Particle placement and the case for "allostructions"

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Abstract

As a reaction against derivational frameworks, Construction Grammar accords no place to regular alternations between two surface patterns. This paper argues for a more tolerant position towards alternations. With respect to the well-known placement variability of verbal particles (*pick up the book* / *pick the book up*), the author grants that there is little reason for analysing one ordering as underlying the other but goes on to show that it is equally problematic to claim that the two orderings code two different meanings (or serve two different functions) and therefore cannot be linked in the grammar as variants of a single category. The alternative offered here is to consider the two orderings as two "allostructions" of a more general transitive verb-particle construction underspecified for word order.

1. The ambivalent status of alternations in Construction Grammar

One of the main issues of grammatical theory, and of Construction Grammar in particular, has been to account for the ubiquitous fact that words – foremost verbs – turn up in multiple structural patterns. That the first article to appear in the present journal deals with alternations is therefore hardly surprising: Kolehmainen and Larjavaara (2004) discuss a Finnish grammatical phenomenon, apparently highly frequent in sports media, whereby an inherently intransitive verb takes a direct object or whereby a transitive verb appears with an object not belonging to its conventional valency. English equivalents would sound like, for example, *Edward jumped a new record* or *Robert Helenius punches bronze in European Boxing Championships.* In order to explain such deviant valencies, the authors take recourse to the existence of a special constructional template with three elements: a subject typically referring to an agent, a verb specifying the "means" of creating or achieving something and typically denoting a particular sporting event, and an object referring to the effected or achieved entity (e.g. a newly established

record or a prize won in a contest).[1] This template is especially useful in headlines since it answers the multipart question *Who did what with what result?* in the most succinct and expressive way possible.

Although the authors of this journal's inaugural article occasionally refer to the valency changes caused by the use of this template as a "valency alternation" or a "valency alternation pattern", it is not clear exactly what status they accord to an alternation (pattern). Obviously, an alternation between two items – in this case, between a verb's conventional valency and its augmented or otherwise altered valency – is not a 'pattern' in the same sense that a construction might be called a pattern (i.e., a 'structure', a 'configuration'). Still, insofar as the valency change at hand is described as "recurrently occurring", the word 'pattern', in the more general sense of 'regularly observed phenomenon', seems fully appropriate. Because of their recurrent occurrence, we would indeed expect alternations to make up an integral part of the inventory of grammatically noteworthy facts about a language.

Construction Grammar, however, seems to be reluctant to include alternations in the set of entities that need to be stored in the linguistic memory. Some distinguished Construction Grammarians, at least, have in recent years offered an alternative to the quite common linguistic practice (see, e.g., Levin 1993) of considering the various patterns in which a verb can appear as following from the meaning of the verb and (hence) as semantically related to each other. Michaelis and Ruppenhofer (2001) have illustrated that the special properties of the productive German "applicative" (or *be*-prefix) pattern (e.g. *behaaren*, 'to cover with hair', cf. English *bestubbled*, 'covered with stubble') cannot adequately be described as resulting from the operation of a lexical rule on the putative "input" verb – which may in fact, as they point out, be a

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[1] Kolehmainen and Larjavaara actually argue for the existence of two constructions: the "effected object construction" (cf. *the jump a new record* example) and the "possessive transfer construction" (cf. *the punch bronze* example). For the sake of expository simplicity and because the authors themselves state that the "two Finnish argument structure constructions … are closely related to each other", I have taken the liberty to collapse them into a single construction. (Kolehmainen & Larjavaara 2004)

converted noun not occurring as a verb outside this pattern (cp. *haaren*, 'to hair'). Quite similarly, with regard to the well-known *spray / load* (or "locative") alternation, Goldberg (2002) has argued that we should go beyond treating the locative pattern (e.g., *spray the wall with paint, load the wagon with hay*) as merely a transformation of the caused-motion pattern (e.g., *spray paint on the wall, load hay onto the wagon*) and that we should instead describe each pattern as an independent construction.

The rationale behind these two studies is this: alternations are the descendants of lexical rules and transformations, and must therefore be regarded with some suspicion in a mono-stratal, non-derivational framework like Construction Grammar. The proposed alternative to describing one structure in relation to another, or as being the result of a rule applied to a class of verbs, is to describe each "surface pattern" in terms of its own syntactic, semantic and pragmatic properties. A full description of all existing constructions taken by themselves should suffice to account for the whole of speakers' grammatical knowledge. This way, alternations need no longer be given a place in a construction-based grammatical theory.[2]

However, I would like to warn that by averting our attention from regular alternations in a language (to focus on the poles of the alternations only), we may fail to represent an important component of the language user's linguistic knowledge. This would be a serious shortcoming of Construction Grammar, which advertises itself as a theory within which all linguistic data of a language can be accommodated: "To adopt a constructional approach is to undertake a commitment in principle to account for the entirety of each language" (Kay & Fillmore 1999: 1).

In this study, I want to defend the view that, ultimately, constructions and alternations can both be seen as mental "patterns", that is, as "regularities that speakers can extract from a number

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[2] To be fair, some linguists operating within Construction Grammar do study alternations between patterns. Lambrecht (1994) is a prominent example, to which we will come back in section 5. Also, in the conclusion to her aforementioned article, Goldberg (2002) herself acknowledges that the existence of alternations is not completely irrelevant to language learning and processing or to linguistic representation.

of analogical usage events". I will propose a way of capturing the relation between two or more formal variants of a construction without necessitating a rule-based or transformational stance. The well-known particle placement alternation in English (e.g. *She turned off the TV* / *She turned the TV off*) will serve as an example case of how this can be achieved.

2. The particle placement alternation: two extreme approaches

It is not unreasonable to assert that Construction Grammar has been largely shaped and popularized by Goldberg's (1995) book on argument structure. Accordingly, much work in Construction Grammar has been devoted to argument structure patterns. The particle placement alternation in transitive English verb-particle combinations, however, relates two different *word order* patterns: [verb – particle – object] and [verb – object – particle]. Even so, the particle placement alternation provides a nice and typical example of Construction Grammar's break with grammatical tradition as sketched in the previous section. In this section, I will briefly present two radically opposed approaches to this alternation: the generative and the constructional approach.

2.1. Generativist treatments of the alternation

In *Syntactic Structures*, Chomsky (1957: 76) formulated the particle placement alternation as a transformation operating on strings with the structure X – V – Prt – NP (e.g. *The police brought in the criminal*), turning them into strings of the form X – V – NP – Prt (e.g. *The police brought the criminal in*). In other words, what could be referred to as the "continuous" pattern (with the verb and the particle in adjacent positions) is taken as basic and the "discontinuous" pattern (with an intervening object NP) is taken as derived. Chomsky therefore called it a "Separation operation". While this transformation is optional, it has to be applied obligatorily if the object NP is an unaccented pronoun (cp. **The police brought in him* and *The police brought him in*).

Up to the present day, most generativists still consider one or the other pattern as basic, although there is no agreement on which order this should be. For Ross (1967), only idiomatic particles (e.g. *up* as in *call up an old friend*) are base-generated closest to the verb, on the left of

the object NP, while directional ones (e.g. *out* in *let the dog out*) are analyzed as reduced prepositional phrases whose underlying position is on the right of the object NP. Jackendoff (1997) went further by claiming that all particles should be base-generated on the right of the object NP, whether they are directional or not. Most recently, perhaps, Dehé (2002) again claimed that the continuous order is the basic one, as Chomsky had originally proposed.

In order to back her claim, Dehé (2002: 91-102) reports on an extensive and rather cleverly designed speech production experiment she carried out to find out which ordering native speakers most frequently assembled out of scrambled VP fragments with a verb, a particle and an object NP. It appeared that the participants predominantly produced the continuous order, even if the scrambled fragments presented to them happened to be in the discontinuous order. All in all, the continuous order was formed in about 75% of the cases. Dehé also cites an early study by Van Dongen (1919), who studied 899 authentic sentences with a verb-particle combination, which he had, in his words, "taken from a great number of books without skipping any relevant examples (Van Dongen 1919: 324)". The outcome was that 740 of these 899 examples displayed the continuous order.

In addition, Dehé uses some seemingly decisive syntactic arguments. One of them is the fact that a *wh*-element in the object NP can be "extracted" in the continuous but not in the discontinuous pattern:

(1a)   John filled out [the forms from his wife's office].   (continuous)
(1b)   ?John filled [the forms from his wife's office] out.   (discontinuous)
(1c)   Which office did John fill out [the forms from _]?   (continuous)
(1d)   *Which office did John fill [the forms from _] out?   (discontinuous)
          (cf. Dehé 2002: 89)

The fact that the discontinuous construction less freely allows such a syntactic operation provides evidence, according to Dehé, that it is less basic than the continuous construction. Under the standard generativist assumption that a moved NP forms an "island" for extraction, the

impossibility of (1d) strongly suggests that the object NP has moved out of its neutral post-particle position to the derived position between the verb and the particle, thereby preventing the extraction of a *wh*-element from it.

We will come back to generativist views on the placement alternation and more specifically to Dehé's arguments for the neutrality of the continuous order in section 3.1.[3]

2.2. Constructional treatment of the alternation

In his recent quantitative study of particle placement, Gries (2003) adopts a distinctly constructional approach. Not only does he dismiss a transformationally based link between the two patterns but he also states that "each construction constitutes a category in its own right" and, furthermore, that "the two constructions do *not* form a single category since … we find more differences than similarities between the two constructions" (Gries 2003: 141).

Gries investigates the effect of some thirty phonological, morphosyntactic, semantic, discourse-functional and other variables on particle placement in a collection of 403 corpus-extracted sentences with transitive verb-particle combinations. This enables him to identify two prototypes, one for each ordering. These are given below as (2a) and (2b):

(2a)   … to take up erm an interest or activity which will channel them into other activities.
(2b)   Then we got him back to the Prince of Wales Theatre.
        (Gries 2003: 135-136)

Gries comments:

The sentence in [2a] can be most unambiguously predicted to be [the continuous construction] for obvious reasons: the direct object is quite long and of high complexity, its referent is abstract and the determiner of the direct object is indefinite. The meaning of the verb phrase is not transparent and no prepositional phrase follows. Finally, the referent of the direct object noun phrase has not been mentioned or hinted at before and is, thus, inactive. Equally straightforward is the classification of [2b] as a very representative

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[3] See Cappelle (2005: Chapter 6) for a more in-depth discussion of Dehé's (2002) study.

exemplar of the category [discontinuous construction]: the direct object is extremely short, pronominal and has a concrete referent, the meaning of the verb phrase is literal and the [verb-particle combination] is followed by a directional PP. Lastly, the referent of *him* has been mentioned seven times in the preceding discourse and is, thus, highly active. (Gries 2003: 136)

It is because "the two constructions exist due to their different functional motivations" that Gries argues "that the two constructions (that can frequently be interchangeably used) do not form a single category of [verb-particle constructions] as has almost always been argued before" (Gries 2003: 140). Gries thereby seems to cut the link between the two orderings.

3. Drawbacks of the two extreme approaches

As may be expected of approaches that are characterized as "extreme", they have their disadvantages. I will briefly point out some problems here, and will then propose a compromise between them in the next section.

3.1. Problems of the generativist approach

A characteristic of the generativist treatments portrayed in section 2.1 is that they are always in search of arguments for one or the other pattern as the basic one. We have also seen that there is no consensus on which of the two orderings of the transitive verb-particle construction is actually basic, which leads to the situation that generative-oriented linguists with an interest in this construction are still battling it out over this issue.

I would like to argue, however, that neither verb-particle ordering ought to be considered as underlying the other. At least, there is no hard empirical evidence that one ordering vastly outnumbers the other. I base this claim on one of the largest corpus counts to date, involving

2,418 transitive non-passivized verb-particle combinations extracted from the ICE-GB corpus (Cappelle 2005: 270-272).[4, 5] The data are represented in table 1.

ICE-GB	Spoken part (60%)	Written part (40%)	Row totals
V – Prt – NP	731	543	1,274
V – NP – Prt	917	227	1,114
Column totals	1,648	770	2,418

Table 1. The transitive verb-particle construction and its two orderings in ICE-GB (ca. 1 million words).

Although it appears that the continuous order (verb – particle – NP) is used in 52.7% of the cases (1,274 out of a total of 2,418), this is not quite the striking predominance that warrants treating it as basic in a numerical sense, contrary to what appears from Dehé's (2002: 91-102) own speech production experiment (± 75%) or Van Dongen's (1919) early corpus study cited by her (± 82%).[6]

Of course, my corpus results should not be compared directly with the results of Dehé's speech experiment, if only because the ICE-GB combinations contain many nonfocal pronominal objects (which obligatorily trigger the discontinuous ordering) while the NPs flashed onto the screen in Dehé's experiment are all full NPs. But how can we explain the large discrepancy

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[4] My set of automatically extracted examples initially contained 2,507 sentences, but I left out sentences with contested particles, namely those with *behind*, *forth*, *forward* and *to*, and I further discarded by hand a few examples with prepositions wrongly tagged as particles (e.g. *…but I have not come across an earlier citation*).

[5] For comparison, Gries's (2003) quantitative study comprised 403 cases, and Van Dongen's (1919) study comprised 899 cases. But see also Gries (2005) with 2,443 cases, which he also culled from ICE-GB.

[6] Besides, as one reviewer of this article pointed out, being the most frequent pattern does not necessarily mean being the unmarked pattern. Givón (1991) uses three criteria to establish grammatical markedness (structural complexity, frequency distribution and cognitive complexity) and remarks that "the *general* tendency is for all three criteria to coincide" (337, emphasis added).

between my and Van Dongen's corpus findings?[7] I see two possible and related reasons. First, it is well known that an important locus of language change is the availability of different choices to the language user. Therefore, it is rather dangerous to assume, as Dehé does, that language users' preference in the choice between two competing orderings has stayed constant for over eighty years. The discontinuous pattern may have become more frequent in use, although it strains credulity that this pattern would have risen so spectacularly in the course of one century. The second reason is perhaps closer to the truth: the discontinuous pattern may well have been used about equally frequently in spoken language at the beginning of the century as it is now, but people used to be more hesitant to use it in written discourse. As Bolinger (1971) writes,

> The fact that end position of the particle is at the familiar end of the speech-level or register scale perhaps explains why until the present century end position was comparatively rare in writing. The formality of earlier literature kept the proportion of any kind of phrasal verb low (Konishi notes … instances of self-correction on the part of writers, who replaced phrasal verbs with Latinate forms, e.g. Dryden [1631-1700 – B. C.], with *limited* for *bound up*, *introduced* for *brought in*), and the more familiar position by the same token would have been avoided with even more care. In *Pendennis* [by William Makepeace Thackeray, 1849 – B. C.] I found no instances of end position of the particle except with personal pronouns. (Bolinger 1971: 57, fn. 8)

So, according to Bolinger, it is in fact the *dis*continuous order, not the continuous order, that is and was the most familiar and least formal structure, which might explain why earlier writers tended to avoid it, if they at all used a "vulgar" verb-particle combination instead of a more learned alternative derived from Latin. It would be interesting to back up this claim with some hard empirical data, but I know of no diachronic study into the evolution of the relative acceptability of the discontinuous construction in formal and informal genres. However, the claim

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[7] In Gries's (2003, 2005) studies, the continuous ordering receives even slightly lower numbers, but all in all, his results compare rather well with mine: in the sample for his earlier study, there were 194 (± 48%) continuous and 209 (± 52%) discontinuous orderings; in the sample for his more recent study, there are 1,251 (± 51%) continuous and 1,192 (± 49%) discontinuous orderings.

finds some support from the fact that this ordering is (still?) the one that prevails in spoken discourse. Of the 1648 transitive verb-particle combinations in my spoken sample, 917 (± 58%) displayed the discontinuous ordering. In written discourse, by contrast, it is the continuous ordering that is (still?) the dominant ordering, representing ± 71% of the combinations (543 out of a total of 770). The difference between Van Dongen's and our findings can therefore also be explained by the different composition of the corpora used: Van Dongen's corpus consisted of written texts only, whereas the ICE-GB is made up of 40% written and 60% spoken discourse.[8]

But what about the *wh*-extraction facts pointed out by Dehé and shown in (1a-d) above? I am not sure whether these facts can really be used as evidence that the continuous construction is basic and that the discontinuous one is derived from it. The difference in acceptability is unmistakable, but I think we should look for an explanation in terms of syntactic complexity and concomitant processing demands. An NP from which a *wh*-element is extracted is, for that very reason, extremely complex. Indeed, such an NP contains a "gap" which requires the hearer to perform a search in memory in order to find a "filler" for it earlier in the sentence.[9] Now, if the discontinuous order were chosen, the hearer would have to deal with two dependencies in a row: first, the filler-gap dependency I just mentioned has to be resolved, and after this relatively effortful task, the hearer has to link the particle with the verb, which still has to be held active in working memory. So, given that a *wh*-extraction construction already by itself demands a lot of processing effort, all extra memory burdens are best avoided. This can be achieved by using the

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[8] A minor additional factor in the difference between Van Dongen's results and mine might be the method of extraction, as a reviewer remarked, since "it is easy to skip relevant occurrences when doing manual extraction (despite Van Dongen's claim)". This may especially be so in cases where the verb and the particle do not appear adjacently. Overlooking such examples would then naturally contribute to a relatively low number of discontinuous combinations.

[9] See Deane (1991, 1992) for a cognitive account of extraction from NP. As Deane (1992: 30) puts it, "Extraction is an intrinsically difficult processing task since the extracted phrase and its extraction site are discontinuous but must be processed together."

continuous order.[10] From the point of view of the speaker, it is probably also safer to produce the verb and the particle adjacently so as not to overcomplicate matters during the production of an utterance. After all, a speaker, too, has to keep track of which lexical material is already interpretable and which material is still awaiting the addition of another segment.

In short, generativist approaches suffer from the rather pointless search for a basic, underlying pattern from which the other pattern is then purported to be derived. Although the existence of an unmarked pattern and a more marked variant should certainly not a priori be excluded, there do not seem to be any convincing arguments for considering the continuous ordering as basic.[11] Even if there were, there still would not be any cogent (theory-external) grounds for positing a transformational link between this ordering and the discontinuous ordering, understood as the latter pattern actually coming about as the result of a movement operation effected on the continuous order.

3.2. Problems of the constructional approach

Extreme constructionalism tries to do away with alternations by studying the constructions linked by any alternation in their own right. For example, instead of describing the passive pattern as a transformation of the active pattern, each voice pattern is considered in isolation, with their own formal and semantic characteristics. As regards the particle placement alternation, we have seen that Gries (2003) likewise treats the two orderings as constructions on their own terms. Although

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[10] See Lohse et al. (2004) for a coherent theory of why processing is often facilitated by putting the verb and the particle in adjacent positions.

[11] If anything, it is the discontinuous ordering that should be treated as basic, in the sense of being the "default", unmarked pattern. There are two arguments for this. First, on the widely-held assumption that spoken language is primary (e.g., Bloomfield 1933:21), we are forced to view the discontinuous pattern as the basic one, since in this modality it occurs more often than the continuous pattern, as we have seen. (But note again that the correlation between frequency and basic structure is not always perfect; cf. note 6). Second, the discontinuous pattern is clearly the default pattern selected for novel combinations of a verb and a particle, like *chest* (*the ball*) *down* or *itemize* (*these factors*) *out*. In the ICE-GB corpus, I identified 140 combinations as "creative", because they were not attested in any of five specialized dictionaries of phrasal verbs. Out of these 140 combinations, 100 (71%) displayed the discontinuous ordering and only 40 (29%) the continuous ordering.

he is right that each ordering has its specific prototype, I argue that by altogether banning the particle placement alternation, we may be throwing out the baby with the bath water. Just because the two orderings are not linked by a truly Chomskyan transformation, it does not necessarily mean that language users are not aware of their relatedness.

As regards my qualification of Gries's perspective as extreme in that it seems to cut the link between the two orderings (cf. section 2.2), it might need some modification or closer examination. While Gries does claim that the two orderings are different and unique constructions, it is hard to believe that he would also claim that they are not in any way related. Indeed, one might say that the two orderings are related by the very set of verb-particle combinations that can occur in either of them. My claim that language users experience relatedness between the two patterns may not be in contradiction with Gries's claim that the two patterns are different constructions. What follows, then, is not a reaction against Gries's position as such but against an extreme interpretation of his position. I will show that giving up a relatedness link poses two interrelated problems. One has to do with alternating idioms, the other with the acquisition of non-alternating idioms.

Let us start with the problem raised by idioms. As is well known, verb-particle combinations can be stereotyped, that is, they can form a conventionalized (and often idiomatic) unit. Some verb-particle combinations also have a fixed object NP, as in *blow off steam*, *keep up the good work*, *put two and two together* and *throw one's weight about.* Often, as in the idioms just mentioned, the internal order is practically fixed (e.g. ?*blow steam off*). Other idioms, however, have two orderings – though one of both orderings may be slightly preferred:

(3a)   buck up one's ideas / buck one's ideas up
(3b)   get in a blow for… / get a blow in for…
(3c)   keep up one's end / keep one's end up
(3d)   lay down the law / lay the law down
(3e)   make up one's mind / make one's mind up

(3f)   pull up one's socks / pull one's socks up

(3g)   put out feelers / put feelers out

(3h)   roll up one's sleeves / roll one's sleeves up

(3i)   take away somebody's breath / take somebody's breath away

(3j)   throw in one's hand / throw one's hand in

(3k)   turn back the clock / turn the clock back

(3l)   turn up one's nose at… / turn one's nose up at…

Clearly, the two manifestations of each idiom have the same meaning. For example, if I say, "She took away my breath", I intend to convey the same kind of figurative meaning as I would if I said, "She took my breath away". Therefore, the view that each such alternating idiom is stored twice (once as an instance of the continuous pattern and once as an instance of the discontinuous pattern) without there being a level of representation at which the two versions are perceived to be semantically identical lacks psychological plausibility.

Let us now turn to the problematic case of acquisition. As we have just seen, some stereotyped verb-particle combinations only allow one ordering. For example, *drum up* in the sense of 'find, gather, gain' (e.g. *drum up support*) is only acceptable in the continuous ordering, while *ask / invite over* (as in, e.g. *ask / invite the neighbours over*) is only acceptable in the discontinuous ordering. The question, now, is this: how do children who are learning the English language get to know that only one ordering is felicitous? That is, how can they learn not to extend the discontinuous pattern to continuous-only idioms, and, conversely, how can they learn not to apply the continuous pattern to idioms that only allow the discontinuous ordering? The answer cannot just be that *drum up* is idiomatic and *ask / invite over* is (more) transparent, since in general, both idiomatic and transparent combinations can be found with either ordering (e.g. {*let down a friend / let a friend down*} 'disappoint'; {*let down the blinds / let the blinds down*} 'lower').

One answer may be that, given that transitive verb-particle combinations normally allow either ordering and given that for a particular verb-particle combination one ordering is almost

never heard, the learner can infer that this ordering must apparently be disallowed for that combination. For example, there is in se nothing syntactically wrong or discourse-functionally awkward about *drum support up*, as in (4a), which after all uses the same ordering as in (4b), with the verb *get*:

(4a)   They have utilized the President's image and status to drum support up for
         themselves.
         (www.breakthechain.org/exclusives/trucker.html accessed 6 February 2004)
(4b)   If you can get enough support up for that, I'll definitely do what I can to help.
         (mail.gnome.org/archives/gnome-list/ 2001-October/msg00319.html accessed 6
         February 2004)

The fact is, though, that there are only two hits for the string *drum support up* on Google (as of 6 February 2004). By contrast, the string *drum up support* returns almost 25,000 hits. There is, in other words, little chance that children ever hear the ordering in (4a), but there are plenty of opportunities for them to hear the other ordering. Learners may grow an awareness of such stark statistical discrepancies, and therefore stick to the ordering they are familiar with, which, in turn, will further reinforce the continuous ordering for this combination.

Of course, the problem with this answer is that no account is taken of the hallmark of language: its endless combinatorial possibilities. Notwithstanding the pervasive use of prefabricated utterances in every-day language use, many and probably most of the utterances we hear around us are being encountered for the first time and, crucially, we can effortlessly tell whether or not they are grammatical. Put differently, it is not because you have never heard a particular combination that this combination is, for that very reason, wrong. So, if children have never heard, say, *drum support up*, this should not be sufficient ground for them to figure out that this form is impossible. How, then, do children learn not to over-generalize the alternation pattern

if they are not being told explicitly that *drum support up* is wrong?[12] This problem comes down to what is known in the literature as the "learnability paradox", "Baker's paradox", or the "partial productivity paradox" (e.g. Pinker 1989).

A way to break this paradox is suggested by, amongst others, Goldberg (1995: 122-125).[13] She argues that learners can sometimes make use of indirect negative evidence that a certain form is disallowed. In particular, the more often speakers do not use a given form which would be most suitable in a particular discourse context, the stronger becomes the evidence for a child that this form is not acceptable: the heard form pre-empts the expected form. If we can apply this pre-emption mechanism to the problem of acquiring verb-particle combinations with a stereotyped word order, we would expect that, for example, the sequence *invite over some people* should be heard relatively frequently, in view of the fact that *some people* is an indefinite NP and therefore probably new in the discourse and in view of the fact that discourse-new elements tend to be put towards the end. Now, it suffices to encounter a number of occurrences in which the discourse-functionally less suited sequence *invite some people over* is used instead to conclude that the continuous ordering is presumably dispreferred. This indirect negative evidence is easy to come by. A search done on Google (6 February 2004) returned 309 hits for *invite some people over*, and only 2 for the theoretically more suitable *invite over some people*. These two occurrences are given below:

(5a)   They (…) wanted to invite over some people who had never seen their house in the
        Sunset district before.
        (www.spies.com/~rawdon/journal/2001/04/22.html accessed 6 February 2004)

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[12] As one reviewer commented, it may well be the case that some parts of grammar allow language users greater freedom in creating new combinations than other parts of grammar. Language users may be sensitive to which parts of grammar are permissive and which parts tend to force speakers to take recourse to prefabricated chunks. Still according to this reviewer, verb-particle constructions may be an aspect of grammar that is strongly characterized by conventional combinations (occurring in conventional orderings), which may explain why learners can judge whether a certain string of a verb, a particle and an object NP in a particular order is acceptable or not.

[13] See also Tomasello (2003: 178-181) for elaboration and further references.

(5b)   So I decided that I'd first, get out a couple of pots, anty up lots of ambition, invite
            over some people over then run to the store and viola!
            (www.simplyfoodchicago.com/cook's_tools.htm accessed 6 February 2004)

It will not have gone unnoticed that the object NP in the first example is very long, so that
the order may in fact be accounted for by "heavy NP shift", and that the second, rather sloppy,
example contains an instance of what Maarten Lemmens (personal communication) would call
"analogical contamination": the stacking of two preceding verb-particle combinations with the Prt
+ NP ordering triggers the same ordering for *invite over.* The writer then corrects this mistake, as
it were, by using the more natural NP + Prt for this combination all the same, which results in an
awkward kind of blend. So, the first example does not provide clear evidence that the continuous
ordering is generally fine with *invite over,* and the second example displays rather corrupted
(perhaps non-native?) language. In the absence of any unambiguous proof that the continuous
ordering can be used with non-heavy object NPs, young speakers can draw the right conclusion:
this ordering is disallowed. In addition, exposure to utterances like the following would provide
very strong indirect negative evidence, since the object NP is not only discourse-new but also
syntactically rather complex, another feature that typically leads to the continuous ordering – see
again Gries's prototype in (2a):[14]

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[14] Similarly, with respect to *drum up*, learners may infer from sentences like the following that the continuous
ordering is the standard one for this combination:

(ia)   "I am afraid, Cardinal, that you might need to actually get off that overly fleshy backside of yours and
            try and get some **votes** yourself."
            I frowned; trying to drum up votes directly was considered *extremely* bad form, …
            (thirddrawer.com/stuff/nano/2001/?section = 13 accessed 25 February 2005)
(ib)   I'd be more likely to believe it was some farkers who **support** the war and are trying to drum up support
            through fear.
            (forums.fark.com/cgi/fark/comments.pl?IDLink = 474821 accessed 25 February 2005)
(ic)   Can still remember her calling on everyone to attend his trial to show **support**. Doubt she drums up
            support for another con-artist.
            (www.network54.com/Forum/viewall?forumid = 40471&it = 30 accessed 25 February 2005)

(6a)   Why not … invite some people from Knoxville over, …

        (www.oakridger.com/stories/092099/opE_0920990046.html accessed 6 February 2004)

(6b)   Maybe we could invite some people we know over, …

        (www.rpg.net/news + reviews/columns/thistlemar01.html accessed 6 February 2004)

(6c)   I'd invite some people I know over, …

        (web.pitas.com/pixie_wings_/29_11_2003.html, accessed 6 February 2004)

(6d)   Invite some people you'd like to know better over for coffee, ….

        (www.casscomm.com/~virgnumc/November2003/ November2003.html, accessed 6 February 2004)

For acquisition on the basis of this kind of indirect negative evidence to be possible at all, language learners should be able to see a semantic similarity between the construction actually used and the construction they would have expected to be used. This is rather obvious, but the importance of this necessary condition cannot be overemphasized. Indeed, one cannot unlearn a certain unacceptable construction simply by being frequently exposed to a construction that is not closely linked to it. For example, no matter how often children hear the use of, say, the "object control" construction (e.g. *She invited some friends to come to her house*, where *some friends* is understood as the implicit subject of *come to her house*), this does not in the least help them to infer that **She invited over some friends* is a strange way of putting things. By contrast, on repeatedly hearing a more closely resembling pattern getting in the way of ("blocking") a pattern that might be expected on discourse-functional grounds, learners of a language can grasp the infelicity of this latter pattern. Only if the blocking pattern is sufficiently similar in form and meaning to the pattern that is systematically avoided can this "unlearning" take place. So, the perception of a relationship between patterns, such as between the "verb – particle – NP" pattern

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(id)   Wyatt said retail and business **customers** already have been told about the change, although some retail **customers** may have missed the news in mailings from the bank. To counter confusion and to drum up customers, U.S. Bank is launching a print and broadcast advertising campaign on the name change. (www.bizjournals.com/columbus/stories/2002/07/15/story5.html accessed 27 February 2005)

In these cases, the NP is not only short (one word) but also activated by the preceding discourse (see the words in boldface). This would normally, as per Gries's prototype, facilitate the choice of the discontinuous ordering. The fact that the continuous ordering is nonetheless chosen can be taken as an indication that this ordering is indeed fixed.

and the "verb – NP – particle" pattern, is crucial to mastering a language. Such relationships must therefore be part of competent speakers' knowledge of their language.

In short, the existence of alternating verb-particle idioms with a fixed NP (as shown in (3))and the acquisition of verb-particle combinations that conventionally allow one ordering only provide a very strong case for the claim that language users must have mental access, one way or another, to a particle alternation pattern.

4. A solution

Having laid bare some weak points of extreme derivationalism in the generative approach and of extreme "category-chopping" in the constructionalist approach, I would like to defend a middle way between these extremes. We need not lapse into transformational syntax by acknowledging that constructions are related to each other, nor do we have to give up the view that linked constructions have their own specific constraints.

The way we can conceive of two patterns as related is not by treating one as derived from the other but by considering them as "allostructions" – as variant structural realizations of a construction that is left partially underspecified. In the case of the particle placement alternation, we can posit the existence of a transitive verb-particle construction with underspecified word order. The two orderings are then more fully specified implementations of this general pattern. This is represented in figure1:

$$[_{VP,\ trans}\ V\ \{Prt\}\ NP_{Direct\ O}\ \{Prt\}]$$

$$[_{VP,\ trans}\ V\ Prt\ NP_{Direct\ O}]\ \longleftarrow - - - - \dashrightarrow\ [_{VP,\ trans}\ V\ NP_{Direct\ O}\ Prt]$$
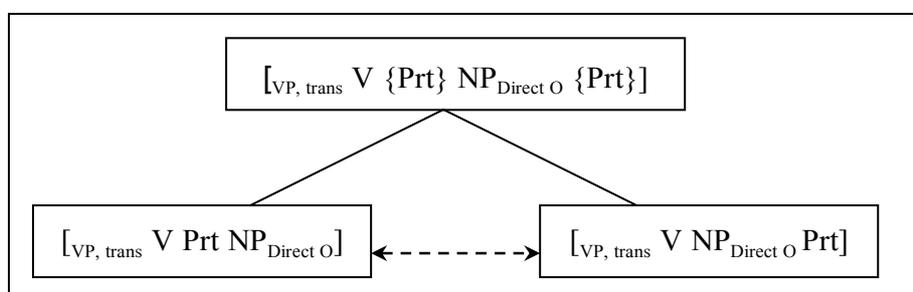
Figure 1. The transitive verb-particle construction with its two allostructions

This (simplified) representation is meant to convey the idea that the two allostructions of the transitive verb-particle pattern are not linked via a derivational rule but via a common "supercategory". Importantly, the fact that the two lower patterns are different forms of the same thing is a piece of linguistic knowledge that speakers of English learn on the basis of systematic variation in the language they hear being used around them. In this sense, the ordering alternation is itself one of the patterns of the English language, a generalization residing in the minds of its speakers.

The two allostructions are not in complementary distribution. That is, in many discourse environments, they may substitute for one another without bringing about a change in (truth-conditional) meaning. But although there is a good deal of free variation, the specific circumstances in which the transitive verb-particle pattern is used sometimes do determine the selection of one allostruction over another. In accordance with a general information-structural tendency, discourse-old and light elements are typically placed before discourse-new and heavy ones. This tendency is reflected in the well-known grammatical fact that, in principle, pronominal objects have to precede the particle, while long and especially syntactically complex ones have to follow the particle:

(7a)   I made it up. (cp. *I made up it.)
(7b)   I made up [a story about dinosaurs who didn't let a new dinosaur be a friend because
        he wouldn't look at them when they were talking and didn't act interested in what they
        had to say]. (cp. *I made [a story … had to say] up.)
        (www.tcet.unt.edu/images/i32.pdf accessed 26 February 2005)

There are no strict criteria for what counts as a long and complex NP. In the following authentic sentence, the object NP is ten words long and has considerable internal complexity; yet it precedes the particle:

(8)   I think he knew I made [the story of him coming to town once a year] up, but he only
       alluded to it…
       (www.hcmagazine.com/magazine.hc/ interactive/messageboard/0,6,0005427,00.html
       accessed 26 February 2005)

In this example, the use of the definite determiner (*the*) suggests that the object NP refers to familiar information. Familiarity status can, apparently, override the requirement that long and complex NPs have end-position. Conversely, when a pronominal object has sufficient informational value, for example because it is focal, it can follow the particle:

(9)   Of all the dogs in the shelter, my Master picked out me!
       (www.helgathedog.com/story.asp accessed 2 April 2001)

If the particle rather than the object NP is focal, the discontinuous ordering is the only acceptable pattern. In the following example the asterisks flanking the particle *off* are not ungrammaticality symbols but occur in the original example to mark accent:

(10)   I use the switch to turn the motor *off*, not on. (cp. *I use the switch to turn OFF the
       motor, not on.)
       (www.ibiblio.org/pub/academic/ crafts/woodworking/misc/new-info/rww4.log accessed
       26 February 2005)

Besides discourse-familiarity, weight and focality, there are several other factors that play a role in the choice of one or the other verb-particle allostruction. Among the lesser known factors is the extent to which the object NP refers to an expected entity given the activity expressed by the verb-particle combination. The more obviously this entity is associated with the activity, the more easily it appears in the discontinuous ordering, even if the entity has not been mentioned yet in the preceding discourse. For example, shoes are relatively more established items one puts on than, say, spurs. Therefore, the discontinuous order is more acceptable with the former than with the latter NP:

(11a)   He {put on his shoes / put his shoes on} and left.

(11b)   He {put on his spurs / ?put his spurs on} and left.

The actual impact of this putative factor, which involves elusive extra-linguistic or "encyclopaedic" knowledge, is as yet not fully investigated empirically.

5. Allostructions in Construction Grammar

In a Construction Grammar architecture, the existence of allostructions is fully expected. After all, if it is granted that morphological units can have multiple formal manifestations (generally known as allomorphs), it follows rather naturally that such variation also exists for phrasal units. What allomorphs are in morphology are allostructions in (other parts of) grammar. What is more, to the extent that constructions are not restricted to phrasal structures in Construction Grammar but include form-meaning pairings on the morphological level, we might in fact consider allomorphs as merely a special case of allostructions. The notion "allostruction" might even be further generalized to the domain of phonology. Inasmuch as specific sounds can be conceptualized as instances of one and the same more abstract phonological schema (a phoneme), we can regard these sounds not only as allophones (as in traditional phonological theory) but also as allostructions of one another: tiny formal variants of a single acoustic "concept".[15] Since constructions are also distinguished on the supra-phrasal level in Construction Grammar, we can likewise extend the general concept of allostructions to what Lambrecht (1994), after Daneš (1964), refers to as "allosentences": "semantically equivalent but formally and pragmatically divergent sentence pairs, such as active vs. passive, canonical vs. topicalized, canonical vs. clefted

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[15] Cf. Taylor (2002) for the conceptual nature of phonology:

> The phonology of a language is grounded in the human ability to produce, perceive, and, above all, to categorize sounds, and to form mental representations of sounds. And while phonology is not 'conceptual' in the sense that phonological units do not symbolize concepts, phonology *is* conceptual in the sense that phonological units can be regarded as concepts (...) –phonological representations reside in the mind, and are invoked in acts of speaking and understanding. (Taylor 2002: 79-80)

or dislocated, subject-accented vs. predicate-accented sentences, etc." (Lambrecht 1994: 6). In short, just as the notion of construction itself stretches from morphological (and perhaps even phonological) units all the way up to sentence types, so we can assimilate formal variation at all levels of grammatical description to the notion of "allostructions".

The similarity between two or more allostructions, mediated through the common schema that they instantiate, can itself be "objectified" and included in the whole of what speakers (have to) know about their language. In other words, an alternation that forms a link between allostructions can itself be a linguistic object. The treatment of such a link as a valid grammatical entity onto itself is nothing new in Cognitive Grammar, the theory of grammar most closely related to Construction Grammar. Mentally stored alternations or similarity links correspond more or less to Langacker's (1987) "categorizing relations", about which he says: "Each such relationship is a cognitive routine, more specifically an established comparison event assessing one node in relation to another" (Langacker 1987: 379). Particularly relevant to the idea that the perceived link between two patterns can itself become a well-entrenched piece of linguistic knowledge is the following passage from Tuggy (1981):

> …Synonymy is not to be accounted for by derivation, but by showing how the semantic structure of one expression closely parallels that of the other, making it possible for both to be used to code the same situations. Identity of meaning is, if it exists at all, an extremely rare limiting case; virtually all synonymous expressions differ in meaning to some degree … The similarities of meaning that do exist between synonymous morphemes or constructions can, of course, be perceived by speakers, and that relationship of synonymy can achieve unit status (like any other cognitive relationship) and be conventionalized and even have a directionality, with one expression felt to be the more basic one. This would be the functional equivalent of a classical transformational rule… (Tuggy 1981: 46-47)

Langacker distinguishes bidirectional relations from unidirectional ones. The former are invoked when "the speaker perceives the similarity of each element to the other without attributing primacy to either one" (Langacker 1987: 380), while the latter indicate that the speaker

intuitively considers one element as most basic (prototypical) and the other as more marked (peripheral).

Turning again to the issue of particle placement, we might consider the alternation on the most abstract level to be bidirectional: either ordering is (more or less) equally natural. This bidirectionality is not incompatible with the observation that, for certain stereotyped combinations, one allostruction is clearly more natural than the other, calling for a unidirectional relation between them. This is represented in figure 2, which incorporates the general transitive verb-particle construction and its two allostructions, familiar from figure 1, and adds an individual instance of this general construction, the combination *turn up*, which we know really only allows the continuous ordering. This can be visually represented by highlighting the enclosing box of the highly favoured allostruction with heavy lines and by deemphasizing the outlines of the box surrounding the strongly dispreferred allostruction. But this latter allostruction, however faint its outlines, can – and has to – be used when the object NP is an unstressed pronoun. To be sure, this is a grammatical property not only of this individual combination but of transitive verb-particle combinations in general. In other words, there are obvious parallels between the general transitive verb-particle schema and its concrete, lexically filled-out instantiations. These connections are indicated by means of curved lines that connect the outer boxes enclosing the general pattern and the lower-level instance, as well as the corresponding boxes around the elements within these two outer boxes. It is likely that speakers cannot make use of a cognitive routine for the discontinuous allostruction of *drum up*. If need be, they can nevertheless produce it by virtue of *drum up* being an instance of the more abstract transitive verb-particle pattern, from which it inherits general grammatical properties. (Of course, this more abstract pattern could only arise in the minds of language users by virtue of the perceived similarity in the grammatical behaviour of the many concrete verb-particle combinations in the first place.)
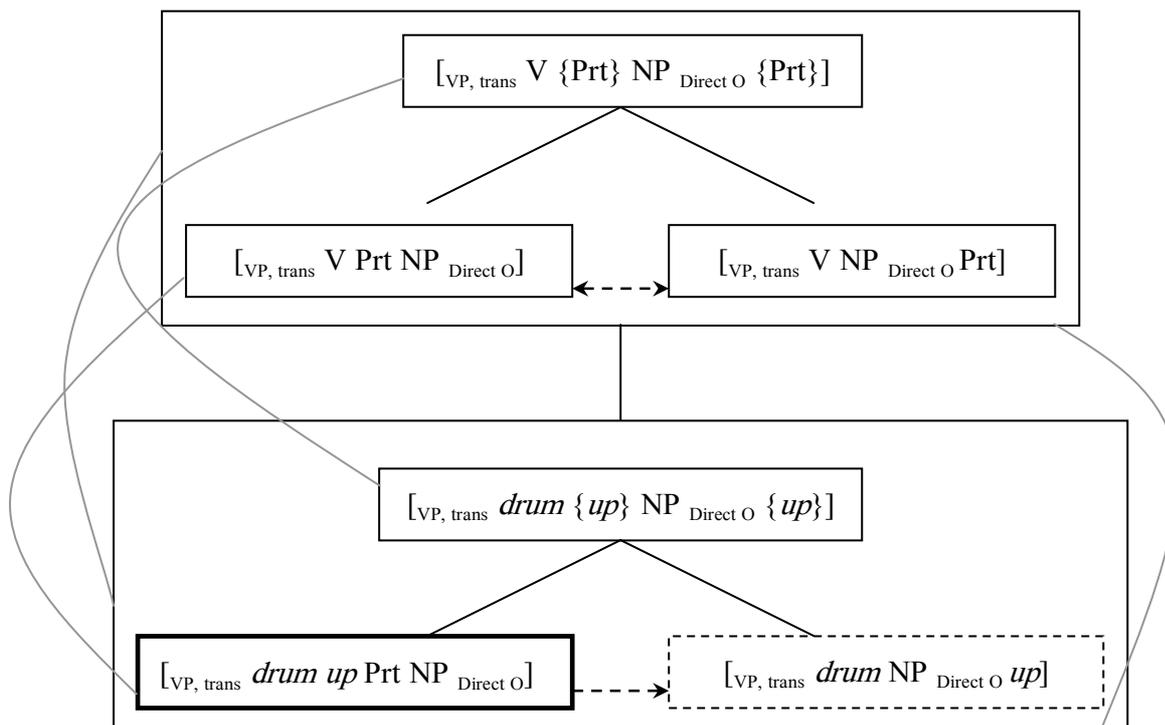
Figure 2. The transitive verb-particle construction and one of its many instances, both with their two allostructions

In Construction Grammar, the relation between a schema and its instances is captured by what are called inheritance links (see, e.g., Goldberg 1995: 72-100). These links, too, are treated as objects in the grammar. So, the existence of mentally stored links between patterns is nothing new in Construction Grammar either. In Goldberg's theory, an inheritance link is either a relation between a construction and a specific instance of it (as in the above example), between a larger construction and a proper subpart of it (e.g. between the caused-motion and the intransitive motion construction), between a construction and a metaphorical extension from it (e.g. between the caused-motion and the resultative construction, linked via the conceptual mapping from changes of location to changes of state), or between a construction whose sense is considered central to it and the various constructions whose senses form a polysemy network with that central sense (e.g. between the ditransitive referring to actual 'giving' and other kinds of ditransitives, such as those referring to 'promising', 'refusal', etc.).

Alternations, viewed as links between any two (or more) different formal versions of one and the same underspecified pattern, cannot be accommodated to any of these four types of inheritance links. In view of the problems raised by a radically constructional treatment of the transitive verb-particle construction, though, they would be a useful addition to the inventory of linguistic objects in Construction Grammar. The fact that inheritance links are fully recognized as proper linguistic objects should help remove some uneasiness against their full acceptance within the theory.

At any rate, this study has provided an example of how a phrase-level construction can have variant subforms. Inspired by the less controversial existence of allophonic and allomorphic variation in the domain of sound structure and word structure, I have called these phrase-level variants "allostructions". In keeping with the extendibility of the term "construction" into both sub- and supra-phrasal domains of grammar, the term "allostructions" can prove to be useful to refer to any kind of formal variants.

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