

FROM THE VVINGPP CONSTRUCTION TO THE VVING PATTERN A descriptive account¹

CRISTIANO BROCCIAS¹, ENRICO TORRE²

¹UNIVERSITÀ DI GENOVA, ²INDEPENDENT SCHOLAR

Abstract – In the first part of this paper, we assess Goldberg’s (2006, pp. 50-52) account of the English syntactic pattern she labels “VVingPP construction” (e.g. *The toddler went screaming down the street*), which is based on five constraints concerning argumenthood, verb types, transitivity, extended meaning, and constituency. On the basis of an analysis of data collected from dictionaries, corpora, and literary works, we argue that Goldberg’s account needs to be refined. A much more complex picture emerges from our analysis than is assumed by Goldberg, whose constraints are often violated. Drawing on these observations, in the second part of the paper, we propose, in the case at hand, replacing Goldberg’s notion of ‘construction’ with that of *pattern*, intended as a cluster of occurrences whose common (formal and semantic) traits must be captured at a more abstract level. Moreover, we observe that the instantiations of the pattern are related via family resemblance not only with each other but also with occurrences which do not feature a PP. This suggests that a more general VVing pattern can be posited, which portrays the integration of two events. At the same time, the data also suggest that low-level generalisations of limited scope can still be drawn over clusters of occurrences characterized by the interaction between V, Ving, and (possibly) PP. By focusing on both the former and the latter generalisations, it is possible to notice that the event integration can be described in terms of causality and/or temporal coextension.

Keywords: VVing; participle; construction; pattern; family resemblance.

1. Introduction

Goldberg (2006, pp. 50-52) offers a detailed, albeit brief, synchronic discussion of what she terms the “VVingPP construction”, which is exemplified in (1).

(1) The toddler went screaming down the street.

In the label *VVingPP*, V stands for the tensed verb (*went* in (1)), Ving for what Goldberg calls the progressive (*screaming* in (1)), which receives a manner interpretation, and PP for the prepositional phrase that Goldberg analyses as a directional complement (*down the street* in (1)). A construction in Construction Grammar is defined as a pairing of a semantic pole and a syntactic pole. These two poles for the VVing construction are shown in Figure 1 (based on Goldberg’s 2006 Table 3.1). Goldberg also points out that the VVingPP construction may be analysable as a serial verb construction.

¹ Both authors have contributed equally to the writing of this paper. In particular, Cristiano Broccias wrote most of Sections 1, 2, 5 and 6, while Enrico Torre wrote most of Sections 3 and 4 and carried out the corpus analysis.

Sem:	Move	in a Manner	along a Path
Syntax:	V _{go, come, run, take off}	Ving	(Oblique)

Figure 1. Goldberg's (2006) VVingPP construction

What Goldberg terms the VVingPP construction is also discussed to some extent by Bolinger (1983), Salkie (2010) and, especially, Matsumoto (2016), the latter with reference to instances of what she calls the VVing sequence, which we will label the VVing pattern. By “pattern”, we will mean an immanent and underspecified pairing of a phonological pole and a semantic pole, as will be made clear in the discussion below.

The VVingPP construction is also mentioned in passing by other scholars, for example Huddleston and Pullum (2002, p. 1224). They classify Ving as a depictive adjunct and remark that it could also be analysed as a catenative complement, much in the spirit of Goldberg's serial verb analysis. Killie and Swan (2009) also mention the VVing construction and wonder if Ving could be categorised as a converb, which points to the same idea.² In general, however, the description of the VVingPP construction is rather elusive. For example, as the references above highlight, there is uncertainty with regard to the syntactic classification of Ving.

In the present paper, we limit ourselves to viewing Ving as a participle rather than a progressive because the latter term is usually reserved for the progressive construction made up by *be* plus Ving (e.g. *The toddler is screaming*), see e.g. Berk (1999, pp. 107-110). Our overall goal is primarily descriptive, albeit with a constructionist twist, in the sense that although we aim to describe Goldberg's VVingPP construction in some detail, we will take this as an opportunity to offer some reflections on the notion of construction as is currently understood. We will show, in Section 2, that Goldberg's description, which rests on five constraints, needs to be refined. For example, it is essential to distinguish between manner of motion Ving's and non-manner of motion Ving's because this is related to the issue of which verbal element (V and/or Ving) the PP is an argument of. Also important will be the observation that the participle Ving does not always have an extended or progressive meaning and that causality plays a role in the description of the construction at hand. This will lead us, in Section 3, to question the aptness of the terms *constraint* and *construction*. We will replace the former with *generalisation* and will make use of the term *pattern* alongside construction. In particular, we will concur with Matsumoto (2016) that Goldberg's VVingPP construction should be described as part of a family of VVing sequences, see Section 4. Nevertheless, we will offer a more theoretical characterisation of Matsumoto's *sequence* by interpreting it as a pattern, to be understood as an immanent and underspecified pairing of a phonological pole and a semantic pole. In other words, we will distance ourselves from mainstream constructionist approaches by highlighting the fact that (i) constructions should not be regarded as pairings of semantics and syntax (because syntax can be regarded as meaningful), (ii) *high-level* constructions, which are similar to what we mean by patterns, may be thought of as immanent in their instantiations and (iii) family-resemblance-based connections may be less contentious a tool for describing the interrelatedness of language

² The VVingPP construction is also discussed briefly in Croft *et al.* (2010) in terms of Talmy's typology of motion constructions (see e.g. Talmy 2000), where they observe that it represents a mixture of verb-framing and satellite-framing as neither manner nor direction are expressed through the tensed verb but, rather, through Ving and PP, respectively. Finally, from a diachronic point of view, the Old English equivalent of the VVing construction is mentioned in Los (2005), which relies on Callaway (1913). The Old English VVing construction could also employ an infinitive in place of the participle (which ended in *-ende* in Old English).

than constructional hierarchies. In Section 5, we extend the scope of our description further by showing that the use of such dimensions of variation as causality and temporality illuminates the connections between the VVing pattern and other complex patterns, such as those involving the use of *-ly* adjuncts and resultative phrases. Finally, in Section 6 we draw some conclusions, on the basis of the observations made in the present study.

2. Constraints

Goldberg (2006) proposes five constraints that limit the productivity of the VVingPP construction, which we will now examine in some depth, showing that Goldberg's account is somewhat too simplistic. Although these constraints are also mentioned by Matsumoto (2016), her account is often not critical enough.

2.1. Argumenthood

The first constraint pertains to argumenthood. Goldberg (2006, p. 51) claims that “[t]he directional is an argument of the main verb, not of the second verb”, which means that Ving cannot appear with an argument of its own, as the contrast between the subordinate manner clauses in (2) and the corresponding impossible VVingPP examples in (3) show. (The Ving and its argument have been bracketed together to make the point clearer.)

- (2) a. Bill went down the street [whistling a tune].
b. Bill took off toward the cops [screaming at the thief].
- (3) a. *Bill went [whistling a tune] down the street.
b. *Bill took off [screaming at the thief] toward the cops.

However, this constraint turns out to be problematic if Ving is a manner of motion verb rather than a sound emission verb such as *whistling* and *screaming*. Consider the example in (4):

- (4) [They] came strolling out of the woods. (J.K. Rowling, *Harry Potter and the Goblet of Fire*)

As the sentences in (5) show, the PP *out of the woods* can function as a directional complement of both *came* and *strolling*.

- (5) a. They came out of the woods.
b. They strolled out of the woods.

In fact, Huddleston and Pullum (2002, p. 1224) analyse the PP together with Ving in the similar example (6), as is shown by their own underlining (this is their example (49ii) on p. 1224).

- (6) It came / went hurtling through the window.

Of course, it could be claimed that Goldberg's VVingPP construction only involves sound emission Ving's or, at least, that it excludes manner of motion verbs so that the latter would not be relevant to the present discussion. Importantly, Goldberg does not make this qualification in either the representation for the construction reproduced in Figure 1 above or her discussion. In fact, she herself provides an example of the VVingPP construction where

Ving is a manner of motion verb. This is example (7) below, which we will go back to in Section 2.4 below, when we address the issue of the temporal profile of Ving.

- (7) Bill went jumping off the bridge.³

As manner of motion Ving's cannot be excluded, an additional complication must be pointed out involving cases where more than one PP is present, which can be illustrated by means of example (8):

- (8) Professor McGonagall came walking [alongside the Gryffindor table] [toward him]. (J.K. Rowling, *Harry Potter and the Goblet of Fire*)

It must be ascertained which verb(s) the two bracketed PPs depend on. Using the same test as in (5) above, we obtain:

- (9) a. She came [toward him].
 b. *She came [alongside the Gryffindor table].
 c. She walked [alongside the Gryffindor table].
 d. She walked [toward him].

In other words, the PP *toward him* may be analysable as a directional of either V (*came*) or Ving (*walking*), as was the case for *out of the woods* in (4), but the PP *alongside the Gryffindor table* appears to be only a dependant of Ving. A way out of this impasse would be to claim that *alongside the Gryffindor table* is an adjunct while *toward him* is a complement so that the issue of argumenthood only pertains to *toward him*. But this appears to be an ad hoc solution. It is more reasonable to conclude that Ving too can occur with a complement, albeit a directional (prepositional) one, not a direct object. That is, an analysis such as the following cannot be excluded (single vs. double underlining shows the dependency of the PPs with respect to the verbs):

- (10) Professor McGonagall camewalking alongside the Gryffindor tabletoward him.⁴

The need for distinguishing between two cases, one relevant to manner of motion Ving's and the other to non-manner of motion Ving's, is also highlighted by Matsumoto (2016), drawing on Bolinger (1983) and, in particular, Salkie (2010). She refers to cases involving manner of motion Ving's as *motion-manner* and to cases involving non-manner of motion Ving's as

³ Incidentally, *off the bridge* is probably best seen as an argument of *jumping* rather than *went* (see also Matsumoto 2016, p. 145). This observation would actually make the example an instance of a different construction altogether, possibly what Matsumoto (2016) calls the *motion-purpose* subtype, because *jumping off the bridge* seems to describe the purpose of the motion event. Still, the point remains that Goldberg does not exclude manner of motion verbs from the Ving slot.

⁴ A similar example containing the Ving *jumping* mentioned in example (7) is the following:

- (i) Mama told me I wasn't very ladylike, as I went jumping across the rocks to the other side of the creek. (Susie Whiting, *Whiting Family Publishing*, <https://books.google.it/books?isbn=0965327620>)

Although it is possible to analyse the PP *across the rocks* as a complement of *went* (cf. "I went across the rocks to the other side of the creek"), it intuitively makes more sense to analyse it as a complement of *jumping* and to regard the PP *to the other side of the creek* as a complement of *went*. That is, using the underlining convention in (10), the following analysis cannot be excluded:

- (ii) I went jumping across the rocks to the other side of the creek.

motion-subject-depictive (because the Ving describes the subject). Nevertheless, she seems to fail to make an explicit connection between the two types and the issue of argumenthood, which is clearly the discriminant between the two. The former type appears to be compatible with the PP being a dependent of both V and Ving while the latter type requires the PP to be a dependent of V alone.

Finally, it must be observed that the PP is not always obligatory, as the following example from the *Oxford English Dictionary* (OED) shows.

- (11) 1832 Tennyson *Lady of Shalott* ii, in *Poems* (new ed.) 12 The knights come riding, two and two. (OED, s.v. *come*, v., I, 4b)

Importantly, the OED itself recognises this example as an instance of what Goldberg calls the VVingPP construction as it clarifies that (11) illustrates the usage where *come* is “[f]ollowed by a present participle or gerund indicating a concomitant action or activity (often expressing the method or manner of movement)”.

In sum, we have shown that the issue of argumenthood is not as straightforward as Goldberg (2006) assumes as it interacts with the nature of the Ving verb. If Ving is not a manner of motion verb but is a sound emission verb such as *scream*, then the PP is a directional argument of V. If Ving is a manner of motion verb, then the PP may be a directional argument of both V and Ving and the latter may even take its own (prepositional) complement. Argumenthood is therefore the discriminant for the identification of Matsumoto’s (2016) two subtypes. Finally, we have pointed out that the PP may be left implicit.

2.2. V types

The second constraint pertains to the types of V used in the construction. Goldberg (2006, p. 51) observes that “[t]he main verb [...] is not very productive”. She mentions *come*, *go*, *run*, *take off*, which are all rather schematic motion verbs, and points out that other verbs are not allowed, as is shown in (12), which reproduces Goldberg’s own example (12). (See also Section 3 below for actual corpus data.)

- (12) a. *Bill raced whistling down street.
b. *Bill walked whistling down the street.

Nevertheless, it is not impossible to come across actually occurring examples where *race* and *walk* are used as V’s, as is shown in (13). Note also that (13b) is very similar to the starred example (12b) in that it also contains the Ving *whistling* and the preposition *down*, although its complement is *the room* rather than *the street*.

- (13) a. He raced screaming into the house. (*Corpus of Contemporary American English* (COCA))
b. He walked whistling down the room. (Lawrence, *Sons and Lovers*)

Examples such as (13) also show that it is not desirable to use the term *constraint* to refer to what are in effect *generalisations* concerning the distributional properties of a construction.⁵ The term *constraint* seems to imply a computational model of grammar; this is an assumption that would only make sense from a generative perspective, which we do not subscribe to. If

⁵ Curiously, Goldberg (2006) uses the term *generalisation* (with the American spelling) in the title of her book but she does not explain what the differences are, if any, between *generalisation* and *constraint*.

the notion of constraint is adopted, then examples such as those in (13) could only make sense if described as *violations* of the constraint under discussion.⁶ Much the same could be argued with regard to the argumenthood constraint discussed in the previous subsection. We therefore think that it is more satisfactory both descriptively and theoretically to refer to Goldberg's constraints as generalisations (cf. also Salkie 2010: 172). The term *generalisation* is not loaded with computational associations but merely reflects the point that variation is everywhere in language and that the analyst's task is to offer a description of recurring properties of certain syntactic configurations at different levels of granularity.

2.3. Transitivity

Perhaps surprisingly given her use of the term *constraint*, Goldberg's third constraint is indeed formulated as a generalisation in that it is intended to capture variation in acceptability, although it is not called as such. Goldberg (2006, p.51) observes that the VVingPP construction has a transitive variant where "[t]ransitive verbs *take* and *bring* are also acceptable to varying degrees, depending on the choice of Ving", as is exemplified in (14), which reproduces Goldberg's examples (13)-(16).

- (14) a. Bill took him kicking into the room.
 b. Bill brought him kicking and screaming into the room.
 c. ??Bill took him whistling into the room.
 d. ??Bill brought him grinning into the room.

It must however be observed that the two sets of examples in (14), namely (14a-b) vs. (14c-d), are not on a par. While Goldberg intends all her examples to have a purely depictive interpretation – e.g. taking somebody into the room and this person's whistling in (14c) are two events that are meant to unfold simultaneously and not to be related causally to each another, this is not the case in (14a-b). Here, the kicking and screaming, although unfolding simultaneously with the taking event, are obviously a reaction on the part of the referent of the pronoun *him* to his being displaced. Indeed, a causal interpretation is also found in a related (transitive) case, illustrated in (15):

- (15) The explosion sent glass flying everywhere. (*Longman Dictionary of Contemporary English* (LDCE))

The Ving *flying* can be regarded as a manner of motion verb because it specifies (forceful) motion through the air in this example and, thus, (15) seems to qualify as a potential candidate for inclusion in Goldberg's (transitive) VVingPP construction.⁷ Now, an event of sending requires reference to two components, a force component and a motion component. The Ving *flying* elaborates the motion component only and the verb *send*, unlike *take* or *bring* in (14), is punctual.

The case illustrated in (15) can, in turn, be related to examples such as (16), where V is the inceptive verb *set*.

- (16) The wind set the trees rustling. (LDCE)

⁶ Constraint violations are possible in certain formal frameworks such as Optimality Theory and the Decathlon Model (see Featherston 2005) but not in Goldberg's Construction Grammar.

⁷ It is also worth pointing out that, as *fly* is a motion verb, the directional component *everywhere*, which should be classified as an adverbial rather than a PP, can be regarded as an argument of both V and Ving.

Although (16) is not an instantiation of VVingPP (the PP is absent, nor is it understood, as in (11) above), the crucial point is that the VVingPP construction, as Goldberg herself observes (see also below), has many links to other ‘constructions’ as well. Further, it seems that the transitive variant(s) involve(s) causality, independently of whether V is non-punctual (as in (14a-b)) or punctual (as in (15)), see also the next Subsection and Section 5 below.

2.4. Extended meaning

Goldberg (2006, p. 51) contends that “the activity described [by Ving] must be construed as obtaining over a period of time or as being iterative”. The former scenario is relevant to the examples mentioned so far while the latter applies to (17) below, which reproduces Goldberg’s example (17).

- (17) a. Bill jumped off the bridge.
b. Bill went jumping off the bridge.

Goldberg claims that while (17a) is semelfactive, (17b) is iterative.⁸ Although it is not immediately apparent without any further context what type of iterative activity is being depicted in (17b) (perhaps repeated jumps off the bridge on the same occasion?), the point that Goldberg makes is that Ving portrays an extended event in the VVingPP construction, which probably justifies her choice of the term *progressive* to refer to Ving.

Although this characterisation indeed applies to her examples (with perhaps the exception of (17b)) and is also found in other studies such as Bolinger (1983) and Matsumoto (2016), it is possible to come across counterexamples such as (18):

- (18) The wall came crashing down. (COCA)

The participle *crashing* in (18) clearly refers to one single event (i.e. it is not iterative) and cannot, strictly speaking, “be construed as obtaining over a period of time”. Rather, the verb *crash* depicts the culmination of a motion event resulting in a loud noise and/or significant structural damage. It is the motion event presupposed by *crash* that extends over time rather than *crash* itself.⁹ It is also important to note that (18) has a causal flavour in that it is the coming down of the wall that causes the noise/damage implied by *crash*. This observation will be picked up again in Section 5.¹⁰

We can therefore conclude that the constraint proposed by Goldberg is in reality once more a generalisation, which applies specifically to non-causal intransitive examples. If causality is relevant, then the Ving may not have an extended temporal profile.

2.5. Constituency

Goldberg (2006, p. 51) observes that “[t]he syntax [...] appears to be [Subj [VVingPP]]”. To put it differently, Goldberg does not analyse [VingPP] as a constituent, a conclusion which is

⁸ Example (17b) is rather difficult to analyse also because Ving is a verb of manner of motion and, hence, the PP may also be an argument of Ving. Indeed, one may even analyse it as an argument of Ving alone, see also the discussion of (i) in Note 2, which, incidentally, is clearly iterative in Goldberg’s sense.

⁹ As a Reviewer points out, an iterative interpretation cannot always be excluded, as in *The boulder came crashing down the mountainside*.

¹⁰ Matsumoto (2016, p. 137) mentions the similar example *The plate went crashing to the floor* but ignores both the fact that *crashing* depicts the culmination of the motion event and the fact that causality is implied.

also accepted by Matsumoto (2016). Goldberg claims that this is the case using fronting as a test for constituency, as is shown in (19).

- (19) a. Down the hill Bill went screaming.
b. ??Screaming down the hill Bill went.

As only constituents can be fronted and *screaming down the hill* cannot, Goldberg concludes that [VingPP] is not a constituent. The issue of constituency is in part a reformulation of the argumenthood constraint discussed in Section 2.1. Goldberg contends that the PP is an argument of V and implies that Ving behaves like an adverbial; hence, the constituency [Subj [V VingPP]] follows. However, it was observed in Section 2.1 that there are clear cases where the PP can be analysed as an argument of Ving as well. Further, fronting should be used with caution as a test for constituency (see Benito 2009 for a detailed analysis). For example, as Goldberg (n.d.)¹¹ observes in an unpublished version of her analysis of the V VingPP construction, *went* on its own at the end of a clause where fronting is used is typically infelicitous, probably because, we may add, *went* would typically precede the subject in fronting cases (cf. *Down the hill went Bill*). Also, Goldberg (n.d.) does not star the example reproduced in (20), where *took off* is used instead of *went*, which therefore makes the conclusion drawn on the basis of (19) less than reliable.

- (20) Screaming down the hill Bill took off.

All in all, judgements concerning fronting are not so clear as to warrant safe conclusions about constituency. It is probably less hazardous to disregard the issue of constituency altogether.¹²

3. Patterns and constructions

The discussion so far has revealed a more complex picture than is suggested by Goldberg's constraints. First of all, we need to distinguish those instances where the PP is an argument of V alone (e.g. with sound emission Ving's such as *screaming*) from those cases where the PP may also be regarded as an argument of Ving (e.g. with manner of motion Ving's such as *strolling*). In fact, if we consider the structure V VingPP where V denotes what Halliday would call a material process (see Halliday and Matthiessen 2014)¹³ and disregard the meaning isolated by Goldberg, we note that there are three possible argumenthood options for the PP for this syntactic arrangement. Alongside the two mentioned before, which are exemplified in (1) and (4) above, reproduced here as (21a) and (21b), the PP can also occur as an argument of Ving alone, as in (21c), as is shown by the underlining. Importantly, to the best of our knowledge, no other researchers have linked the issue of the identification of the three types of V VingPP as in (21) explicitly to argumenthood.

- (21) a. The toddler went screaming down the street.
b. They came strolling out of the woods.

¹¹ See <https://www.princeton.edu/~adele/papers/Papers/vving.doc> (last access: 22nd May 2018).

¹² Incidentally, not all linguists would subscribe to the notion of constituency as is usually understood (see e.g. Langacker 2016).

¹³ Material processes are processes of doing and happening (see Halliday and Matthiessen 2014, Section 5.2 and, in particular, Table 5.5 on pp. 234-236).

c. She came looking for him.

Moreover, it was remarked above that, with a Ving such as *crashing* (see (18), which is reproduced below for the sake of convenience), the Ving event, which is causally related to V, is punctual, unlike what is observed in all the examples in (21).

(18) The wall came crashing down.

Thus, just by considering PP argumenthood, the type of Ving used and the temporal profile of Ving as dimensions of variation (which need not be independent of each other), it appears to be difficult to neatly ‘isolate’ a VVingPP construction in the Goldbergian sense. A closer look at the data reveals that there are various ‘constructions’ that are partly related to one another by what can only be described as family resemblance connections. All the examples in (21) and (18) contain a rather schematic (material) V, either *went* or *came*. In addition, (21a) and (21b) are similar to each other because the V and Ving processes unfold simultaneously. Still, V and Ving are truly different processes only in (21a), as the Ving *strolling* in (21b) specifies the manner of motion encoded by the V *came*. Also, (21a) and (21b) differ in terms of PP argumenthood. (21c), like (21a) and (21b), depicts a complex motion event but the event of arriving somewhere is a part of the overall event of looking for somebody rather than being coextensive with it; further, only in (21c) is the PP an argument of Ving alone. Finally, in (18) Ving depicts a punctual event although the V event and the Ving event are intimately connected as the crashing results from the motion event.

We find it difficult to claim that these relations may be modelled by means of a radial network approach of the type favoured by Goldberg (1995, 2006), which requires a central ‘prototypical’ sense out of which other senses radiate as extensions.¹⁴ We cannot see any compelling reason for isolating the semantics (including the constraints) proposed by Goldberg for the VVingPP construction (and instantiated by e.g. (21a)) as a prototype, for example. In fact, on the assumption that earliest occurrences and token frequencies are correlates of prototypicality, we observe that, diachronically, the earliest occurrences in the OED (see s.v. *come* v. I 4a, b) contain non-finite verbs of manner of motion corresponding to what in present-day English would be *flying* and *riding*, that is, verbs that contradict Goldberg’s constraint concerning PP argumenthood. Synchronically, the three most frequent V’s are, in order of frequency, *come*, *go*, *run*.¹⁵ The Ving types are detailed and exemplified in Table 1. (For the sake of simplicity, the subject has been ignored in each example.) The Table includes two percentages. The *all cases* percentage refers to all Ving types irrespective of the dependency of the PP on either V or Ving or both. The *only non-VingPP* column ignores cases such as (21c), where the PP is only an argument of Ving.¹⁶

¹⁴ Goldberg does not use the radial network approach in the case of the VVingPP construction because she does not identify any ‘extensions’. Thus, we are supposing that, if the VVingPP construction were treated in a similar way to the resultative construction (see Goldberg 1995) or the subject-auxiliary inversion construction (see Goldberg 2006), then its treatment would involve a radial network approach.

¹⁵ The most frequent motion V’s were obtained out of a sample of 4,000 VVingPP tokens from COCA using the string `_vv* _v?g* _i*`. The analysis of the Ving’s types for *come*, *go*, *run* was carried out using samples of 100 tokens for each verb when the verb was followed by Ving and a preposition.

¹⁶ Most of the labels for the Ving types should be self-explanatory. In any case, the label *emission* refers to the emission of a visual and/or auditory percept, as with *crashing* and *screaming*. The label *grammaticalized* refers to usages of *go* where the concrete directional component has been lost, as with *go missing*. The label *bodily* refers to processes that the human body undergoes (i.e. bodily processes), as with *shivering*.

V	Ving type	Example	All cases	Only VingPP cases
<i>come</i>	Manner of motion	... <i>came running down the stairs</i>	73%	89%
	Purpose	... <i>came looking for him</i>	19%	
	Emission	... <i>came crashing into the boat</i>	8%	11%
<i>go</i>	Purpose	... <i>went looking for you</i>	30%	
	Activity	... <i>went shopping in Manhattan</i>	26%	
	Manner of motion	... <i>went running up the street</i>	23%	85%
	Grammaticalized	... <i>went missing in Iowa</i>	17%	
	Emission	... <i>went crashing to the floor</i>	4%	15%
<i>run</i>	Emission	... <i>ran screaming through the waiting area</i>	87%	87%
	Manner of motion	... <i>ran tumbling¹⁷ down the hill</i>	10%	10%
	Bodily	... <i>ran shivering out the door</i>	3%	3%

Table 1. Ving types and their percentages with *come*, *go* and *run*.

The V *come* collocates most frequently (73%) with manner of motion Ving's, whether we consider all the possible dependencies of PP or we exclude the type in (21c). The V *go* collocates mostly with Ving's of purpose and activity; only in 23% of all cases does it collocate with manner of motion Ving's. However, if we exclude the type in (21c), then manner of motion Ving's amount to 85% of all Ving's. The V *run*, instead, does not occur most frequently with manner of motion Ving's in either analysis; rather, it favours emission in the great majority of cases. This shows that manner of motion Ving's are preferred with the most generic verbs (*come*, *go*) and that the most frequent type of Ving collocate is not identical across different verbs, thus making the identification of a possible prototype rather contentious. More generally, we need to remark that the notion of prototype in the context of a syntactic construction seems rather difficult to define (see, for example, Gilquin 2006, Torre 2017).

We find it safer to adopt a more descriptive stance as follows. First, we prefer to avoid, as was pointed out above, the term *constraint* because this suggests the *mind as a computer* metaphor. Instead, we opt for the less loaded term *generalisation* and interpret Goldberg's constraints as generalisations that point to various dimensions of variation. Second, we opt for the term *pattern* (as in Pattern Grammar, see Hunston and Francis 2000) to refer to the syntactic arrangement NP V (NP) Ving PP or, in its abbreviated form, VVingPP. (The NP is placed in parentheses so as to cover both transitive and intransitive cases.)

¹⁷ As a Reviewer points out, the verb *tumble* does not exclude a sound emission interpretation. Still, sound emission is secondary to *tumble* as opposed to *crash* and *scream*. For example, the definition of *tumble* and the phrase *come tumbling down* in the online Longman Dictionary make no reference to sound at all, while the Dictionary mentions sound in connection with *crash* and, obviously, *scream*. For this reason, *tumble* appears as a manner of motion verb in Table 1.

This approach is reminiscent of Matsumoto's (2016) use of the term *V Ving sequence* to cover a variety of cases that exhibit connections between them. However, we use the term *pattern* in a quite specific sense which is important to spell out in relation to mainstream constructionist approaches to language. By *pattern*, we mean a somewhat undetermined syntactic configuration that can be specified further along various parameters, such as PP argumenthood, V and Ving types, etc. in the case at hand.¹⁸ To us, the material pattern V VingPP is a syntactic configuration that covers all the cases discussed so far. An important caveat is in order, though. We take issue with the view of a construction as a pairing of meaning and form if form is to be interpreted as syntax because this implies that syntax is 'pure form' without meaning. Instead, we side with Langacker's (2008) view, where constructions are described as pairings of a semantic pole and a phonological pole, rather than a syntactic pole. Thus, a syntactic pattern is to be understood as a construction whose semantic and phonological poles are quite general. As for the (material) V VingPP pattern, for example, its semantic pole specifies that a material process is involved, as described by V, and that some relation obtains between V and the process encoded by means of Ving, with PP being an argument of either or both V and Ving. We thus isolate what constructionists would term a high-level construction and call this a *pattern* but, contrary to constructionist approaches, we do not view syntax as pure form because we take syntax to be inherently meaningful (see Langacker 2008 but also Jespersen 1924; cf. Bloomfield 1933). Furthermore, we do not make any claims concerning the psycholinguistic reality of such high-level constructions, contrary to what seems to be the (explicit or implicit) assumption in much of the Construction Grammar literature (see e.g. Traugott and Trousdale 2013; Hilpert 2014). At most, we agree with Langacker (2008, p. 56) in viewing them as immanent in all their instantiations. This amounts to saying that the description of constructions in hierarchical terms (e.g. high-level vs. low-level constructions possibly related by inheritance links, see immediately below) may be a convenient descriptive metaphor, whether it reflects their actual representation in the mind or not. To us, it is important to recognise the pattern V VingPP because of its descriptive power, namely the fact that it allows us to establish connections between various 'constructions' when we approach them at a *semantic minimum*, so to speak, while remaining agnostic as to their psycholinguistic reality.

Alongside this high-level construction or pattern, we identify a variety of more specific constructions, i.e. low-level constructions or even mini-constructions in Boas's sense (see Boas 2003), which exhibit family resemblance connections between them. We do not view these low-level constructions as either exhaustively enumerable or identifiable in unambiguous terms, as the network metaphor (see also Langacker 2008 on this point) and/or the use of *constraints* imply. In a sense, each single example of the V VingPP pattern is a *construction* in its own right and connections between the various examples are based on partial overlaps that the analyst can use to define constructional clusters (e.g. we can

¹⁸ It is not possible to provide an exhaustive list of 'parameters' for the identification of a pattern. What is crucial is the structural similarity across various cases. An unrelated pair of examples may be useful to illustrate the point. Consider the sentences *I gave him a present* and *I opened him the door*, which was apparently more common in earlier stages of the language (see Coleman & De Clerck 2011, Zehentner 2018). The former is an example of the Double Object Construction (DOC), see Goldberg (1995) among many others, because it has a 'transfer' meaning. The latter, although structurally identical to the former, should not be regarded as an instance of the DOC but, rather, of a different construction; it does not imply any physical transfer but has a 'beneficiary' interpretation ("I opened the door on his behalf"). Still, the two constructions are somehow related (someone profits from both actions) and this is what the term 'pattern' is intended to capture. Other constructionist approaches such as Cappelle (2005) would view the DOC and the 'beneficiary' construction as 'allostructions' of a hierarchically higher construction.

distinguish examples such as (21a) from (21b) on the basis of the type of Ving used, etc.), as approaches such as Matsumoto (2016) purport to do. But, again, we do not make any claims with regard to the psycholinguistic reality of such clusters. We merely suggest that it is descriptively convenient to capture linguistic facts at a very high-level, that of patterns, and at a relatively low-level, even down to that of each single example, and that the links between the various cases are best viewed in terms of family-resemblance connections. To be sure, radial network models such as those typically adopted in Construction Grammar seem problematic to us both as descriptive and as psycholinguistic models, see Torre (2017) for an extensive discussion in relation to the English Caused Motion Construction.

4. From VVingPP to VVing

As Goldberg (2006) views the VVingPP construction as a serial construction, she posits that it is related to other serial verb constructions such as the *goVPing* construction (e.g. *Don't go sticking your nose in where it doesn't belong*) and the *goVPbare* construction (e.g. *Go tell your sister to come here*). Although this may indeed be the case, it was argued above that the VVingPP construction is not a unitary construction but, rather, it is better to refer to a more general (material) VVingPP pattern and then discuss it in relation to various dimensions of variation such as the argumenthood of the PP, the type and temporal profile of Ving used as well as transitivity (see (14a-b) above). In other words, if we view examples such as (21a) as typical examples of what Goldberg has in mind when using the label VVingPP, then there are various other constructions that are readily associable to it via family resemblance alongside the *goVPing* and *goVPbare* constructions. We have already pointed out cases such as (18), (21b), (21c) and, as far as the transitive variant is concerned, (15) and (16). Also, it was observed that the PP may be absent or understood, as in (11) (cf. *They came riding*).

Remarkably, Goldberg does not make a connection between her motion VVingPP construction and non-motion examples such as (22), which involve posture V's such as *lie* and *sit*.¹⁹ Matsumoto (2016) makes such a connection but contends (see Matsumoto 2016, p. 157) that the only possible posture verbs are *sit* and *stand*, which is contradicted by (22a-b), which shows that *lie* is also possible.²⁰

- (22) a. He lay gasping (on the ground). (COCA)
 b. He lay gasping for air. (COCA)
 c. Faith sat gripping her saucer. (Frances Hardinge, *The Lie Tree*)

Further, as was the case with motion V's, Matsumoto (2016) doesn't explicitly relate examples such as those in (22) to the argumenthood status of the complement following Ving.

Despite the occurrence of non-motion verbs in the V slot, the semantics of the sentences in (22) is very similar to what was observed for motion cases. (22a) clearly resembles (21a) above. Ving denotes an extended activity unfolding simultaneously with V and the PP is an argument of *lay*, as shown by the underlining. Further, as in (11), we note that the PP is optional. As in motion V instances (see (21c)), the Ving may be used with a complement of its own, like the PP *forair* in (22b) or the NP *the saucer* in (22c).

¹⁹ Other verb types are possible as well. An example with a perception V is the following:

(i) Lambent stared unmoving at the boot for a few seconds. (Frances Hardinge, *The Lie Tree*)

²⁰ The sample mentioned in Note 14, namely 4,000 VVingPP tokens from COCA extracted by means of the string `_vv* _v?g*_i*`, shows that the most frequent posture V's are (in order) *stand*, *sit*, *lie*.

It is thus useful to consider not only a general pattern where V is not restricted to motion verbs – which is what the label *material V* does – but also to refer to an even more general pattern, namely VVing, where a dependent of either V or Ving or both, in the form of either an NP or a PP, is not necessarily present, as in (22a) above.²¹

In addition to argumenthood of the PP, the type and temporal profile of Ving, the type of V and transitivity, another dimension that deserves further scrutiny is causality, which comes to the fore when considering the VVing pattern. We have already observed that, with motion VVingPP's, some examples are causal, see (14a-b) and (18) for example. If we now consider the more general VVing pattern, we can capture the relatedness of (23) to the other examples considered so far.

(23) He died laughing.

The V *died* in (23) is neither a motion nor a posture verb.²² Nevertheless, like (21a) and (22a), (23) depicts two concurrently unfolding processes, dying and laughing. Importantly, (23) is not equivalent to *He died while laughing*. Rather, (excessive) laughing is to be construed as the cause for the subject referent's death. That is, (23) is equivalent to *He laughed himself to death*, which implies that causality is a key ingredient in its analysis.²³ In particular, the type of causality observable in (23) is the opposite of that detectable in (18) because it is the Ving event that causes the V event in (23) rather than the other way around, as in (18).²⁴

In sum, we agree with Goldberg that her VVingPP construction has ties with other constructions. Still, we would argue that such links are not limited to other serial verb constructions but involve many more cases, which seems to be also Matsumoto's (2016) position. For example, an interesting parallelism exists between cases involving motion V's and cases involving posture V's. Further, by referring to the very general (material) VVing

²¹ Our insistence on V being a material process has consequences for the analysis of the more specific pattern *go Ving*, which has been the topic of various studies. Wood (1964: 121) usefully identifies three main uses for this pattern, an idea which is also found, with additions, in later studies such as Silva (1975), Bolinger (1983), Salkie (2010) and Matsumoto (2016), see also Table 1 above. One use involves cases such as *go fishing, hunting, swimming, walking*, etc., which denote “sports, pastimes or activities which are pursued [...] temporarily, on specific occasions”. Another use is relevant to cases such as *go farming, go teaching, go nursing*, which express the idea of “taking up or following a more or less permanent occupation”. Finally, we have instances such as *go boasting* as well as Goldberg's example *go sticking your nose*, which are “used colloquially to express disapproval of an activity”. While in the first use, *go* may retain, at least partly, a concrete meaning and thus may be relevant to our material VVing pattern, the second and especially third usages clearly involve a grammaticalized use of *go* akin to “start”. Another grammaticalized type, not mentioned by Wood, was discussed above in connection with Table 1 (*go missing*). In any case, these types will not be discussed any further here.

²² It is still a material process, though, as Halliday and Matthiessen (2014) include transformative processes under the rubric of material processes.

²³ The causal meaning can be made more transparent by using prepositions *with* and *of*, as in the following examples cited in the OED s.v. *die* v.1, I, 7c:

- (i) a. 1778 F. Burney *Let. 23 Aug. in Early Jrnls. & Lett.* (1994) III. 99 An account he gave us..would have made you die with laughing.
- b. 1930 D. H. Lawrence *Phoenix II* (1968) 84 He looked like a positive saint: one of the noble sort, you know, that will suffer with head up and with dreamy eyes. I nearly died of laughing.

²⁴ A similar analysis could be adopted for Matsumoto's (2016) example *I've nearly wept reading some of the reviewers of the shows*. Reading and weeping are, at least to some extent, simultaneous but the reading event is also the cause for the weeping event.

pattern, we were able to highlight the importance of causality as another dimension of variation. However, to reiterate, we prefer not to make any assumptions about the actual mental representation of the family resemblance-based connections that we have detected so far. We just observe that it is very convenient descriptively to rely on both very high-level ‘constructions’ (i.e. patterns) and very low-level ‘constructions’ simultaneously. At the very least, we follow Langacker (2008) and view patterns as schemas immanent in their instantiations, on the assumption that syntax is meaningful.

5. Temporality and causality

In cognitive-based accounts, constructions are related to cognitive models. For example, Broccias (2003) links the transitive resultative construction (e.g. *She shot the burglar dead*) to the basic cognitive model dubbed the billiard-ball model by Langacker (see e.g. Langacker 1991). This model describes the energetic interaction between two entities such that one of them undergoes a change of position. This model can be understood metaphorically as depicting an interaction between two entities that results in one entity’s change of state (the burglar dies in our example).

While it seems difficult to us to identify cognitive models that underline the constructions discussed here, it is still possible to observe that they must involve basic conceptual abilities, such as our ability for conceptual integration (see Fauconnier and Turner 2002) in that the two events involved in the VVing pattern, those evoked by V and Ving, must somehow be merged together. Pivotal to performing the integration of V and Ving are the temporal and causal dimensions (see also Croft 2012 for a similar two-dimensional analysis as well as Broccias 2003 and Broccias 2007). Our ability to manipulate processes by relating them temporally and/or causally as facets of a complex event is manifest not only in the VVing pattern but in other ‘complex’ constructions as well, thus allowing us to establish connections well beyond instances of the VVing pattern, that is between the VVing pattern and other patterns. In the rest of the discussion, we will refer to the various temporal and/or causal integration options as (*event*) *alignments*.

Let us start with temporality. We have observed that Ving does not always portray an extended event (cf. (18)). Although the attribution of a specific meaning to the *-ing* morpheme has been criticised (cf. De Smet and Heyvaert 2011), we can in fact take *-ing* not only as an exponent of imperfectivity in many cases (although not, obviously, in all, as (18) demonstrates) but also, and more generally, as an exponent of (some degree of) simultaneity. (Some degree of) simultaneity applies to all cases discussed here, as we are now going to argue (see also Matsumoto 2016 for a similar idea couched in terms of the absence of any time lag between V and Ving as the temporal property of the participle).²⁵

Cases such as (1), (4), (11), (14a-b) and (22), irrespective of whether or not a complement (either a PP or an NP) is used, describe the simultaneous unfolding of two extended events. In fact, in the case of (11), *come* and *riding* could be viewed as two different construals of the same motion event, where *come* highlights the directionality of the motion event while *riding* the manner of motion. Still, the point holds that we are dealing with extended, overlapping events unlike what we observe in the remaining instances, where the overlap is either minimal or, at least, partial.

²⁵ We prefer to characterise Ving as implying simultaneity rather than absence of any time lag to highlight the fact that, in many instances, the overlap between the V and Ving events does not involve the absence of a time lag between the culmination of the V event and the inception of the Ving event (as in (18)).

Minimal overlap applies to (18) as well as (15) and (16). In (18), *crashing* depicts the culmination of the event of falling. In (15) and (16), the application of force coincides with the beginning of the event denoted by Ving (motion through space in (15), some oscillatory motion resulting in sound in (16)).

Partial overlap holds for (21c) and (23). In (21c), the event of arriving somewhere can be regarded as a part of the event of looking for someone or, rather, part of the scenario where somebody tries to find somebody else. In (23), the process of dying and the event of laughing are to some extent coextensive. We have therefore argued that the material VVing pattern portrays two overlapping events, provided that we realize that the overlap is not necessarily extended.

Alongside temporality, another semantic dimension that is involved in the integration of the two events is causality, which is neglected in all accounts of the VVing pattern we are aware of. The VVing pattern is compatible with either lack of causality, as in (1), (4), (11), and (22), as well as two types of causality, which we abbreviate as $V \Rightarrow \text{Ving}$ and $\text{Ving} \Rightarrow V$. The former abbreviation means that the event denoted by V causes the event denoted by Ving and is relevant to cases (18), (14a-b) (15), (16). The latter abbreviation means that the Ving event causes the V event and this relation can be detected in (23), where the dying event ensues as a result of excessive laughing.

As the VVing pattern involves the merger of two events, it perhaps comes as no surprise to observe that the options identified above are also detectable, *mutatis mutandis*, in other patterns that involve complex events. Two cases in point are *-ly* adjuncts (see Broccias 2011) and the so-called resultative construction (see Broccias 2003). Consider the examples in (24):

- (24) a. Sally nodded silently.
b. Sally angrily tore the letter.
c. Sally angrily read the letter.

The event of Sally's nodding and her being silent in (24a), as denoted by the adverb *silently*, unfold together and are not related causally. This is an example of the alignment observable in cases such as (1). In (24b), the adverb *angrily* can be construed as hinting at the motive why Sally tore the letter, i.e. she tore the letter out of anger. This can be seen an instance of the alignment $\text{Adv} \Rightarrow V$, which is therefore similar to $\text{Ving} \Rightarrow V$. Finally, in (24c), it is possible to construe the adverb *angrily* as depicting a consequence of the event of reading the letter, i.e. $V \Rightarrow \text{Adv}$, which mirrors $V \Rightarrow \text{Ving}$. Importantly, the state of being angry can overlap partially with the event of tearing the letter up, both in (24b) and (24c). This shows that the causal alignment does not exclude the simultaneity alignment.

A similar state of affairs obtains when "resultative" constructions such as those in (25) are considered.

- (25) a. They booed the players off the pitch at the interval.
b. The car screeched to a halt.
c. The computer module clicked into place.
d. She beat him unconscious.

In (25a), the event of the players' leaving the pitch and the fans' booing at them unfold together without any causal relation existing between them (see Broccias 2007 for a detailed discussion). This simultaneity alignment mirrors what was observed in (1) and (24a). In

(25b), the event of the car's coming to a halt causes the screeching sound, which illustrates the alignment RP (resultative phrase, e.g. *to a halt* in (25b)) \Rightarrow V.²⁶ Still, the fact that a causal relation obtains between RP and V does not prevent the temporal overlap between the motion event and the screeching event, as was also observed in connection with the adverb *angrily* above, which can be a cause or a consequence for the verbal event and, yet, depict a state at least partially coextensive with it. In other words, both causality and extended simultaneity are relevant to a proper characterisation of (25b). The example in (25c) also exhibits the alignment RP \Rightarrow V (the module clicked because it went into place) but the temporal overlap between clicking and going into place is punctual, as in (18). Finally, in (25d), we observe the alignment V \Rightarrow RP, as the state of being unconscious is a consequence of the event of beating. Thus, this case is parallel to V \Rightarrow Adv and V \Rightarrow Ving above.

To conclude, we have argued that the conceptual integration behind the VVing pattern can be elucidated by invoking temporality and causality, which are relevant to other patterns as well. Temporality pertains to the temporal overlap between V and Ving, which can be either extended or partial, down to a punctual correspondence between the two. Causality comes in two flavours as two component subevents are involved (V and Ving) and does not exclude some temporal overlap between V and Ving.

6. Conclusion

In this paper, we have shown that a much more complex picture emerges from a detailed investigation of the VVingPP construction than is suggested by Goldberg (2006). We pointed out that it is preferable to refer to the VVingPP pattern, or even in fact the VVing pattern, rather than the VVingPP construction because the semantics of the VVingPP pattern is rather diverse and consists of occurrences related via family resemblance. We have thus used the term *pattern* as a synonym for a rather underspecified construction where V and Ving depict two processes that require conceptual integration. This allows us to capture the links between a variety of formally similar cases, well beyond those constructions (namely, the serial constructions) mentioned by Goldberg. Specific cases should be treated as mini-constructions in Boas's sense. While recognizing the descriptive need for both high-level patterns and low-level constructions, we remain non-committal as to the psycholinguistic reality of such a description but, at a minimum, we view patterns as immanent in their instantiations. Also, we have denied the view of syntax as pure form and, consequently, we have analysed a *pattern* as a pairing of semantics and phonology, rather than semantics and syntax. Further, in keeping with our descriptive commitment, we have avoided using Goldberg's term *constraint*, which suggests a computational model of the mind, to capture regularities in the distribution of the VVingPP pattern and have preferred the more neutral term *generalisation*.

Finally, we have argued that an exploration of the VVing pattern requires reference to a variety of dimensions of analysis, such as the dependency of any complements (of either V or Ving) that may be present, the type of V and Ving used and the two dimensions of temporality and causality. In particular, we have identified the simultaneity, V \Rightarrow Ving and Ving \Rightarrow V patterns and have observed that, with the necessary modifications, they are also

²⁶ The label RP for *to a halt* is somewhat misleading because the car does not come to a stop as a result of the event of screeching, of course. For this and other reasons, Broccias (2003) prefers to avoid using this label and replaces it with *change phrase* as *to a halt* depicts a change (of position). However, these details can be ignored in the text because the crucial point here is about the type of alignment obtaining between the PP *to a halt* and the verb *screeched*, independently of the label assigned to the PP itself.

found across other ‘constructions’ such as those involving *-ly* adjuncts and resultative phrases.

Although the detection of these three alignment types obviously says something about our ability to manipulate and integrate events in terms of simultaneity and causality, it remains to be seen whether it is possible to connect the VVing pattern to some basic cognitive model in the same way as is done, for example, with Langacker’s billiard-ball model for resultatives. For us, the main aim in this paper was to highlight the interconnectedness of constructions without invoking assumptions such as constraints, radial networks, constructional hierarchies and the meaninglessness of syntax, which often seem to be presupposed as valid psycholinguistic descriptors in constructionist research. Rather, we have insisted on a descriptive approach based on generalisations, family resemblance, immanence and the meaningfulness of syntax.

Bionote: Cristiano Broccias is Professor of English Language and Linguistics at the University of Genoa, Italy. His research interests include synchronic and diachronic English syntax, cognitive theories of language and, more recently, figurative language. He has published a book on change constructions (*The English Change Network*, 2003) and various papers on cognitive approaches to grammar, resultative constructions, adverbs, *as*-constructions and metonymy.

Enrico Torre holds a PhD in Linguistics from Lancaster University, UK. His research interests include English linguistics, theories of language, and the philosophy of linguistics. He is currently investigating the notions of analogy, pattern, and family resemblance in the history of linguistics. Moreover, he is exploring the connections between contemporary linguistic theories and the structuralist tradition.

Authors’ addresses: c.broccias@unige.it; contact@enicotorre.com

References

- Benito L. 2009, *Object and complement fronting in the English clause*, MA Dissertation, Universidad Complutense de Madrid.
- Berk L. 1999, *English Syntax: From Word to Discourse*, Oxford University Press, New York / Oxford.
- Boas H.C. 2003, *A Constructional Approach to Resultatives*, CSLI, Stanford (CA).
- Bloomfield L. 1933, *Language*, Holt, New York.
- Bolinger D.L. 1983, *The Go-Progressive and the Auxiliary-Formation*, in Agard F., Kelley G., Makkai A., and Becker Makkai V. (eds.), *Essays in Honor of Charles F. Hockett*, E.J. Brill, Leiden, pp. 153-167.
- Broccias C. 2003, *The English Change Network: Forcing Changes into Schemas*, Mouton de Gruyter, Berlin / New York.
- Broccias C. 2007, *The construal of constructions: Causal and temporal interpretation in change constructions*, in "Constructions" 1/2007, <http://journals.linguisticsociety.org/elaugue/constructions/article/view/19/24.html> (16.12.2017).
- Broccias C. 2011, *Motivating the flexibility of oriented -ly adverbs*, in Panther K.U. and Radden G. (eds.), *Motivation in Grammar and the Lexicon*, John Benjamins, Amsterdam / Philadelphia, pp. 71-88.
- Callaway M. 1913, *The Infinitive in Anglo-Saxon*, Carnegie Institution of Washington, Washington DC.
- Cappelle B. 2005, *Particles and the case for allostructions*, in "Constructions" 1 [7], pp. 1-28.
- Colleman T. and De Clerck B. 2011, *Constructional semantics on the move: On semantic specialization of the English double-object construction*, in "Cognitive Linguistics", 22 [1], pp. 183-209.
- COCA: Corpus of Contemporary American English, <https://corpus.byu.edu/coca>.
- Croft W. 2012, *Verbs: Aspect and Causal Structure*, Oxford University Press, New York / Oxford.
- Croft W., Barðdal J., Hollmann W., Sotirova V. and Taoka C. 2010, *Revising Talmy's typological classification of complex events*, in Boas H.C. (ed.), *Contrastive Construction Grammar*, John Benjamins, Amsterdam / Philadelphia, pp. 201-235.
- De Smet H. and Heyvaert L. 2011, *The meaning of the English present participle*, in "English Language and Linguistics" 15 [3], pp. 473-498.
- Fauconnier G. and Turner M. 2002, *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*, Basic Books, New York.
- Featherston S. 2005, *The decathlon model*, in Kepser S. and Reis M. (eds.), *Linguistic Evidence: Empirical, Theoretical, and Computational Perspectives*, Mouton de Gruyter, Berlin / New York, pp. 187-208.
- Gilquin G. 2006, *The place of prototypicality in corpus linguistics: Causation in the hot seat*, in Gries S.Th. and Stefanowitsch A. (eds.), *Corpora in Cognitive Linguistics: Corpus-based Approaches to Syntax and Lexis*, Mouton de Gruyter, Berlin / New York, pp. 159-191.
- Goldberg A.E. 1995, *Constructions: A Construction Grammar Approach to Argument Structure*, University of Chicago Press, Chicago / London.
- Goldberg A.E. 2006, *Constructions at Work: The Nature of Generalization in Language*, Oxford University Press, New York / Oxford.
- Halliday M.A.K. and Matthiessen C.M.I.M. 2014, *Halliday's Introduction to Functional Grammar*, Routledge, London / New York.
- Hilpert M. 2014, *Construction Grammar and Its Application to English*, Edinburgh University Press, Edinburgh.
- Huddleston R. and Pullum G. 2002, *The Cambridge Grammar of the English Language*, Cambridge University Press, Cambridge / New York.
- Hunston S. and Francis G. 2000, *Pattern Grammar: A corpus-driven approach to the lexical grammar of English*, John Benjamins, Amsterdam / Philadelphia.
- Jespersen O. 1924, *The Philosophy of Grammar*, George Allen and Unwin, London.
- Killie K. and Swan T. 2009, *The grammaticalization and subjectification of adverbial -ing clauses (converb clauses) in English*, in "English Language and Linguistics" 13 [3], pp. 337-363.
- Langacker R.W. 1991, *Foundations of Cognitive Grammar: Volume II: Descriptive Application*, Stanford University Press, Stanford.
- Langacker R.W. 2008, *Cognitive Grammar: A Basic Introduction*, Oxford University Press, New York / Oxford.
- Langacker R.W. 2016, *Toward an integrated view of structure, processing, and discourse*, in Drodzdz G. (ed.), *Studies in Lexicogrammar: Theory and Applications*, John Benjamins, Amsterdam / Philadelphia, pp. 23-53.
- LDCE: *Longman Dictionary of Contemporary English*, <https://www.ldoceonline.com>.
- Los B. 2005, *The Rise of the To-Infinitive*, Oxford University Press, New York / Oxford.
- Matsumoto N. 2016, *Multiverb Sequences in English: Their Classifications and Functions*, PhD Dissertation,

Kobe University.

OED: *Oxford English Dictionary*, <https://www.oed.com>.

Salkie R. 2010, On *going*, in Cappelle B. and Wada N. (eds.), *Distinction in English Grammar: Offered to Renaat Declerck*, Kaitakusha, Tokyo, pp. 169-190.

Silva C.M. 1975, *Adverbial -ing*, in "Linguistic Inquiry" 6 [2], pp. 346-350.

Talmy L. 2000, *Toward a Cognitive Semantics* (2 vols), The MIT Press, Cambridge (MA).

Torre E. 2017, *Concerning the radial network view of argument structure: The case of the English caused-motion pattern*, in "Language Sciences" 66, pp. 199-211.

Traugott E. and Trousdale G. 2013, *Constructionalization and Constructional Changes*, Oxford University Press, New York / Oxford.

Wood F. 1964, *English Verbal Idioms*, MacMillan & Co Ltd, London.

Zehentner, E. 2018, *Ditransitives in Middle English: On semantic specialisation and the rise of the dative*, in "English Language and Linguistics" 22 [1], pp. 149-175.