Grammaticalization meets construction grammar
Opportunities, challenges and potential incompatibilities

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Introduction

Grammaticalization research has in the last decade highlighted the notion of constructions. Hopper & Traugott (2003, p. 1) in their classical definition of grammaticalization point out that that not only words but also constructions, i.e. sequences of words, can undergo grammaticalization.

> As a term referring to a research framework, "grammaticalization" refers to that part of the study of language change that is concerned with such questions as how lexical items and constructions come in certain contexts to serve grammatical functions or how grammatical items develop new grammatical functions.

Himmelmann (2004, p. 31) in turn argues that a grammaticalizing element (he uses the synonym term a 'grammaticizing' element) should not be considered in isolation but rather in its syntagmatic context, i.e. the construction it occurs in.

> Strictly speaking, it is never just the grammaticizing element that undergoes grammaticization. Instead, it is the grammaticizing element in its *syntagmatic context* which is grammaticized. That is, the unit to which grammaticization properly applies are *constructions*, not isolated lexical items.

In the wake of this work, efforts have been made in grammaticalization research to more precisely articulate the largely pretheoretical notion of construction in the theoretical framework of construction grammar. Confronting grammaticalization research with the framework of construction grammar also brought up the question how grammaticalization relates to constructional change in general (Noël, 2007; Gisborne & Patten, 2011; Heine et al., 2016). As such, grammaticalization research increasingly interacts and converges with the emerging field of diachronic construction grammar (Israel, 1996; Bergs & Diewald, 2008; Barðdal et al., 2015).

This volume brings together articles that are situated at the intersection of grammaticalization research and diachronic construction grammar. All articles share an interest in integrating insights from grammaticalization research and construction grammar in order to advance our understanding of empirical cases of grammaticalization. This introduction lays the ground for the central recurring theoretical issues in the articles, addressing opportunities, challenges and potential incompatibilities in the growing interaction between grammaticalization and construction grammar. First out is the question what makes construction grammar so attractive

for the study of grammaticalization phenomena. A related question is how concepts from grammaticalization theory can be related to and integrated into construction grammar. Some thought will also be given to the question what kind of construction grammar typically is used for the study of grammaticalization. Finally, some critical voices in the field will be examined, addressing areas where grammaticalization and construction grammar (might) prove to be incompatible.

Construction grammar comes with a focus on form and meaning

One of the attractions of construction grammar for the study of grammaticalization is its fundamental focus on both form and meaning. Constructions, the basic building blocks of construction grammar, are defined as pairings of form and meaning (Langacker, 1987; Fillmore et al., 1988; Croft, 2001; Goldberg, 1995, 2006). These pairings are not restricted to the level of words (as is the case in the traditional Saussurean sign) but extend to all levels of grammar. Grammar in this view is "constructions all the way down" (Goldberg, 2006, p. 18) ranging from specific words such as *avocado*, fully fixed idioms such as *going great guns* and partially filled idioms such as *jog* <someone's> *memory*, to more general syntactic structures such as the subject-predicate construction. Grammaticalization is known to be accompanied by both formal and semantic changes, as is witnessed by Lehmann's (1982) well-known criteria for grammaticalization, including both the phonetic erosion of a grammaticalizing item and its semantic bleaching. Construction grammar, with its systematic linking of form and meaning in constructions at all levels of grammar, urges us to consider both form and meaning, in every step of the grammaticalization process, and at all levels of grammar involved in the process.

Construction grammar and syntagmatic contexts

Constructions, as defined in construction grammar, have also a great potential for the syntagmatic dimension of grammaticalization. Grammaticalization theorists have since the beginning of the new millennium emphasized the importance of the specific syntagmatic context in which grammaticalization takes place (Heine, 2002; Diewald, 2002; Traugott, 2003; Bybee, 2003; Himmelmann, 2004). A classic example is the grammaticalization of the future marker *going to*. Bybee (2003, p. 146) argues that "*going to* does not grammaticalize in the construction exemplified by *I'm going to the store* but only in the construction in which a verb follows *to*, as in *I'm going to help you*". Construction grammar offers a framework to model these grammaticalization contexts in terms of form-meaning pairings.

The type of construction that is particularly relevant for the study of grammaticalization is what we could call the 'host-class construction'. It is a construction consisting of the grammaticalizing element (or string of elements as in *going to*) and "the class of elements the gram is in construction with, i.e. the host class" as Himmelmann (2004, p. 32) puts it. In more technical construction grammar terms, we are dealing with a semi-schematic construction, where the grammaticalizing element(s) constitute(s) the substantive element(s) of the construction and the

emerging host-class forms an open slot or schematic position for lexical elements collocated with the grammaticalizing element(s). As such, *going to* is the substantive part of the semi-schematic construction [*going to* V] expressing future tense.

Note that there is no consensus on the fact that grammaticalization results in a host-class construction (see also Noël, 2007). Grammaticalization has been argued to include types of grammatical change such as word order changes and the development of discourse markers where no host-class can be identified. At any rate, it should not come as a surprise that the constructions studied in this volumes are of the semi-schematic kind.

Construction grammar does not only provide a model for describing the syntagmatic contexts in which grammaticalization takes place. It also helps us come into grips with the contextual changes that are known to accompany grammaticalization. Lehmann (1982) has identified three types of changes in the syntagmatic dimension that come with grammaticalization: decrease of structural scope (condensation), increase of bondeness (coalescence), and decrease in syntagmatic variability (fixation). The first two of these changes can directly be related to the association process between the grammaticalizing element and its host-class which Himmelmann (2004) hinted at. As the grammaticalizing element gets associated with an expanding host-class, its structural scope becomes exclusively restricted to this construction-internal class of elements (condensation), and the collocational association between the substantive and schematic position gets strengthened (coalescence).

Traugott & Trousdale (2013, p. 100) point out that the grammaticalization model of Lehmann (1982) focuses on reduction and increased dependency. Two articles in this volume exploit these aspects of grammaticalization on the syntagmatic axis in order to uncover ongoing grammaticalization. Kinn (this volume) explores constructional variants of the asymmetric verb phrase coordination construction [VP_1 *og* VP_2] in Norwegian, such as *sitte og lese* 'be reading' (literary: 'sit and read'), *gå og se* 'go and see', and *løpe rundt og leke* 'run around and play'. He argues that a high degree of grammaticalization of the first verb in the asymmetric coordination construction correlates with (a) scarcity or absence of constituents in between VP_1 and the coordinator *og*, (b) a blurring of the facilitation relation between VP_1 and VP_2, and, (c) the meaning of the coordination approaching the meaning of VP_2, thus strengthening the single-event reading of the construction. Enghels & Comer (this volume) investigate the grammaticalization of the Spanish lexical verbs *poner* and *meter* 'put' into inchoative auxiliaries. They explore similarly to Kinn (this volume) how the grammaticalization of *poner* and *meter* correlates with the presence of intervening material in the inchoative construction [NP_1 V_{refl} PREP INF]. They observe a decrease of intervening adverbial complements in inchoative constructions with *poner* and relate it to an increased syntactic incorporation of *poner* and its host-class.

Although the above criteria are related to the syntagmatic parameters of Lehmann, it is not possible to identify a one-on-one relation between criteria and parameters (see also Traugott & Trousdale 2013, p. 123). The criteria rather exploit various reduction tendencies in host-class constructions that have been described in more general terms in diachronic construction

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grammar. Traugott & Trousdale (2013, p. 120-122) for instance argue that the formation of a new construction (a process they call 'constructionalization') comes with a decrease of compositionality, as the result of a mismatch between the overall meaning of a construction and the meaning of its constituting parts. Traugott & Trousdale (2013, p. 122) also mention that "cumulative effects of entrenchment help explain why constructions generally (not only grammatical ones) show high degrees of fixation".

Next to grammaticalization as reduction and increased dependency, Traugott & Trousdale (2013, p. 100) highlight that grammaticalization also comes with expansion. Himmelmann (2004) has articulated two types of expansions that are directly relevant to the syntagmatic axis of grammaticalization: host-class expansion and expansion of the larger syntactic context in which the construction is used. Both characteristics have been exploited in this volume in order to uncover ongoing grammaticalization. Enghels & Comer (this volume) investigate the relative frequency of constructional variants with a varying degree of animacy of the subjects NP_1 and a varying dynamicity of the infinitive INF. They find that the inchoative construction with *poner* expands to semantic types other than the original prototypical use with an animate NP1 and a dynamic INF. The observation confirms the claim of Coussé (forthcoming) that context expansion in grammaticalization proceeds away from a prototype.

Context expansion in grammaticalization affects the dimension of schematicity and productivity in constructions. The schematicity of a construction pertains to the extent in which it can abstract or generalize over more specific items (Tuggy, 2007). In the process of host-class expansion, a semi-schematic construction incorporates a wider range of items in its schematic position, which leads to an overall higher degree of schematicity in the construction. Productivity is a related dimension in constructions in that it pertains to the extensibility of schematic constructions (Barðdal, 2008; Barðdal et. al, 2015). Productivity can be assessed by means of frequency measures, which makes it a valuable tool in quantitative construction grammar. Two articles have exploited productivity measures in order to assess the degree of grammaticalization in their corpus material.

Lesuisse & Lemmens (this volume) investigate the degree of grammaticalization of the English posture verbs *sit*, *stand* and *lie* in adjectival copula constructions of the type [SubjectNP V SubjCompAdjP]. The productivity of these constructions is assessed by looking into specific frequency patterns of the adjectival subject complement, the expanding host-class of this construction. Lesuisse & Lemmens more specifically measure the type frequency of this open slot and its so-called productivity rate, i.e. the number of hapax legomena (types that occur only once in a corpus) divided by the total number of tokens (Baayen & Lieber, 1991). Guardamagna (this volume) similarly investigates the grammaticalization of the Latin preposition *secundum* 'according to' in the construction [*secundum* NP] measuring type frequency, token frequency, number of hapax legomena and finally Baayen's (1993) productivity index of the NP slot.

Construction grammar and paradigmatic relations

Construction grammar also helps us come into grips with the paradigmatic side of grammaticalization. One well-known feature of grammaticalization is that grammaticalizing elements become part of a paradigm, something that Lehmann (1982) calls 'paradigmaticization'. Take the grammaticalization of *going to.* As a lexical expression, it is part of a wide and loosely structured semantic field of motion. As it grammaticalizes and starts serving in a future tense construction, it gets incorporated into a much smaller closed paradigm of auxiliaries expressing tense. Construction grammar approaches paradigmatic issues no differently from syntagmatic matters, i.e. by making use of its basic building blocks, constructions. However, whereas syntagmatic parameters of grammaticalization are confined to a single construction, paradigmatic issues imply a relation between two or more constructions.

Constructions are related to each other in construction grammar by means of taxonomic networks. The network, and its different levels of abstraction or schematicity, can be illustrated by means of a classic example, i.e. that of binominal degree modifiers (figure 1). Neels & Hartmann (this volume) document the grammaticalization of German degree modifiers such as *ein bisschen* 'a bit' and *ein wenig* 'a little'. They are part of emerging host-class constructions, consisting of the substantive grammaticalizing elements *ein bisschen* / *ein wenig* and an open slot that can contain nouns, verbs and adjectives. These constructions form the most basic level of description relevant for the grammaticalization of the degree modifiers at hand, and are as such called 'micro-constructions' by Traugott & Trousdale (2013, p. 16). Neels & Hartmann (this volume) argue that both micro-constructions entered into a paradigmatic relation and could be subsumed under a more schematic construction, with an open slot that abstracts over the grammaticalizing elements and an open slot that incorporates the host-class elements. Traugott & Trousdale (2013, p. 14) call such constructions 'schemas' which "abstract across sets of constructions which are (unconsciously) perceived by language-users to be closely related to each other in the constructional network".
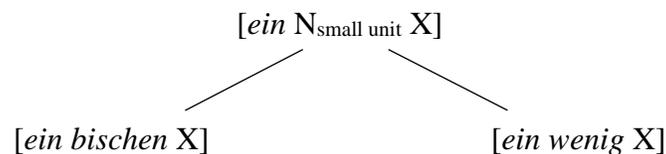
[*ein* N~small unit~ X]

[*ein bischen* X]   [*ein wenig* X]

Figure 1: A taxonomic network for German degree modifiers

The above account raises the question how a schema is formed out of lower-level micro-constructions. In general, links in a constructional network are based on similarity, in form and meaning (Diessel 2015). Neels & Hartmann (this volume) mention some points of similarity between the degree modifier constructions with *ein bisschen* and *ein wenig* that may have spurred the formation of a new schema, i.e. (a) the lexical elements *Bisschen* and *wenig* share the

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meaning component 'small (unit)', (b) both micro-constructions contain the same substantive element *ein*, and, (c) both constructions have similar highly schematic host-classes.

The schema above includes two open slots, one that abstracts over the host-class slots in the micro-constructions, and one that captures (an embryo of) the paradigm of degree modifiers in German. These slots differ very much in number of elements, which raises the question whether they differ as to their internal structure. Coussé (forthcoming) has argued that the open class of elements collocating with the grammaticalizing element in host-class constructions is internally structured as a prototype category. Guardamagna (this volume) finds such a prototypical patterning among a group of nouns collocating with the preposition *secundum* 'according to' in Latin. It is an open question whether something similar applies for a paradigm slot with grammaticalizing elements. Kinn (this volume) suggests that there indeed might be a prototypical structure in the first verb slot of the asymmetric verb phrase coordination construction [VP$_1$ *og* VP$_2$] in Norwegian, with some members more central than others in terms of frequency and signs of grammaticalization. However it may be, one thing both slots seem to have in common is their ability to attract new members.

Bisang (1998, p. 36) argues that open slots in schemas can function as 'attractor positions' that "operate as a kind of melting pot or as a kind of catalyst for linguistic items to be grammaticalized into different types of grammatical functions". Neels & Hartmann (this volume) show that the degree modifier schema serves as a model for new modifiers such as *ein Funken* 'a spark', *eine Idee* 'an idea', *ein Tich* 'a tick', *ein Quänchen* 'a quantum', *eine Preise* 'a pinch' which originally all expressed the meaning of 'small (unit)' and allowed for the indefinite article *ein.* These recent degree modifiers are less frequent and have more restricted collocational patterns than *ein bisschen* and *ein wenig*, which seem to tie in to the findings of Kinn (this volume) for the first verb slot in the asymmetric verb phrase coordination construction [VP$_1$ *og* VP$_2$].

The formation of a schema also seems to come with a decrease of formal variation in micro-constructions (Hilpert, 2013). Neels & Hartmann (this volume) show that the use of *ein* with *bisschen* increases in comparison to definite articles, possessive or demonstratives. Enghels & Comer (this volume) similarly find that the use of the preposition following the inchoative auxiliary *poner* gradually becomes fixed to *a*, leading to the loss of the alternate preposition *en* in this position. This tendency seems counterintuitive at first, since the formation of a schema comes with a higher degree in schematicity, i.e. the ability to abstract over a wider set of elements. But on closer look, the reduction of formal variation mostly seems to affect substantive elements, and as such contributes to a 'carving out' of substantive positions in the schema.

Construction grammar and its cognitive commitment

Construction grammar has been presented as a framework that allows us to integrate different aspects of grammaticalization. It was shown how the syntagmatic and paradigmatic aspects of grammaticalization may be addressed in a principled way by means of constructions, which are

either studied in their own right (syntagmatic axis) or in relation to each other in a taxonomic network (paradigmatic axis). This construction grammar approach also proved capable of handling grammaticalization both as a process of reduction and expansion.

Hilpert (this volume) brings up the issue that construction grammar predominantly serves as a descriptive framework in constructionist approaches to grammaticalization. He points out that construction grammar has a theoretical commitment that that goes well beyond this, representing "a mentalistic approach to language that aims to describe speakers' knowledge of language". This cognitive commitment is often left implicit or is altogether missing in constructionist studies of grammaticalization, something that also holds true for the articles in this volume. Hilpert (this volume) therefore raises an open question to diachronic construction grammar: should its central objective be "an explicit commitment to psychological reality" or "to offer a framework for descriptions of language change in which discussions of form and meaning, context, schematicity, and productivity have a natural central place".

A related issue is that many flavors of construction grammar come with a usage-based model of grammatical description (e.g. Langacker, 1987, 2000; Kemmer & Barlow, 2000; Bybee, 2006, 2010). The premise of usage-based theory is that the cognitive representation of grammar is not isolated from its usage (as is the case in generative grammars) but rather is based on and shaped by usage. Von Mengden & Coussé (2014, p. 4–8) point out that a lot of research in grammaticalization is compatible with a usage-based perspective. Types and mechanisms of change such as pragmatic inference, bridging contexts, analogy and frequency effects all explore how usage gives rise to innovative linguistic structures. Following this usage-based tradition, Neels & Hartmann (this volume) investigate the role of bridging contexts for the grammaticalization of degree modifiers. Some of the usage-related concepts from grammaticalization research have also been interpreted in a constructional framework. Pragmatic inference has been analyzed as a 'mismatch' between form and meaning properties leading to a loss of compositionality (Andersson, 2014; Granvik, this volume) whereas semantic bleaching is interpreted as 'coercion by override' resulting in new more procedural or 'bleached' constructions (Audring & Booij, forthcoming). However, it should be pointed out that not many of these studies take a full-blown usage-based perspective, considering that usage-based grammar implies "grammar based on usage but located and processed in the human mind" (Von Mengden & Coussé 2014, p. 8), which is in essence a cognitive perspective.

The descriptive focus of many constructionist approaches to grammaticalization also often implies that these studies do not explicitly commit themselves to one particular flavor of construction grammar. This is also the case in the current volume. One notable exception is Karlsson (this volume) who explicitly choses Radical Construction Grammar (Croft, 2001) as his theoretical framework. Nevertheless, it is possible to get an insight in the theoretical orientation of most studies in this volume by having a look at their references to standard works and handbooks in construction grammar. The articles in this volume predominantly cite Langacker (1987, 1991), Goldberg (1995, 2006), Croft (2001) and Bybee (2010). These well-known

references have in common that they present a usage-based perspective to construction grammar, which has been argued to be compatible with many insights from grammaticalization research. It is remarkable that more formally oriented strands of construction grammar, such as Berkeley Construction Grammar or Sign-Based Construction Grammar (as well as the other formal models presented in Hoffmann & Trousdale, 2013), remain uncited in the articles in this volume, despite their potential for the study of grammatical change (as demonstrated most notably by Fried, 2009, 2013). This might have to do with the general functional orientation of many scholars working on grammaticalization shunning too rigorous formalization.

Areas where grammaticalization and construction grammar might not meet

This introduction has focused until now on the advantages of bringing together grammaticalization research and construction grammar, reflecting the general favorable attitude of the articles in this volume. However, there are some voices in the field (especially within grammaticalization research) that offer a critical note, identifying some areas where grammaticalization and construction grammar (might) prove to be incompatible.

Trousdale (2015) and Heine et al. (2016) have identified some theoretical premises of construction grammar that make the framework less suitable for addressing some of the central issues in grammaticalization. Construction grammar, for one, does not make a fundamental distinction between lexical and grammatical forms. This makes the framework incompatible with the very premise of grammaticalization research which addresses "questions as how lexical items and constructions come in certain contexts to serve grammatical functions or how grammatical items develop new grammatical functions" (Hopper & Traugott, 2003, p. 1). A related issue is that not all constructionist approaches consider morphemes to be constructions, i.e. independent pairings of meaning and form (e.g. Booij, 2010, p. 15). This feature seriously hampers the integration of the concept of grammaticalization clines, e.g. the change from content item → grammatical word → clitic → inflectional affix (Hopper & Traugott, 2003, p.7), into a construction grammar perspective.

Heine et al. (2016, 160) also point out some "issues that are important to students of grammaticalization while they have less or no significance in work based on Construction Grammar". As the discussion below will show, this claim is too strong, and erroneously narrows down the scope of construction grammar to the study of constructions in isolation. Heine et al. (2016, p. 150) for instance make a case for 'event schemas' as the cognitive-conceptual foundation of grammatical categories, claiming that these schemas differ "from the symbolic form-meaning units of Construction Grammar […] in the fact that they are defined as cognitive-conceptual categories". True, event schemas are not the same as constructions, but they do play an important role in construction grammar. First, the meaning of constructions may be described in terms of event schemas, as is demonstrated by the cognitive schemas for posture verbs in Lesuisse & Lemmens (this volume). Second, the meaning of individual constructions may be mapped onto a more abstract conceptual space, as has been shown in great detail by Croft (2002).

Heine et al. (2016) go on to argue that semantic changes in grammaticalization are driven by discourse and context rather than the construction itself. Again, this issue is not incompatible with construction grammar, rather on the contrary. It was argued in the preceding section that many strands of construction grammar take a usage-based perspective on grammar, implying that constructions are based on and shaped by usage (including discourse and context). Neels & Hartmann (this volume) illustrate this usage-based approach by exploring the role of bridging contexts for the grammaticalization of degree modifiers. Finally, Heine et al. (2016) claim that the "main arena of work on constructional change is language history, that of students of grammaticalization is the search for typological generalizations on the evolution of functional categories". This assessment contrasts with the effort of Hölzl (this volume) to translate Heine & Kuteva's (2010) concept of 'grammaticalization areas' into 'constructionalization areas', i.e. "a group of often geographically contiguous languages that share an analogous instance of constructionalization due to language contact".

Overview of the contributions

Now that the theoretical groundwork of this volume is laid, it is time to present the individual articles in more detail. The volume opens with a theoretical contribution by **Martin Hilpert** raising three open questions to the diachronic study of constructions and constructional change: (1) To what degree should practitioners of diachronic construction grammar make psychological claims when using constructions as the basic unit of their analysis? (2) When does an emerging construction count as a new construction? (3) Is there such as thing as form-meaning nodes in the constructional network?

These three questions are of great interest and their potential answers have a great impact on basis concepts of grammatical theory and how to understand change in the grammatical system. Hilpert argues that aspects of diachronic construction grammar need to be clarified explicitly. For one, there is need for some meta-theoretical reflection on how diachronic construction grammar can make claims about the linguistic knowledge of earlier generations. Furthermore, the status of a new construction is problematic as it can only be decided in relation to a starting point that is chosen by the analyst. An alternative way to distinguish different types of change could be to ask which parts of the network are affected by a given process of change. As to the third question, Hilpert points out some directions for future research, calling for a shift of perspective. He argues for a connection-centered view of linguistic knowledge, which reduces constructions to being links between form and meanings, rather than being nodes in the network.

The remaining contributions in the volume have a more empirical focus, each of them tackling one particular case of grammaticalization or constructional change in one particular language or language family. These articles are arranged thematically around the type of construction in focus.

Verb Constructions

Mégane Lesuisse and **Maarten Lemmens** investigate the historical development of the posture verbs *sit*, *stand* and *lie* in English. This trio of verbs is fascinating as they have not (or only very little) grammaticalized into locative markers or copulas, which sets them apart from their cognates in other Germanic languages. Lesuisse & Lemmens search for traces of grammaticalization of these posture verbs in historical dictionaries and corpora. They combine qualitative methods with quantitative productivity measures in order to uncover signs of expansion in the locative and copular use of the three verbs. The data analysis reveals that posture verbs did occur in locative and copula constructions in the history of English, which indicates that their "grammaticalization was cut short" at some point in history. Lesuisse & Lemmens try to explain this halted grammaticalization by testing the hypothesis of Newman (2009) that it is the innovative use of posture verbs expressing dynamic events (getting into a sitting, standing, lying posture) that has hampered their further grammaticalization.

Torodd Kinn addresses an interesting family of verb constructions in Norwegian, the so-called asymmetric verb phrase coordination construction [VP_1 *og* VP_2], where the first verb in some cases may express grammatical meaning. The construction is particularly interesting since it has multiple meanings and shows great variation in the verb slots VP_1 and VP_2. The paper focuses on the properties of a set of subschemas expressing atelic motion as in *løpe rundt og leke* 'run around and play'. An extensive corpus study in Present-day Norwegian shows (in contrast to earlier thinking) that a great range of verbs may fill the VP_1 slot; some verbs however are more central than others. Using quantitative methods from construction grammar, such as distinctive collexeme analysis, Kinn shows that the bleaching of particular verbs in VP_1 correlates with non-agentive (mainly cognitive) verbs in VP_2. He argues for a complex interplay between bleaching of particular verbs and constructional semantics, all correlating with decreased argument structure inside the construction. As a result of the semantic bleaching of some verbs in VP_1, the facilitation relation that holds between VP_1 and VP_2 is blurred, which also affects the meaning of the construction as a whole, since VP_2 contributes most of the lexical meaning, and this strengthens the single-event meaning that already characterizes asymmetric coordination in general.

Renata Enghels and **Marie Comer** examine the grammaticalization of the Spanish verbs *poner* and *meter* 'put' into inchoative auxiliaries. Inspired by Hilpert (2013), they explore the structural variants of the inchoative construction [NP_1 V_{refl} PREP INF] in order to examine "to what extent different structural patterns have given rise to a general constructional schema". To this purpose, they perform a corpus study taking into account (a) the general productivity of the construction, (b) the formal variation in the prepositional slot PREP, (c) the occurrence of intervening adverbials in the construction, and, (d) the overall semantics of the construction. Their data analysis shows that the inchoative construction in Spanish becomes more productive, shows less variation in the prepositional slot, allows less intervening adverbials, and is used in a wider array of contexts. Enghels & Comer take these findings as evidence "that a leveling process has taken

place, and that an abstract constructional inchoative schema has been formed". They also point out that this process is more advanced in constructions with *poner* in comparison to the semantically specialized verb *meter*.

Noun constructions

Jakob Neels and **Stefan Hartmann** address the grammaticalization of the degree modifiers *ein bisschen* 'a bit' and *ein wenig* 'a little' in German. The history of degree modifiers has been studied from different angles in constructionist approaches, mostly based on English data but also on Dutch and Spanish. Neels & Hartmann build on this research tradition, exploring both syntagmatic and paradigmatic aspects of the grammaticalization of the degree modifiers in German. They first focus on the syntagmatic properties of the host-class constructions [*ein bischen* X] and [*ein wenig* X], investigating (a) the general productivity of the constructions, (b) the parts of speech found in the host-class X, and, (c) the formal variation of the determiner *ein* in [*ein bischen* X]. Their corpus results show a "reduction in individual formal variation and expansion in their range of use" as such uncovering both reduction and expansion aspects of grammaticalization at work simultaneously. The micro-constructions [*ein bischen* X] and [*ein wenig* X] moreover show an increasing convergence, both functionally and formally, which leads Neels & Hartmann to posit the formation of a constructional schema [*ein* N$_{small unit}$ X]. This schema is hypothesized to function as a model for new degree modifiers in German.

Caterina Guardamagna takes a constructionist approach to diachronic changes in the Latin [*secundum* NP] 'according to NP' construction. She elaborates on type frequency effects such as productivity and schematicity (Barðdal, 2008), as well as host-class expansion (Himmelmann, 2004). Her investigation is based on empirical data from the Latin Library Corpus, covering data from four periods: Classical Latin (BC106-AD17), Silver Latin (100-258), Late Latin (330-469) and Early Medieval Latin (530-704). The analyzed data, consisting of nearly 1000 tokens, shows that the [*secundum* NP] construction becomes more productive over time. Guardamagna argues that constructional change includes frequency changes. As for the host-class expansion, she argues that social context stimulates some of the changes, in the sense that the [*secundum* NP] construction with a 'conformity' meaning connects to cultural changes in the transition from Paganism to Christianity.

Constructions at sentence level

Anton Granvik investigates the development of the abstract noun *caso* 'case' into a conditional marker in Spanish, e.g. *(en) (el) caso (de) que llueva, no saldremos* '(in) (the) case (of) that it rains, we'll stay in'. In accordance with the theme of this volume, he compares how grammaticalization and constructionalization models fare in accounting for the creation of a new grammatical meaning and the subsequent formal changes in the conditional *caso* construction. In his discussion, he finds that both models are accurate, but serve for different aspects of the development of the construction. As for the development of the conditional reading of *caso*, the grammaticalization model provides an accurate explanation for describing the directional change. However, concerning formal changes in the construction, Granvik finds the constructionalization

and constructional change model of Traugott & Trousdale (2013) more suitable. Especially, the network model of construction grammar provides a powerful tool in this case, since it allows the researcher to relate different forms to higher and lower level schemas.

Andreas Hölzl starts out from the concept of 'grammaticalization areas' defined by Heine & Kuteva (2010, p. 97) as "a group of geographically contiguous languages that have undergone the same grammaticalization process as a result of language contact". Hölzl argues for the existence of 'constructionalization areas' as well, that is similar changes in constructions and constructional networks among contiguous languages due to contact. He examines the concept of negation in Tungusic and Mongolian languages in Northeast Asia, focusing on Manchu and Mongolian. By examining a great range of constructions and constructs with similar subsequent constructional changes, Hölzl shows that the languages addressed in the paper share a development from negative existential (non-existence of x) to a standard negator and as such a development towards a more abstract and procedural meaning. Hölzl emphasizes the importance of a shared source construction, arguing that it is the construction as a whole that expands its domain of use rather than the negative existential alone. He subsumes all changes under shared constructionalization and discusses the development in terms of an "extension of the interlingual constructional network" shared by the languages included.

Emanuel Karlsson makes an intriguing attempt to combine insights from radical construction grammar (Croft 2001) with grammaticalization, investigating the diachrony of spatial particles from Proto-Indo-European to Ancient and Classical Greek, such as *epi* 'on' and *kata* 'down'. The empirical data show a semantic shift of *epi* and *kata* across constructions, and the particles develop from being used more or less as spatial adpositions to verbal prefixes (expressing aspect) and independent adverbs. Karlsson uses the term 'construction split' for the development of multiple constructions and argues for a 'pragmatics-driven' gradual development where there is no single point of reanalysis of covert structure. In taking a pragmaticist position, he emphasizes the importance of concepts such as 'utterance cues' (rather than form or substance) and 'discourse effects' (rather than function or meaning). Karlsson suggests that the senses of individual particles develop in different directions under the influence of the specific constructions in which they are used, and that the fundamental gradualness of synchrony and diachrony correspond to one another. As such, the paper attempts a partial synthesis of theoretical components relevant to diachronic construction grammar and grammaticalization from the perspective of a cue-based approach to constructions.

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