looked up it', loses force in view of sentences such as (28),

28. *John gave Bill it.

In Kayne's analysis of datives (cf. the structures for (16a) above and Kayne 1984, Chs 7 and 9), it should be possible to base-generate such sentences, and their ungrammaticality cannot be attributed to a "weight" filter on the output of rightwards

movement. Examples such as (28) suggest that the filter may apply more generally to block a pronoun object occurring to the right of a heavier constituent in a manner that potentially will cover both (28) and (22), with a complex verb analysis for the latter.

Kayne's third argument is that there is an absence of constructions such as (15b) and (16b) ('John made out Bill a liar'; 'John handed down Bill the tools'), contrary to expectations under a complex verb analysis and normal assumptions about sub-categorization. In response to this argument, we can propose a different analysis, which will both permit particle verb structure and require the particle to follow the first object in such constructions. We will assume the base structure to be one in which at least the first NP is sister to V^0 . We will take the dative case as the paradigm case, since there the meaning of the particle verb is maximally compositional, and make the following assumptions. In the internal structure of complex verbs, each constituent can separately specify the thematic role of an argument. For hand down, hand will specify THEME and down will specify GOAL. The following condition will apply: if an argument is syntactically realized, it must be c-commanded in S-structure by the element that determines its thematic role.¹² If the NP-P order in English particle constructions is derived from a complex V D-structure by virtue of a rule of particle movement that raises the P to a position under V_I , then that rule will make legitimate double object constructions with verbs such as hand down. The contrast between (16a) and (16b) is thus accounted for by the c-command condition on theta-role assignment, plus the existence of a particle movement rule that raises the particle into a position where it c-commands the first object. This analysis predicts that if a language had complex (particle) verb constructions, but did not have a particle movement rule, then there would be no sentences such as (15b) and (16b), since there would be no way to make the S-structure conform to the c-command condition. Swedish appears to fit this prediction. It does not have particle movement, and, as far as I can tell from questioning my informants, it does not have double object constructions with particle verbs.¹³

The analysis of the middle placement of the particle in double NP constructions given here is intuitively most plausible where

the relation between the particle and the NP to which it putatively assigns a thematic role is fairly transparent (so, for example, (16b) has the paraphrase 'John handed the tools down to Bill', where 'down to Bill' can have PP status ('It was down to Bill John handed the tools')). It can be counted as a mark in favor of this approach that the middle position preference may be relaxed where the meaning of the verb plus particle is relatively non-compositional, and it is less plausible that the particle assigns a thematic role independently of the verb. This relationship between how close-knit the verb and particle are and placement of the particle was noted by Bolinger (1971, p. 179), who finds the following sentences equally acceptable,

- 29.a Pack your brother up a nice lunch
- b Pack up your brother a nice lunch.¹⁴

Kayne's fourth argument concerns idiom chunks and there in sentences such as those in (22). His account is that rightwards movement of the infinitive from within a small clause creates a control structure, which is illegitimate for sentences with idioms and there, since idiom chunks and there are in general barred from being controllers. An alternative account under a complex V analysis is to posit a tell-type control structure in the base for particle verb constructions with infinitival complements; the D-structure for (21a) and (22a) will then be,

- 30. They are trying to make out [John] [PRO to be a liar]
- 31. They are trying to make out [advantage] [PRO to have ...]

The sentences in (22) can then be ruled out on the same ground that Kayne excludes them (the bar on idiom chunks and there as controllers), but with an analysis that allows complex verbs.

Kayne notes that idioms and there are better in infinitival complements to particle verbs when the particle construction is passive,

- 32. ?Advantage was made out to have been taken of them 72
- (?)There was made out to be no solution to this problem

a fact that Kayne attributes to passive having placed the idiom chunk/there in a position where it c-commands the subject of the infinitive, which can then be interpreted as a trace bound by the subject, rather than as PRO (cf. the structure 22). An alternative is to treat sentences such as those in (32) as raising constructions (cf. the non-particle be said) separate from the

tell-type control structures of (30-31).

Argument [5] concerned wh-movement. To be accounted for is the fact that (24b), with extraction of second object in a non-particle double NP construction is good, but the seemingly same extraction in (25b), with a particle construction, is ungrammatical. In the spirit of Fodor (1978), there may be an explanation of this contrast that is based in processing, rather than in principles of grammar per se, and which is consistent with a complex verb analysis of particle verbs. It is well-attested that the sentence processor fills a wh-phrase into available positions in the incoming string, on occasion erroneously anticipating the structure of the VP (see, for example, Fodor 1978; Stowe 1984). The distinction between (24b) and (25b) can be accounted for in the following way, under a complex verb and particle movement analysis. In (24b), the word following the verb hand is the indirect object John, which will alert the processor to the correct analysis, with the wh-phrase in final position; by contrast, in (25b) the verb hand plus down can be integrated into an incorrect analysis ('handed which tools down'). The difference between (24b) and (25b) can thus be accounted for as a difference in whether the correct analysis can be arrived at with only one word after the verb in hand. The erroneous analysis for (25b) may be promoted additionally by the fact that the particle down can be taken (incorrectly in the case of (25b)) as signal for closure of the verb phrase.

To summarize this section, for almost all of Kayne's arguments against a complex verb analysis, it is possible to propose an alternative analysis of the facts that is consistent with a complex verb account that conforms to the X-bar theory of word structure sketched above. In the case of the distribution of inflectional morphemes, the analysis depended on the head-modifier account of complex V structure suggested in section D. In the case of the order of constituents in dative particle constructions, our analysis depended on the existence of a particle movement rule, and makes the prediction that languages that differ in the presence vs. absence of such a rule will differ in the possibility of particle constructions with double objects; the facts of English vs. Swedish appear to support this prediction. Positing different structures to those of Kayne for infinitival complements to particle verbs allowed the control facts with

respect to idioms and there to be accounted for. Wh-extraction facts were given a processing account. The right argument was not neatly dealt with, in that allowing particles to have specifier structure in verb particle constructions but not compounds requires some relaxing of the condition that constituents of words are categories at bar level 0 or lower.¹⁵

F. CONCLUSION

Having gone to some pains to reply to the arguments of detractors of a complex verb analysis for particle constructions in both Swedish and English, I should add that that is all that I have done. The fact that objections to a complex verb analysis can be answered does not mean that the complex verb analysis is at present strongly motivated in comparison with its competitors.

For example, an apparent virtue of the analysis above, where English and Swedish differ in the existence of a particle movement rule that raises the particle to a position where it c-commands the first object is that it allows an account of why Swedish lacks particle double object constructions. However, it appears that this lack is common to Norwegian and Danish also, languages which, like English, have particles following the object (obligatorily in the case of Danish).¹⁶ Possibly particles that follow the object in languages that do not have double NP particle constructions are restricted in their meaning and/or by interpretive rules in such a way that they cannot legitimize the double object construction.¹⁷ Whether this is in fact the case, or whether the absence of double object particle constructions in Scandinavian languages is merely a linguistic happenstance, seems an interesting question to pursue.

FOOTNOTES

1. Ejerhed (n.d.) uses the term compound stress to refer to the pattern of stressing on the particle. The rule that assigns stress to the particle may not in fact be part of the system of rules for stressing compound words in Swedish (below it is suggested that verb plus particle constructions are complex words but not compounds, as defined in a recent study of compounding). The stressing operation involved is more plausibly one that unifies a syntactic and/or semantic unit with end-stress, and which is responsible also for the stressing of the preposition in constructions such as (2), below (see Anward and Linell 1976, Ejerhed 1979, n.d. for discussion of a range of pertinent data; Rischel 1983 discusses similar phenomena in Danish).

2. The following spatial prepositions permit the type of semantic alternation illustrated in (2-3): bakom (behind); under (under); över (over); på (on); framför (in front of); emellan (between).

3. The speaker I have questioned in most detail in some cases finds gapping of the verb alone acceptable to some degree, in addition to gapping of both the verb and the particle. For example, her judgements were as indicated on the following sentences:

- ia Per bröt av grenen och Kalle bröt av kvisten
'Per broke off the branch and Kalle broke off the twig'
- b OK Per bröt av grenen och Kalle Ø Ø kvisten
- c ?/* Per bröt av grenen och Kalle Ø av kvisten

It is not clear what status should be assigned to examples such as (c). One possibility is that in some cases a speaker may compute (permit) a prepositional analysis as well as a particle analysis for the string, resulting in a degree of acceptability for the (c) type sentences.

4. Passivization is also a potential test of the distinction between (1) and (2-3) on the assumption that direct but not prepositional objects in Swedish may passivize (cf. Maling and Zaenen 1985, section 4). I have not checked many examples, but it appears particle constructions (defined as such by the gapping test) allow passivization and sentences of type (2), like sentences of type (3), do not freely passivize, except with the preposition på in passives with the verb bliva,

- ia. Katten spráng på elefanten
'The cat ran on top of the elephant'
- b. Katten spráng på elefanten
'The cat bumped into the elephant'
- c. Elefanten blev påsprungen av katten
'The elephant was bumped into by the cat'

(Gapping of the preposition for conjoined sentences with springa på is rejected by everyone I have queried, with as well as without stress on the preposition).

5. Ejerhed (1979, n.d.) mentions some other points that potentially bear on the syntactic analysis of particle constructions, none of which is conclusive, as she notes. She argues against a richer analysis of the internal structure of particle constructions (in which the verb contains a VP in its internal structure, as suggested by Anward and Linell 1976) on the ground that verb particle constructions show no examples of alternation between compound stress (destressing to the left) and stress on both constituents, parallel to contrasts found for lexicalized vs. non-lexicalized noun phrases,

Vita Húset	'the White House' vs.
det vita húset	'the white house'

6. Ejerhed (1979, n.d.) makes this point with examples such as få se ('catch sight of'). The sentence 'Per fick se flickan', with stress on se, has the structure [Per fick [se flickan]].

7. Another alternative is that the in-location reading is associated with a PP at a higher V-bar level than that of a PP with the towards location reading, with a correspondingly greater freedom to prepose in the in-location case. That would allow a structural basis for the assignment of stress and thematic role (section C, below).

8. A further difference not discussed here is incorporation of the particle to the left of the verb in participial forms in Swedish.

9. Numbers to the right are numbers from Kayne's article.

10. This discussion covers only the points Kayne makes against a complex V analysis (p. 125-127), and is not a complete alternative to his account of particle constructions (see footnote 15 for some discussion of points not covered in this section).

11. A different tack would be to derive examples such as (26) with right plus particle in end-position, extraposition of NP accounting for the surface order of (26). Kayne notes such examples are improved with a more complex object (Kayne's example, p. 127, 'John looked right up the information I had asked for'), consistent with the general ease of extraposition of 'heavy' NPs. This suggests a general variant on the analysis below (where particle movement raises a particle to the right of the object), in terms of intraposition and incorporation of the particle as part of the complex verb.

12. The approach here is similar to that in Lieber's 1983 analysis of compound formation in English. Possibly c-command as a condition on thematic role assignment for syntactically realized arguments will generalize constraints on compounds and particle constructions (Lieber (p. 255, fn. 6) leaves the latter out of her analysis), but I have not worked this through in detail.

13. The verbs ta på ('put on') and ta av ('take off') are exceptions to this statement,

- i. Jan tog på henne skorna
'Jan put on her the shoes'

14. Kayne (p. 126) emphasizes that he is concerned with syntactic deviance of the V P NP NP sequence: "The claim is that there are no such combinations, even idiomatic, that would make [such sentences] acceptable to all, or even most, speakers". My approach differs somewhat in taking the semantically transparent cases as at the root of the ordering restriction, with the implication that the deviance of idiomatic V P NP NP sequences for many speakers is due to some kind of influence of the clear cases on judgements of the idiomatic cases.

15. The general aim of Kayne's analysis is to demonstrate that the grammar of particles will follow from the small clause analysis in interaction with general principles of grammar, and the viability of a complex V/particle movement analysis will depend not just on whether Kayne's arguments against a complex V analysis can be answered, but on how the total data covered by Kayne's analysis can be accounted for. There is not space here to detail all of Kayne's arguments. Among the arguments he gives in favor of a small clause approach to particles is that it allows a principled account of the similar behavior of V NP Adj and V NP P sequences in nominalizations (*'John's consideration of Fred honest'; *'John's calling of Bill up') and of extraction facts not dealt with in section E (particularly, the ungrammaticality of extraction of the object of a prepositional complement to NP before a particle (*'Who has the cold weather worn the sister of out?') and of the first object in double NP constructions (*?'Who should we hand (down) the tools'), both of which involve extraction from within a left-branch on Kayne's analysis (pp. 103 and 117-118). One drawback of Kayne's analysis is that verb-like aspects of the behavior of V--P sequences (the possibility of being followed by an NP and other complement types (p. 107-8 and 128)) and the possibility of nominalization with the particle in immediate post-verbal position ('John's calling up of Bill') require introduction of a special mechanism of theta role-percolation to distinguish particle and adjectival small clauses (p. 128-130). Gapping is not discussed in Kayne's article, and it is a point in favor of a non-small clause analysis that Kayne's analysis, in which the particle and NP comprise an immediate constituent of a projection of V, incorrectly predicts gapping of a verb plus particle (example 9b in the text) to be ungrammatical.

16. I have not checked this for predicative constructions in Danish. Herslund (n.d.) notes the absence of double NP particle datives in Danish, with the exception (fn. 8) of give tilbage ('give back'),

- i. De gav ham hans penge tilbage
'They gave him his money back'

observing that this use of tilbage does not freely extend to other double-object taking verbs. From my informants' judgements ge (NP) (NP) tillbaka is a similarly restricted exceptional construction in Swedish. (See also Kayne 1985, p. 120 on the fact that back in English is acceptable in final position after two objects, unlike particles such as down).

17. The same structural position may be more restricted in interpretation in one language than another. Åfarli (1985) argues end-placed particles in Norwegian participate in a causative rule system. The following examples illustrate that end-placed particles in English also occupy a position associated with result or cause. In (ia) sweaty may have a result interpretation; in (ib,c) sweaty may only have a predicative interpretation (with respect to either John or the pigs),

- ia. John drove the pigs sweaty
- b. ?John drove in the pigs sweaty
- c. John drove the pigs in sweaty

It is not plain to me whether the preference for middle position of the particle in adjectival constructions (noted by Jackendoff 1977, p. 67) has the same source as the preference for middle position in double NP constructions. One possibility concerning the deviance of semantically transparent examples such as (ib) is that there is a tendency to misconstrue the final adjective as a result, which will be inadmissible since result is preempted by the particle.

ACKNOWLEDGEMENTS

This work was supported by funds from the Swedish Institute and the Graduate School of the University of Wisconsin-Madison (project no 170668 to Helen Goodluck). Elisabet Engdahl and Christer Platzack among others provided helpful references and comments and Anne-Christine Bredvad-Jensen was a particularly patient informant.

REFERENCES

- Anward, J. and P. Linell. 1976. Om lexikaliserade fraser i svenskan, Nysvenska Studier, Årg 55-56, 77-119.
- Bolinger, D. 1971. The Phrasal Verb in English, Cambridge, MA: Harvard University Press.
- Ejerhed, E. 1979. Verb-partikel-konstruktionen i svenska: syntaktiska och semantiska problem. O. Josephson, H. Strand, N. Westman (eds). Förhandlingar vid sammankomst för att dryfta frågor rörande svenskans beskrivning 11, Stockholm.
- Ejerhed, E. n.d. Swedish verb-particle constructions: semantic and syntactic problems. Ms.
- Emonds, J. 1972. Evidence that indirect object movement is a structure preserving rule. Foundations of Language, 8, 546-61.
- Fodor, J. 1978. Parsing strategies and constraints on transformations. Linguistic Inquiry, 9, 427-453.
- Gruber, J. 1976. Studies in Lexical Relations. In Lexical Structures in Syntax and Semantics. North Holland Publishing Company, Amsterdam.
- Herslund, M. n.d. The double object construction in Danish. Ms. University of Copenhagen.
- Jackendoff, R. 1977. X̄ Syntax: A Study of Phrase Structure, Cambridge, MA: The MIT Press.

- Kayne, R. 1984. Connectedness and Binary Branching. Foris Publications, Dordrecht.
- Kayne, R. 1985. Principles of particle constructions. In Grammatical Representations, edited by J. Guéron, H.-G. Obenauer and J.-Y. Pollack. Foris Publications, Dordrecht.
- Lieber, R. 1983. Argument linking and compounds in English. Linguistic Inquiry, 14, 151-85.
- Maling, J. and A. Zaenen. Preposition stranding and passive. Nordic Journal of Linguistics, 8, 197-209.
- Neijt, A. 1979. Gapping: A Contribution to Sentence Grammar. Foris Publications, Dordrecht.
- Rischel, J. 1983. On unit accentuation in Danish - and the distinction between deep and surface phonology. Folia Linguistica, XVII/1-2, Special Issue "Prosody".
- Selkirk, L. 1982. The Syntax of Words. Cambridge, MA: MIT Press.
- Stillings, J. 1975. The formulation of gapping English as evidence for variable types in syntactic transformations. Linguistic Analysis, 1, 247-74.
- Stowe, L. 1984. Models of Gap Location in Human Parser. University of Wisconsin dissertation, distributed by the Indiana University Linguistics Club.
- Åfarli, T. 1985. Norwegian verb particle constructions as causative constructions. Nordic Journal of Linguistics, 8, 75-98.