

Object positions, the Unique Checking Constraint and the development of particle verbs

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1 Introduction

One of the central features of contemporary syntax is the abandonment of idiosyncratic surface conditions, such as adjacency conditions. In its place the theory of syntax must do the work. In particular, Johnson 1991 provided a theoretically motivated treatment of the rather special conditions that seem to characterize the phenomenon known as particle verbs. The analysis provided evidence for derivations of particle verb constructions that involved both DP and verb movement, unifying this range of phenomena with much of clausal syntax.

In this paper I will attempt to understand an old and controversial phenomenon concerning the development of the grammar of particle verbs in terms of the theory of syntax as well as contemporary approaches to grammatical development. The analysis will take off from the insights provided by Johnson's theory of particle verbs. Johnson's insights, using DP movement as a central component of the analysis, will be seen to merge quite tellingly with the theory of early grammatical stages of development.

Particle verbs, also known as separable verbs, contain an attached particle that can (and sometimes must) separate from the verb. In German (V2/SOV), we find, for example:

- (1) a. Katrin liest das Buch durch
Katrín reads the book through
'Katrín reads through the book'
- b. Katrin will das Buch durchlesen
Katrín wants the book through.read.INF
'Katrín wants to read the book through'
- c. *Katrín durchliest das Buch (Poeppel & Wexler 1993)

The full verb + particle (*durchlesen*) may not move in finite form (e.g. *durchliest*) into 2nd (C) position in matrix clauses. Only the verb itself may move into this position, yielding (1a). (1c) is ungrammatical.

The phenomenon we would like to explain is the following. In the earliest stages of grammatical development (in German ending by 3:0 or earlier) children often produce nonfinite instead of finite verbs (for main verbs they produce the infinitive instead of an inflected finite form). However, less well known (and less often studied) is that in some stages of early development, there is what [Poepfel & Wexler \(1993, footnote 12\)](#), the first to discover the phenomenon, call a “curious asymmetry”. Namely, particle verbs are made infinitival by the child when they should be finite at a much higher rate than are simple verbs. Let’s call this configuration of data the “particle verb asymmetry” (PVA). Although the PVA has been questioned,¹ it seems to me still viable. The question is: why does the asymmetry hold?²

2 The syntax of particle verbs

In order to explain several phenomena of basic clause structure, [Johnson \(1991\)](#) assumes (his (17)):

- (2)
 - a. Specifiers of XP precede X’.
 - b. Verbs always move out of the VP they head.
 - c. Accusative Case-marked NPs move to Specifier of VP.

Minimalist theory developed in the latter 1990s and 2000s assumed these results in a slightly different form. A light verbal category *v* was assumed to select for VP. This light verb assigns an external argument to its specifier. Typically one assumes that V moves to *v*, so this assumption is similar to (2b). *v* also is standardly assumed to contain features that check or assign in some way accusative case, perhaps (in some cases) through movement. This assumption is partially similar to (2c) and partially different. For Johnson, structural case is assumed under government. For example, for a verb in minimalist theory, accusative case involves checking a

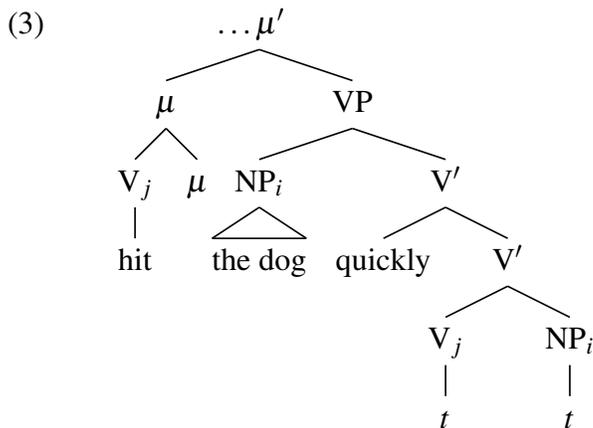
¹ [Bennis et al. \(1995\)](#) reanalyze Dutch data, taking out uses of auxiliaries, that are known to be always finite in child grammar, and find that the PVA doesn’t hold. However, it does for at least one of their three children. More important, they analyze data from a wide range of ages per child, without reporting file by file data. It may very well be that the finite particle verbs occur at much later ages, when there aren’t many non-finite verbs. Until the data is reanalyzed, it is inconclusive. [Poepfel & Wexler \(1993\)](#) analyzed one child of 25 months, with data from one recording, and PVA strongly held by category. Their data didn’t seem to count many or any copulas or auxiliaries, as can be seen from the word order statistics that they give. I won’t make any attempt in this paper to compare the proposed account with any of these alternatives.

² After [Poepfel & Wexler](#), who made some brief suggestions concerning the cause of the phenomenon, theoretical accounts of the relevant grammatical development were proposed by [Broihier et al. \(1994\)](#) and [Hyams et al. \(1993\)](#). I won’t compare theories, except to point out that unlike these theories, the analysis proposed here makes no assumptions about development except for well-established principles that already account for a wide variety of phenomena.

feature between a DP and v . Nevertheless, there is enough continuity between (2) and current assumptions to make our search for the analysis of the syntax and development of particle verbs benefit by paying attention to Johnson's analysis. The movement of verbs and objects in particular are a crucial part of both theories, as opposed to surface conditions. We will see that this movement will play a crucial role in the developmental theory. We can't in limited space attempt to develop a precise implementation of Johnson's theory in terms of minimalist theory, but the guiding intuitions of both theories seem close enough in spirit to me, that I believe that a sketch of a theory at an intuitive level could be useful in creating a close match.

Strongly confirming the closeness of Johnson's ideas to contemporary theory is the crucial role that a category head μ above VP plays. μ has several of the characteristics of v , lacking mostly the external argument assigning property. Johnson in fact discusses how μ appears similar to (perhaps should be identified with) AgrO, a functional category in that position pre minimalist theory.

The flavor of Johnson's analysis of a simple transitive clause may be seen from his p-m for such a sentence (his (6)):



The verb raises to adjoin to μ and the object raises to SpecVP. By Johnson's definitions, the verb *hit* governs *the dog* and assigns accusative case to it. Properties like the fact that an adverb may not intercede between the verb and the direct object follow.

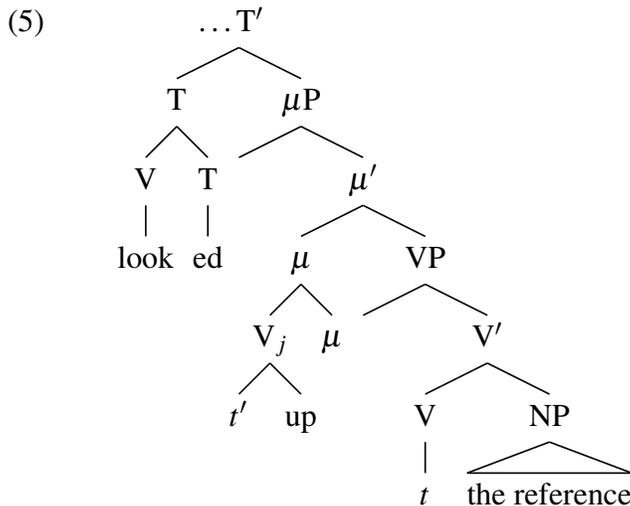
Johnson argues that the movement of the object NP upwards is the same type of movement as Object Shift (OS) in other Germanic languages, and thus the movement should have much in common in OS. For example, in Icelandic, the object optionally moves past SpecVP to a higher position. The analysis employs this possibility in deriving properties of particle verbs, in particular the possibility of En-

glish particles showing up immediately after the verb or after the object and only one of these orders being possible for weak object pronouns.

- (4) a. Mary looked the reference up.
- b. Mary looked up the reference.
- c. Mary looked it up.
- d. *Mary looked up it.

A fundamental assumption is that a particle enters the syntax as part of the verb. The particle optionally moves with the verb to μ . When the verb moves on to T, the particle may not travel with it because T “does not tolerate the particle as a stem”.

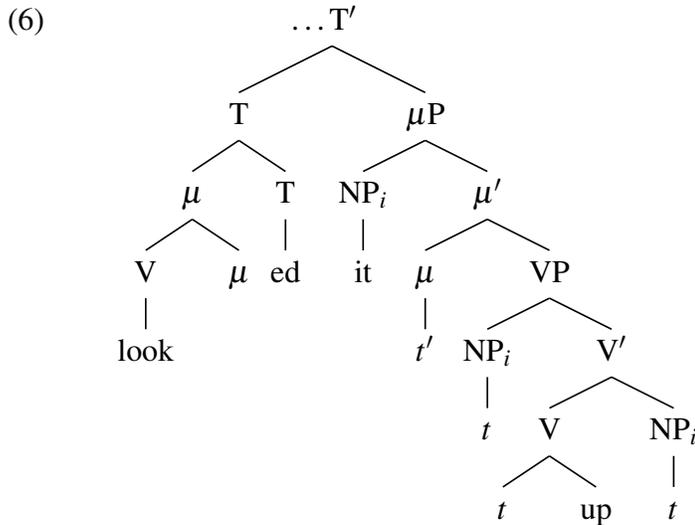
Two possibilities arise. When the particle moves with the verb to μ , then the verb must (move) adjoin to T by itself, without μ , since μ dominates the particle, which T cannot tolerate as a stem, as (5) shows (Johnson’s (79)).



The only (ACC) case-marked position is SpecVP so *the reference* moves there. This derives (4b). The other possibility is when the particle is stranded in its original position; the verb by itself moves up to μ . Then μ (dominating the verb) moves (adjoins) to T (Johnson’s (78), not shown here). μ can assign case either before or after it moves to T, so the object *the reference* moves to either SpecVP (if case assigned before V moves to T) or to Spec μ P (if case assigned after V moves to T). In either case (4a) and (4c) are derived.

Why doesn’t (5) derive (4b)? Johnson argues on the basis of facts about OS in other languages that a weak pronoun must be brought as close to the verb as possible. The facts of government/case assignment in (5) mean, as we have pointed out, that the object is assigned case (moves to) SpecVP. This position is not close enough to the verb for a weak pronoun, so (4d) cannot be derived. On the other

hand, if the particle is stranded in its original position (not moved with V), then (4c) is derived as in (6), (Johnson's (80)).



Johnson shows that this pronoun “characteristic paradigm” holds for both English particle constructions and OS in other Germanic languages, lending strong support to the analysis of English particle constructions as OS.

3 Development of particle constructions

The analysis of particle constructions as OS offers a strong hint as to the nature of the difficulty for children with finite separable particles. There are two movement/checking related constraints in child grammar, each of which has a good deal of explanatory adequacy in predicting a range of grammatical phenomena. The second one, mostly involving A-chains and known as the Universal Phase Requirement (UPR, Wexler 2004b), constrains the child's grammar into only having full phases, not defective phases. It renders ungrammatical verbal passives, subject to subject raising constructions and many other grammatical processes. However, it holds until the child is about 7 years of age, much older than we expect the nonfiniteness requirement on separable verbs to hold. So this age signature suggests that it is not the right constraint to derive the participle verb asymmetry.

The other child checking movement constraint is known as the Unique Checking Constraint (UCC, Wexler 2004a). It renders ungrammatical a sentence in which the same DP checks more than one uninterpretable feature (more specifically in an implementation, the EPP feature). Its first and perhaps most well-known use was as the foundation for the theory of the optional infinitive (OI) stage. Assuming that there is an EPP feature for both TENSE and subject agreement (AgrS, in an imple-

mentation), a simple finite clause violates the UCC. In order to satisfy the UCC, the child omits either TENSE or AgrS, thereby deriving the characteristic nonfiniteness of many simple clauses (in non-null-subject languages) in the OI stage of child grammar until about 3, with some variation according to construction and language (Wexler 1993). Since omitting Tense or AgrS is a violation of the child's grammar, the child sometimes doesn't do this, providing a finite sentence (Minimize Violation).

The UCC is stated in grammatical relation neutral terms; it also explains constraints on object movement, predicting a number of grammatical properties including the omission of object clitics in languages in which the past participle agrees with the clitic (Wexler 2002, 2004a, 2014, Wexler et al. 2002, Gavarró et al. 2010, Tsakali & Wexler 2004).

Most to the point for present purposes, Wexler (2004a) argued that delays in object scrambling in Germanic languages were the result of the UCC. The age range of the phenomenon was about the OI age range, as would be predicted if UCC were the cause of scrambling delays. The error was the lack of scrambling when it was obligatory. That is, scrambling was optional for the child in obligatory contexts, just as finiteness is optional for the child in obligatory contexts. The analysis directly involved OS. Following Chomsky's (2000) extension of Holmberg's (1999) ideas, Wexler assumed that v has an EPP feature that attracts the direct object to its second specifier (under certain conditions). Holmberg showed that the object moved even further up than second specifier of v , to a higher category, for what he assumed were phonological reasons. So there are two EPP features involved, on v and on the higher functional category. Which should the child omit given the UCC? The child is unlikely to omit v , since this would force the omission of the external argument. The child sometimes omits the higher category, thus leaving the object in second specifier of v , where it linearly appears after relevant adverbs and negation. This looks like the omission of scrambling. (The child rarely scrambles an object when it is semantically incorrect, e.g. for many indefinites,)

Given Johnson's analysis of particle verb syntax as involving OS, we might look there to see how the UCC applies. We'll take Johnson's analysis of particle verbs for English as roughly correct for the other Germanic languages, in particular German, the language in which Poeppel and Wexler discovered PVA. If we were only considering scrambling sentences, in which the object raises up to a category even higher than μ , we might think we had the solution; Wexler's (2004a) analysis predicts the optionality of scrambling. However, what we want to know is why Tense is omitted so often for these OS sentences, a problem not encountered before.

First, let's consider how many EPP features have to be checked in the particle construction. I will assume that German particles always remain stranded; they

never move with the verb to C.³ Thus an analysis like that in (6) will apply (for a lexical object DP like *the reference* instead of *it*⁴)⁵. What can we say about double checking of an EPP feature in (6)?

Johnson doesn't discuss the exact movement pattern of the object DP. But in (6) we see that the object NP moves first to SpecVP and then to Spec μ P. If that pattern is correct, then we can see a double checking of the object DP, presumably against two EPP features (on V and μ) in today's terms. Two questions arise. First, is this in fact the correct analysis of the movement to μ , first through V? And second, does the double checking constraint explain why T is omitted for particle verbs more often than for simple verbs?

We can't take a definitive position on whether moving through V to μ is the correct analysis. It's natural to think that V could host the kinds of features that attract a DP. On the other hand, a simple minimalist theory often says that the phase head v targets features in a phrase and would be responsible for Move to the outer spec of v , without taking account of V, which doesn't have the appropriate features. Chomsky's (2000) analysis of OS has v adding an EPP feature so that an object DP with the appropriate semantic features (*INT*) can surface, given a condition that doesn't allow such features on the edge of v P. The object moves to Spec v P, not checking features in V.

I will assume that in fact there is an uninterpretable EPP feature on V that must be checked and deleted by the object.⁶ This seems natural (perhaps necessary) in terms of Johnson's analysis of particle structures, since the structure in which the particle moves with the verb to μ (5) has the object DP moving to SpecVP, not to Spec μ P.

3 This assumption might be problematic for some properties of Dutch verb raising to the right; I haven't performed any kind of analysis.

4 The analysis will apply to German up to word order of course; Tense is probably on the right, not left. And quite possibly the particle precedes rather than follows the verb at lexical insertion. This will be irrelevant to the analysis here.

5 Since we have assumed that particle stranding is obligatory in German, (6) is the only analysis of particle verbs.

6 An alternative possibility is that in fact the double checking only occurs when the object has the semantic complex (specificity, etc.) that makes it incompatible with being on the edge of v P. This would be especially true if (after v) the second category that had an EPP feature was the phonological-motivated one posited by Holmberg. If something like this analysis were correct, it could be that the sentences the child produced for separable verbs for some reason were scrambling structures. In German simple clauses, if there is no relevant adverb in the structure, the word order is SVO, whether or not scrambling occurs. If, as is likely, the appropriate adverbs don't exist in sufficient number in early child grammar to test the hypothesis, one could test to see if in fact the objects of the non-finite participle structures sentences were specific, etc., more than the objects for simple verbs.

The second question asks what are the consequences of this double checking of the object DP? Unlike cases where TENSE or AgrS or CI (the base-generated clitic head on a verb) are omitted by the child, it seems unlikely that V or *v* would be omitted. V selects the object, *v* selects the external argument (and the VP). We don't expect these to be omitted, and omitting these probably isn't consistent with the child data we're looking at.

Let us consider a simple child sentence with a participle verb and a direct object. We have just shown why the UCC is violated with respect to the direct object. But if the sentence is finite, the UCC is violated again, via standard assumptions, by the double checking of TENSE and AgrS. There are two UCC violations. In contrast, a sentence with a simple verb has a UCC violation for AgrS/TENSE. One analysis of object movement for the simple verb in a simple SVO main clause has the analysis (3), in which the object only moves to SpecVP.⁷ Thus if we extend the child's preference from not violating the UCC to Minimize UCC Violations, then we predict that the child will omit TENSE so as to have only one UCC violation rather than two. Exactly this extension was proposed in Rice et al. 2009: 1431 to explain why *copula and auxiliary* omission occurred more often in *wh*-questions than in declarative questions during the OI stage.⁸

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⁷ A second object movement might be possible, once the verb has moved to TENSE, unless I've missed something. But this would have the same word order as the one movement analysis (the verb is in C, preceding the object, in either case), so that a child would prefer the analysis that doesn't violate UCC.

⁸ One might ask about English. The UCC predicts that the child would prefer the option where the particle is stranded, the verb moving by itself to μ , for in this case there would only be one EPP checked by the object. This would predict that the young child would prefer forms like (4b) over (4a), that is the child wouldn't strand. I don't know if there is convincing evidence either way for sufficiently young children. If in fact these children don't prefer the non-stranded construction, it might be due to a preference for moving the verb + particle as a unit.

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