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Approaching German syntax from a constructionist perspective

1 Introduction

Over the last decade or so, Construction Grammar (CxG) has evolved into an influential paradigm in linguistic research. CxG subsumes a family of related constructional approaches to language including Cognitive Construction Grammar (Lakoff 1987, Goldberg 1995, Boas 2013), Berkeley Construction Grammar (Fillmore et al. 1988, Kay and Fillmore 1999, Fillmore 2013), Sign-based Construction Grammar (SBCG; Sag 2011, Boas and Sag 2012, Michaelis 2013), Radical Construction Grammar (Croft 2001, 2013), and Cognitive Grammar (Langacker 1987, 2008; Broccias 2013), among others (for an overview see Hoffmann/Trousdale 2013, Ziem and Lasch 2013, and Lasch and Ziem 2014). Although such approaches differ not only in methodological terms but also with respect to the types of linguistic phenomena addressed, they all embrace the view that both lexicon and grammar essentially consist of constructions, i.e. non-compositional (and compositional) form-meaning pairings of varying abstractness and syntagmatic complexity. Building on this basic assumption, this volume investigates a variety of grammatical phenomena in German from a constructional point of view, including argument structure constructions, prepositional constructions, comparative correlatives, and relative clause constructions. Each contribution is anchored in a constructional approach to language, and the constructional nature of each phenomenon addressed is demonstrated in detail.

Why German? Since its beginnings in the 1980s, constructional research has primarily focused on English, although languages such as Czech, Finnish, French, and Japanese have also received considerable attention. Since the 2000s, there has also been a significant amount of constructional research on German, including Järventausta (2006), Imo (2007), Nikula (2007), Chang (2008), Cloene and Willems (2006a, b), Deppermann (2007), Rostila (2008), Felfe (2012), Zeldes (2012), Hein (2015), and Lasch (2017); as well as a number of edited volumes such as Fischer and Stefanowitsch (2006), Stefanowitsch and Fischer (2008), Günthner and Bücker (2009), Engelberg et al. (2011), Lasch and Ziem (2011),

Lasch and Ziem (2014), Ziem and Lasch (2015); and a special issue of "Zeitschrift für Germanistische Linguistik" (Knobloch 2009). However, almost all of the constructional research on German has been written in German (exceptions include Hens (1996), Michaelis and Ruppenhofer (2001), Boas (2003), Hilpert (2008, 2009), and Auer and Pfänder (2011)). To date, there exists relatively little constructional research on German written in English, which denies linguists without knowledge of German access to the insights of these German linguists.

The purpose of this volume is thus to help overcome this dearth of access by providing a state of the art collection of CxG-based research on grammatical constructions in German. The collection of papers presented in this volume is unique in that it offers an easily accessible, yet comprehensive and sophisticated collection of papers on various grammatical constructions in German. Moreover, many of the papers in the volume make explicit connections between argument structure constructions and the concept of valency, which has figured quite prominently in Germanic linguistics over the past half century (e.g. in Helbig and Schenkel 1973, Ágel 2000, Heringer 2009, and Welke 2011). As such, this volume is of direct interest to at least four different groups of linguists: (1) syntacticians in general; (2) linguists interested in German who do not read German and therefore have at best limited access to constructional research published in German; (3) Construction Grammarians who want to know more about grammatical constructions in German and how studying them may further inform the general theory of CxG; and (4) linguists interested in contrastive grammatical issues (particularly English-German).

The remainder of this chapter is structured as follows. Section 2 discusses a number of selected features of German syntax that are relevant for researchers with very little or no prior knowledge of German syntax.[1] In Section 3 we discuss specific points that a constructional analysis of grammatical phenomena in German should consider. Finally, Section 4 provides an overview of the individual papers contained in this volume.

2 A selection of interesting characteristics of German syntax

This section briefly reviews some characteristics of German (morpho-)syntax that have posed a variety of problems for syntactic analyses across different theories, i.e. phenomena related to word order and case. The goal is to show that German

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1 Section 2 of our chapter is based on Boas & Ziem (in press).

syntax is of interest to anyone interested in syntax, because analyses of these syntactic phenomena in German inform our understanding of syntactic principles more generally. Undoubtedly, also a constructionist approach to German should cover these phenomena. However, this is a long-term goal of empirical analyses. In the following, we would like to introduce some grammatical characteristics of German that a constructionist approach should address.

2.1 Word Order

We begin with issues related to word order. In contrast to English, which is assumed to be an SVO language, German has often been characterized as an SOV language, i.e. SOV order is considered to be the "basic" word order, while other word orders are said to be derived from this basic word order (see Bach 1962, Bierwisch 1963, Haider 1993). Consider the following examples, in which word order differs between SOV (1a), VSO (1b), and OVS (1c).

(1) a. ...dass   Fritz   den   Wein   austrinkt. (SOV)
        ... that   Fritz   the   wine   out-drinks
        'that Fritz drinks the wine up.'
     b. Trinkt   Fritz   den   Wein   aus? (VSO)
        drink   Fritz   the   wine   out
        'Does Fritz drink the wine up?'
     c. Den   Wein   trinkt   Fritz   aus. (OVS)
        the   wine   drinks   Fritz   up
        'Fritz drinks the wine up.'

Generative syntactic models such as Government and Binding / Minimalism (Reis 1980, den Besten 1983, Webelhuth 1992), Generalized Phrase Structure Grammar (Jacobs 1986, Uszkoreit 1987), Lexical Functional Grammar (Berman 2003), and Head-Driven Phrase Structure Grammar (Kathol 2000, Meurers 2000, Müller 2005) assume that the "basic" German word order is as in (1a), in which the finite verb occurs in the last position (V-L) in sentences introduced by complementizers, and that other word order configurations in which the verb occurs in second position (V-2) such as in (1b) are derived from it (see Müller 2005 for details). Similarly, generative theories account for other differences in word order by assuming a basic underlying SOV word order in order to derive specific word orders such as those for infinitives (Haider 1986, von Stechow/Sternefeld 1988), left dislocation (Haider 1990), topicalization (Fanselow 1989, Haider 1990), passives (Grewendorf 1989), and relative clauses (Haider 1985, Rimsdijk 1985).

From the viewpoint of Construction Grammar, the assumption that one word order is more basic than others and should therefore serve as the basis for deriving other types of word orders is difficult to maintain, since there are no a priori empirical criteria for determining what types of constructions are more basic than others, or what types of constructions should be derived from "basic" constructions (see Fillmore/Kay 1993, Croft 2001, Goldberg 2006). In other words, the constructional view holds that (1) there are no constructions which are necessarily more basic than other constructions[2] and (2) constructions are organized in networks with inheritance hierarchies in which related constructions inherit information from each other (Goldberg 1995, Fillmore 1999, Boas 2011, Michaelis 2012, Sag 2012, Ziem 2014b).

More traditional approaches to German syntax employ the so-called topological fields model to classify the basic clause types of German based on the position of the finite verb, among other factors (for details, see Eisenberg 2006: 394–420, Eisenberg and Gallmann 2016: 871–899, and Imo 2016: 199–226). We briefly review some of the key insights of this model before showing how some of these insights can be integrated into a constructional approach to German syntax. The topological fields model captures generalizations about the position of the finite verb by employing different sets of co-called fields and brackets, as in Figure 1.

In this view, the clause is structured around a left bracket ("linke Satzklammer" = "LS"), which hosts the verb in either initial or second position and a right bracket ("rechte Satzklammer" = "RS"), which is the position taken by clause-final verbs (finite and non-finite) and verbal particles (Höhle 1986). The left and right brackets are used to define structural positions, so-called fields: The position to the left of the LS is the so-called prefield ("Vorfeld"), which can host only one constituent with varying degrees of complexity. The prefield remains empty in a variety of sentences, such as in subordinate clauses, verb-first sentences, and yes-no questions. The left bracket contains either the finite verb or a subordinating conjunction and may only be left empty in a few select instances such as special cases of relative clauses, infinitival clauses, and an embedded constituent question (see Reis 1985, Wöllstein-Leisten et al. 1997).

Prefield	Left Sentence Bracket	Middle Field	Right Sentence Bracket	Final Field

Figure 1: Topological Fields.

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2 Prototype effects may yield similar observations (Lakoff 1987, Goldberg 1995), but we leave this refinement aside here.

The position between the LS and the RS is the so-called middle field ("Mittelfeld") and the position to the right of the RS is the so-called final field ("Nachfeld"). According to Wöllstein-Leisten et al. (1997), the middle field can host a potentially unlimited number of constituents of various types, each of which have internal structure of their own (e.g. they can also be clauses). The right sentence bracket hosts all non-finite verbs or the finite verb in cases in which it does not appear in the left sentence bracket. The final field typically contains constituents in cases of subject, object, adverbial, and relative clauses.[3] According to the topological fields model, different types of elements (which themselves can have internal structure of their own) can occur in different fields, thereby covering the three types of sentence patterns, characterized in terms of the position of the finite verb, in German, as in Figure 2.

	Prefield	Left Bracket	Middle Field	Right Bracket	Final Field
V-1		*Finite verb*	Constituents	Inf. V	Constituents
		Ist	Egon in die Bar	gegangen	um Bier zu trinken?
V-2	*Constituent*	*Finite verb*	Constituents	Inf. V	Constituents
	Egon	ist	in die Kneipe	gegangen	um Bier zu trinken
V-L		*Conjunction*	Constituents	*Inf. V finite Verb*	Constituents
		dass	Egon in die Kneipe	gegangen ist	um Bier zu trinken

Figure 2: Three sentence types according to the position of the finite verb; items in italics are obligatory (see Wöllstein-Leisten et al. 1997: 54). Elements in italics are obligatory while other elements are optional. Depending on the verb, a subject and different types of objects may also be obligatory or optional, which directly influences the number and ordering of elements in the middle field and final field. See Wöllstein-Leisten et al. (1997) and Welke (2011) for more details. In a constructicon that adopts key insights from the topological fields model it will thus also be necessary to determine how lexical entries of words (specifically verbs) interact with different types of constructions, i.e. under what circumstances particular verbs may fuse with constructions (for details see Boas 2008, 2011).

Figure 2 is the result of a generalization over a multitude of different sentence types (e.g. declarative, imperative, interrogative, etc.) defined by the position of the finite

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3 For further details about the different types of constituents occurring in the various positions of German sentences in the topological field model, see Lenerz (1977), Bech (1983), Höhle (1986), Reis (1987), Abraham (1995), and Wöllstein-Leisten et al. (1997).

verb, i.e. V-1 (e.g. *Ist Egon in die Kneipe gegangen, um Bier zu trinken?* 'Did Egon go to the bar to drink beer?'), V-2 (e.g. *Egon ist in der Kneipe, um Bier zu trinken.* 'Egon is in the bar to drink beer.'), and V-L sentences (e.g. *..., dass Egon in die Kneipe gegangen ist, um Bier zu trinken.* '… so that Egon went to the bar to drink beer').

Wöllstein-Leisten et al. (1997: 55) list a total of 28 different types of sentence templates depending on different combinations, configurations, and positions of the finite verb and other constituents in the topological field model.[4] From a constructional point of view, each of the 28 sentence templates can be regarded as part of the form of a construction (leaving aside other issues regarding the form of constructions such as intonation), and could thus serve as the basis for an inventory of German word order constructions that could eventually be organized in terms of a network of constructions with inheritance relations (see Ackerman & Webelhuth 1998, Ginzburg and Sag 2000, Sag 2012). Following the concept that constructions are pairings of form with meaning would also require us to address the meaning side of each of the 28 constructions (and others). Because of space constraints, we leave this investigation to further research.

So far, we addressed only syntactic ordering (focused primarily on the position of the finite verbs) as a particularly interesting phenomenon in German syntax. We now turn to pragmatic ordering, which orders sentence constituents not only based on syntactic ordering mechanisms, but also according to their role and function in communication. That is, the order of constituents in a sentence may depend on the specific circumstances in which the sentence is uttered, e.g. on the particular emphasis required, on what has been said before, and so on (Fox 1990: 251). Consider, for example, the sentences in (2a)–(2d), which contain the same constituents, ordered in different ways.

(2)   a. Der Mann hat dem Jungen gestern den Ball gegeben. (subject)
      b. Den Ball hat der Mann dem Jungen gestern gegeben. (direct object)
      c. Dem Jungen hat der Mann gestern den Ball gegeben. (indirect object)
      d. Gestern hat der Mann dem Jungen den Ball gegeben. (adjunct)
         'Yesterday, the man gave the ball to the boy.'

The examples above show that the prefield position can host different elements: the subject, the direct object, the indirect object, and an adjunct. The ordering is based on the communicative function that the speaker intends to encode, depending on the context and depending on what is already known (and what

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4 Space limitations prevent us from going into any further detail about the 28 different configurations of constituents according to the topological field model here.

is not known) by the hearer.[5] Typically, animate NPs tend to precede inanimate ones, short constituents (e.g. pronouns) tend to occur before longer ones, and given information precedes new information (Behaghel 1930).

For example, depending on the question that has been asked, such as *Who gave the boy the ball?, When did the man give the boy the ball?*, or *What was going on?*, the speaker will likely prefer one of the pragmatic orderings in (2) over the others.[6] An additional factor complicating the choice and interpretation of different pragmatic orders is the nucleus of the intonation pattern that can be moved around in each of the sentences in (2), thereby achieving different interpretations depending on the communicative context (for details see Lenerz 1977, Höhle 1982, Eroms 1986, Fox 1990). In a constructional approach, these different intonation patterns will also require a careful analysis as a part of the form side of each individual construction. This entails that one would most likely have to identify and classify the full range of intonation patterns as a part of the form side of the construction entries for each of the 28 different constructional patterns pointed out above.

With this short overview of German word order in hand, we turn to another important aspect of German (morpho)syntax, namely its case system.

2.2 Case

Unlike most other Germanic languages, German has a relatively elaborate case system consisting of four cases (nominative, accusative, dative, and genitive), all of which may be used to inflect nouns, adjectives, pronouns, and determiners. Its four-case system allows German to encode a variety of grammatical functions in many different word order combinations, yielding a much more flexible (close to free) word order when compared with other languages such as English, which has a relatively fixed word order because of the almost complete absence of an overt case marking system (for details see Kirkwood 1969, Hawkins 1986, Barðdal 2013, and Fischer 2013). Case can be assigned structurally (configurationally), i.e. to identify the grammatical functions such as subject (nominative), direct object (accusative), or indirect object (dative) in a sentence, or lexically by verbs and prepositions (see Engel 1988 and Zifonun et al. 1997). As can be seen in (3), the

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5 Acceptability judgements may vary depending on a speaker's background.

6 Note that most likely, a speaker will reply to one of these questions in natural discourse by just answering *Der Mann* ('the man') or *Gestern* ('yesterday'), leaving out the rest of the information. We thank Bernhard Ost for pointing this out to us.

paradigm of German case marking on NPs is quite extensive, involving number and gender.

(3) a. der gute Mann   die gute Frau   das gute Kind
       den guten Mann   die gute Frau   das gute Kind
       des guten Mannes   der guten Frau   des guten Kindes
       dem guten Mann   der guten Frau   dem guten Kind
   b. die guten Männer   die guten Frauen   die guten Kinder
       die guten Männer   die guten Frauen   die guten Kinder
       der guten Männer   der guten Frauen   der guten Kinder
       den guten Männern   den guten Frauen   den guten Kindern

The NPs in (3) differ in number: those in (a) are singular, those in (b) are plural. The first row shows nominative marking, the second row accusative marking, the third row genitive marking, and the fourth row dative marking. Each of the case markers in (3) can be regarded as their own constructions, combining a specific form with a specific meaning (this also holds to a certain degree when case is assigned lexically by verbs and prepositions). For example, the sequence [$_{<Nom-sing-masc>}$*der*, [Adj]-*e*, [N]-Ø] is the form side of a nominative singular masculine NP construction which specifies three elements: the determiner *der* ('the'), an adjective with an ending in −*e*, and a noun with no marker. The meaning-function side of the construction is typically that of Agent (subject) or some semantically more specific instantiation of Agent, depending on the semantic frames evoked by the noun (and verb in the same sentence) (see Van Valin/Wilkins 1996; Boas 2010c).[7] In contrast, the form side of the accusative case marking construction for singular masculine nouns is [$_{<Acc-sing-masc>}$*den*, [Adj]-*en*, [N]-Ø], while the meaning-function side is typically that of a Patient (direct object) or some specific semantic instantiation of it.

Of course, case in German has many more facets than those discussed above (for more details, see Zifonun et al. 1997). At this point, however, we hope to have shown that a constructional approach to case in German requires a great number of case-marking constructions that apply to determiners, adjectives, and nouns, and that case is either structurally assigned depending on the grammatical

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7 The nominative in German has different types of functions, as described in works like Sommerfeldt/Starke (1992: 103–104). As such, there is great variation in sentence initial subject position, which is not always identified as the Agent of a sentence. Compare, e.g., *Der kalte Kaffee schmeckt nicht* ('The cold coffee does not taste good') and *Die laute Musik ist nicht auszuhalten* ('The loud music cannot be tolerated').

function of a NP in a sentence or it is assigned based on the properties of particular verbs and prepositions that govern specific cases.[8]

3 A Construction Grammar view of syntactic structures in German

The typologically interesting features of German Grammar discussed above belong to what is sometimes called "core grammar". On top of that, however, there are many other constructions both at the lexical and at the syntactic level that generative analyses of German syntax consider "peripheral" with respect to the role they play in the grammatical system (see, e.g., Haider 1993). Nonetheless, they are peculiar to German and thus deserve analytical attention; a number of these "peripheral" phenomena, such as many of those mentioned in Section 3.4, also turn out to be very productive in terms of their range of variation and their frequency of occurrence (for an overview see Section 3.2). Given this, the question arises how to approach these phenomena theoretically and methodologically. In other words: What is an appropriate theoretical framework to best capture all grammatical properties, be they peripheral or core-like (as claimed by generative syntax), of a language such as German? Which theoretical principles should inform such an approach? What are the basic concepts required for full-fledged analyses claiming to analyze all grammatical phenomena of a language and not only just a few?

The remainder of this section tackles these questions by first introducing the basic concepts and principles of CxG (Sections 3.1–3.3). Based on this, we provide a short overview of some of the most important constructional studies concerned with German (Section 3.4).

3.1 What's (in) a construction?

By putting the notion of construction at the center of linguistic analysis, CxG aims to account for both peripheral intransparent grammatical phenomena and fully regular semantic and syntactic structures. Even though we are a long way from having identified, let alone described and explained, the bulk of the

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8 For more details on how case can be analyzed in a constructional approach, see Barðdal (2006, 2008, 2009).

constructions constituting a language's grammar, there is a rapidly growing body of literature adopting a usage-based, constructional perspective (cf. Fillmore et al. 2012, Hoffmann/Trousdale 2013; or Ziem/Lasch 2013: 153–164 on German specifically).

CxG evolved out of the wish for a comprehensive (ideally full) coverage of linguistic phenomena within a single theoretical framework. For this reason, CxG is sometimes called a maximalist approach to grammar (Fried/Östman 2004: 24). Its roots can be traced back to the 1980s, particularly to Lakoff's seminal investigation of *there*-constructions (Lakoff 1987: 462–585) and the influential study of the *let alone*-construction by Fillmore/Kay/O'Connor (1988). In line with functional approaches, and in contrast to generative Chomskyan approaches, CxG is usage-based. Just like its sister theory Frame Semantics (Fillmore 1982), CxG aims at modeling what a language user really knows in order to fully understand any linguistic expression, given all kinds of cognitive and social distractions they are exposed to.[9]

The constructional view of language thus stands in stark contrast to Chomsky's (1965: §1) dictum to focus entirely on an ideal speaker/hearer. Instead, CxG is concerned with a regular everyday speaker/hearer in a heterogeneous speech community, who is also always affected by grammatically relevant conditions such as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying their knowledge of the language in actual performance (cf. Ziem 2014a: 55).[10] To account for such factors, CxG proposes a non-modular and non-derivational architecture of grammar. This means that the basic unit of a language, and therefore of any linguistic analysis, is the linguistic sign, i.e. a conventional pairing of form and meaning at varying levels of abstraction and complexity. At the same time, one of the core interests of CxG is to capture both generalizations and constraints on those generalizations that license those and only those expressions that can be found in a given language. In this sense CxG is generative.

Since CxG is a sign-based theory of grammar, form and meaning cannot be separated from one another. Of course, for analytical reasons it might make sense to investigate form or meaning aspects in isolation. However, form and function do not exist on their own, e.g. as autonomous (sub-)modules as is often postulated

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9 For more information on the relationship between CxG and Frame Semantics, see Fillmore and Atkins (1992), Boas (2005, 2010a, 2013b, 2017), and Fillmore et al. (2012).

10 Like analyses in other frameworks, CxG accounts typically focus on the analysis of a particular variety of a language, most often the standard variety. At the same time, however, constructional analyses are also well equipped to handle issues related to language variation, as shown by Östman/Trousdale (2013) and Hollmann (2013), among others.

in other syntactic theories. In CxG, form and meaning rather constitute inseparable parts of a linguistic sign. It is also the sign-based nature of constructions that necessitates a usage-based perspective, since form and meaning are coupled by a social convention established within a speech community due to similar communicative needs. As a result, recurrent use of similar linguistic categories may give rise to usage patterns, such as grammatical constructions. Currently, the most commonly used definition of "construction" is probably that of Goldberg (2006:5):

> Any linguistic pattern is recognized as a construction as long as some aspect of its form or function is not strictly predictable from its component parts or form other constructions recognized to exist. In addition, patterns are stored as constructions even if they are fully predictable as long as they occur with sufficient frequency.

This definition differs from Goldberg (1995) in that it also accounts for word combinations that are semantically and syntactically fully transparent, but which, because of frequency effects, became at some point unit-like entities that are individually stored. Entrenchments based on frequency effects can be found in transparent phraseologisms (e.g. *in letzter Sekunde* 'in the nick of time'), collocations (e.g. *schallendes Gelächter* 'roaring laughter'), *blühende Fantasie* 'vivid imagination'), welcoming/leave-taking formulas (e.g. *mit freundlichen Grüßen* 'with best regards'), among others. Such prefabricated word combinations can be directly accessed without being decomposed into individual component parts. The existence of many such fixed strings of words suggests that the variety of constructions should be extended to cover not only schemas with open slots but also non-schematic units (Goldberg 2006: 5).

Hence, the question arises of what is in a construction. According to Croft (2001: 18), each construction specifies a set of information types. As illustrated in Figure 3, Croft adopts Saussure's bilateral sign concept supplemented with properties specific to grammatical constructions.

Most constructions do not require specifications of all information types. For example, Goldberg's (1995) analysis of the ditransitive construction does not include specific morphological or phonological constraints, and it does not explicitly provide discourse-functional information specific to double-object constructions. However, other constructions, such as the *What's-X-doing-Y* construction (WXDY) discussed by Kay/Fillmore (1999), also features pragmatic properties. Similarly, phonological information can also enter a construction. As is the case of the Incredibility construction (e.g. *Him being a doctor*?), constructions may also rely on phonological properties, such as the prosodic contour (see Lambrecht 1990). Finally, extraposition constructions (e.g. *It's amazing, the people you see here*, Michaelis/Lambrecht 1996) are good examples of discourse-functional properties specifying constructions. They have a significant
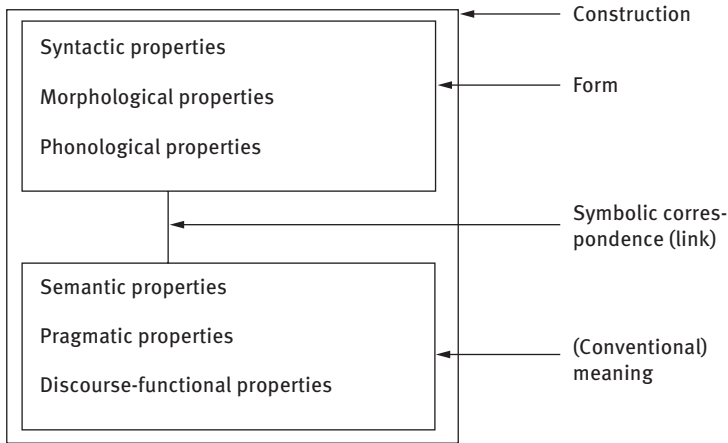
Figure 3: Types of information in constructions (Croft 2001: 18).

effect on the overall information structure – a strategy often found in verbal inter-action (Günthner 2006a, 2008a, b).

It is worth mentioning that Croft's distinction between information types does not account for contextual information that may also be reflected in con-structions. As already noticed by Fillmore (1988: 51), a grammar "needs a way of dealing with the subtle character of contexts which are created or defined by particular grammatical constructions". What Fillmore has in mind here are contextual requirements determining what kind of linguistic expressions (both in terms of their form and their meaning) can enter an open slot of a sche-matic construction. Similarly, Fried and Östman (2004: 20) observe that "some constructions must make reference to differences in register, social value, and context-related properties or pragmatic reasoning". Information about the reg-ister is crucial to distinguish different forms of address in letters (e.g. in German *Lieber Herr X* vs. *Sehr geehrter Herr X)*.[11] Contextual information is also needed to account for the role sometimes played by particles such as *mal* ('sometime') in questions of the kind *Warum gehen wir nicht mal ins Kino?* ('Why don't we go to the movies sometime?'), since they presuppose a positive attitude of the person asking the question towards the situation expressed. Bybee (2010: 14) even goes one step further when she argues that the semantic pole of constructions may include "inferences made from this meaning [of a given linguistic in a certain

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11 German *lieber* indicates an informal register, while *sehr geehrter* belongs to a formal register, but in English both are translated as *dear*.

situation] and from the context, and properties of the social, physical and lin-
guistic context". In Bybee's usage-based approach, any given context feature
may become a part of a construction as long as it co-occurs often enough with
the linguistic unit instantiating the construction. Hence, it should be noted that
in principle any background information, including recurrent situation or other
context parameters, could become conventionally encoded in a linguistic sign
(for a detailed discussion cf. Ziem 2014a: 179–195).

As conventional form-meaning pairings, constructions are building blocks
capable of representing both the language competence itself as well as linguistic anal-
yses addressing aspects of such language competence. In other words: Constructions
are conceptual tools for systematically investigating a language; at the same time,
they are employed to represent the knowledge that a speaker has of a language and
to serve as a cognitive resource to produce and understand linguistic expressions of
varying complexity. Goldberg (2003: 219) even goes so far as to claim that "the total-
ity of our knowledge of language is captured by a network of constructions."

As cognitive units, constructions are categories that share basic characteris-
tics. Consider the following examples.

(4)   a. Peter gibt seiner Tochter einen Kuss.
          'Peter gives his daughter a kiss.'
      b. Laura backt Bob einen Kuchen.
          'Laura bakes Bob a cake.'

(4) subsumes a set of instances of the ditransitive construction (Goldberg 1995; Croft
2003). While varying significantly with respect to their actual meaning, they are all
licensed by the ditransitive construction they instantiate. The ditransitive construc-
tion consists of an Agent (*Peter*, *Laura*) causing a Recipient (*his daughter*, *Bob*) to
receive a Theme (*a kiss*, *a cake*). Terminologically, it is therefore important to distin-
guish between different constructional schemas: the ditransitive construction, on the
one hand, and instances of a schema, such as (4), on the other hand. For the sake of
terminological clarity, the latter are called "constructs". While constructional schemas
are *conventionalized* form-meaning pairings (just like any other linguistic sign in the
Saussurean sense), constructs are equated with instantiations of constructions.

3.2 Motivating a constructional approach to German

CxG differs from other theories of language in taking constructions as the basic
building blocks of a language. Instead of assuming distinct modules of linguistic
analyses, CxG proposes at least three different continua, namely the periphery-core

continuum, the lexis-grammar continuum, and the instance-schema continuum. This section reviews each of these.

3.2.1 The periphery-core continuum

It has long been a truism in linguistic research that grammar divides into a "core" area subsuming fully regular linguistic expressions and structures on the one hand and a "periphery" on the other, to which irregular linguistic forms are relegated. The metaphor *core grammar* goes back to Chomsky's outline of the government-and-binding approach (Chomsky 1981: 1–151). It has at least two meanings. First, it means that there are grammatical phenomena that are evidently more important than others. On this view, the syntactic structures of German discussed in Section 2 belong to core grammar. Second, *core grammar* has a more technical meaning relevant for the overall architecture of a theory of grammar. This is the case when a theory is designed for describing and explaining a set of grammatical features and structures constituting the "core", while ignoring other grammatical features and structures constituting the "periphery". Chomsky's idea of a Universal Grammar (UG) is such a theory (cf. Chomsky 1980: 8, among others). In UG any grammatical phenomenon belonging to the "core" is regular, in that it is, at least in principle, explainable within the theoretical rule-based framework provided by UG. In contrast, any grammatical phenomenon that pertains to the "periphery" is exceptional in such a way that it can hardly be captured by the principles of UG. Explanations are often very complex, opaque and far from a cognitively realistic analysis (for the case of verbless directives and nominal reduplications see Müller 2010, for a critique Stefanowitsch 2010).

CxG challenges the core-periphery dichotomy, since from an empirical point of view it is unclear as to what extent the "periphery" really is "peripheral". Given that idiomatic expressions of various types and complexities are ubiquitous and syntactic irregularities do not seem to be restricted to a small number either, the genuine "core" could instead be regarded as the "periphery" (see, e.g., Pawley/Syder 1983 for a discussion). But if it does turn out that the phenomena traditionally counted as "peripheral" constitute, in fact, the majority of the inventory of constructions of a language, it is more advantageous to prefer a theory that is able to cover these cases as well in order to provide more comprehensive analyses.[12] Hence, CxG denies a principle difference between core and peripheral grammatical phenomena. Rather, both should be analyzed with the same analytical and methodological tool

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12 For an extensive discussion of this logical/economical argument see Stefanowitsch (2011).

set, without losing track of either, fully transparent, compositional constructions and opaque, idiomatic structures (Michaelis 2012).

In the early days of CxG, the rejection of the core-periphery distinction has been an important driving force. As Fillmore (1988: 36) put it:

> Our reasons for concerning ourselves with otherwise neglected domains of grammar are not so that we can be left alone, by claiming territory that nobody else wants, but specifically because we believe that insights into the mechanics of the grammar as a whole can brought out most clearly by the work of factoring out the constituent elements of the most complex constructions.

In other words: Singling out those mechanisms that are at work in seemingly irregular grammatical instances has a critical impact on approaching more "central" phenomena. By starting at the periphery, rather than at the core where we find transparent structures, CxG aims at developing a "maximalist" approach covering both peripheral and core linguistic phenomena alike.

3.2.2 The lexis-grammar continuum

Traditionally, lexicon and grammar are, implicitly or explicitly, kept separate from one another, both on the object level of linguistic organization and on the level of linguistic analysis. Formal theories of grammar, e.g. Chomsky's Government-and-Binding approach (Chomsky 1981: 135–138), propose a strict separation into different modules (e.g. lexicon / syntax / phonology). While, in this view, a language's grammar subsumes a system of rules determining the way words and phrases can be combined, the lexicon provides the linguistic material accessed by those rules. CxG challenges this assumption by providing empirical evidence for a substantial overlap between lexicon and grammar. For example, grammatical phrasemes such as the *let alone*-construction (Fillmore/Kay/O'Connor 1988) cannot simply be relegated to the lexicon, since the syntactic constraints determining possible realization patterns would be part of a comprehensive lexicon entry. In essence, this means that words and syntactic structures do not fall into different categories and consequently do not need to be treated separately in what has been traditionally labeled "the lexicon" and "syntax" (see also Herbst 2014 on the relationship between lexical valence patterns and constructions).

Table 1 presents an ordered inventory of different types of constructions illustrating the continuum between what has traditionally been characterized as "the lexicon" respectively "syntax". Some constructions, such as morphemes and words, are considered to be very specific whereas others, such as argument structure constructions or sentence type constructions, are regarded as abstract and schematic. Words as well as idioms and double-object constructions count as pairings of form with meaning: "it's constructions all the way down" Goldberg (2006: 18).

Table 1: Constructions of varying complexity and schematicity.

Constructions	Examples
Morphemes	*-er* [*größ-er*] ('tall-er'); *-er* [*Trau-er*] ('sad-ness')
(complex) words	*traurig* ('sad'), *Junge* ('boy'), *Weberknecht* ('*daddy longlegs*')
Multi-word units	*Guten Tag!* ('*Good afternoon!*')
Grammatical phrasemes	*geschweige denn* ('*let alone*')
Proverbs	*Morgenstund hat Gold im Mund* ('*The early bird catches the worm*')
Idioms	*jdm. an die Gurgel gehen* ('to be at each other's throat')
Comparatives	*je x-er desto y-er* [*je mehr desto besser*]
	('the −er, the −er', 'the more, the better')
Double-object constructions	[[NP$_{Nom}$][VP][NP$_{Dat}$][NP$_{Acc}$]]
Parts of speech	[NOUN]

The examples in Table 1 vary considerably in terms of their syntagmatic complexity and in terms of schematicity and abstractness. Schematicity refers to the degree to which constructions are lexically specified; double-object constructions, for example, are highly schematic, since none of their slots are lexically specified (even though their fillers have to meet a set of form- and meaning-related requirements, see Barðdal 2008, Boas 2008 and 2010b). Abstractness, then, concerns the category level on which a construction is located; lexical units, such as *boy*, *table*, *ability*, are relatively concrete lexical constructions, whereas the category noun to which these lexical units belong is both more abstract and cognitively more complex (Behrens 2005).

The lexicon-grammar continuum is undoubtedly one of the key features of CxG (cf. Boas 2010b, Broccias 2013). There is some dissent, however, as to where the continuum starts and where it ends. According to Goldberg (2006: 5), the smallest constructional units are morphemes. Booij (2010: 15), however, questions whether grammatical morphemes should be assigned a constructional status. If Booij's arguments were probative, a CxG approach would be problematic, precisely because morphemes would then not be regarded as linguistic signs. Equally controversial is the question of what could count as the largest constructional units. While many researchers remain agnostic in this matter, Goldberg's list of sample constructions (Goldberg 2006: 5) seems to suggest that syntactic patterns such as the covariational conditional are the endpoint of the continuum. Yet, there is good reason to include units such as text genres. Östman (2005), for example, makes the valid point that in the case of recipes so-called "discourse constructions" license subjectless constructions such as "cook and stir bacon in skillet". Following this line of argumentation, Bücker, Günthner, and Imo (2015) argue that text genres are generally constructions in their own right (for further discussion see Günthner 2006b and Imo 2010b).

3.2.3 Productivity and the instance-schema continuum

Productivity has been an important concept in linguistic research, particularly in morphology but also in syntax. In many studies productivity has been regarded as an all-or-nothing-phenomenon (for an overview, see Barðdal 2008: 36ff.). This perspective, however, ignores that constructions may significantly vary in terms of their syntactic and semantic restrictions. For example, also due to its more numerous restrictions, the English double-object construction is less productive than the *way*-construction (Goldberg 1995: 141–151, 199–218).

CxG views the productivity of constructions on a continuum, ranging from fully productive constructions to semi- and non-productive constructions. It takes the view that productivity has a crucial impact on the way a construction is shaped and related to other constructions in the constructicon. In this view, as Barðdal (2012: 467) notes with respect to argument structure constructions, syntactic productivity does not primarily refer to the ability to generate new sentences, but rather to "the interesting question of how case and argument structure constructions are extended to new verbs." In other words, usage-based CxG takes

> the type frequency and the coherence of a schema to determine the actual level of schematicity at which the construction exists in the minds of speakers [...]. This level of schematicity, i.e. a construction's highest level, also determines the construction's productivity. The higher the degree of schematicity, the more productive the construction is, and, conversely, the lower the degree of schematicity, the less productive the construction is (Barðdal 2008: 45).

To illustrate, consider the idiomatic construction *jdm. den Laufpass geben* ('to jilt') that instantiates the double-object construction evoked by the verb *geben* ('to give'). The instances of the idiomatic expression such as (5a) instantiates different constructions at various levels of specificity, namely the schematic idiomatic construction (5b), the more abstract *give* construction, evoking the Giving frame (see https://framenet.icsi.berkeley.edu, accessed: 1.10.2016) as well as the highly schematic double-object construction (5c).[13]

(5) a. Judith gibt Thomas den Laufpass. ('Judith jilts Thomas')
    b. [[Agent]/[NP]] gibt [[Recipient]/[NP]] den Laufpass.
    c. [[Agent]/NP]] [Verb] [[Recipient]/[NP]] [[Topic]/[NP]].

Although the fully schematic double-object construction (5d) features also preferences with regard to the (types of) verbs entering this construction (Stefanowitsch/

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13 Since in English the verb *jilt* incorporates the meaning provided by the direct object in the German equivalent, the verb *jilt* instantiates a transitive instead of a double-object construction.

Gries 2003: 227–230), the double-object construction remains very productive since a plethora of instances are licensed to enter the construction and many more specific constructions instantiate the double-object construction, including idiomatic constructions such as (5b). This idiomatic construction (5b) comprises only two open slots restricted to human agents and recipients, which helps entrench the idiomatic construction as a whole.

In addition to productivity related to the range of instances entering a slot, productivity may also relate to semantic variation, that is, to syntactic structures whose (abstract) meanings systematically change depending on the lexical items entering them (e.g., *He gives her a glass* vs. *He gives her a kiss* vs. *He promises her a kiss*). In any case, constructions vary from entirely unproductive to highly productive units depending on type and token frequency as illustrated in Figure 4. According to Clausner/Croft (1997: 271), schema instantiation gives rise to gradient productivity and thus cognitive entrenchment in three ways: (a) A constructional schema is productive, and thus entrenched, if a range of different examples instantiate this schema; (b) in contrast, token entrenchment occurs, if the schema is semi-productive, that is, if only a very limited number of examples instantiate the schema; (c) finally, token entrenchment also happens, if there is no variation such that only one instance reoccurs which is why a schema is neither instantiated nor formed. As illustrated in Figure 4, each of these cases must be regarded as degrees on a continuum. In Figure 4, the bold lines indicate entrenchment, more precisely: type entrenchment in the case of productive schemata and token entrenchment in the case of semi-productive as well as unproductive schemata.[14]

On this view, type and token entrenchment determine the way a grammar is cognitively structured and organized. Even though there is no uniform way
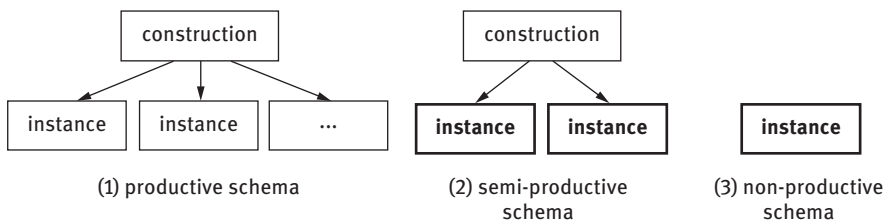

Figure 4: Constructional productivity (based on Clausner/Croft 1997: 271).

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14 For an extensive discussion of token and type entrenchment in Frame Semantics, cf. Ziem (2014a: 292–300).

of dealing with relations holding between constructions across different CxG approaches, schema instantiation is deemed to be the most important and most powerful mechanism (Ziem 2014b). As such, the constructional view holds that a grammar is no more and no less than a constructicon, that is, an inventory of constructions systematically related with one another both in terms of their forms and meanings (see Fillmore 2008, Fillmore et al. 2012). At the same time, it serves as a cognitive resource to generate and understand utterances. Language in use is thus licensed by interacting constructions. Consider (6), which is licensed by seven types of constructions summarized in Table 1.

(6) Die   Blumen   duften   stark.
    the.NOM   flowers   smell   strongly
    'The flowers have a strong scent.'

The intransitive construction licensed by the one-place predicate *duften* sets out the sentence structure, comprising an NP and VP construction, whereby the first is complex in itself such that it consists of a definite pronoun and a noun. Lexical constructions make up the lexical material combined into phrases. Again, lexical constructions may be simple in cases in which the items do not inflect (*die*, *aber*, *stark*) or complex (*duften*, *Blumen*). The latter instantiate morphological constructions, such as plural constructions (*Blumen*) or other inflection constructions specifying number, tense and mood (*duften*).

As demonstrated in Table 2, in contrast to projectionist accounts, CxG adopts a what-you-see-is-what-you-get approach to syntactic form (Goldberg 2003: 219). With abstaining from empty categories, traces and invisible derivation processes, CxG argues that constructions are learned and shaped in language use, rather than being derived from each other. The driving force behind this is the productivity of a construction as attested in empirical data.

3.3 CxG as a family of approaches

CxG is not a homogenous theory of language but rather a family of closely related approaches. This is also important to keep in mind when engaging oneself with the contributions in this volume. All contributions share basic assumptions and concepts, particularly those introduced above. They also converge with regard to the methodology applied, respectively the way constructions are approached and examined, since all analyses assembled in this volume rely on corpus data in one or the other way while refraining from formalizations of constructions and adopting a cognitive-linguistic perspective at the same time. However,

Table 2: Constructions instantiated by *Die Blumen duften stark*
('The flowers have a strong scent').

Types of constructions	Instances
Intransitive construction $[[X]_{NP} [Y]_V]$	$[[Die\ Blumen]_{NP} [duften]_V]$
VP construction[1] $[[X]_V ([Y]_{NP}) ([Z]_{PP})]$	*duften*
AdvP construction $[[x]_{Adv} ([y]_{Adv})]$	*stark*
NP construction	$[[die]_{def-Pr.} [Blumen]_N]$
Plural construction $[[X]_{N-root-morph} [-y]_{infl-morph}]]$	$[[Blume-]_{root-morph} [-n]_{infl-morph}]$
Verb-inflection construction[2] $[[X]_{V-root-morph} [Y]_{Infl}]$	$[[duft-] [-en]]$
Lexical constructions	$[duften]$, $[die]$, $[Blume]$, $[stark]$, $[aber]$

Note:

[1] Even though we are dealing here with an intransitive construction, the VP construction offers options for licensing direct and indirect object NPs in cases involving transitive and ditransitive verbs.

[2] The verb-inflection construction will need to access a subject-predicate agreement construction that licenses the verb's proper inflectional ending.

beyond such a cognitive approach based on corpus evidence, we find a wealth of alternative research agendas that also subscribe to a constructional approach to grammar.

First of all, substantial differences between different constructional approaches concern the objectives and particular interests motivating both the linguistic issues addressed and the methodological requirements needed for approaching them appropriately (for an overview cf. Hoffmann/Trousdale 2013: Section II; Ziem/Lasch 2013: 48–66). Croft's (2001) Radical Construction Grammar, for example, adopts basic assumptions and concepts developed in Langacker's Cognitive Grammar in order to raise the question to what extent typologically different languages make use of distinct grammatical categories. A cognitive approach is also favored in the domains of language change (e.g. Traugott/Trousdale 2013, Hilpert 2013) and language acquisition (for an overview Tomasello 2003). In contrast, Embodied Construction Grammar (e.g. Feldman/ Dodge/Bryant 2009; Bergen/Chang 2005) and Fluid Construction Grammar (e.g. Steels 2011) aim at developing a computational model facilitating implementations of constructional processing. To this end, robust formalisms that can be implemented computationally are required.

Second, another distinguishing feature is the degree to which each constructional approach allows for, or strives at, formalizing constructions. At one end we find Berkeley Construction Grammar, also called Traditional Construction Grammar, as well as Fluid Construction Grammar, Embodied Construction Grammar and Sign-Based Construction Grammar. Closely related to the early work of Charles Fillmore and Paul Kay (Kay 1984, Fillmore 1988, Fillmore/Kay/O'Connor 1988), Berkeley CxG evolved out of the endeavor to provide full-fledged analyses of idiosyncratic grammatical constructions by means of the same formalisms capturing also fully regular syntactic structures. Even though Berkeley CxG was methodologically inspired by Head-driven Phrase Structure Grammar, it took more than a decade until both approaches were systematically blended, yielding a new theory known as Sign-Based Construction Grammar (Boas/Sag 2012). At the other end, we find constructional approaches that are not very interested in expressing linguistic insights in terms of specific formalizations, e.g., Goldberg's Cognitive CxG and, to some extent, Croft's Radical CxG. According to them, formalizations of constructions distract attention from the rich conceptual content and structure best describable in terms of radial categories (Goldberg 2006: 216). Formalizations, as Goldberg puts it in an interview with Gonzálvez-García (2008, 348), are "daunting"; referring to Fillmore (1975), Goldberg is "doubtful that a perspicuous formalism for lexical semantics can exist." Despite these seemingly different stances, however, all approaches build on the same idea that constructions are the basic building blocks of language. What is more, as Sag, Boas and Kay (2012) have shown, analyses in one constructional framework can in principle be translated into another. Thus, individually pursued research aims to eventually determine what kind of approach is privileged and adopted for empirical investigations.

Third, another difference between CxG approaches concerns the methods applied. At least four methodological strands can be identified (Ziem/Lasch 2013: 67–76): (a) introspection, (b) data-driven, quantitative methods, (c) qualitative corpus analyses, and (d) experiential approaches. In the present volume, most studies orient themselves towards a cognitive approach, particularly inspired by Goldberg's seminal studies on argument structures (Goldberg 1995, 2006); occasionally constructions are also formalized for the sake of clarity and precision. Generally, a main focus is on quantitative and qualitative analyses of corpus data. In this vein, the methods applied include comparisons of different approaches in terms of explanatory adequacy (e.g. Imo), quantitative and multifactorial corpus analyses (e.g. Engelberg, Hoffmann, Madlener), corpus-based investigations of annotated data (e.g. Willems, Zeldes, Dux, Roustila), qualitative analyses of interactional data (Imo), and contrastive analyses (Ruppenhofer, Hoffmann).

3.4 Major strands of constructional approaches to syntactic structures in German

Since the turn of the millennium a growing number of studies have addressed grammatical constructions in German both from a synchronic and a diachronic perspective, including frame semantic studies particularly focusing on valence-bearing words and their construction realizations patterns (Boas 2005b, 2013b; Schmidt 2009; Busse 2012: 23–250; Ziem 2014a). However, the vast majority of these studies are in German and thus not accessible to people not familiar with this language. In this section we therefore provide an overview of constructional approaches to syntactic structures in German. Currently, five major research strands can be identified: (a) syntactic structures from a synchronic perspective, (b) syntactic structures from a diachronic perspective, (c) idiomatic constructions, (d) syntactic structures from an interactional perspective, (e) syntactic structures in language acquisition. We briefly discuss each of them.

(a) Syntactic structures from a synchronic perspective. Following Goldberg's rationale (1995), many studies focus on argument structure constructions peculiar to German (Engelberg et al. 2011; Imo 2007a; Rostila 2009), including resultative constructions (Chang 2008; Müller 2007, Boas 2011, 2014) and double-object constructions (Haspelmath 2004). More specifically, a broad range of verb-oriented analyses concern grammatical voice (Primus 2011; Lasch 2014/2017), grammatical tense (Hilpert 2008; Petrova 2008), semantic shifts (Engelberg 2009; Goschler 2011) and various valence patterns (Nikula 2007; Jacobs 2009; Welke 2009a, b; Rostila 2014; Lasch 2015) as well as specific verb classes, such as verbs of cognition (Osswald 2014), light verbs and particle verbs (Müller 2007, Zeschel 2008, Felfe 2012).

(b) Syntactic structures from a diachronic perspective. In a historical perspective, we find a main focus of CxG studies in the field of grammaticalization and constructional change (Diewald 2007, 2009; Hilpert 2011). Most diachronic constructional studies focus on the status of the verb, addressing verb-second word order in German (Freywald 2010), future and past tense (Hilpert 2008, Froschauer 2014, Rödel 2014), progressive aspect (Flick 2016), and complement constructions (Smirnova 2011). Moreover, Diewald (2008) investigates the historical development of idiomatic constructions and the role of modal particles in constructions.

(c) Idiomatic constructions. It is not by chance that idiomaticity has been, and still is, one of the driving forces for a constructionist approach to grammar (Fillmore/Kay/O'Connor 1988). In contrast to other theories that relegate idiomatic expressions to the lexicon (Chomsky 1981, Bresnan 1982, Pollard & Sag 1994), CxG considers irregular expressions test cases displaying the

descriptive and explanatory power of the framework applied. Interestingly, however, only a few studies on German address idiomaticity (for an overview: Feilke 2007; Dobrovol'skij 2011). Worth mentioning is Zeschel's (2011) study contrasting rule-based and pattern-based analyses of German constructions with a locative subject (e.g. *Wiesen und Wälder blühen* 'meadows and forests are blooming'). At the same time, it is striking that constructions play an increasingly important role in attempts to account for generalizations and constraints licensing idiomatic expressions in German, such as deictic constructions (Dobrovol'skij 2010), somatisms (Staffeldt/Ziem 2008; Staffeldt 2010, 2011a, b; Ziem/Staffeldt 2011) and idioms in general (Birkner 2008b; Zeschel 2008; Dobrovol'skij 2011; Stathi 2011; Diedrichsen 2014; Richter/Sailer 2014). The analyses provided here offer fine-grained investigations of the constructional mechanisms that remain unnoticed both in traditional phraseology and in approaches that focus solely on non-idiomatic expressions like projectionist accounts, such as Valency Grammar and Generative Grammar.

(d) Syntactic structures from an interactional perspective. In quantitative terms the dominating area of constructional research on German is interactional linguistics. In contrast to projectionist approaches to grammatical structures, CxG is a very appealing approach for addressing interactional data because it offers a useful usage-based framework to describe grammatical categories and structures in context and on the basis of empirical evidence without presuming pre-existing rules or linguistic categories (Günthner 2010). Both interactional linguistics and CxG subscribe to the guiding principle "What you see is what you get" mentioned above. Overall, there is a bulk of studies providing brief surveys of particular constructions at work in spoken discourse (Auer 2002, 2005, 2006, 2007a, b, 2008; Deppermann 2002, 2006, 2007, 2011a, b, 2012; Selting 2004; Fried/Östman 2005; Günthner 2005, 2006, 2010; Fischer 2006, 2007; Günthner/Imo 2006; Uhmann 2006; Imo 2007a, b, 2011a, b; Betz 2008; Günthner/Bücker 2009; Günthner/Hopper 2010, Auer/Pfänder 2011). One of the major interests of Interactional Construction Grammar lies in accounting for properties of interaction that constrain and facilitate communicative practices when describing constructions. According to Deppermann (2011: 207), these properties include (a) co-presence of interlocutors (in terms of time and space), (b) materiality and multimodality of interaction, (c) temporality, and (d) pragmaticity. There is overwhelming empirical evidence that these factors crucially shape constructions in interaction. Constructions scrutinized so far include turn-taking (Selting 2005), lexical categories with discourse function, such as discourse particles (Fischer 2006, Alm 2007), modal particles (Alm 2007; Imo 2008), discourse markers (Imo 2012), and adverbs (Imo 2010a) as well as clause-level constructions, such as garden-path

sentences (Imo 2011a, b), verb-first constructions (Auer/Lindström 2011), relative-clause constructions (Birkner 2008a) and pseudo-cleft constructions (Günthner 2006a). In addition, a number of studies focus on particular verbs (Imo 2007a; Deppermann/Elstermann 2008; Goschler/Stefanowitsch 2010; Deppermann 2011c) and phenomena specific to spoken discourse, including increments (Auer 2006b, Imo 2011b), interjections (Imo 2009; Reber/Couper-Kuhlen 2010), *von-x-her* constructions (Bücker 2014), *so* constructions (Auer 2006b, Imo 2011b), quotative constructions (Bücker 2009), idiomatic constructions (Birkner 2008b), and verbal humor (Brône 2008, 2010).

(e) Syntactic structures in language acquisition. In the field of language acquisition, there is an ongoing debate on the issue as to what extent language is an innate faculty or rather an emergent product of human communicative competence, that is, a sophisticated adaptive cognitive system (Tomasello 2008). In contrast to research in the Chomskyan paradigm, Michael Tomasello and his research group argue for the fundamental role of grammatical constructions as the building blocks of language acquisition (see Tomasello 2006a, b, c; Behrens 2009a, b and 2011a for overviews). Many corpus and experiential studies conducted so far relate to English grammar. However, based on German data, Behrens (2006) investigates relations between input data (linguistic data a learner comes across) and output data (linguistic data a learner generates), showing to what extent the acquisition of syntactic structures is a matter of frequency (for the case of second language acquisition see Madlener 2015). Following the same rationale, a selection of studies addresses complex constructions in German, such as word order, transitive and complement constructions (e.g. Abbot-Smith/Behrens 2006; Diessel 2006, 2007; Abbot-Smith/Lieven/Tomasello 2008; Brandt/Lieven & Tomasello 2010; Brandt 2011). The same methodology has also been applied to investigate the acquisition of abstract categories, notably part of speech (Akhtar/Tomasello 1997, Behrens 2005, Stumper 2011). With the help of sophisticated corpus linguistic and experimental methods, the framework of CxG allows to capture and model the gradual process of acquiring constructions in real-world ecological environments, yielding a full-fledged, yet still "fluid" cognitive grammar at the end.

4 This volume

This volume presents ten original research papers that all deal with particular aspects of German syntax from a constructionist perspective. The papers are organized into four thematic sections:

i. Grammatical constructions and valency
ii. Comparing Constructions in German and English
iii. Prepositional Constructions in German
iv. Constructional productivity

i. Grammatical constructions and valency

Stefan Engelberg (IDS Mannheim) argues in his study *The argument structure of psych-verbs: A quantitative corpus study on cognitive entrenchment* that psych-verbs exhibit a fairly large variation of argument structure patterns, alternating between stimuli and experiencers in subject position, between nominal and sentential realizations of arguments, and between explicit and implicit arguments. Engelberg's corpus-based investigation relies on statistical analyses to demonstrate that different factors determine the quantitative distribution of argument structures with psych-verbs, including stylistic properties of text genre, requirements from information structure, functional dependencies between different argument structure patterns, and cross-linguistic conceptual-semantic properties of verbs. Taking all these factors into account, Engelberg argues that a number of language-specific, idiosyncratic preferences of verbs for particular argument structure patterns remain, and that these are reflected in the frequencies of their co-occurrence. While this points to the existence of valency-based argument structure representations, Engelberg also presents evidence for construction-driven behavior. In particular, argument structures of small or medium frequency all show similar frequency distributions with respect to the respective verbs they occur with. This reveals how the constructions are entrenched with particular verbs and slowly spread into other parts of the verb lexicon. The remainder of Engelberg's article focuses on the interplay of valency and argument structure constructions.

The second paper in this section, *Case alternation in argument structure constructions with prepositional verbs: A case study in corpus-based constructional analysis* by **Klaas Willems**, **Jonah Rys**, and **Ludovic De Cuypere** (University of Ghent), investigates nine so-called two-way prepositions in modern German, which can take either the accusative (ACC) or dative (DAT). In traditional explanations, ACC is typically associated with 'motion' and DAT with a 'static event'. However, Willems et al. review previous corpus-based research (Willems 2011; 2012) showing that many instances of prepositional verbs cannot be accounted for in this way. The authors develop an alternative account, which not only is corpus-based but also pays attention to a diverse set of motivating factors that bear on the selection of either the ACC or DAT. More specifically, Willems et al. perform a constructional analysis of corpus data drawn from the Mannheim German Reference Corpus for four prepositional verbs that vary as to the extent of

the case alternation: *versinken in*, *einpflanzen in*, *aufsetzen auf*, *aufbauen auf*. For each item, the authors annotated ca. 750 example sentences for constructional factors (transitivity, voice, tense, and the complexity of the verb) and lexical properties (typing restrictions of the prepositional argument, verbal aspect, and the meaning of the preposition). The analysis shows that constructional factors have a significant effect on the case alternation. The seemingly random alternation between ACC and DAT with, e.g., *aufsetzen auf* appears to correlate strongly with the distinction between transitivity and intransitivity. However, Willems et al. demonstrate that lexical properties also play a significant role, given that correlations between case assignment and specific prepositional arguments can be observed in the corpus.

The third paper in this section, **Wolfgang Imo**'s (University of Hamburg) *Valence patterns, constructions, and interaction: Constructs with the German verb* erinnern *('to remember / to remind')* addresses a continuous debate in valency-oriented approaches, namely the question of whether some units have the status of a verb's argument or not. Previous research typically tackled this question by applying a range of syntactic and semantic tests. In contrast, Imo takes a different approach: Instead of trying to localize the core argument structure of the verb *erinnern* via hypothetical reconstructions and tests, he employs a usage-based, empirical method. On the basis of corpora of spoken German, Imo analyzes all instances of *erinnern* to achieve a combination of both quantitative and qualitative results. These results are then interpreted in relation to the concepts of *interactional construction grammar* (Deppermann 2006, 2011; Imo 2007a; Günthner 2010). Specific questions addressed by Imo include: (1) Should valance patterns be treated separately from constructions or should they be integrated into constructions?, and (2) what are the specific discourse functions of constructions with *erinnern*, and (3) for what specific purposes do speakers employ such constructions?

ii. Comparing Constructions in German and English

The first paper in this section, **Thomas Hoffmann**'s (Catholic University of Eichstätt-Ingolstadt) *Comparing Comparative Correlatives: The German vs. English construction network*, investigates the properties of Comparative Correlative (CC) constructions (*the more you eat, the fatter you get / je mehr du isst, desto dicker wirst du*), which are fascinating peripheral members of the set of filler-gap constructions (Sag 2010). In his study, Hoffmann draws on corpus data to analyze and compare the CC construction network of English and German with respect to the types of filler phrase, word order variation, the presence of complementizers, deletion phenomena as well as the interaction with argument structure constructions. On top of that, Hoffmann discusses the status of ternary structures such as

[the more opaque that atmosphere is]C1, [the less conductive it is]C2 [the bigger the temperature difference you need to cross it]C3 (ICE-GB:S2A-043) or [Je länger der Backprozess dauert,]C1 [um so mehr Wasser verdampft auch aus den darunterliegenden Teigschichten,]C2 [um so dicker also wird die Kruste.] C3 (LIMAS 116:09.24:240).

The second paper in this section, **Josef Ruppenhofer**'s (University of Heidelberg) *Argument omissions in multiple German corpora*, discusses unexpressed arguments, which are a long- and much-studied phenomenon in theoretical linguistics (Lehrer 1970, Fillmore 1986, Bender 1999, inter alia). Still, there are aspects of the phenomenon that have not yet received sufficient attention, two of which Ruppenhofer examines. First, he investigates whether there is evidence of cross-linguistic regularity, or whether argument omission affordances appear as unpredictable across languages as they have traditionally been said to be within languages. Second, while most previous studies focused on written data, Ruppenhofer broadens the scope of these investigations by taking spoken language data into account. In particular, he presents an analysis of lexical and constructional argument omission phenomena in several written (e.g. Huge German Corpus) and spoken (e.g. CallHome German, Kiez-Deutsch Korpus) German corpora. One part of the analyses consists of comparing the findings for the spoken and written corpora. The interest lies in seeing which omission types in German are genre- or modality-specific. The other part compares the results for written German to findings for written English, in particular those of Ruppenhofer (2004) and Ruppenhofer & Michaelis (2010). The paper focuses on the question whether the per-frame interpretation regularity hypothesized for English by Ruppenhofer (2004) also holds for German, and on how similar the inventory of constructions licensing omissions is between the two languages.

iii. Prepositional constructions in German

The first contribution in this section *The Case for Caseless Prepositional Constructions with 'voller' in German*, by **Amir Zeldes** (Georgetown University), deals with German prepositions that typically mark their objects with one of three cases: accusative, dative or genitive. However, in some constructions case marking varies in colloquial usage, either systematically or sporadically. Cases of variation between genitive and dative objects are well known (e.g. *wegen*+gen/dat 'because of'), whereas cases applying to more specific lexicalized constructions are less discussed, e.g. *mit jemand anderem* [dat] / *anders* [gen] 'with someone else'. For still other constructions, speakers profess uncertainty (so-called *Zweifelsfälle* 'dubious cases') and no fixed case analysis seems to apply. To address this issue, Zeldes focuses on the recently grammaticalized deadjectival quasi-preposition *voller* ('full of'), which appears to occur with genitive, dative

and even nominative forms, e.g.: *eine Stadt voller Kinder*[gen]? ('a city full of children'), *eine Badewanne voller Wasser* [dat]? ('a tub full of water'), *Menschen voller Aberglaube* [nom]? ('people full of superstition'). Using a large Web corpus, normative lexica, and native speakers' forum discussions on the subject, Zeldes explores patterns of variation in the case marking of *voller* and related cases, and proposes that case conflation leads to systematic avoidance and suppletion of forms with clear case marking, such as objects with attributive adjectives. Zeldes then puts forth a constructional approach to capture these data, which defies traditional analyses.

The second contribution in this section, *Construction, compositionality, and the system of German particle verbs with 'an'*, by **Marc Felfe** (Humboldt University, Berlin) discusses the form and meaning of German transparent particle verbs with *an* ('on'). Felfe shows how these particle verbs can be generated in a rule-based manner in approximately 50% of cases from minimal argument structures of verb and particle. At the same time, however, he argues that it would be appropriate to also consider an alternative analysis that is also able to account for the remaining 50% of particle verbs. According to Felfe, this is possible by pursuing a constructional approach, in which neither the concept of lexeme-based connections nor that of construction-based connections is made absolute. He shows why and how very different complexes are analyzed on the basis of different argument constructions with *an* as a lexical component. In cases involving an *analysis*, Felfe proposes that the principle of compositionality, modeled with the help of a frame-semantic approach (Fillmore 1985), should be employed. In cases in which particle verbs with *an* occur in the plural, systematic relationships within the analytical model should be explicable, according to Felfe. Such cases are then analyzed using the concepts of family resemblance and schema–instance relationship.

iv. Constructional productivity

In the first contribution in this section, *Type and token frequency effects on developing constructional productivity: The case of the German 'sein' ('be') + present participle construction*, **Karin Madlener** (University of Basel) shows that constructions often restrict the range of filler choice for a specific slot, a phenomenon which has been discussed as partial productivity. The German *sein* + present participle construction, for example, is restricted to the class of causative psychological verbs, some 200 verbs like *enttäuschen* ('disappoint') and *beunruhigen* ('worry'). Using German corpus data, Madlener demonstrates that the construction's productivity is not only limited in terms of type frequencies, type variation and coverage, but also by idiosyncratic blockings (*ärgerlich*/*ärgernd), and that it does not have any apparent coercion potential. However, Madlener asks whether this necessarily means that the pattern is a low-level, mostly item-specific schema. In order

to approximate this question, she discusses data from a training study on the acquisition of *sein* + present participle by adult learners of German as a second language. Madlener argues that learners generalize productively even when exposed to input with extremely limited type variation (down to nine types only). This suggests that higher-level schema abstractions may commonly be made in spite of restricted constructional productivity.

The second contribution in this section is **Ryan Dux**'s (IDS-Mannheim), *Frames, verbs, and constructions: German constructions with verbs of stealing*. Dux first reviews Goldberg (1995, 2006), who proposes abstract constructions with relatively few restrictions on their combination with individual verbs and the juxtaposes Goldberg's work with that of Boas (2003), who claims that to account of individual verbs' lexical entries one must first specify whether or not they may occur with a given construction. Recently, scholars have found that semantic frames advance the description of this combination (Boas 2008, Croft 2009, Herbst 2014). Dux's analysis of the 'dative victim' construction with German verbs evoking the Theft frame reveals that frame membership determines the interpretation of polysemous constructions. At the same time, however, the ability of a verb to combine with the construction must be specified for each individual verb. Various dative constructions, including the 'dative victim' and 'dative recipient' construction, differ according to the semantic properties associated with the dative argument. Dux shows that all dative objects occurring with verbs evoking the Theft frame are interpreted as victims, and never as benefactives or recipients. With verbs of the Giving frame, however, the dative object is always a recipient. Dux takes this as evidence that semantic frames predict the interpretation of the polysemous dative object construction.

Jouni Rostila's (University of Helsinki) *Argument structure constructions among German prepositional objects* is the final contribution of the volume. Rostila investigates object markers in the form of prepositions such as *auf* ('on') (e.g. with *warten* 'wait') and *an* ('at') (e.g. with *zweifeln* 'doubt') in German, which have hitherto mostly been described as lexical idiosyncrasies of the predicate head they accompany. However, Rostila argues that there are reasons to assume that some of them have turned into productive templates whose choice displays semantic regularities. Concentrating on the case of prospective *auf*, Rostila argues that such productive prepositions of prepositional objects in fact constitute argument structure constructions whose sole formal exponent is the preposition in question. What is even more interesting is that the emergence of such productivity can be viewed as a grammaticalization process. Rostila's proposal has repercussions for the discussion of whether argument structure constructions can be considered products of grammaticalization, as well as on the description of similar prepositional structures in other languages.

References

Abbot-Smith, Kirsten & Heike Behrens. 2006. How Known Constructions Influence the Acquisition of Other Constructions: The German Passive and Future Constructions. *Cognitive Science* 30. 995–1026.

Abbot-Smith, Kirsten, Elena Lieven & Michael Tomasello. 2008. Graded Representations in the Acquisition of German and English Transitive Constructions. *Cognitive Development* 23(1). 48–66.

Abraham, Werner. 1995. *Deutsche Syntax im Sprachenvergleich*. Tübingen: Narr.

Ackerman, Farrell & Gert Webelhuth. 1998. *A Theory of Predicates* (CSLI lecture notes 76). Stanford: CSLI Publications.

Ágel, Vilmos. 2000. *Valenztheorie*. Tübingen: Narr.

Akhtar, Nameera & Michael Tomasello. 1997. Young Children's Productivity with Word Order and Verb Morphology. *Developmental Psychology* 33. 952–965.

Alm, Maria. 2007. *"Also darüber lässt sich ja streiten!" Die Analyse von "also" in der Diskussion zu Diskurs- und Modalpartikeln*. Almqvist & Wiksell International: Stockholm.

Auer, Peter. 2002. *On line*-Syntax – Oder: was es bedeuten könnte, die Zeitlichkeit der mündlichen Sprache ernst zu nehmen. *Sprache und Literatur* 85. 43–56.

Auer, Peter. 2005. Projection in Interaction and Projection in Grammar. *Text* 25(1). 7–36.

Auer, Peter. 2006a. Construction Grammar Meets Conversation: Einige Überlegungen am Beispiel von 'so'-Konstruktionen. In Susanne Günthner & Wolfgang Imo (eds), *Konstruktionen in der Interaktion,* 291–314. Berlin: de Gruyter.

Auer, Peter. 2006b. Increments and More. Anmerkungen zur augenblicklichen Diskussion über die Erweiterbarkeit von Turnkonstruktionseinheiten. In Arnulf Deppermann, Reinhard Fiehler & Thomas Spranz-Fogasy (eds.), *Grammatik und Interaktion. Untersuchungen zum Zusammenhang von grammatischen Strukturen und Gesprächsprozessen.* 279–294. Radolfzell: Verlag für Gesprächsforschung. http://www.verlag-gespraechsforschung. de/2006/pdf/gui-auer.pdf (accessed 10.11.2014)

Auer, Peter. 2007a. Why are Increments such Elusive Objects? *Pragmatics* 17(4). 647–658.

Auer, Peter. 2007b. Syntax als Prozess. In Heiko Hausendorf (eds.), *Gespräch als Prozess. Linguistische Aspekte der Zeitlichkeit verbaler Interaktion,* 94–124. Tübingen: Narr.

Auer, Peter. 2008. On-line Syntax: Thoughts on the Temporality of Spoken Language. *Language Sciences* 31. 1–13.

Auer, Peter & Jan Lindström. 2011. Verb-first conditionals in German and Swedish: convergence in writing, divergence in speaking. In Peter Auer & Stefan Pfänder (eds.), *Constructions: emerging and emergent,* 218–162. Berlin; Boston, Mass.: De Gruyter.

Auer, Peter & Stefan Pfänder (eds.). 2011. *Constructions: Emerging and Emergent (linguae & litterae 6),* 156–185. Berlin/Boston: de Gruyter.

Bach, Emmon. 1962. The Order of Elements in a Transformational Grammar of German. *Language* 38(3). 263–269.

Barðdal, Johanna. 2006. Construction-Specific Properties of Syntactic Subjects in Icelandic and German. *Cognitive Linguistics* 17(1). 39–106.

Barðdal, Johanna. 2008. *Productivity. Evidence from Case and Argument Structure in Icelandic*. Amsterdam/Philadelphia: John Benjamins.

Barðdal, Johanna. 2009. The Development of Case in Germanic. In Jóhanna Barðdal and Shobhana Chelliah (eds.), *The Role of Semantic, Pragmatic and Discourse Factors in the Development of Case*, 123–159. Amsterdam: John Benjamins.

Barðdal, Jóhanna. 2012. Predicting the Productivity of Argument Structure Constructions. *Berkeley Linguistics Society* 32. 467–478.

Barðdal, Johanna. 2013.Construction-Based Historical-Comparative Reconstruction. In Thomas Hoffmann & Graeme Trousdale (eds.), *Oxford Handbook of Construction Grammar*, 438–457. Oxford: Oxford University Press.

Bech, Gunnar. 1983. *Studien über das deutsche verbum infinitum*. 2. Auflage. Tübingen: Narr.

Behaghel, Otto. 1930. Von deutscher Wortstellung. *Zeitschrift fuer Deutschkunde* 44. 81–89.

Behrens, Heike. 2000. *Anleitung zur Kodierung und Disambiguierung von Erwerbsdaten des Deutschen.* Unveröffentlichtes Manuskript. Leipzig: Max-Planck-Institut für Evolutionäre Anthropologie.

Behrens, Heike. 2005. Wortartenerwerb durch Induktion. In Clemens Knobloch, Bernhard Schaeder (eds.), *Wortarten und Grammatikalisierung: Perspektiven in System und Erwerb,* 177–198. Berlin: de Gruyter.

Behrens, Heike. 2006. The Input-Output Relationship in First Language Acquisition. *Language and Cognitive Processes* 21. 2–24.

Behrens, Heike. 2009a. Konstruktionen im Spracherwerb. *Zeitschrift für Germanistische Linguistik* 37: 427–444.

Behrens, Heike. 2009b. Usage-Based and Emergentist Approaches to Language Learning. *Linguistics* 47(2). 383–411.

Behrens, Heike. 2011a. Die Konstruktion von Sprache im Spracherwerb. In Alexander Lasch, Alexander Ziem (eds.), *Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze*, 165–179. Tübingen: Stauffenburg.

Behrens, Heike. 2011b. Grammatik und Lexikon im Spracherwerb: Konstruktionsprozesse. In Stefan Engelberg, Anke Holler, Kristel Proost (eds.), *Sprachliches Wissen zwischen Lexikon und Grammatik,* 375–396. Berlin, New York: de Gruyter.

Bender, Emily. 1999. Constituting Context: Null Objects in English Recipes Revisited. *Penn Working Papers in Linguistics* 6(1). 53–68.

Bergen, Ben & Nancy Chang. 2005. Embodied Construction Grammar in simulation-based language understanding. In Jan-Ola Östman and Mirjam Fried (eds.), *Construction Grammars. Cognitive grounding and theoretical extensions*, 147–190. Amsterdam/ Philadelphia: John Benjamins.

Betz, Emma. 2008. *Grammar and interaction. Pivots in German conversation.* (Studies in discourse and grammar 21). Amsterdam/Philadelphia: John Benjamins.

Bierwisch, Manfred. 1963. *Grammatik des deutschen Verbs*. Studia Grammatica No. 2. Berlin: Akademie Verlag.

Birkner, Karin. 2008a. *Relativ(satz)konstruktionen im gesprochenen Deutsch: syntaktische, prosodische, semantische und pragmatische Aspekte*. Berlin, New York: de Gruyter.

Birkner, Karin. 2008b. ‚Was X betrifft'. Textsortenspezifische Aspekte einer Redewendung. In Anatol Stefanowitsch, Kerstin Fischer (eds.), *Konstruktionsgrammatik II. Von der Konstruktion zur Grammatik.* 59–80. Tübingen: Stauffenburg.

Boas, Hans C. 2003. *A constructional approach to resultatives.* Stanford: CSLI Publications.

Boas, Hans C. 2004. You wanna consider a Constructional Approach to Wanna-Contraction? In Michel Achard and Suzanne Kemmer (eds.), *Language, Culture, and Mind*, 471–491. Stanford, CA: CSLI Publications.

Boas, Hans C. 2005a. Determining the Productivity of Resultative Constructions: A Reply to Goldberg & Jackendoff. *Language* 81(2). 448–464.

Boas, Hans C. 2005b. From Theory to Practice: Frame Semantics and the Design of FrameNet. In S. Langer and D. Schnorbusch (eds.), *Semantik im Lexikon*, 129–160. Tübingen: Narr.

Boas, Hans C. 2008. Determining the structure of lexical entries and grammatical constructions in Construction Grammar. *Annual Review of Cognitive Linguistics* 6. 113–144.

Boas, Hans C. (eds.). 2010a. *Contrastive studies in Construction Grammar*. Amsterdam/Philadelphia: John Benjamins.

Boas, Hans C. 2010b. The syntax-lexicon continuum in Construction Grammar: A case study of English communication verbs. *Belgian Journal of Linguistics* 24. 58–86.

Boas, Hans C. 2010c. Comparing constructions across languages. In Hans C. Boas (ed.), *Contrastive Studies in Construction Grammar,* 1–20. Amsterdam/Philadelphia: John Benjamins.

Boas, Hans C. 2011. Zum Abstraktiongrad von Resultativkonstruktionen. In Stefan Engelberg, Anke Holler, and Kristel Proost (eds.), *Sprachliches Wissen zwischen Lexikon und Grammatik,* 37–69. Berlin, New York: de Gruyter.

Boas, Hans C. 2013a. Cognitive Construction Grammar. In Thomas Hoffmann and Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar*. 233–254. Oxford: Oxford University Press.

Boas, Hans C. 2013b. Wie viel Wissen steckt in Wörterbüchern? Eine frame-semantische Perspektive. *Zeitschrift für Angewandte Linguistik* 57. 75–97.

Boas, Hans C. 2014. Zur Architektur einer konstruktionsbasierten Grammatik des Deutschen. In A. Ziem & A. Lasch (eds.), *Grammatik als Inventar von Konstruktionen? Sprachliches Wissen im Fokus der Konstruktionsgrammatik*. Berlin/New York: de Gruyter.

Boas, Hans C. 2017. Computational Resources: FrameNet and Constructicon. In B. Dancygier (ed.), *The Cambridge Handbook of Cognitive Linguistics*, 549–573. Cambridge: Cambridge University Press.

Boas, Hans C. & Ivan Sag (eds.). 2012. *Sign-Based Construction Grammar*. Stanford: CSLI Publications.

Boas, Hans C. & Alexander Ziem. In press. Constructing a constructicon for German: Empirical, theoretical, and methodological issues. In: Benjamin Lyngfelt, Tiago Timponi Torrent, Lars Borin, and Kyoko Hirose Ohara (eds.), *Constructicography. Constructicon development across languages*. Amsterdam/Philadelphia: John Benjamins.

Booij, Gerd. 2010. *Construction Morphology*. Oxford: Oxford University Press.

Brandt, Silke. 2011. Einfache Transitive und Komplementsatz-Konstruktionen im Spracherwerb: Analysierbarkeit und Kategorienbildung. In Alexander Lasch, Alexander Ziem (eds.), *Konstruktionsgrammatik III*: *Aktuelle Fragen und Lösungsansätze*, 181–192. Tübingen: Stauffenburg.

Brandt, Silke, Elena Lieven & Michael Tomasello. 2010. Development of Word Order in German Complement-Clause Constructions: Effects of Input Frequencies, Lexical Items, and Discourse Function. In *Language* 86 (3). 583–610.

Bresnan, Joan. 2001. *Lexical-Functional Syntax*. Oxford: Blackwell.

Broccias, Cristiano. 2013. Cognitive Grammar. In Thomas Hoffmann & Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar,* 191–210. Oxford: Oxford University Press.

Brône, Geert. 2008. Hyper- and Misunderstanding in Interactional Humor. In *Journal of Pragmatics* 40(12). 2027–2061.

Brône, Geert. 2010. *Bedeutungskonstitution in verbalem Humor: Ein kognitiv-linguistischer und diskurssemantischer Ansatz*. Frankfurt am Main: Lang.

Bücker, Jörg. 2009. Quotativ-Konstruktionen mit 'Motto' als Ressourcen für Selbst- und Fremdpositionierungen. In Susanne Günthner and Jörg Bücker (eds.), *Grammatik im Gespräch. Konstruktionen der Selbst- und Fremdpositionierung,* 215–248. Berlin, New York: de Gruyter.

Bücker, Jörg. 2014. Konstruktionen und Konstruktionscluster: Die Zirkumposition *von* XP *her* im gesprochenen Deutsch. In Alexander Lasch and Alexander Ziem (eds.), *Grammatik als Netzwerk von Konstruktionen? Sprachwissen im Fokus der Konstruktionsgrammatik*, 117–135. Berlin, Boston: de Gruyter.

Bücker, Jörg, Susanne Günthner & Wolfgang Imo. 2015: Einleitung zu Konstruktionsgrammatik V: Konstruktionen im Spannungsfeld von sequentiellen Mustern, kommunikativen Gattungen und Textsorten. In Jörg Bücker, Susanne Günthner, and Wolfgang Imo (eds.), *Konstruktionen im Spannungsfeld von sequentiellen Mustern, kommunikativen Gattungen und Textsorten*, 1–14. Tübingen: Stauffenburg.

Busse, Dietrich. 2012. *Frame-Semantik. Ein Kompendium*. Berlin, Boston: de Gruyter.

Bybee, Joan. 2010. *Language, use, and cognition*. Cambridge: Cambridge University Press.

Chang, Lingling. 2008. Resultative Prädikate, Verbpartikeln und eine konstruktionsgrammatische Überlegung. *Deutsche Sprache* 36(2). 127–145.

Chomsky, Noam. 1965. Aspects of a theory of syntax. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 1980. *Rules and Representations*. Oxford: Basil Blackwell.

Chomsky, Noam. 1981. *Lectures in Government and Binding*. Dordrecht: Foris Publications.

Clausner, Timothy C., and William Croft. 1997. Productivity and Schematicity in Metaphors. *Cognitive Science* 21(3). 247–82.

Croft, William. 2001. *Radical Construction Grammar*. Oxford: Oxford University Press.

Croft, William. 2003. Lexical rules vs. constructions: a false dichotomy. In Hubert Cuyckens, Thomas Berg, René Dirven, and Klaus-Uwe Panther (eds.), *Motivation in language: studies in honor of Günther Radden*, 49–68. Amsterdam/Philadelphia: John Benjamins.

Croft, William. 2013. Radical Construction Grammar. In Thomas Hoffmann & Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar,* 211–232 .Oxford: Oxford University Press.

Den Besten, Hans. 1983. On the interaction of root transformations and lexical deletive rules. In W. Abraham (ed.), *On the formal syntax of the Westgermania: Papers from the 3rd Groningen Grammar Talks*, 47–131. Amsterdam/Philadelphia: John Benjamins.

Deppermann, Arnulf. 2002. Von der Kognition zur verbalen Interaktion: Bedeutungskonstitution im Kontext aus Sicht der Kognitionswissenschaften und der Gesprächsforschung. In Arnulf Deppermann, Thomas Spranz-Fogasy (eds.), *Be-deuten*: *Wie Bedeutung im Gespräch entsteht*. 11–33. Tübingen: Stauffenburg.

Deppermann, Arnulf. 2006. Construction Grammar – eine Grammatik für die Interaktion? In Arnulf Deppermann, Reinhard Fiehler, Thomas Spranz-Fogasy (eds.), *Grammatik und Interaktion*, 43–65. Radolfzell: Verlag für Gesprächsforschung. http://www.verlag-gespraechsforschung. de/ 2006/pdf/gui-deppermann.pdf (accessed 19.10.2014).

Deppermann, Arnulf. 2007. *Grammatik und Semantik aus gesprächsanalytischer Sicht.* Berlin: de Gruyter.

Deppermann, Arnulf. 2011a. Pragmatics and Grammar. In Wolfram Bublitz, Neal Norrick (eds.), *Handbook of Pragmatics,* Vol. 1, 425–460. Berlin: de Gruyter.

Deppermann, Arnulf. 2011b. Konstruktionsgrammatik und Interaktionale Linguistik: Affinitäten, Komplementaritäten und Diskrepanzen. In Alexander Lasch & Alexander Ziem (eds.),

Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze, 205–238. Tübingen: Stauffenburg.

Deppermann, Arnulf. 2011c. Constructions vs. lexical items as sources of complex meanings. A comparative study of constructions with German *verstehen*. In Peter Auer & Stefan Pfänder (eds.), *Constructions: Emerging and Emergent* (linguae & litterae 6), 88–126. Berlin, Boston: de Gruyter.

Deppermann, Arnulf. 2012. How Does 'Cognition' Matter to the Analysis of Talk-in-Interaction? *Language Sciences* 34 (6). 746–767.

Deppermann, Arnulf & Mechthild Elstermann. 2008. Lexikalische Bedeutung oder Konstruktionsbedeutungen? Eine Untersuchung am Beispiel von Konstruktionen mit *verstehen*. In Anatol Stefanowitsch & Kerstin Fischer (eds.), *Konstruktionsgrammatik II: Von der Konstruktion zur Anwendung*, 103–133. Tübingen: Stauffenburg.

Diedrichsen, Elke. 2014. Zur "Inventarisierung" von idiomatischen und Argumentstruktur-Konstruktionen im Deutschen. In Alexander Lasch & Alexander Ziem (eds.), *Grammatik als Netzwerk von Konstruktionen? Sprachwissen im Fokus der Konstruktionsgrammatik,* 175–195. Berlin, Boston: de Gruyter.

Diessel, Holger. 2006. Komplexe Konstruktionen im Erstspracherwerb. In Kerstin Fischer & Anatol Stefanowitsch (eds.), *Konstruktionsgrammatik – Von der Anwendung zur Theorie*, 36–51. Tübingen: Stauffenberg.

Diessel, Holger. 2007. Komplexe Konstruktionen im Erstspracherwerb. In Kerstin Fischer & Anatol Stefanowitsch (eds.), *Konstruktionsgrammatik: Von der Anwendung zur Theorie*, 39–54. Tübingen: Stauffenburg Verlag.

Diessel, Holger. 2013. Construction Grammar and first language acquisition. In Thomas Hoffmann and Graeme Trousdale (eds.). *The Oxford Handbook of Construction Grammar*, 347–364. Oxford: Oxford University Press.

Diewald, Gabriele. 2007. Konstruktionen in der diachronen Sprachwissenschaft. In Kerstin Fischer and Anatol Stefanowitsch (eds.), *Konstruktionsgrammatik: Von der Anwendung zur Theorie*, 79–104. Tübingen: Stauffenburg Verlag.

Diewald, Gabriele. 2009. Konstruktionen und Paradigmen. *Zeitschrift für germanistische Linguistik* 37(3). 445–468.

Dobrovol'skij, Dmitrij. 2010. Deiktische Konstruktionen des Deutschen aus lexikographischer Perspektive. In Anne Dykstra, Tanneke Schoonheim, *Proceedings of the XIV Euralex International Congress, Leeuwarden, 6–10 July 2010*. CD-ROM. Leeuwarden: Fryske Akademy.

Dobrovol'skij, Dmitrij. 2011. Phraseologie und Konstruktionsgrammatik. In Alexander Lasch and Alexander Ziem (eds.), *Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze*, 111–130. Tübingen: Stauffenburg.

Dobrovol'skij, Dmitrij & Artëm Šarandin. 2010. Konstruktionsgrammatik und Lexikographie: Verben der Fortbewegung im *Neuen deutsch-russischen Großwörterbuch*. In Peter Ďurco (ed.), *Feste Wortverbindungen und Lexikographie. Kolloquium zur Lexikographie und Wörterbuchforschung,* 37–41. Berlin: de Gruyter.

Eisenberg, Peter. 2006. *Grundriss der deutschen Grammatik: Band 2: Der Satz*. Stuttgart: Metzler.

Eisenberg, Peter and Reinhard Peter Gallmann. 2016. *Der Duden in 12 Bänden: 4 – Die Grammatik*. Bibliographisches Institut & FA Brockhaus AG.

Engel, Ulrich. 1988. *Deutsche Grammatik*. Heidelberg: Julius Groos.

Engel, Ulrich & Meike Meliss (eds.). 2004. *Dependenz, Valenz und Wortstellung*. München: iudicium.

Engelberg, Stefan. 2009. *Blätter knistern über den Beton*. Zwischenbericht aus einer korpuslinguistischen Studie zur Bewegungsinterpretation bei Geräuschverben. In Edeltraud Winkler (eds.), *Konstruktionelle Varianz bei Verben* (OPAL Sonderheft 4/2009), 75–97. Mannheim: Institut für Deutsche Sprache.

Engelberg, Stefan, Svenja König, Kristel Proost & Edeltraud Winkler. 2011. Argumentstrukturmuster als Konstruktionen? Identität – Verwandtschaft – Idiosynkrasien. In Stefan Engelberg, Anke Holler, Kristel Proost (eds.), *Sprachliches Wissen zwischen Lexikon und Grammatik,* 71–112. Berlin, New York: de Gruyter.

Eroms, Werner. 1986. *Funktionale Satzperspektive*. Berlin/New York: Mouton de Gruyter.

Fanselow, Gisbert. 1989. Coherent infinitives in German: Restructuring vs. IP-Complementation. In C. Bhatt, E. Loebel, and C. Schmidt (eds.), S*yntactic phrase structure phenomena in noun phrase and sentences*, 1–16. Amsterdam/Philadelphia: John Benjamins.

Feilke, Helmuth. 2007. Syntaktische Aspekte der Phraseologie III: Construction Grammar und verwandte Ansätze. In Harald Burger (ed.), *Phraseologie. Ein internationales Handbuch der zeitgenössischen Forschung* (HSK 18.1), 63–76. Berlin: de Gruyter.

Felfe, Marc. 2011. Lexemas y construcciones sintácticas – unidades del léxico. In Lanzi de Zeitune, Josefina & Silvia Deborah Grodek de Marengo (eds.), *Perspectivas en estudios de traducción y terminología*. Tucumán: Editorial Universidad Nacional de Tucumán.

Felfe, Marc. 2012a. *Das System der Partikelverben mit "an". Eine konstruktionsgrammatische Untersuchung.* (Reihe: Sprache und Wissen 12). Berlin, Boston: de Gruyter.

Felfe, Marc. 2012b. Transitive Resultativkonstruktionen in der Konstruktionsgrammatik. In *Zeitschrift für Germanistische Linguistik* (ZGL) 40(3). 352–395.

Feldman, Jerome, Dodge, Ellen, and John Bryant. 2009. A Neural Theory of Language and Embodied Construction Grammar. In B. Heine and Heiko Narrog (eds.), *The Oxford Handbook of Linguistic Analysis*, 111–138. Oxford: Oxford University Press.

Fillmore, Charles J. 1975. An alternative to checklist theories of meaning. *Proceedings of the First Annual Meeting of the Berkeley Linguistics Society* 1. 123–131.

Fillmore, Charles J. 1982. Frame Semantics. In: *Linguistics in the Morning Calm*, ed. Linguistic Society of Korea, 111–38. Seoul: Hanshin.

Fillmore, Charles J. 1986. Pragmatically controlled zero anaphora. *Proceedings of the 12th annual meeting of the Berkeley Linguistics Society*. 95–107.

Fillmore, Charles J. 1988. The Mechanisms of "Construction Grammar". *Proceedings of the Fourteenth Annual Meeting of the Berkeley Linguistics Society*: 35–55.

Fillmore, Charles J. 1999. Inversion and constructional inheritance. In G. Webelhuth, J.-P. Koenig and A. Kathol (eds.), *Lexical and Constructional Aspects of Linguistic Explanation*, 113–128. Stanford: CSLI Publications.

Fillmore, Charles J. 2008. Border Conflicts: FrameNet meets Construction Grammar. *Proceedings of the XIII EURALEX International Congress* (Barcelona, 15–19 July 2008), 49–68.

Fillmore, Charles. 2013. Berkeley Construction Grammar. In Thomas Hoffmann and Graeme Trousdale (eds.), *The Oxford handbook on Construction Grammar*, 111–132. Oxford: Oxford University Press.

Fillmore, Charles J. & Collin Baker. 2010. A frames approach to semantic analysis. In B. Heine and H. Narrog (eds.), *The Oxford Handbook of Linguistic Analysis,* 13–340. Oxford: Oxford University Press.

Fillmore, Charles J. & Paul Kay. 1993. *Construction Grammar Course Book*. UC Berkeley: Department of Linguistics.

Fillmore, Charles J., Kay, Paul & Mary C. O'Connor. 1988. Regularity and idiomaticity in grammatical constructions: The case of 'let alone.' *Language* 64. 501–538.

Fillmore, Charles, Lee-Goldman, Russell & Russell Rhomieux. 2012. The FrameNet Constructicon. In: H.C. Boas and I. Sag (eds.), *Sign-based Construction Grammar*, 309–372. Stanford: CSLI Publications.

Fischer, Kerstin. 2006. Konstruktionsgrammatik und Interaktion. In Susanne Günthner and Wolfgang Imo (eds.), *Konstruktionen in der Interaktion,* 343–364. Berlin: de Gruyter.

Fischer, Kerstin. 2007. Konstruktionsgrammatik und Interaktion. In Anatol Stefanowitsch and Kerstin Fischer (eds.), *Konstruktionsgrammatik: Von der Anwendung zur Theorie,* 129–146. Tübingen: Stauffenburg.

Fischer, Kerstin & Anatol Stefanowitsch. 2007. Konstruktionsgrammatik: Ein Überblick. In Anatol Stefanowitsch and Kerstin Fischer (eds.), *Konstruktionsgrammatik: Von der Anwendung zur Theorie,* 3–17. Tübingen: Stauffenburg.

Fischer, Klaus. 2013. *Satzstrukturen im Deutschen und Englischen*. Berlin: Akademie Verlag.

Flick, Johanna. 2016. Der *am*-Progressiv und parallele *am* V-en *sein*-Konstruktionen: Kompositionalität, Variabilität und Netzwerkbildung. *Beiträge zur Geschichte der deutschen Sprache und Literatur (PBB)* 138 (2). 163–196.

Fox, Anthony. 1990. *The structure of German*. Oxford: Clarendon Press.

Freywald, Ulrike. 2010. Obwohl vielleicht war es ganz anders. Vorüberlegungen zum Alter der Verbzweitstellung nach subordinierenden Konjunktionen. In Arne Ziegler (ed.), *Historische Textgrammatik und Historische Syntax des Deutschen*, 55–84. Berlin: de Gruyter.

Fried, Mirjam & Jan-Ola Östman. 2004. Construction Grammar: a thumbnail sketch. In Mirjam Fried and Jan-Ola Östman (eds.), *Construction Grammar in a cross-language perspective*, 11–86. Amsterdam: John Benjamins.

Froschauer, Regine. 2014. Die Grammatikalisierung der beiden Vollverben „habên" und „eigan" zu Auxiliaren bei der Umschreibung von Vergangenheitstempora im Althochdeutschen. In Alexander Lasch and Alexander Ziem (eds.), *Grammatik als Netzwerk von Konstruktionen? Sprachwissen im Fokus der Konstruktionsgrammatik,* 195–207. Berlin, Boston: de Gruyter.

Gonzálvez-García, Francisco. 2008. Cognitive Construction Grammar works. An interview with Adele E. Goldberg. *Annual Review of Cognitive Linguistics* 6. 345–360.

Ginzburg, Jonathan & Ivan Sag. 2000. *Interrogative Investigations: The Form, Meaning and Use of English Interrogatives*. Stanford: CSLI.

Goldberg, Adele. 1995. *Constructions: A Construction Grammar approach to argument structure*. Chicago: University of Chicago Press.

Goldberg, Adele. 2006. *Constructions at Work*. Oxford: Oxford University Press.

Goschler, Juliana. 2011. Geräuschverben mit direktionaler Erweiterung: Syntax, Semantik und Gebrauch. In Alexander Lasch, Alexander Ziem (eds.), *Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze*, 27–41. Tübingen: Stauffenburg.

Goschler, Juliana & Anatol Stefanowitsch. 2010. Pfad und Bewegung im gesprochenen Deutsch: Ein kollostruktionaler Ansatz. In Thomas Stolz, Jürgen Trabant, and Esther Ruigendijk (eds.), *Linguistik im Nordwesten (Diversitas Linguarum), 103–115*. Bochum: Brockmeyer.

Grewendorf, Günther. 1989. *Ergativity in German*. Dordrecht: Foris.

Gries, Stefan Th. 2008. Phraseology and Linguistic Theory: A Brief Survey. In Sylviane Granger and Fanny Meunier (eds.), *Phraseology: An Interdisciplinary Perspective*, 3–25. Amsterdam, Philadelphia: John Benjamins.

Günthner, Susanne. 2005. *Dichte Konstruktionen*. Potsdam: Universität Potsdam (InList 43).

Günthner, Susanne. 2006a. "Was ihn trieb, war vor allem Wanderlust" (Hesse: *Narziss und Goldmund*). Pseudocleft-Konstruktionen im Deutschen. In Susanne Günther and Wolfgang Imo (eds.), *Konstruktionen in der Interaktion (Linguistik – Impulse & Tendenzen 20)*, 59–90. Berlin: de Gruyter.

Günthner, Susanne. 2006b. Von Konstruktionen zu kommunikativen Gattungen: Die Relevanz sedimentierter Muster für die Ausführung kommunikativer Aufgaben. In *Deutsche Sprache* 34(1–2). 173–190.

Günthner, Susanne. 2008a. "die Sache ist …": eine Projektor-Konstruktion im gesprochenen Deutsch. *Zeitschrift für Sprachwissenschaft* 27(1). 39–71.

Günthner, Susanne. 2008b. Die *die Sache/das Ding ist*-Konstruktion im gesprochenen Deutsch – eine interaktionale Perspektive auf Konstruktionen im Gebrauch. In Anatol Stefanowitsch and Kerstin Fischer (eds.), *Konstruktionsgrammatik II. Von der Konstruktion zur Grammatik*, 157–177. Tübingen: Stauffenburg.

Günthner, Susanne. 2008c. Projektorkonstruktionen im Gespräch: Pseudoclefts, 'die Sache ist'-Konstruktionen und Extrapositionen mit 'es'. *Gesprächsforschung* 9. 86–114. http://www.gespraechsforschung-ozs.de/heft2008/ga-guenthner.pdf (accessed 10.10.2014)

Günthner, Susanne. 2009. Adjektiv + *dass*-Satzkonstruktionen als kommunikative Ressourcen der Positionierung. In Susanne Günthner and Jörg Bücker (eds.). *Grammatik im Gespräch. Konstruktionen der Selbst- und* Fremdpositionierung, 149–184. Berlin: de Gruyter.

Günthner, Susanne. 2010. Konstruktionen in der kommunikativen Praxis – zur Notwendigkeit einer interaktionalen Anreicherung konstruktionsgrammatischer Ansätze. In *Zeitschrift für Germanistische Linguistik* 37 (3). 402–426.

Günthner, Susanne. 2011. Between emergence and sedimentation. Projecting constructions in German interactions. In Peter Auer and Stefan Pfänder (eds.), *Constructions: Emerging and Emergent (linguae & litterae 6),* 156–185. Berlin, Boston: de Gruyter.

Günthner, Susanne & Jörg Bücker. 2009 (eds.). *Grammatik im Gespräch: Konstruktionen der Selbst- und Fremdpositionierung.* Berlin: de Gruyter.

Günthner, Susanne & Paul J. Hopper. 2010. Zeitlichkeit & sprachliche Strukturen: Pseudoclefts im Englischen und Deutschen. *Gesprächsforschung* 10. 1–28. http://www.gespraechs-forschung-ozs.de/heft2010/ga-guenthner.pdf (accessed 10.10.2014)

Günthner, Susanne & Wolfgang Imo. 2006. Konstruktionen in der Interaktion. In Günthner, Susanne and Wolfgang Imo (eds.), *Konstruktionen in der Interaktion (Linguistik – Impulse & Tendenzen 20),* 1–22. Berlin: de Gruyter.

Haider, Hubert. 1986. Fehlende Argumente: Vom Passiv zu kohärenten Infinitiven. *Linguistische Berichte* 101. 3–33.

Haider, Hubert. 1990. Topicalization and other puzzles of German syntax. In Günther Grewendorf and Wolfgang Sternefeld (eds.), *Scrambling and Barriers*, 93–112.

Haider, Hubert. 1993. *Deutsche Syntax – Generativ.* Tübingen: Narr.

Haspelmath, Martin. 2004. Explaining the Ditransitive Person-Role Constraint. A Usage-Based Account. *Constructions* 2. http://elanguage.net/journals/constructions/article/view/3073 (accessed 10.10.2014)

Hawkins, John. 1986. *A comparative typology of English and German: Unifying the contrasts.* London: Routledge.

Hein, Katrin. 2015. *Phrasenkomposita im Deutschen. Empirische Untersuchung und konstruktionsgrammatische Modellierung*. Tübingen: Narr.

Helbig, Gerhard & Wolfgang Schenkel. 1971. *Wörterbuch zur Valenz und Distribution deutscher Verben.* Tübingen: Niemeyer.

Helbig, Gerhard & Schenkel, Wolfgang. 1973. Wörterbuch *zur Valenz und Distribution deutscher Verben*. Leipzig: VEB Bibliographisches Institut.

Hens, Gregor. 1996. (jm) (einen Brief schreiben). Zur Valenz der Konstruktionsgrammatik. *Linguistische Berichte* 164. 334–356.

Hentschel, Elke & Harald Weydt. 2003. *Handbuch der deutschen Grammatik* (de Gruyter Studienbuch). Berlin/New York: de Gruyter.

Heringer, Hans-Jürgen. 2009. *Morphologie*. Paderborn: Fink Verlag.

Herbst, Thomas. 2014. The valency approach to argument structure constructions. In Thomas Herbst, Hans-Jörg Schmidt & Susan Faulhaber (eds.), *Constructions – Collocations – Patterns*, 167–216. Berlin: De Gruyter.

Hilpert, Martin. 2008. Germanic future constructions. Amsterdam/Philadelphia: John Benjamins.

Hilpert, Martin. 2009. The German *mit*-predicative construction. *Constructions and Frames* 1(1). 29–55.

Hilpert, Martin. 2011. Was ist Konstruktionswandel? In Alexander Lasch & Alexander Ziem (eds.), *Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze*, 59–75 Tübingen: Stauffenburg.

Hilpert, Martin. 2013. *Constructional Change in English: Developments in Allomorphy, Word Formation, and Syntax*. Cambridge: Cambridge University Press.

Höhle, Tilman. 1986. Der Begriff "Mittelfeld", Anmerkungen über die Theorie der topologischen Felder. In Walter Weiss, Herbert E. Wiegand, and Marga Reis (eds.), *Akten des VII. Kongresses der Internationalen Vereinigung für germanische Sprach- und Literaturwissenschaften*. Göttingen 1985. 3rd Vol., 329–340. Tübingen: Max Niemeyer Verlag.

Hoffmann, Thomas & Graeme Trousdale (eds.). 2013. *The Oxford Handbook of Construction Grammar*. Oxford: Oxford University Press.

Holler, Anke. 2005. *Weiterführende Relativsätze. Empirische und theoretische Aspekte*. Berlin: Akademie Verlag.

Hollmann, Willem. 2013. Constructions in cognitive sociolinguistics. In T. Hoffmann and G. Trousdale (eds.), *The Oxford Handbook of Construction Grammar*, 491–510. Oxford: Oxford University Press.

Imo, Wolfgang. 2007a. *Construction Grammar und Gesprochene-Sprache-Forschung*: *Konstruktionen mit zehn matrixsatzfähigen Verben im gesprochenen Deutsch*. Reihe Germanistische Linguistik 275. Tübingen: Niemeyer.

Imo, Wolfgang. 2007b. Der Zwang zur Kategorienbildung: Probleme der Anwendung der 'Construction Grammar' bei der Analyse gesprochener Sprache. *Gesprächsforschung* 8: 22–45. http://www.gespraechsforschung-ozs.de/heft2007/ga-imo.pdf (accessed 19.10.2014)

Imo, Wolfgang. 2008. Individuelle Konstrukte oder Vorboten einer neuen Konstruktion? Stellungsvarianten der Modalpartikel 'halt' im Vor- und Nachfeld. In Anatol Stefanowitsch & Kerstin Fischer (eds.), *Konstruktionsgrammatik II: Von der Konstruktion zur Grammatik*, 135–156. Tübingen: Stauffenburg.

Imo, Wolfgang. 2009. Konstruktion oder Funktion? Erkenntnisprozessmarker im Deutschen. In Susanne Günthner & Jörg Bücker (eds.), *Grammatik im Gespräch. Konstruktionen der Selbst- und Fremdpositionierung,* 57–86. Berlin: de Gruyter.

Imo, Wolfgang. 2010a. Das Adverb "jetzt" zwischen Zeit- und Gesprächsdeixis. *Zeitschrift für germanistische Linguistik* 38(1). 25–58.

Imo, Wolfgang. 2010b. 'Mein Problem ist/mein Thema ist' – how syntactic patterns and genre interact. In Anja Wanner & Heidrun Dorgeloh (eds.), *Syntactic variation and genre,* 141–166. Berlin: de Gruyter.

Imo, Wolfgang. 2011a. Die Grenzen von Konstruktionen: Versuch einer granularen Neubestimmung des Konstruktionsbegriffs der *Construction Grammar*. In Stefan Engelberg, Anke Holler & Kristel Proost. (eds.), *Sprachliches Wissen zwischen Lexikon und Grammatik*, 113–148. Berlin, New York: de Gruyter.

Imo, Wolfgang. 2011b. Ad-hoc-Produktion oder Konstruktion? Verfestigungstendenzen bei Inkrement-Strukturen im gesprochenen Deutsch. In Alexander Lasch & Alexander Ziem (eds.), *Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze*, 239–254. Tübingen: Stauffenburg.

Imo, Wolfgang. 2011c. Online changes in syntactic gestalts in spoken German. Or: do garden path sentences exist in everyday conversation? In Peter Auer & Stefan Pfänder (eds.), *Constructions: Emerging and Emergent (linguae & litterae 6)*, 127–155. Berlin, Boston: de Gruyter.

Imo, Wolfgang. 2012. Grammatik als gerinnender Diskurs: Äußerungsfinale Gradpartikeln zwischen sequenziellem Muster und syntaktischer Struktur. *Germanistische Mitteilungen* 38. 3–24.

Imo, Wolfgang. 2016. *Grammatik: Eine Einführung*. Stuttgart: Metzler.

Imo, Wolfgang. This volume. Valence patterns, constructions and interaction: Constructs with the German verb *erinnern* (remember/remind).

Jacobs, Joachim. 1986. The syntax of focus and adverbials in German. In W. Abraham and S. De Meij (eds.), *Topic, Focus, and Configurationality. Papers from the 6th Groningen Grammar Talks, Groningen 1984,* 103–127. Amsterdam/Philadelphia: John Benjamins.

Jacobs, Joachim. 2008. Wozu Konstruktionen? *Linguistische Berichte* 213. 3–44.

Jacobs, Joachim. 2009. Valenzbindung oder Konstruktionsbindung? Eine Grundfrage der Grammatiktheorie. *Zeitschrift für germanistische Linguistik* 37(3). 490–513.

Järventausta, Marja. 2006. Valenzielle und konstruktionelle Information in einem lernerorientierten Verbwörterbuch. *Neuphilologische Mitteilungen* 107(1): 45–85.

Kathol, Andreas. 2000. *Linear syntax*. Oxford: Oxford University Press.

Kay, Paul. 1984. The kinda/sorta construction. *Proceedings of the Tenth Annual Meeting of the Berkeley Linguistics Society*. 157–171.

Kay, Paul, & Charles J. Fillmore. 1999. Grammatical constructions and linguistic generalizations: The 'What's X doing Y?' Construction. *Language* 75. 1–33.

Kirkwood, H.W. 1969. Aspects of word order and its communicative function in English and German. *Journal of Linguistics* 5. 85–107.

Knobloch, Clemens. 2005. *Oberfläche: metapragmatisch – zum Erwerb modalisierender Sprachzeichen*. Siegen: Siegener Inst. für Sprachen im Beruf.

Knobloch, Clemens. 2009. Einladung und Einleitung. ZGL-Workshop „Konstruktionsgrammatik" am 29./30. Januar 2009. *Zeitschrift für germanistische Linguistik* 37(3). 385–401.

Knop, Sabine de. 2014. Deutsche Konstruktionen mit komplexen "bis"-Präpositionalgruppen. In Alexander Lasch & Alexander Ziem (eds.), *Grammatik als Netzwerk von Konstruktionen? Sprachwissen im Fokus der Konstruktionsgrammatik*, 157–175. Berlin, Boston: de Gruyter.

Lakoff, George. 1987. *Women, Fire, and Dangerous Things*. Chicago: University Press of Chicago.

Lambrecht, Knud. 1990. 'What me worry?' Mad magazine sentences revisited. *Berkeley Linguistics Society* 16. 215–228.

Langacker, Ronald W. 1987. *Foundations of Cognitive Grammar I: Theoretical Prerequisites*. Stanford: Stanford University Press.

Langacker, Ronald W. 1999. *Grammar and Conceptualization*. Berlin, New York: Mouton de Gruyter.

Langacker, Ronald W. 2008. *Cognitive Grammar. A Basic Introduction*. Oxford: Oxford University Press.

Lasch, Alexander. 2014. *Das Fenster wirkt geschlossen* – Überlegungen zu nonagentiven Konstruktionen des Deutschen aus konstruktionsgrammatischer Perspektive. In Alexander Lasch & Alexander Ziem (eds.), *Grammatik als Netzwerk von Konstruktionen? Sprachliches Wissen im Fokus der Konstruktionsgrammatik*, 65–97. Berlin, New York: de Gruyter.

Lasch, Alexander. 2015. *Gott ist ein Freund des Lebens* . Die Konstruktion [[NP]+[[DETgen] + *Lebens*]] als gestalthafte Routine im palliativmedizinischen Diskurs. In Alexander Ziem & Alexander Lasch (eds.), *Konstruktionsgrammatik IV: Konstruktionen als soziale Konventionen und kognitive Routinen*, 134–154. Tübingen: Stauffenburg.

Lasch, Alexander. 2017. *Nonagentive Konstruktionen des Deutschen*. Berlin/Boston: De Gruyter.

Lasch, Alexander & Alexander Ziem (eds.). 2011. *Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze*. Tübingen: Stauffenburg.

Lasch, Alexander & Alexander Ziem (eds.). 2014. *Grammatik als Netzwerk von Konstruktionen? Sprachliches Wissen im Fokus der Konstruktionsgrammatik*. Berlin, New York: de Gruyter.

Lasnik, H. and R. Freidin. 1981. Core grammar, Case theory, and markedness. In A. Belletti, L. Brandi, and L. Rizzi (eds.), *Theory of Markedness in Generative Grammar*, 407–421. Pisa: Scuola Normale Superiore.

Lehrer, Adrienne. 1970. Verbs and Deletable Objects. *Lingua* 25. 227–253.

Lenerz, Jürgen. 1977. *Zur Abfolge nominaler Satzglieder im Deutschen*. Tübingen: Stauffenburg.

Lingnau, Beate & Birte Schaller. 2009. Bedeutung und Gebrauch in der Konstruktionsgrammatik. Wie kompositionell sind modale Infinitive im Deutschen? *Zeitschrift für germanistische Linguistik* 37(3). 565–593.

Meurers, Walt Detmar. 2000. *Lexical generalizations in the syntax of German non-finite constructions*. Arbeitspapiere des SFB 340, No. 145. Eberhard-Karls-Universität Tübingen.

Michaelis, Laura. 2012. Making the case for Construction Grammar. In: H.C. Boas and I. Sag (eds.), *Sign-based Construction Grammar*, 30–68. Stanford: CSLI Publications.

Michaelis, Laura A. 2013. Sign-Based Construction Grammar. In Thomas Hoffman & Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar*, 133–152. Oxford: Oxford University Press.

Michaelis, Laura & Knud Lambrecht. 1998. Sentence accent in information questions. In J.P. Koenig (ed.), *Discourse and Cognition: Bridging the Gap*, 387–402. Stanford: CSLI Publications.

Michaelis, Laura & Josef Ruppenhofer. 2001. *Beyond alternations: A constructional model of the German applicative pattern*. Stanford: CSLI Publications.

Michel, Sascha. 2014. Die Verschmelzung von Konstruktionen in der Wortbildung – Präfixkonversion und Zusammenbildung. In Alexander Lasch & Alexander Ziem (eds.), *Grammatik als Netzwerk von Konstruktionen? Sprachwissen im Fokus der Konstruktionsgrammatik*, 139–157. Berlin, Boston: de Gruyter.

Müller, Gereon. 2011. Regeln oder Konstruktionen? Von verblosen Direktiven zur sequentiellen Nominalreduplikation. In S. Engelberg, A. Holler, & K. Proost (eds.), Sprachliches Wissen zwischen Lexikon und Grammatik, 211–249. Berlin/Boston: De Gruyter.

Müller, Stefan. 1999. *Syntactic Properties of German Particle Verbs*. In Abstracts of HPSG 99, 83–88, Edinburgh.

Müller, Stefan. 2002. *Complex Predicates: Verbal Complexes, Resultative Constructions, and Particle Verbs in German*. Stanford: CSLI Publications.

Müller, Stefan. 2005. German: A grammatical sketch. In: A. Alexiadou & T. Kiss (eds.), *Syntax – ein internationales Handbuch zeitgenössischer Forschung*, 2nd Edition. Berlin: de Gruyter.

Müller, Stefan. 2007. Resultativkonstruktionen, Partikelverben und syntaktische vs. lexikonbasierte Konstruktionen. In Anatol Stefanowitsch & Kerstin Fischer (eds.), *Konstruktionsgrammatik*: *Von der Anwendung zur Theorie*, 177–202. Tübingen: Stauffenburg.

Nikula, Henrik. 2007. Valenz, Satzmodell und Konstruktion. In Nina Niemelä & Esa Lehtinen (eds.), *Fachsprachen und Übersetzungstheorie*, 200–211. Vaasa: University of Vaasa.

Östman, Jan-Ola. 2005. Construction Discourse: A Prolegomenon. In Jan-Ola Östman & Mirjam Fried (eds.), *Construction Grammars: Cognitive Grounding and Theoretical Extensions*, 121–144. Amsterdam/Philadelphia: Benjamins.

Östman, Jan-Ola & Graeme Trousdale. 2013. Dialects, discourse, and Construction Grammar. In Thomas Hoffmann & Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar*. 476–490. Oxford: Oxford University Press.

Osswald, Rainer. 2014. Konstruktion versus Projektion – Argumentrealisierung bei Kognitionsverben des Deutschen und Englischen. In Alexander Lasch & Alexander Ziem (eds.), *Grammatik als Netzwerk von Konstruktionen? Sprachwissen im Fokus der Konstruktionsgrammatik,* 313–329. Berlin, Boston: de Gruyter.

Pawley, Andrew & Frances Syder. 1983. Two puzzles for linguistic theory: Nativelike selection and nativelike frequency. In Jack C. Richards & Richard W. Schmidt (eds.), *Language and Communication*, 191–226. London: Longman.

Petrova, Svetlana. 2008. *Zur Interaktion von Tempus und Modus. Studien zur Entwicklungsgeschichte des Konjunktivs im Deutschen*. Heidelberg: Winter.

Pollard, Carl & Ivan A. Sag. 1994. *Head-Driven Phrase Structure Grammar*. (Studies in Contemporary Linguistics). Chicago: University of Chicago Press.

Primus, Beatrice. 2011. Das unpersönliche Passiv: ein Fall für die Konstruktionsgrammatik? In Stefan Engelberg, Anke Holler & Kristel Proost (eds.), *Sprachliches Wissen zwischen Lexikon und Grammatik*, 285–313. Berlin, New York: de Gruyter.

Reber, Elisabeth & Elizabeth Couper-Kuhlen. 2010. Interjektionen zwischen Lexikon und Vokalität. Lexem oder Lautobjekt? In Arnulf Deppermann & Angelika Linke (eds.). *Sprache intermedial. Stimme und Schrift, Bild und Ton,* 69–96. Berlin: de Gruyter.

Reis, Marga. 1980. On justifying topological frames: 'positional field' and the order of non-verbal constituents in Berman. *Documentation et Recherche en Linguistique Allemande Contemporaire* 22/23. 59–85.

Reis, Marga. 1985. Wer glaubst Du hat recht? On the so-called extractions from verb-second clauses and verb-first parenthetical constructions in German. *Sprache und Pragmatik* 36. 27–83.

Reis, Marga. 1987. Die Stellung der Verbargumente im Deutschen. Stilübungen zum Grammatik-Pragmatik-Verhältnis. In: I. Rosengren (ed.), *Sprache und Pragmatik*, 139–177. Stockholm: Almqvist & Wiksell.

Rezat, Sara. 2009. Konzessive Konstruktionen: ein Verfahren zur Rekonstruktion von Konzessionen. *Zeitschrift für Germanistische Linguistik* 37(3). 469–489.

Richter, Frank & Manfred Sailer. 2014. Idiome mit phraseologisierten Teilsätzen: Eine Fallstudie zur Formalisierung von Konstruktionen im Rahmen der HPSG. In Alexander Lasch & Alexander Ziem (eds.), *Grammatik als Netzwerk von Konstruktionen? Sprachwissen im Fokus der Konstruktionsgrammatik*, 291–313. Berlin, Boston: de Gruyter.

Rimsdijk, Henk van. 1985. Zum Rattenfängereffekt bei Infinitiven in deutschen Relativsätzen. In Werner Abraham (ed.), *Erklärende Syntax des Deutschen*, 75–99. Tübingen: Narr.

Rödel, Michael. 2014. Mehr als die Summe der einzelnen Teile: Die Entstehung von Konstruktionen am Beispiel von Perfekt und am-Progressiv. In Alexander Lasch & Alexander Ziem (eds.), *Grammatik als Netzwerk von Konstruktionen? Sprachliches Wissen im Fokus der Konstruktionsgrammatik*, 207–225. Berlin, New York: de Gruyter.

Rostila, Jouni. 2009. Lectio praecursoria: Konstruktionsansätze zur Argumentmarkierung im Deutschen. *Neuphilologische Mitteilungen* CX 1. 105–114.

Rostila, Jouni. 2011. Phraseologie und Konstruktionsgrammatik: Konstruktionsansätze zu präpositionalen Funktionsverbgefügen. In Michal Prinz & Ulrike Richter-Vapaatalo (eds.), *Idiome, Konstruktionen, „verblümte Rede": Beiträge zur Geschichte der Phraseologieforschung*, 263–282. Stuttgart: S. Hirzel Verlag.

Rostila, Jouni. 2014. Inventarisierung als Grammatikalisierung: das Beispiel Präpositionalobjekte. In Alexander Lasch & Alexander Ziem (eds.), *Grammatik als Netzwerk von Konstruktionen? Sprachwissen im Fokus der Konstruktionsgrammatik,* 97–117. Berlin, Boston: de Gruyter.

Ruppenhofer, Josef. 2004. *The interaction of valence and information structure*. University of California, Berkeley dissertation.

Ruppenhofer, Josef & Laura A. Michaelis. 2010. A constructional account of genre-based argument omissions. *Constructions and Frames* 2(2). 158–184.

Sag, Ivan. 2010. English Filler-Gap Constructions. *Language* 86(3). 486–545.

Sag, Ivan. 2012. Sign-based Construction Grammar: An informal synopsis. In Hans C. Boas & Ivan Sag (eds.), *Sign-based Construction Grammar*, 69–202. Stanford: CSLI Publications.

Sag, Ivan, Boas, Hans C. & Paul Kay. 2012. Introducing Sign-based Construction Grammar. In Hans C. Boas & Ivan Sag (eds.), *Sign-based Construction Grammar*, 1–29. Stanford: CSLI Publications.

Schmidt, Thomas. 2009. The Kicktionary. A multilingual resource of football language. In Hans C. Boas (ed.), *Multilingual FrameNets in Computational Lexicography. Methods and Applications*, 101–134. Berlin/New York: Mouton de Gruyter.

Selting, Margret. 2004. Konstruktionen am Satzrand als interaktive Ressource in natürlichen Gesprächen. In Brigitte Haftka (ed.), *Was determiniert Wortstellungsvariation?,* 299–318. Opladen: Westdeutscher Verlag.

Selting, Margret. 2005. Syntax and Prosody as Methods for the Construction and Identification of Turn-Constructional Units in Conversation. In Auli Hakulinen & Margret Selting (eds.), *Syntax and Lexis in Conversation. Studies on the Use of Linguistic Resources in Talk-in-Interaction*. Amsterdam, 17–44. Philadelphia: John Benjamins.

Smirnova, Elena. 2011. Zur diachronen Entwicklung deutscher Komplementsatz-Konstruktionen. In Alexander Lasch & Alexander Ziem (eds.), *Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze*, 77–94. Tübingen: Stauffenburg.

Sommerfeldt, Karl-Ernst & Günther Starke. 1992. *Einführung in die Grammatik der deutschen Gegenwartssprache*. Tübingen: Niemeyer.

Staffeldt, Sven. 2010. Zur Rolle des Körpers in der phraseologisch gebundenen Sprache. Fingerübungen zur semantischen Teilbarkeit. In Jarmo Korhonen (ed.), *EUROPHRAS 2008. Beiträge zur internationalen Phraseologiekonferenz vom 13.–16.8.2008 in Helsinki*. http://goo.gl/a9NJg (accessed 10.10.2014).

Staffeldt, Sven. 2011a. "wie Sie wissen": kleines Plädoyer für mehr Pragmatik und mehr Konstruktionen in Grammatiken. *Sprachwissenschaft* 36. 85–112.

Staffeldt, Sven. 2011b. In der Hand von Konstruktionen. Eine Fallstudie zu bestimmten Phraseologismen mit *in … Hand*. In Alexander Lasch & Alexander Ziem (eds.), *Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze*, 131–147. Tübingen: Stauffenburg.

Staffeldt, Sven & Alexander Ziem. 2008. Körper-Sprache: Zur Motiviertheit von Phraseologismen mit Körperteilbezeichnungen. *Sprachwissenschaft* 33(4). 455–499.

Stathi, Katherina. 2011. Idiome in der Konstruktionsgrammatik: im Spannungsfeld zwischen Lexikon und Grammatik. In Alexander Lasch & Alexander Ziem (eds.), *Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze*, 149–163. Tübingen: Stauffenburg.

Steels, Luc (ed.). 2011. *Design patterns in Fluid Construction Grammar*. Amsterdam, Philadelphia: John Benjamins.

Stefanowitsch, Anatol. 2009. Bedeutung und Gebrauch in der Konstruktionsgrammatik. Wie kompositionell sind modale Infinitive im Deutschen? *Zeitschrift für Germanistische Linguistik* 37(3). 565–592.

Stefanowitsch, Anatol. 2011a. Keine Grammatik ohne Konstruktionen: Ein logisch-ökonomisches Argument für die Konstruktionsgrammatik. In Stefan Engelberg, Anke Holler, & Kristel Proost (eds.), *Sprachliches Wissen zwischen Lexikon und Grammatik*. Berlin/Boston: de Gruyter.

Stefanowitsch, Anatol. 2011b. Konstruktionsgrammatik und Grammatiktheorie. Alexander Lasch & Alexander Ziem (eds.), *Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze*, 11–25. Tübingen: Stauffenburg.

Stefanowitsch, Anatol & Kerstin Fischer (eds.). 2008. *Konstruktionsgrammatik II: Von der Konstruktion zur Grammatik*, Stauffenburg Linguistik. Tübingen: Stauffenburg.

Stefanowitsch, Anatol & Stefan Gries. 2003. Collostructions: The interaction of words and constructions. *International Journal of Corpus Linguistics* 8(2). 209–243.

Stumper, Barbara. 2011. Kookurrenzen in der Kind-gerichteten Sprache: verlässlicher Hinweis auf die Wortarten? In Alexander Lasch & Alexander Ziem (eds.), *Konstruktionsgrammatik III: Aktuelle Fragen und Lösungsansätze*, 193–203.Tübingen: Stauffenburg.

Tesnière, Lucien 1959. *Éléments de syntaxe structurale.* Paris: Klincksieck.

Tomasello, Michael. 2003. *Constructing a Language.* Cambridge, Mass.: Harvard University Press.

Tomasello, Michael. 2006a. Acquiring Linguistic Constructions. In William Damon, Richard M. Lerner, Deanna Kuhn & Robert S. Siegler (eds.), *Handbook of Child Psychology*, *Volume 2: Cognition, Perception, and Language*, 255–298. New York: Wiley.

Tomasello, Michael. 2006b. Construction Grammar for Kids. *Constructions* 1(11). 1–23.

Tomasello, Michael. 2006c. *Die kulturelle Entwicklung des menschlichen Denkens: Zur Evolution der Kognition*. Stuttgart: Suhrkamp.

Tomasello, Michael. 2008. *Origins of Human Communication*. Cambridge, MA: MIT Press.

Traugott, Elizabeth Closs & Trousdale, Graeme. 2013. *Constructionalization and Constructional Change*. Oxford: Oxford University Press.

Uhmann, Susanne. 2006. Grammatik und Interaktion: Form follows function? – Function follows form? In Arnulf Deppermann, Reinhard Fiehler & Thomas Spranz-Fogasy (eds.), *Grammatik und Interaktion – Untersuchungen zum Zusammenhang von grammatischen Strukturen und Gesprächsprozessen,* 179–203. Radolfzell: Verlag für Gesprächsforschung.

Uszkoreit, Hans. 1987. *Word order and constituent structure in German*. Stanford: CSLI Publications.

Van Valin, Robert & D.P. Wilkins. 1996. The case for 'Effector': Case Roles, agents, and agency revisited. In M. Shibatani & S. Thompson (eds.), *Grammatical Constructions*, 289–322. Oxford: Oxford University Press.

Webelhuth, Gert. 1992. *Principles and Parameters of Syntactic Saturation*. Oxford: Oxford University Press.

Webelhuth, Gert. 2011. Paradigmenwechsel rückwärts: Die Renaissance der grammatischen Konstruktion. In Stefan Engelberg, Anke Holler & Kristel Proost (eds.), *Sprachliches Wissen zwischen Lexikon und Grammatik*, 149–179. Berlin, New York: de Gruyter.

Welke, Klaus. 2009a. Valenztheorie und Konstruktionsgrammatik. *Zeitschrift für Germanistische Linguistik* 37(1). 81–124.

Welke, Klaus. 2009b. Konstruktionsvererbung, Valenzbewegung und die Reichweite von Konstruktionen. *Zeitschrift für Germanistische Linguistik* 37(3). 514–543.

Welke, Klaus. 2011. *Valenzgrammatik des Deutschen. Eine Einführung*. Berlin, New York: de Gruyter.

Willems, Klaas. 2011. The semantics of variable case marking (Accusative/Dative) after two-way prepositions in German locative constructions. Towards a constructionist approach. *Indogermanische Forschungen* 116. 324–366.

Willems, Klaas. 2012. Intuition, introspection and observation in linguistic inquiry. *Language Sciences* 34. 665–681.

Wöllstein, Angelika. 2010. *Topologisches Satzmodell*. Heidelberg: Winter.

Wöllstein-Leisten, Angelika, Heilmann, Axel, Stepan, Peter & Sten Vikner. 1997. *Deutsche Satzstruktur*. Tübingen: Stauffenburg Verlag.

Yoo, Duck-Geun. 2008. *Syntax und Kontext: Satzverarbeitung in kopffinalen Sprachen*. Bielefeld University dissertation.

Zeldes, Amir. 2012. *Productivity in Argument Selection. From Morphology to Syntax*. (Trends in Linguistics: Studies and Monographs 260.) Berlin, New York: de Gruyter.

Zeschel, Arne. 2008. Funktionsverbgefüge als Idiomverbände. In Anatol Stefanowitsch & Kerstin Fischer (eds.), *Konstruktionsgrammatik II: Von der Konstruktion zur Grammatik,* 263–278. Tübingen: Stauffenburg.

Zeschel, Arne. 2011. Den Wald vor lauter Bäumen sehen – und andersherum: zum Verhältnis von 'Mustern' und 'Regeln'. In Alexander Lasch & Alexander Ziem (eds.), *Konstruktions-grammatik III: Aktuelle Fragen und Lösungsansätze*, 43–57. Tübingen: Stauffenburg.

Ziem, Alexander. 2014a. *Frames of Understanding in Text and Discourse: Theoretical Foundations and Descriptive Applications* (= Human Cognitive Processing 48). Amsterdam, Philadelphia: Benjamins.

Ziem, Alexander. 2014b. Konstruktionsgrammatische Konzepte eines Konstruktikons. In Alexander Lasch & Alexander Ziem (eds.), *Grammatik als Netzwerk von Konstruktionen. Sprachliches Wissen im Fokus der Konstruktionsgrammatik*, 15–34. Berlin/New York: de Gruyter.

Ziem, Alexander & Alexander Lasch (eds.). 2015. *Konstruktionsgrammatik IV. Konstruktionen als soziale Konventionen und kognitive Routinen*. Tübingen: Stauffenburg.

Ziem, Alexander & Sven Staffeldt. 2011. Compositional and embodied meanings of somatisms: a corpus-based approach to phraseologisms. In Doris Schönefeld (ed.), *Converging evidence: Methodological and theoretical issues for linguistic research*, 195–219. Amsterdam, Philadelphia: John Benjamins.

Ziem, Alexander & Alexander Lasch. 2013. *Konstruktionsgrammatik. Konzepte und Grundlagen gebrauchsbasierter Ansätz*e (Germanistische Arbeitshefte 44). Berlin, Boston: de Gruyter.

Zifonun, Gisela, Ludger Hoffmann & Bruno Strecker. 1997. *Grammatik der deutschen Sprache*, Bd. 3. Berlin: de Gruyter.

Part I: **Grammatical constructions and valency**

Stefan Engelberg

The argument structure of psych-verbs: A quantitative corpus study on cognitive entrenchment

1 Introduction

1.1 Psych-verbs and argument structure alternations

Psych-verbs exhibit a fairly large variation in argument structure patterns, as the following examples from German show. Many of these verbs allow alternations between stimuli and experiencers in subject position (1a vs. 1b), between nominal and clausal realizations of arguments (1a vs. 1c, 1b vs. 1d), between inanimate and agent-like animate stimuli (1a vs. 1e), between simple stimuli and "split-stimuli" that are spread out over two constituents, a subject NP and a PP (1a vs. 1f), and between explicit and implicit argument realization (1b vs. 1g).

(1) a. Rebeccas bösartige Bemerkung   ärgerte   Jamaal.
       Rebecca's malicious remark.NOM   anger.3SG.PST   Jamaal.ACC
       'Rebecca's malicious remark angered Jamaal.'
     b. Jamaal   ärgerte   sich   über Rebeccas bösartige Bemerkung.
       Jamaal.NOM   anger.3SG.PST RFL   over Rebecca's malicious remark.ACC
       'Jamaal was/became angry about Rebecca's malicious remark.'
     c. Dass Rebecca so eine bösartige Bemerkung gemacht hatte,
       that Rebecca had made such a malicious remark
       ärgerte   Jamaal.
       anger.3SG.PST   Jamaal.ACC
       'That Rebecca had made such a malicious remark angered Jamaal.'
     d. Jamaal   ärgerte   sich (dar-über),
       Jamaal.NOM   anger.3SG.PST   RFL there-over
       dass Rebecca so eine bösartige Bemerkung gemacht hatte.

that Rebecca had made such a malicious remark

'Jamaal was/became angry that Rebecca had made such a malicious remark.'

e. Rebecca   ärgerte   Jamaal.

Rebecca.NOM anger.3SG.PST Jamaal.ACC

'Rebecca angered Jamaal.'

f. Rebecca   ärgerte   Jamaal   mit ihrer bösartigen Bemerkung.

Rebecca.NOM anger.3SG.PST Jamaal.ACC with her malicious remark

'Rebecca angered Jamaal with her malicious remark.'

g. Jamaal   ärgerte   sich.

Jamaal.NOM anger.3SG.PST RFL

'Jamaal was/became angry.'

Traditionally, psych-verbs have been investigated because the alternation between stimulus and experiencer subjects poses some interesting problems for linking theories (cf., e.g., Belletti and Rizzi 1988; Grimshaw 1990; Dowty 1991). Other argument structure alternations with psych-verbs – of which the examples in (1) only represent a small part – have attracted much less attention. In particular, there has been little discussion of why a particular argument structure is chosen and why the alternations differ so strongly with respect to their frequency of occurrence.

The latter question has of course not been addressed because quantitative investigations in general led a marginal existence in the linguistics of the 1980s and 1990s with its strong tendency to separate competence and performance, system and use. This is currently changing, and the present article adheres to a conception of linguistics that assumes a strong connection between linguistic knowledge and language use.

1.2 Frequency in usage-based linguistics

While to a certain degree, frequency data has always been discussed in linguistics with respect to language acquisition, language processing and language change, the assumption that frequency of use is an important factor in the cognitive representation of synchronic grammatical structure is a more recent development. Within usage-based linguistics, language is seen "as fluid and dynamic, changing through the interaction of social usage events with the cognitive processes characteristic of the human brain in general" (Bybee and Beckner 2010: 854).[1] This

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1 The basic ideas of usage-based linguistics are discussed, e.g., in Beckner at al. (2009), Bybee (2010), Bybee and Beckner (2010), and Diessel (2011).

has consequences for the grammatical system: "[...] language structure comes about through the application of a handful of common mechanisms that recur when human beings use language. The domain-general processes of sequential learning, chunking, categorization, and inference-making, along with the effect of partial or complete repetition, lead to the establishment and conventionalization of the categories and structures we find in languages. This bottom-up and emergentist perspective, we argue, may turn out to be indispensable to our understanding of linguistic processes and structure" (Bybee and Beckner 2010: 853).

This conception of linguistics requires weakening or even giving up on the separation between language use and linguistic structure in favor of a dynamic model of grammar (Diessel 2007: 123–124). Thus, recurrence and co-occurrence of linguistic expressions shape our linguistic system. One of the concepts that is closely attached to the recurrence and co-occurrence of expression is cognitive entrenchment. The entrenchment of a linguistic item or pattern into the cognitive system is strongly influenced by its frequency of occurrence and its frequency of co-occurrence with other entities or patterns. This presumes that speakers have linguistic knowledge that is based on a statistical assessment of the input they are confronted with. Ellis (2002) describes this from a psycholinguistic point of view: "[...] psycholinguistic studies of sentence processing show that fluent adults have a vast statistical knowledge about the behavior of the lexical items of their language. They know the strong cues provided by verbs, in English at least, in the interpretation of syntactic ambiguities. Fluent comprehenders know the relative frequencies with which particular verbs appear in different tenses, in active versus passive and in intransitive versus transitive structures, the typical kinds of subjects and objects that a verb takes, and many other such facts. This knowledge has been acquired through experience with input that exhibits these distributional properties and through knowledge of its semantics" (Ellis 2002: 160).

Similarly, corpus linguists who take a cognitive stance towards language argue: "It is common practice in corpus linguistics to assume that the frequency distribution of tokens and types of linguistic phenomena in corpora have – to put it as generally as possible – some kind of significance. Essentially, more frequently occurring structures are believed to hold a more prominent place, not only in actual discourse but also in the linguistic system, than those occurring less often" (Schmid 2010: 101). Thus, cognitively oriented corpus linguists "try to correlate the frequency of occurrence of linguistic phenomena (as observed in corpora) with their salience or entrenchment in the cognitive system. A corollary of this assumption is that patterns of frequency distributions of lexico-grammatical variants of linguistic units correspond to variable degrees of entrenchment of cognitive processes or representations associated with them" (Schmid 2010: 102).

Entrenchment has become quite a popular concept within cognitive and usage-based linguistics. In this paper, entrenchment will be viewed not so much as the absolute strength of the representation of a linguistic item in memory, but rather as a relative notion. I will investigate how strongly a lexical item is associated with a pattern in which it occurs. Thus, the paper addresses the question of whether and how strongly a verb is cognitively entrenched relative to an argument structure pattern and how strongly an argument structure pattern is entrenched with respect to particular verbs. This might be called relative, or associative entrenchment. It is of course undisputed that the relation between quantitative corpus data and cognitive processes as revealed by psycho- and neurolinguistic experiments is not a straightforward one. However, most linguists using the concept of entrenchment agree that there is a strong connection between quantitative corpus data and cognitive processes (cf. Schmid 2010, Blumenthal-Dramé 2012, Gries 2012b). Since I will not be discussing data from experimental studies in this paper, I shall leave the exact nature of the relationship between data from corpus and experimental studies open.

1.3 Quantitative corpus studies on argument structure

The present article starts from the observation that each verb shows particular frequencies of occurrence with respect to its argument structure patterns and each argument structure pattern seems to attract some verbs more strongly than others. The basic assumption is that the observed quantitative distribution patterns can be accounted for, on the one hand, by numerous diverse linguistic factors and, on the other, by basic functions of the human memory system, such as the entrenchment structures as a consequence of recurrent use. I will assume that argument structure patterns constitute entities in our linguistic memory system that accumulate traces of use that determine their variation and diachronic dynamics.

Corpus-based quantitative studies on argument structure have continually – albeit rather infrequently – been published since the 1990s. A number of early studies collected frequency data in order to explain certain phenomena in language processing. MacDonald (1994) and MacDonald, Perlmutter, and Seidenberg (1994) demonstrate how the frequency of argument structures with particular verbs serves to resolve syntactic ambiguities in argument structure processing.

Within research that highlights the role of frequency in the structure of grammar, Gries and Stefanowitsch's Collostructional Analysis has revealed distribution patterns of verbs and their argument structure (Stefanowitsch and Gries 2003; Gries and Stefanowitsch 2004, 2010; Gries 2011, 2012a). Having measured the association of argument structure constructions to particular verbs, Gries and

Stefanowitsch claim that those verbs most strongly entrenched in the construction are those that reflect the meaning of the construction. For example, the verb showing the strongest association to the ditransitive pattern is *give*, which itself lexicalizes the transfer meaning that Gries and Stefanowitsch attribute to the ditransitive construction (Stefanowitsch and Gries 2003: 228).

Another topic that has occasionally been addressed in quantitative corpus studies on argument structure is the question of how genre influences the distribution of argument structure. Roland and Jurafsky (1998) and Roland (2001) attribute influences of this sort to the preference of particular kinds of discourse for particular verb senses, which, in turn, are associated with different argument structures. Some more recent studies have also been able to show the extent to which the distribution of argument structure patterns is influenced by register and by the distinction between spoken and written language (Gries 2011; Engelberg et al. 2012). To the degree that discourse frequencies govern the degree of entrenchment of a linguistic entity, the dependency of frequencies on genre raises the question of whether entrenchment is a notion that is to be understood relative to particular communicative situations, such as writing a letter, giving a talk, or having a chat on the phone. Since frequencies of particular linguistic structures are based on counting linguistic events and events are always contextualized, entrenchment might turn out to be a context-dependent notion.

Other issues that have been addressed are the mechanisms underlying the extension of a construction to new lexical items (cf., e.g., Boas 2011), the productivity of constructions (e.g., Barðdal 2008), the diachronic development of valencies (Köhler 2005), the distribution of valency frames within the lexicon (Steiner 2011; Duwaerts and Ullmann 2013), the role of frequency in argument structure acquisition (Tomasello 2003; Behrens 2011), and the attraction between lexical elements that fill different slots in argument structure patterns (e.g., Engelberg et al. 2011). Schulte im Walde (2003, 2009) employed frequency data in order to automatically induce verb classes from the distribution of valency frames. Some other investigations assessed argument structure frequencies in order to provide norming data for psychological experiments (e.g., Roland et al. 2000; Gahl, Jurafsky, and Roland 2004).

Despite these studies, most of the issues have only been subjected to very few empirical studies, such that there are still a number of open questions:

(i) The claim that argument structures are most strongly associated with verbs that share their meaning with the construction has only been checked with respect to very few argument structure constructions, such as the ditransitive transfer construction (Stefanowitsch and Gries 2003) and the *as*-predicative (Gries, Hampe, and Schönefeld 2010). More evidence is needed for the kind of relationship between the meaning of a verb, the meaning of an argument

structure, and the frequency with which verb and argument structure pattern co-occur.

(ii) There is also a lack of cross-linguistic studies in order to establish the extent to which language-specific versus cross-linguistic semantic and grammatical conditions determine the quantitative distribution patterns in the domain of argument structures.

(iii) A large number of other factors can be expected to determine the frequency of argument realization patterns, such as TAM categories, information structure, or the lexical filling of argument slots. Few of these have so far been investigated.[2]

(iv) There have also been only very few quantitative investigations into the influence of genre, register, and medium on the frequencies of argument structure, in particular on a fine-grained level, taking into account the whole array of argument realization patterns a verb has to offer.

1.4 Argument structure: basic concepts

Since the terms 'argument' and 'argument structure' differ widely in their respective uses denoting different semantic and syntactic concepts, the uses of these and related terms in this article shall be outlined here.

Argument structures are meaning representations in which variables for entities (x,y,z) are related by semantic predicates to each other and – at least in the case of verbs – to some situation variable *e* (an event or state variable), e.g. ASSUME(x,y,e). The argument structure is connected to a lexical predicate by a meaning postulate such that all the entities correspond to the arguments of a lexical predicate. A simple example would be:

(2) a. ASTONISH(x,y,e) → ASTONISHING_ENTITY(e,x) & ASTONISHED_ENTITY(y,x)
     b. ASTONISH(x,y,e) → STIMULUS(e,x) & EXPERIENCER(y,x)

The semantic predicates specify the verb-specific semantic roles (2a) that can be generalized over to a certain degree (2b). The variables in these argument structures are argument variables, and the arguments are the semantic representations of the expressions that specify these arguments in the sentence (cf. Engelberg 2000).

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2 Cf. Gries (2011) on the influence of tense and aspect on the distribution of argument structure.