Goldberg's Rely On Construction: Overreliance on Generalization?

Jouni Rostila

University of Helsinki

Goldberg (2014) proposes one polysemous argument structure construction (ASC) for cases as varied as *nibble/rely/bet on something*. Inspired by ASCs needed for a semantically similar domain in German, my analysis suggests that a more adequate solution can be reached with three constructions that are semantically further apart than the two sub-senses of Goldberg's Rely On construction. The solution makes use of Israel's (1996) empirical findings regarding the historical development of the English *way* ASC to model the development and interrelationships of the required constructions. Overall, the paper advocates the advantages of a contrastive approach and the use of diachronic studies to inform synchronic Construction Grammar analyses of specific domains.

Keywords: Construction Grammar, argument structure construction, preposition, contrastive linguistics, German, English.

1 Introduction

A crucial question in Construction Grammar (henceforth CxG; cf. e.g. Hilpert 2014 for basics) analyses is how to split areas of grammar into form-meaning pairs, i.e. constructions. The same strings can often be generated by combining lexical constructions with either a few semantically general schematic constructions or with a number of more specific ones. While the former approach is attractive in that it may lead to elegant solutions capturing the broadest generalizations, the latter might be psychologically more valid and avoid overgeneration (cf. Croft 2001: 5; Boas 2003; 2011; Perek 2015: 214). Since Goldberg's (1995) introduction of argument structure constructions (ASCs), meaningful complementation patterns into which individual verbs are embedded (cf. Rostila 2015: 34-36), the choice between these options within the realm of verb complementation has been subject to a lively debate, cf. e.g. Müller & Wechsler (2014) and the responses to this target article such as Boas (2014). It seems that ASCs are sometimes semantically too general and thus overgenerate, cf. e.g. Boas' (2003; 2011) criticism of Goldberg's (1995) resultative construction for English. However, this is no reason to reject ASCs categorically – only a reason to be careful to find the adequate level of generalization for the patterns to be described.¹

Goldberg (2014) proposes for English an ASC she calls the Rely On construction, which generates cases as widely varied as *nibble/gnaw/feast on*

¹ Cf. Boas (2014: 96), who stresses that generalizations – also ASCs – are needed on many levels; it is important just to find the right level.

carrots, live on potatoes, prey on foreigners, chew on an idea, rely/depend on help from others, call on somebody to do something, bet on something.² At least at first sight, the semantic spectrum covered by this construction – from verbs of ingestion (*nibble*, gnaw, etc.) via verbs of reliance to verbs with 'hope', i.e. prospective, semantics (*bet*) – might seem too broad for a single construction. In an attempt to find out whether this is the case, this paper takes a closer look at Goldberg's proposal and contrasts it with ASCs proposed in Rostila (2007; 2014; 2015; in press) for similar areas of German verb complementation.³ Moreover, the findings of Israel (1996) regarding the diachrony of the English *way* ASC are used as a basis for an alternative solution. The ultimate goal is by no means to impose German ASCs on English – such an undertaking would be futile, since each language is likely to have constructions of its own, cf. Croft (2001: 6) and Goldberg (2003: 222)⁴ – nor to prove Goldberg's (2014) approach definitely wrong. Rather,

² Goldberg's (2014) proposal is couched in a comment article targeting Müller & Wechsler's (2014) arguments for a lexical approach to argument structure. Although the present paper proposes an account based on more specific constructions than Goldberg's proposal, it does not take a stance against Goldberg's main arguments, but emphasizes the need to find the right level of specificity for ASCs. For some comments on the need to assume ASCs (contra Müller & Wechsler 2014), see Rostila (in press: n. 3).

³ See Boas (2010) for a broader view on contrastive CxG studies.

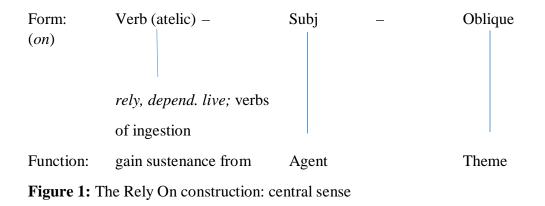
⁴ Shared history – shared parent language or language contact – may of course cause languages to have very similar constructions, but such constructions are hardly identical,

the paper aims at providing the basis for an alternative, improved account in terms of more specific ASCs, and in doing so brings to light more general problems of choosing between CxG analyses.

2 Goldberg's Rely On Construction

A closer look at Goldberg (2014) makes it clear that it is not simply a matter of proposing one too broad a generalization that is at stake here. Rather, Goldberg (2014: 128) proposes two constructions joined by a polysemy link.⁵ The essential properties of the "prototypical Rely On construction", or the "central sense" of the construction (ibid.), can be captured in the following way:

since they have to function as parts of a different system. Both options are likely to be excluded in the case of the Rely On constructions, though: the German constructions considered probably only developed from the 17th century onwards (see Rostila 2016: 272), excluding common Germanic origin; also a contact scenario between English and German strong enough to cause the borrowing of an argument marking pattern is highly unlikely. ⁵ For different types of links between constructions, see Goldberg (1995: 72-81) and Hilpert (2014: 60-65).



The figure, slightly adapted from Goldberg (2014: 128) to make it more easily comparable with those proposed here for German ASCs (see Section 3 below), is meant to express that the form of the construction consists of three "slots", one for a verb of a particular semantic type, one for a subject that has the function of Agent, and one for an oblique object marked by *on* functioning as Theme. Furthermore, the figure indicates that a verb embedded in the construction has the function of expressing the meaning 'gain sustenance from'; like ASCs in general, the construction can even impose this meaning on verbs not possessing it, cf. Goldberg (1995: 159; 2014: 127) and Rostila (in press: Section 2.1) for details. To gain a more concrete idea of the construction, it is useful to have a look at all the examples with which Goldberg (2014) illustrates the central sense:

- (1) a. She nibbled on the roll.
 - b. The cow grazed/gnawed/chewed/dined/feasted/ munched/fed on apples.
 - c. She lived on potato chips/sushi/grass.

- d. She lived on \$10 a month.
- e. The hyenas preyed on giraffes.
- f. The landlord preyed on foreigners.
- g. She chewed on the idea.

The cases in (1) show that verbs of ingestion dominate in the examples, and – somewhat surprisingly – not a single example illustrates *rely*, the verb that is supposed to occur in the construction "quite frequently" (Goldberg 2014: 126).⁶ While this bias in the examples does not necessarily lead to a decisively flawed account, one is still reminded of Rudanko's (1989: 148f.) criticism of an "impressionistic air" in linguistic work and his urge to strive for at least representative lists of verbs exemplifying a construction (ibid.). Section 3 will indeed show that considering more closely verbs of the *rely* type might have led to a different analysis.⁷

⁶ The cases (1f-g) illustrate a metaphorical use of the central sense. The fact that precisely verbs of ingestion are semantically extended in this way might be an (admittedly weak) indication that ingestion constitutes the prototypical, and hence original, sense of the construction, cf. Section 4.

⁷ However, the present paper certainly cannot solve the problem of compiling a representative list of verbs exemplifying the Rely On, and related, constructions; this remains a challenge due to the need to search for them on semantic grounds. Even FrameNet, a resource aiming at fairly comprehensive coverage of verb complementation on a semantic basis, only lists *count, depend* and *rely* as verbs evoking the Reliance Frame. Rudanko (1989: Ch. 6) yields

The following figure presents the essential properties of the second construction Goldberg posits, i.e. the "extended sense" of the Rely On construction (cf. Goldberg 2014: 128):

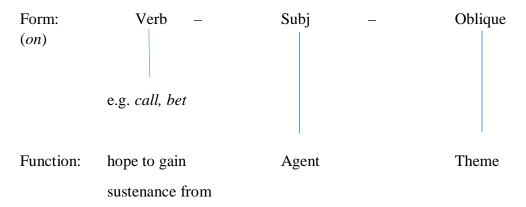


Figure 2: The Rely On construction: extended sense

Again, I have slightly adapted the notation from that used by Goldberg. Apart from the 'hope' semantics of the verb slot and the requirement of the central sense that the verb be atelic, the extended sense inherits its properties from the central sense. Significantly, only *bet* and *call* are mentioned as examples of verbs occurring in the construction.

a few further examples that stem from his analysis of Visser's (1973) type *I depended on him to come: call, count, depend, prevail, rely (on X to do Y); urge ((up)on X to do Y).* Significantly, his analysis also suggests that there might exist a competing pattern with essentially the same semantics, but symbolized by the preposition *to*, cf. *John trusted to Mr. Smith, a lawyer, to draw up his will* (Rudanko 1989: 144).

3 Preliminaries for an Alternative Solution

In my work on German ASCs (cf. e.g. Rostila 2006; 2007; 2014; 2015; in press), I have proposed ASCs based on prepositions of prepositional objects⁸ that closely resemble the two senses of Goldberg's Rely On construction. First, German seems to display an ASC signified by the preposition *an* (+ dative) – interestingly, a historical cognate of English *on* (cf. OED⁹, *s.v. on*) – that similarly to the central sense of the Rely On construction combines with atelic verbs, e.g. verbs of ingestion:

(2) a. Er baute an einem Haus.

he built at a house

'He was building a house.'

b. Er schrieb/lies an einem Buch.

he wrote/read at a book

'He was writing/reading a book.'

⁸ Rostila (2007: Part II, Ch. 4; 2015: n. 9; in press: Section 1) show that it is necessary to differentiate between Ps of prepositional objects that correspond to lexical cases, Ps of this type that have grammaticalized into ASCs, and full local lexical Ps like (*be/appear*) *on/in/at/over/under* ... (cf. Goldberg 2014: n. 7). The latter are fundamentally different and hence should not be put on a par with the former two categories.

⁹ Oxford English Dictionary online; http://www.oed.com. 06.08.2016.

c. Er trank an einem Bier.

he drank at a beer

'He was drinking a beer.'

d. Der Hund kaute an einem Knochen.

the dog gnawed at a bone

'The dog was gnawing a bone.'/'The dog gnawed on a bone.'

However, this construction differs in significant ways from Goldberg's central sense of the Rely On construction. First, it has a different range of application, combining not only with verbs of ingestion, but with other atelic verbs as well; on the other hand, the construction cannot express gaining sustenance, i.e. it does not occur with German translation equivalents of *rely, live,* etc. These make use of other prepositional object and/or lexical case structures instead, cf. *Er vertraut seinen Freunden* (dative)/*auf seinen Freunden* (*auf* + dative), roughly 'He relies on his friends'; *Er lebt von 10 Euro am Tag* (*von* + dative) 'He lives on 10 Euros a day'. Second, the construction is used to express gradual progress, or progressive aspect, in an activity – hence I have labelled it the aspectual/incremental *an* construction

(cf. Rostila 2006; 2007: 192f.; 2015: 41).¹⁰ In fact, it is probably this incremental/progressive semantics¹¹ that excludes verbs of sustenance from the construction: there can be no gradual progress in sustenance.

Given the differences, it is clear that proposing for English a construction semantically identical to the German ASC, but with the same formal pole as Goldberg's central sense, is no improvement over Goldberg's solution. However, the contrast to the similar German construction gives rise to useful questions about Goldberg's central sense. First, does it display similar progressive/incremental semantics? Cases like The cow chewed on the apple for an hour – She nibbled on the roll (Goldberg 2014: 126f.) suggest this. Second, is sustenance always a part of the semantics of cases that Goldberg considers examples of the central sense? It seems to me some of her examples, e.g. chew, gnaw and nibble, focus on incrementality/progressivity and at least background sustenance, if they do not exclude it altogether. On the other hand, when used with more abstract verbs, the on pattern seems to focus on sustenance and to background, or even exclude, progressivity/incrementality, cf. *feed*, *feast*, *dine*, *graze* and (1c-f).

¹⁰ Cf. Schøsler (2007) for a similar construction in Danish that interestingly is based on pa, the Danish translation equivalent of *on*.

¹¹ The division of labor between the aspectual *an* construction and the colloquial/dialectal German progressive (see Van Pottelberge 2004) is a relevant but complex issue that cannot be broached here.

If this semantic analysis is correct, the question arises whether it is justified to assume one construction for all these cases. A more viable alternative might be to assume one construction similar to the German incremental *an* for the cases focusing on progressivity/incrementality – only semantically narrower than in German, to account for the narrower range, i.e. the restriction to verbs of ingestion – and another one for the cases focusing on sustenance. Further still, given that there seems to be a semantic continuum between these two poles, it might be fruitful to assume a polysemy link between the two constructions. This aspect will be elaborated on in Section 4 on the basis of Israel's (1996) account of the development of polysemy in the English *way* ASC.

As regards the extended sense of Goldberg's Rely On construction ('hoping to gain sustenance'), it also resembles an ASC proposed by me for German. As Rostila (2007; 2014; 2015; in press) show in more detail, there seem to be grounds for assuming an ASC in present-day German based on the prepositional object preposition *auf* (+ accusative) that expresses prospectivity. The pattern occurs with prospective verbs like *warten* 'wait' and *hoffen* 'hope', cf. (3a); however, crucial proof of the existence of an ASC consists in cases like (3b-c), where the preposition *auf* can be seen to coerce a verb into a prospective meaning. A further indication of the semantic similarity of the German ASC to Goldberg's extended sense is that the pattern also occurs with the German meaning equivalent of the verb *bet*, which Goldberg (2014) gives as one of two examples of the extended sense, cf. (3d).¹²

(3) a. Er wartet/hofft auf einen Börsensturz.

he waits/hopes on a stock market crash

'He waits/hopes/is waiting/hoping for a crash of the stock market.'

b. Ich freue mich über/auf das Ende des Semesters.

I delight myself over/on the end of term

'I look forward to the end of term.'

c. Ich fahre auf Sieg, ganz klar.¹³

I drive on victory, quite clear

'I drive to win, that's clear.'

d. Er wettet auf Pferderennen.

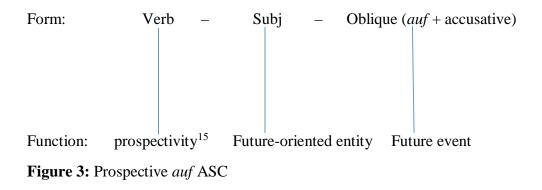
he bets on horseraces

'He bets on horse races.'

¹² See Rostila (2007; 2014; 2015; in press) for numerous further examples of auf + accusative with prospective predicates.

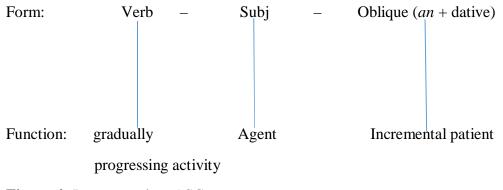
¹³ http://www.bild.de/sport/motorsport/nico-rosberg/wehrlein-hat-uns-in-der-formel-1-sehr-geholfen-43060804.bild.html; 24.05.2016.

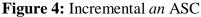
Given the semantic similarity of this German ASC with Goldberg's extended sense, as well as the fact that in present-day German *auf* equals *on* in concrete local uses,¹⁴ it seems tempting to assume a similar prospective ASC in English with the surface realization *on*. Section 4 puts this assumption on a more concrete footing by presenting further possible examples of such a pattern in English. It also makes an attempt to define the relationships of the three ASCs to each other that the analysis has hitherto suggested for Goldberg's Rely On cases. This section closes by showing the two German ASCs exploited in the analysis in more detail, cf. figures 3 and 4:



¹⁴ It must be emphasized that the correspondence of the concrete local meanings presents only weak evidence for a prospective *on* ASC in English. It is merely based on the idea that similar concrete meanings often develop into similar abstract, or more grammatical meanings, an idea that is part and parcel of grammaticalization studies (cf. e.g. Heine, Claudi & Hünnemeyer 1991).

¹⁵ It is important to note that the functions on this row in the construction figures include the semantic influence of the construction on the slot fillers – they do not present e.g. just the semantics of the verb on its own.





See Rostila (in press: Section 2.3) for more details and discussion regarding the structure and semantics of both constructions.

4 Improved Solution

The comparison with German has so far yielded three ASC candidates for English, each with the surface manifestation *on*, that could jointly generate the cases that Goldberg (2014) ascribes to her two senses of the Rely On construction. The purpose of this section is to show how and why the alternative solution might be more plausible. In the following, the properties of the proposed three constructions are recapitulated and their interrelationships are surveyed. Israel's (1996) findings regarding the development of polysemy in the history of the English *way* ASC are used as a basis for modeling these relations. This seems justified for at least two reasons: first, the emergence of polysemy is primarily a diachronic process, and hence it seems fruitful to exploit a diachronic parallel case to inform the synchronic description of the Rely On domain. Second, and more importantly, a comparison of the experimental results presented in Tomasello (2003) and Goldberg (2006) regarding the ontogeny of ASCs and Israel's (1996) empirical historical findings suggests that the emergence of ASCs both in ontogeny and phylogeny involves a generalization process catalyzed by high frequency items and intermediate generalizations resulting from type frequency effects; see Rostila (in press: Section 3.3) for discussion. Therefore, the development¹⁶ sketched by Israel (1996) for the *way* ASC might be at least roughly representative of the development of ASCs in general and hence serve as a legitimate model for the interrelationships of the Rely On constructions.

¹⁶ Israel (1996) studies the development of the English *way* construction (e.g. *The wounded soldiers limped their way across the field*) on the basis of 1211 diachronic examples from the OED and 1047 contemporary examples from the OUP corpus, showing that the construction was extended to new verbs in mainly two ways: by analogy with individual verbs already occurring in it, and by generalizations across clusters of such verbs, the latter leading to semantically more radical extensions. Significantly, similar phenomena are identified by Tomasello (2003) and Goldberg (2006) in the development of ASCs in child language. This makes it a tempting hypothesis to assume that they characterize all development of ASCs – also that of the *on* constructions proposed in this paper, which are partly motivated by this hypothesis.

Here is an overview of the ASCs of the alternative solution and their interrelationships:

ASC 1: Signified by *on*; expresses incremental progress in ingestion; combines with relatively concrete verbs of ingestion like *nibble, chew*. In light of Israel (1996), it seems plausible that this ASC has gradually spread from such verbs to more abstract verbs of ingestion like *feed, prey* and *live*. Such verbs focus more on the aspect of sustenance in ingestion than progress in it,¹⁷ and the occurrence of several such more abstract verbs in ASC 1 may have led to the emergence of an intermediate generalization, i.e. ASC 2, expressing sustenance – cf. Israel (1996: 223) for a similar process in the development of the *way* ASC, where "analogical extensions" to further verbs lead to "clusters of usage", which in turn license "more abstract schemas". The diachronic relationship between ASC 1 and ASC 2 amounts synchronically to a polysemy link between the two.

¹⁷ See Detges & Waltereit (2002) for a study explaining grammaticalization with the aid of this type of switch between figure and ground. Since (contra Noël 2007) there are grounds for considering the emergence and generalization of ASCs a process of grammaticalization (cf. Rostila 2005; 2007; 2014; in press: Section 3), it is to be expected that such a potential general feature of grammaticalization processes should appear in the development of an ASC.

ASC 2: Likewise signified by *on*; expresses sustenance. This constructional semantics enables the use of verbs like *rely* and *depend* in the pattern, i.e. verbs expressing more abstract sustenance instead of 'sustenance by ingestion'. Some verbs of this type display clearly prospective/'hope' semantics, cf. *count, reckon, bet, call (on X to do Y)*.¹⁸ By providing a semantically defined cluster and thus a basis for a generalization (again cf. Israel 1996: 223), their occurrence in the construction may have led to the development of a further ASC, i.e. ASC 3, whose semantics prospectivity dominates.¹⁹

18 The FrameNet description Reliance (cf. of the frame https://framenet2.icsi.berkeley.edu/fnReports/data/frameIndex.xml?frame=Reliance; 23.06.2016) suggests that prospectivity is always part of a reliance relation in that such a relation projects a Means action needed by the subject of the relation. Such an action can only follow the rise of the need for it; hence, a reliance relation seems inherently prospective. The presence of a prospective component in verbs like *rely* and *depend* in fact only lends support to the proposed analysis, since it can further explain why more overtly prospective verbs like bet appear in the same pattern: such an analogical extension may have been enabled by both a shared component sustenance and that of prospectivity – or just by the latter, in case verbs such as bet do not exhibit a component of sustenance, as one referee of this chapter is inclined to assume (cf. also note 19).

¹⁹ In fact, some such verbs, e.g. *bet*, may have found their way into ASC 2 only on the basis of sharing the component 'prospectivity' with verbs such as *rely* and *depend* – i.e. they may not display the component 'sustenance' at all. Precisely this on the other hand may have led to their forming a cluster providing the basis for the development of ASC 3.

ASC 3: Signified by *on*; expresses prospectivity. Notably, gaining sustenance is not part of the semantics of this ASC. This has the advantage of enabling ASC 3 to generate a wider range of cases than Goldberg's extended sense, e.g. the following:

- (4) a. Foreign investors are waiting on election results there.²⁰
 - b. I insist on your being present.
 - c. She was intent on pursuing a career in business.
 - d. They decided on their course of action.

Cases like this are prospective in that the argument marked by *on*, the focus of the subject argument's attention, is to be understood as a future event; see Rostila (in press: Section 2.3) for details.

Notably, ASC 3 can also generate the examples that Goldberg (2014) gives of her extended sense, i.e. cases like *bet on Y, call on X to do Y*. In such cases, the construction contributes the element of prospectivity/'hope', while 'gaining sustenance', if present at all (cf. note 19), conceivably stems from

²⁰ There probably also exists in present-day English a competing prospective ASC based on the preposition *for*, cf. *I'll wait for you/hope for the best/prepare for the worst* and Rostila (2015: 43).

verb semantics. The same goes for cases like *count/reckon on X*, which Goldberg (2014) does not exemplify.

Now, at least on a cursory look, it might seem that Goldberg's Rely On construction - i.e. a generalization over the two subsenses assumed by her could generate all the relevant cases: when combined with verbs of concrete ingestion, it would provide the semantic component 'gaining sustenance' that is present in the background; with verbs of sustenance like *rely* and *depend* its meaning would overlap with verb semantics; and with prospective verbs like bet and call it would again contribute the element 'gaining sustenance'. However, the construction would not be able to generate cases like (4): the element 'gaining sustenance' imposed by the construction is not part of their semantics. Since the three ASCs proposed here can generate all the cases considered, and those in (4), while at the same time being semantically more specific and hence psychologically more realistic, they seem to form the preferable option. To elaborate on the latter aspect: while Goldberg's (2014) two constructions seem to allow for a generalization that slumps them together, the three ASCs proposed here each display different semantics that cannot be generalized over. Thus, even apart from the number of ASCs employed, my solution is on a more specific level than Goldberg's. To the extent that knowledge of language is more likely to be item-specific than generalizable,²¹ this seems to be a desirable feature of my solution. A further argument in favor of my solution is that the diachronic emergence and polysemy relations of the constructions proposed here seem viable in the light of the findings of Israel (1996), whereas the polysemy relation envisaged by Goldberg (2014) between the two subsenses of her Rely On construction is essentially *ad hoc*.

It would thus seem that Goldberg's solution can indeed be improved. The alternative solution captures more data – Goldberg's solution would actually seem to have an undergeneration problem, instead of simply overgenerating, as might be expected of a maximally general solution. Furthermore, my solution is motivated by principles probably applying to both the diachronic and the acquisitional development of ASCs. However, there is a caveat to be made here. First, the semantic considerations that my solution rests on are somewhat lax in that they are based on intuition, not on semantic test procedures. Second, undergeneration and overgeneration issues are less than clear in the domain of prepositional objects, where competition between different patterns with a low degree of generalization and preemption

²¹ If usage-based linguistics (see e.g. Bybee 2006) is right to claim that exemplars are stored along with generalizations that can be drawn from them, and Tomasello's (2003) view of language acquisition progressing from item-based categories to generalizations (while often remaining on an item-specific level) is on the right track, this would seem a legitimate conclusion: exemplars are primary for language, generalizations seem like an optional extra.

effects are rampant (cf. Rostila 2007: 197-204; in press: Section 2.2). The pros and cons of constructions proposed for this domain can therefore only be reliably assessed as part of a larger solution capturing polysemous and partially synonymous ASCs based on PO prepositions.²²

5 Concluding Remarks

The analysis has shown that it may be useful to take a look at semantically similar constructions in another language when deciding how to split a certain domain of the target language into constructions. Such comparisons may function as eye-openers that show the possibility of alternative analyses. However, the viability of analyses inspired by such comparisons must be based on target language data and independent principles of what kinds of constructions are likely to exist. As regards the present case, the advocated solution is motivated by generating more relevant cases than Goldberg's approach, by being less general and thus psychologically more plausible, and

²² A great step in this direction is taken by Uhrig & Zeschel (2016), who propose several ASCs for the Rely On and neighboring semantic domains both in English and German on the basis of corpus evidence. Furthermore, they link these ASCs to frames and image schemas. However, they do not relate their proposal to that of Goldberg (2014) yet. Unfortunately, their paper came to my knowledge too late for me to be able to formulate here a synthesis of their insights with those of Goldberg (2014) and mine.

by being based on empirical diachronic observations possibly representative of the emergence of ASCs in general. An obvious next step would be to compile a truly representative list of verbs occurring in the three constructions proposed and to analyze whether the proposed interplay between verb and construction semantics holds true for all of them. In addition, the history of the ASCs of the Rely On domain would be a fruitful subject of study, since a verification of the parallels proposed here to the history of the *way* ASC would go a long way towards showing that there are generalizable features in the diachrony of ASCs. Last but not the least, Rudanko's (1989)²³ careful analysis of the complements of verbs like *depend*, *rely* and *count* – conducted in true CxG spirit, since both form and function are considered – should be used as a basis for their CxG description, and the interplay of such constructions with the ASCs proposed here should be studied.

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²³ Back then, I wasn't even a student of Juhani's yet; if he hadn't impressed me with his teaching in the 90's, I wouldn't be in linguistics today.

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