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Introduction

New reflections on the sources, outcomes, defining features and motivations of grammaticalization

Tine Breban[1], Jeroen Vanderbiesen[2], Kristin Davidse[1], Lieselotte Brems[1/3] & Tanja Mortelmans[2]
[1]University of Leuven / [2]University of Antwerp / [3]Université de Liège

1.   Preliminaries

It is unquestionable that the study of grammaticalization and related processes of change has had an enormous impact on the recent linguistic scene. Grammaticalization research in the broad sense has created a meeting ground for approaches as varied as typology, language acquisition, comparative and diachronic study, synchronic language description, usage-based and corpus-based description, and discourse approaches. In about a quarter of a century, it has changed the general assumptions of language *description*, putting awareness of change at the centre of interest, rather than reserving it to specialized historical linguistics studies. Diachronically, it has broadened our ideas of *sources* for grammatical elements and the *pathways* involved in developing them. Importantly, awareness of the ubiquity of grammaticalization processes has also woken us up to the fact that, from a synchronic point of view, the grammatical resources of any language are much more extensive than generally recognized in reference grammars. For instance, as observed by Diewald (2010) for German, multiple processes of auxiliarization of periphrastic verbal expressions have extended the auxiliary systems exponentially, but "in mainstream descriptions of the tense and mood systems… most authors follow the tradition of integrating some periphrastic constructions while excluding others without further mention, let alone convincing arguments for the chosen selection" (Diewald 2010: 29). The importance of *principled criteria* for the identification of grammaticalization paths and their outcomes is also reflected in *theory formation*. Lehmann's (1985) parameters and Hopper's (1991) principles form the solid core of countless case studies, and further theoretical reflections endeavour to grasp the essence and all the implications of grammaticalization in volumes such as Heine, Claudi & Hünnemeyer (1991), Traugott & Heine (1991), Hopper & Traugott (2003 [1993]), Bybee, Perkins & Pagliuca

(1994), Giacolone Ramat & Hopper (1998), Fischer, Rosenbach & Stein (2000), Traugott & Dasher (2002), Wischer & Diewald (2002), Roberts & Roussou (2003), Bisang, Himmelmann & Wiemer (2004), Fischer, Norde & Peridon (2004), van Gelderen (2004, 2011), Brinton & Traugott (2005), Fischer (2007), López-Couso & Seoane (2008), Seoane & López-Couso (2008), Davidse, Vandelanotte & Cuyckens (2010), Stathi, Gehweiler & König (2010), Van linden, Verstraete & Davidse (2010), Traugott & Trousdale (2010), Narrog & Heine (2011).

However, as is the case with many fashionable topics, grammaticalization research risks to become the victim of its own success. In *empirical* studies, grammaticalization, and related processes such as subjectification, are sometimes posited without *systematic application of recognition criteria* (see Norde this volume). If attention is restricted to pragmatic and semantic aspects, without sound formal evidence, there is a danger of vacuity, as cautioned by van Gelderen (2004) and Fischer (2007), amongst others. Another potential weakness is the blanket characterization of complex and composite changes as cases of grammaticalization, without eye for the smaller processes and mechanisms of change of which they consist (Roberts & Roussou 2003, van Gelderen 2011). In this context, the ongoing debate about the role of reanalysis and analogy (e.g. Fischer 2007, 2011; Traugott & Trousdale 2010, Traugott 2011) is a healthy sign of critical sense. So is the increased interest in lexicalization, which shares many features with grammaticalization and is often entwined with it in actual changes (e.g. Wischer 2000; Brinton 2002; Lehmann 2002; Himmelmann 2004; Brinton & Traugott 2005). This necessitates a clearer *delineation of the essence of both grammaticalization and lexicalization*. At the same time, researchers are forced to question their views on the *distinction between grammatical and lexical elements*. Finally, researchers should beware of invoking grammaticalization and other general processes of change too readily as ultimate *explanatory principles*. Instead, they should reflect on what these processes can and cannot explain (Campbell 2001; Abraham 2005, 2010) and meet the challenge of *explaining grammaticalization* itself.

This volume is a collection of contributions by authors from the grammaticalization research tradition, who are aware of the challenges just outlined that are upon them. In confronting these challenges, they go back to basics, to a deepened understanding of the *defining features* (e.g. Brinton, De Mulder & Lamiroy, Diewald & Smirnova, Norde, Ronan, Waltereit). They investigate *sources* and *paths of change* that have been largely overlooked so far and also focus strongly on the target areas, or *outcomes*, of these paths (e.g. Brinton, Diessel, Eckardt, Melis & Flores, Trousdale, Vázquez Rozas & García Salido). Before turning to their main theoretical and descriptive contributions in this volume, we will sketch the general thinking, as well as the different approaches, within the tradition they are situated in.

2.   Definitions of grammaticalization and lexicalization

In the last thirty years, a number of *definitions of grammaticalization* have been given, which highlight different aspects of the process. Despite the refinements and additions offered, many of them ultimately draw on the two seminal, but quite distinct, definitions of Meillet and Kuryłowicz. For Meillet (1912) grammaticalization involved "[*l'*]*attribution du caractère grammatical à un mot jadis autonome*" (the attribution of grammatical character to a previously autonomous word). Kuryłowicz (1965) proposed that "[g]rammaticalization consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from less grammatical to a more grammatical status [...]". Whereas Meillet opposes grammatical character to autonomy, Kuryłowicz contrasts lexical with grammatical status. Up until this day, these two contrasts, appearing intuitively simple, seem to have eluded clear definitions and continue to cloud our views on which processes of change should be considered grammaticalization and which should not.

Thus, many scholars in grammaticalization studies have sought to distinguish *grammaticalization from lexicalization*, the diachronic process giving rise to new lexical items, e.g. Kuryłowicz (1965), Lehmann (1989), Moreno Cabrera (1998), Wischer (2000, 2011), Brinton (2002), Lehmann (2002), Himmelmann (2004), Trousdale (2008a), and the book-length study of Brinton & Traugott (2005) (see also Lightfoot 2011). Himmelmann (2004) has observed that grammaticalization and lexicalization can be defined either as distinct *processes* or in terms of their *outcomes*, i.e. the creation of new grammatical versus lexical items. However, the latter approach can only work if we have distinctive conceptions of grammar and lexicon and this is not straightforward for several types of items. For instance, are derivational morphemes such as the suffix *-ment* in French *clairement*, grammatical formatives even though they result in the creation of new lexical items (Himmelmann 2004; Wischer 2011)? Should complex prepositions and conjunctions such as *instead of*, and *all the same*, be classified as grammar because the new words do not belong to the major categories verb, noun, adjective or are they merely new lexicon or maybe both (see e.g. Ramat 1992: 553–554; Schwenter & Traugott 1995; Tabor & Traugott 1998: 244–253; Brinton 2002: 69–70; Lehmann 2002: 9–10; Traugott 2003a: 636; Brinton & Traugott 2005: 64–65)?

Recently, Boye & Harder (2009, 2012) have formulated a proposal to *distinctively define lexical from grammatical items*, and by extension lexicalization from grammaticalization, by correlating their different discourse status with distinct formal behaviour. They propose to define grammar as "coded secondariness" (Boye & Harder 2009: 33). The corresponding concepts used to identify lexical items are those of 'addressability' and 'primariness'. Boye & Harder (2007) first applied these notions to distinguish lexical and grammatical uses of complement-taking

predicates such as *I think*. In their lexical use, they describe an instance of thinking, e.g. *Other days <u>I think</u> "It's just not fair"* (Vandelanotte 2009: 296). In their grammaticalized use, they express evidential or modal qualifications of an assertion, e.g. *Commander Dalgliesh writes poetry, I think* (Hopper & Traugott 2003: 208). Hopper & Traugott (2003: 207–209) had treated the process of change leading from lexical to grammatical uses as nucleus-margin reversal. According to Hopper & Traugott (2003: 208), formal changes that may accompany this grammaticalization process are: loss of complementizer *that*, less stress on the parenthetical than on the main verb, and flexibility of placement of the parenthetical. These formal properties, however, do not appear to systematically distinguish lexical from grammatical uses, as, for instance, grammaticalized uses may still have complementizer *that* (Shank, Plevoets & Cuyckens forthc.). In proposing the functional-formal notions of addressability and coded secondariness, central concerns of Boye & Harder (2007) are to "maintain [...] the role of structural [...] subordination" (2007: 569), while developing linguistic tests that systematically pick up on the different discourse status of the elements in question. Information given in discourse may be the primary predication, i.e. the most important information of an utterance, or a secondary predication, which serves only to support the primary one. The criterion to distinguish between these two readings is 'addressability'. If a clause with complement-taking predicate is the primary point of the utterance, it will be 'addressable' by such linguistic tests as a *really*-query (*Do you really think*…) and a tag or *do*-probe (*Do you?*). If, by contrast, the clause with complement-taking predicate has the grammatical value of qualifying the following clause, which forms the main assertion, it is the latter which will allow *really*-queries, tags and *do*-probes. Qualifying *I think* resists these tests because it is not addressable as the main point of the utterance. It is, or has become, 'secondary' in the discourse in that it functions, as is typical of grammatical elements, as an operator or modifier of the proposition.

Boye & Harder (2012) extend non-addressability and coded secondariness to all grammatical and grammaticalized elements. Elements with grammatical status are generally characterized by their 'ancillary' status vis-à-vis other linguistic expressions and by secondary discursive status. Grammaticalization is the change that gives rise to such expressions and is "functionally motivated by predominant use [...] of elements in situations where they have such secondary status" (Boye & Harder 2009: 32). Non-addressability and secondariness characterize a grammatical element independently from process features such as entrenchment and provide a tool to assess the grammatical status of each individual use. At this point, Boye & Harder have applied their analysis only to the characterization of grammaticalization. It will be interesting to see whether their proposals will allow them to also offer a principled characterization of the process of lexicalization in the future.

An example of what Himmelmann (2004) referred to as the *process-approach* towards the definitions of lexicalization and grammaticalization is developed in Brinton & Traugott (2005). They point out that conceiving of grammaticalization and lexicalization in terms of their outcomes leads to another complication, viz. the status of *degrammaticalization*. As degrammaticalization involves the development from grammatical to lexical material, it should in an outcome-approach be considered a subtype of lexicalization, see amongst others Kuryłowicz (1975 [1965]), Lehmann (1989), Ramat (1992, 2001), Hagège (1993), Giacalone Ramat (1998), Moreno Cabrera (1998), Wischer (2000), Brinton (2002), Lehmann (2002), Van der Auwera (2002), Himmelmann (2004), Norde (2009, 2011), Brinton (this volume). In their attempt to disentangle the three different processes, Brinton & Traugott (2005) argue that the basis for the conflicting analyses lies in the problematic definition of lexicalization. They hold that the broad definition 'adoption of an item in the lexicon' in fact encompasses grammaticalization, degrammaticalization as well as lexicalization. Instead, they propose a new analysis in terms of shared and distinguishing features: grammaticalization is, in contrast to lexicalization, constrained by a number of specific processes, such as decategorialization, bleaching, subjectification, increased frequency and productivity, and typological generalization (Brinton & Traugott 2005: 145). Norde (2009, this volume) proposes a similar process-oriented definition of degrammaticalization.

These process-oriented definitions chime in with a conception of grammaticalization as a *composite* process. As Diewald & Smirnova (2010: 98) put it, grammaticalization is epiphenomenal, in the sense that it is of a "composite nature", consisting of a variety of member processes. Moreover, as argued by several scholars, these component processes are not unique to grammaticalization. Neither in its working nor its motivations is grammaticalization a single process. Traugott (1989) holds that grammaticalization is not distinct from other types of semantic change, and results from a small number of broader tendencies that govern both grammatical and lexical change. Bybee (2010: 112) notes that as grammaticalization is caused by "domain-general processes", i.e. cognitive processes not restricted to language, it is inherently epiphenomenal. In accordance with these observations, Haspelmath (1999: 1043) proffers that the view that grammaticalization is conceived of as "a distinct process," "an encapsulated phenomenon, governed by its own set of laws," has been attributed wrongly to mainstream grammaticalization studies. Lehmann (2002 [1982]: vii) has always stressed that grammaticalization involves a number of phonological, morphological, syntactic, and semantic processes. These may, but need not, constitute grammaticalization. According to Traugott & Heine (1991: 9), reanalysis, analogy, metaphor and metonymy are all "mechanisms that make change possible, but none are restricted to grammaticalization". Is Joseph (2001: 22) right then in claiming that the development of

grammatical forms can be described without once making reference to 'grammaticalization', relying on well-understood concepts such as analogy or phonological change? Diewald & Smirnova (2010: 98) reply to this often-raised question:

> It is not enough to know the individual mechanisms, because none of them is confined to grammaticalization. They can all be involved in other processes of language change. Only in their interaction do they make up a gradual and directed path that leads to the evolution of grammatical forms. […] Consequently, the distinctive and unique feature of grammaticalization is generally seen in its particular combination and serialization of several processes and stages, which – among other things – are reflected in grammaticalization scales and paths and complex scenarios of successive contexts and constructions.

Grammaticalization, then, is a generalization that overarches the convergence of certain processes towards a common goal. It is the task of grammaticalization research to *identify the combinations of processes* that make up cases of grammaticalization as well as to *identify its distinctive outcomes*.

3.   Recognition criteria of grammaticalization

From the early days of grammaticalization research on, scholars have tried to define the component processes underlying grammaticalization, in order to apply them as *recognition criteria* to actual case studies of language change. After thirty years, Lehmann (2002 [1982]: vii) still stands as an authoritative, though not unchallenged (see below), definition of the basic parameters of grammaticalization. In his view, grammaticalization is a composite process in which an unconstrained lexical expression changes into a grammatical formative subject to the rules of grammar. Even though this definition is reminiscent of Kuryłowicz, the parameters that Lehmann proposes characterize grammaticalization elaborate Meillet's idea of grammaticalization as loss of autonomy. Grammaticalization affects the degree of freedom with which a linguistic sign can be used in terms of three principal aspects: weight, cohesion, and variability (Lehmann 1985: 3). As all linguistic signs function on both a paradigmatic and a syntagmatic axis, the three aspects do too. On the paradigmatic axis, weight encompasses the *integrity* of a sign, i.e. its semantic, phonological and morphological size. On this axis, cohesion stands for *paradigmaticity*, which is "the degree to which [a sign] enters a paradigm, is integrated into it and dependent on it" (Lehmann 2002 [1982]: 110). *Paradigmatic variability*, finally, captures the possibility of using one sign in place of another. On the syntagmatic axis, weight is the structural *scope* of a sign, "the structural size of the construction it helps to form […] (which, for

many purposes, may be regarded as its constituent structure level)" (Lehmann 2002 [1982]: 128). Syntagmatic cohesion is *bondedness*, the degree to which the sign is connected to other signs in the same syntagm (which may vary from juxtaposition to cliticization and affixation). Finally, *syntagmatic variability* is the ease with which a sign can take up different positions relative to other constituents that it has a relation to. This yields six parameters which provide "operational criteria for the establishment and justification of special grammaticalization scales" (Lehmann 1985: 4), given in Table 1.

Table 1. Lehmann's parameters

	Paradigmatic	**Syntagmatic**
Weight	Integrity	Scope
Cohesion	Paradigmaticity	Bondedness
Variability	Substitutability	Positional flexibility

As these parameters are only properties of signs, they identify a 'static' degree of grammaticalization. To capture the diachronic evolution of signs, the parameters are dynamicized into processes (Lehmann 2002 [1982]: 111) (see Table 2). A loss of semantic and phonological integrity is called *attrition* – other terms are bleaching and erosion. An increase in paradigmaticity, *paradigmaticization*, means that grammatical formatives are integrated into increasingly small, homogeneous paradigms (Lehmann 1985: 4).[1] The process of *obligatorification*, a loss of paradigmatic variability, is related to paradigmaticization in that it subjects the choice in the paradigm to grammatical rules and makes a choice from the paradigm increasingly obligatory, which drastically expands the distribution of the grammaticalized forms in it. The shrinkage of scope is captured as *condensation*. An increase in bondedness, *coalescence*, is primarily to be viewed as a structural phenomenon which "leads from juxtaposition via cliticization, agglutination and fusion to symbolic alternation" (Lehmann 1985: 5). This may involve a transformation of syntactic boundaries to morphological boundaries and may lead to the disappearance of these boundaries, as in OHG *dia wîla* 'in that time span' > MHG *diweil* 'during' > NHG *weil* 'during'. The initial phase of coalescence does not consist of a noticeable change in the construction, but of alternative ways of seeing it, i.e. reanalysis (Lehmann 2002: 4), e.g. *I am going to be married* as either *going/to be married* or

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1.   Diewald & Smirnova (2010: 156–157) specify that if forms are integrated into an existing paradigm the term "renovation" or "renewal" is used, but if a new paradigm of forms arises the process is called "innovation".

going to/be married. Finally, a loss of syntagmatic variability or mobility is called *fixation*.

Table 2. Lehmann's dynamicized parameters

	Paradigmatic	Syntagmatic
Weight	Attrition	Condensation
Cohesion	Paradigmaticization	Fusion
Variability	Obligatorification	Fixation

Although their wide application testifies to the merit of Lehmann's parameters as recognition criteria for grammaticalization, several aspects of Lehmann's analysis have given rise to critical reflections and refinements. Firstly, some of the *individual parameters* have come under discussion. Most famously, the idea of scope reduction has been challenged on the basis of a wide range of descriptive studies, including studies of modals, discourse markers, etc. Authors such as Diewald (1997: 23, 1999: 21), Nordlinger & Traugott (1997), Tabor & Traugott (1998) and Roberts & Roussou (2003), have argued that grammaticalization typically goes together with scope[2] expansion, as witnessed for example in the development from deontic to epistemic modals: the former have only the predicate in their scope, but the latter the whole utterance. Another parameter that has been subject to debate is obligatorification. Diewald (1997) has pointed out that there are cases where the grammaticalizing form does not become obligatory. For instance, modal verbs do not have to be expressed in every utterance, whereas mood does. Therefore, Diewald & Smirnova (2010: 99–100) make a distinction between 'language internal obligatoriness' and 'communicative obligatoriness'. The first kind holds when a form is 100% obligatory and its placement is governed by grammatical rules – this is the kind captured in Lehmann's parameter. The second kind does not mean that a form is required by the grammar, but that it is required by the speaker's communicative intentions. If, for example, a speaker wants to put the focus on the patient or beneficiary,

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2.   It can be noted that this notion of scope situates itself more at the discourse level, whereas Lehmann's pertains to constituent structure. Looking strictly at constituent structure, Fischer (2010: 24–30) has argued that the shift from deontic to epistemic modality in English did not at first involve scope expansion. Epistemic readings appeared in impersonal clauses such as *mæg gewurðan þæt* + proposition ('it may happen that'), in which the modal's immediate scope was over an infinitive, just as in the deontic constructions. The proposition being - indirectly - modified occurs at a lower structural level, viz. as a complement of the copular verb.

he will have to use one of two passive strategies in German, but the passive does not have to occur obligatorily in a sentence.

Lehmann's formalization of the parameters of grammaticalization can also be linked to three general areas of debate in grammaticalization research. Firstly, several linguists e.g. Sweetser (1990), Heine (1993), Heine, Claudi & Hünnemeyer (1991) and most prominently Traugott (1989, 2003b, 2010), Traugott & König (1991), Hopper & Traugott (1993 [2003]), Traugott & Dasher (2002), have criticized the minor *role assigned to semantic change* in Lehmann's parameters. They argue that semantic change in grammaticalization cannot be conceived as mere loss of semantic content. Rather, loss of descriptive content is counterbalanced by a gain in pragmatic and procedural functionality that the item did not have before. Traugott & König (1991: 190–191) pointed out that it was precisely because grammaticalization was prototypically seen as a loss that it took some time for the relevance of pragmatics to be recognized, also in the motivations for the process (see below). Grammaticalization begins when the original coded meaning is enriched with pragmatic values, the stage Traugott (1989) refers to as 'pragmatic strengthening'. For instance, in specific contexts a *bit*, which literally meant 'a bite', came to be associated with the invited pragmatic inference of 'small quantity'. In a following stage, the purely scalar quantitative meaning of 'little' came to be conventionally coded by the form a *bit of*. It is with the establishment of this new form-meaning pair that we can speak of grammaticalization (Traugott 2010).[3] In this model grammaticalization thus starts off with context-induced semantic change. The general applicability of this model has been questioned by other authors. Even though formal change characteristically lags behind function change, function change may also be a reaction to structural change (Newmeyer 1998: 248–251) or a result of form-based analogy (Heath 1998; Fischer 2007: 123–124).

The *mechanisms of context-induced semantic change* were further developed by, amongst others, Heine (1992, 2002) and Diewald (2002, 2006, 2008; Diewald & Ferraresi 2008). Heine (1992, 1993) proposed that change in grammaticalization proceeds along three stages in an 'overlap' model. A first stage in which the grammaticalizing item has its original meaning (A), a second stage in which it has both its original meaning (A) and a new grammaticalized meaning (B), and

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3.   The focus on the semantics of grammaticalization has givenrise to a fruitful paradigm in grammaticalization studies focusing on more specific types of semantic change including most prominently subjectification and intersubjectification (e.g. Traugott 1989, 2003b, 2010; Stein & Wright 1995; Traugott & Dasher 2002; Athanasiadou, Costas & Cornillie 2006; Davidse, Vandelanotte & Cuyckens 2010).

finally a stage in which the grammaticalized meaning (B) is the only interpretation possible. This results in a chain-like structure: A > A/B > B.[4] As set out by Heine, the stages can be used as analytic tools for the detection of (different stages) of grammaticalization in the synchronic form of the language. Later, this model was further developed by Heine (2002) and by Diewald (2002, 2006, 2008; Diewald & Ferraresi 2008) into two similar but not wholly equivalent models, in which the stages are defined as types of 'context', allowing the analyst to detect ongoing processes of grammaticalization and to establish the degree to which the processes have advanced at a particular time in a language. Diewald & Smirnova (this volume) argue that the stages of grammaticalization they proposed earlier have to be completed by a fourth, new, stage, viz. paradigmatic integration.

Secondly, Lehmann conceptualized grammaticalization as a process with both a synchronic and diachronic side. From a diachronic perspective, grammaticalization is a process of change turning "lexemes into grammatical formatives and mak[ing] grammatical formatives still more grammatical", whereas on the synchronic side it is a "principle according to which subcategories of a given grammatical category may be ordered" (Lehmann 1985: 7). His parameters are devised to reflect this dual perspective: on the one hand there are parameters that serve to describe a more or less 'stative' synchronic distribution of forms, on the other hand these parameters are dynamicized into processes that chart the historical evolution of the forms. In this view, the synchronic and the diachronic perspectives are not mutually exclusive, but complementary. Grammaticalization can be studied both diachronically, by comparison of data from different language stages, and synchronically, by investigation of the current functional variation. Other studies, e.g. Traugott & Heine (1991), Hopper & Traugott (1993 [2003]), have emphasized the *interplay between the diachronic and synchronic sides of grammaticalization*, and have connected ongoing change with synchronic variation. The core of this idea was first formulated by Hopper (1991). Hopper argued that the parameters proposed by Lehmann (1982, 1985) could only detect grammaticalization in an advanced stage. In order to remedy this, he put forward five complementary principles indicative of early-stage grammaticalization (but not exclusive to grammaticalization): layering, divergence, specialization, persistence and decategorialization. The first two principles introduce the idea that diachronic change can lead to synchronic variation. The first principle, *layering*, invokes the notion of a synchronic domain

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4.   It has been clarified by Heine and many others, e.g. Hopper & Traugott (2003: 121–122) that a development does not have to proceed unto the last stage (B only), but that a language can maintain stage A/B or even loose the B meaning, de facto resulting in a stage with only A again.

within which "the older layers […] may remain to coexist with and interact with the newer layers" (Hopper 1991: 23), thus "crowding the field" (Hopper 1996: 230) with different forms whose meaning, style or social status subtly differ. The second principle, *divergence* (called 'split' by Heine & Reh 1984: 57–59), captures the observation that, when a form grammaticalizes, its lexical use may continue to exist and undergo further change like any other lexeme, resulting in functionally different but etymologically related forms. Hopper (1991: 24) noted that divergence can be seen as a special case of layering, the latter involving different degrees of grammaticalization of forms in the same functional domain and the former of one form in various contexts.[5]

With the arrival of large digitalized historical corpora in the 1990s, descriptive studies of grammaticalization showed that synchronic variation as a result of grammaticalization was not just restricted to one form with multiple meanings or one meaning with multiple codings. In addition, variation was shown to apply to examples on a one-by-one basis. That is, grammaticalization processes spread gradually through individual speakers in the language community and, even more significantly, they spread gradually through individual speaker's grammars, who may use the grammaticalized and the original use alongside each other in different contexts (Andersen 2001). Grammaticalization was revealed to be to a large extent a matter of frequency, and to be subject to usage phenomena such as frequency-driven entrenchment and routinization (amongst others Haimann 1994; Bybee & Hopper 2001; Bybee 2003, 2007, 2010, 2011; see Mair 2011 for further discussion of the contributions of corpus linguistics to grammaticalization).

Synchronic study of grammaticalization processes brought yet another aspect to the fore. Synchronic variation in grammaticalization can also involve category indeterminacy or mixed category membership, that is, in mid-grammaticalization the grammaticalizing item can display seemingly irreconcilable characteristics associated with both its original and its new, grammatical uses. This phenomenon has been referred to as synchronic gradience (Denison 2001, 2006, 2010; Aarts 2007; Traugott & Trousdale 2010). It had been acknowledged for some time that form and meaning develop independently in grammaticalization (see Section 3 on discussion whether semantic or formal change drives grammaticalization) and that, synchronically viewed, an item can have a new meaning, yet retain the formal features of its older use. However, in the new millennium the mismatch was shown to be more subtle as items were argued to be subject to step-wise de-and

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5.   Hopper & Traugott (1993 [2003]) in fact use the term "layering" to refer to Hopper's (1991) earlier 'divergence'.

recategorialization affecting individual features (e.g. Traugott 2008a, 2008b; Fried 2008; van Gelderen 2008, 2011; Roberts 2010). Grammaticalization is hence a gradual process, not only in terms of its spread, but also in its impact on the grammaticalizing item. *Synchronic gradience* can be the result of *diachronic gradualness* (Traugott & Trousdale 2010). This type of gradualness challenges the divide between language system and language use in that the 'relative indeterminacy' of the system is taken to be caused by gradual changes in use, and use in general is taken to structure the system, not vice versa.

The analysis of synchronic gradience and diachronic gradualness is closely connected to another recent tendency in grammaticalization studies, i.e. the application of *Construction Grammar models* to language change and grammaticalization (see e.g. Noël 2007; Traugott 2008a, 2008b; Trousdale 2008a, 2008b, 2010; Fried 2009, 2010; Gisborne & Patten 2011; Traugott & Trousdale in preparation). One of the central tenets of Construction Grammar is that the primary units of grammar are grammatical constructions combining a form and a meaning component, which are symbolically linked. Within each component, more fine-grained distinctions are made between e.g. syntactic, morphological and phonological features of the item (form) and semantic, pragmatic and discourse-functional properties (meaning). As shown by Traugott (2008a) and Fried (2009, 2010), this detailed representation of different aspects of the linguistic item is particularly suited to model the incremental promotion and demotion of features in the gradual grammaticalization process.

The third important point of discussion concerns the contrast that has been pointed out by Traugott & Heine (1991:1) and Hopper (1996:217) between a more narrow, *structural-semantic*, view of grammaticalization, and a broader, *discourse-pragmatic*, view:

> The first involves etymology and the taxonomy of possible changes in language, in which semantic and cognitive accounts of words and categories of words are considered to explain the changes. The second involves the discourse contexts within which grammaticalization occurs.   (Hopper 1996:217)

In the Lehmannian structural-semantic view, obligatorification and paradigmatization are the prime determinants of grammaticalization and are an "abstract high-level criterion for defining the target area of grammaticalization" (Diewald & Smirnova 2010:99). They are sufficient but not necessary indications of grammaticalization, along with the progressive loss of lexical semantics and morphosyntactic and phonological traits (Diewald & Smirnova 2010:99–104). The discourse-pragmatic conception focuses on the role of the discourse context to account for the changes, as reflected in this definition by Traugott & Dasher (2002:83):

> [Grammaticalization] is more properly conceived as the change whereby lexical material in highly constrained pragmatic and morphosyntactic contexts is assigned functional category status, and where the lexical meaning of an item is assigned constructional meaning.

As observed by Hopper (1996: 232), "it may be said that they complement each other in that the first [structural approach] explains *what* is grammaticalized and the second [pragmatic approach] *how* this occurs". In the first decade of the twentieth century, the idea that elements grammaticalize in context became the central tenet of several articles such as Himmelmann (2004), Traugott (2003a) and was generally acknowledged and incorporated into existing definitions of grammaticalization.[6] The role of the context in triggering and furthering grammaticalization was spelt out in the models of change proposed by Heine (2002) and Diewald (2002, 2006, 2008) (see above).

4.   Outcomes and sources of grammaticalization

So far, this introduction has focused on definitions and recognition criteria of grammaticalization versus other processes of change. These elements have also been the main focal points in grammaticalization studies in the past thirty years. The *sources of grammaticalization* processes, by contrast, have been studied in a less systematic way. In the early days of grammaticalization studies considerable attention went to the fact that certain grammatical meanings cross-linguistically develop out of lexical items within the same restricted range of meanings. Hence, *paths of grammaticalization* can be defined *in terms of their semantic sources and outcomes* (Heine 1992). For example, Heine, Claudi & Hünnemeyer (1991) studied paths of change which build on metaphors, i.e. the representation of a "target domain" by means of a "source domain", based on some perceived or functional similarity between them (Heine, Claudi & Hünnemeyer 1991: 29). For instance, space is used to code time (and time in turn to code cause) and physical objects are used to represent abstract ones. This observation leads to a metaphorical scale of increasing abstractness, which entails that in grammaticalization the notions to the left of the arrow will be used to code those on the right (Heine, Claudi & Hünnemeyer 1991: 48):

<div align="center">person > object > activity > space > time > quality</div>

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6.   Lehmann (2002: 7) recognized the importance of context when he reformulated his parameters as affecting the "autonomy of a linguistic sign in a certain construction".

In a similar vein, Bybee, Perkins & Pagliuca (2004) proposed, for instance, three possible sources for the development of future tense markers, i.e. verbs meaning 'come to' (de-venitive schema), 'go to' (de-allative schema) and 'want' (volition schema). The detection of such paths culminated in Heine & Kuteva's (2002) *World Lexicon of Grammaticalization*, which offers a typology of cross-linguistic paths of grammaticalization. Ronan's contribution in this volume about Irish and Welsh tense and aspect markers deriving from spatial and temporal prepositions situates itself within this tradition.

Other aspects of the items serving as input for grammaticalization have remained under the radar, including one particularly elusive issue stemming from Kuryłowicz' definition. His definition pertains to the development (a) from lexical to grammatical as well as (b) from less to more grammatical (see Section 2). To capture the distinct processes, the terms "primary" versus *"secondary" grammaticalization* were coined (Givón 1991; Hopper & Traugott 1993). Givón (1991: 305) first used the term secondary grammaticalization in the context of markers of one morphosyntactic category shifting to another, e.g. from aspect markers to tense morphemes. Taking a primarily semantic perspective, Hopper & Traugott (2003: 91) define secondary grammaticalization as the change from one grammatical meaning to a more grammatical one, such as the development from temporal to concessive conjunctive meaning of *while*. Most case studies of grammaticalization have focused on cases of primary grammaticalization. The exact nature of secondary grammaticalization and its differences from primary grammaticalization is uncharted territory and several key questions, e.g. how is one to assess that one meaning is "more" grammatical than another (Brinton & Traugott 2005: 147–150), remain largely unanswered (see Breban 2010, 2012; Waltereit this volume; Norde this volume). Even more importantly, as noted by Diessel (this volume) the term *secondary* carries the presupposition that all primary grammaticalization processes start from a lexical source, either directly or via another, earlier grammatical meaning. Diessel (2006, this volume) challenges this presupposition because demonstratives, which crosslinguistically form the source of multiple grammaticalization paths, cannot be related to a lexical source.

Discussions of the formal aspects of the items serving as input for grammaticalization are found scattered among a wide range of articles. However, no attempt has been made so far to set up a large-scale typology in the same way as the Heine & Kuteva's *World Lexicon of Grammaticalization* has done for semantic sources. In the foundational definitions of Meillet and Kuryłowicz (see Section 2), the sources of grammaticalization are identified as a word ("mot" Meillet) or a morpheme (Kuryłowicz). That is, they propose that grammaticalization affects single items. This idea underlies most of the early studies of grammaticalization. It was not until the 1990s that two important observations were added. Firstly, as discussed earlier,

linguistic items were argued to grammaticalize *in context* rather than *in isolation*. Secondly, several case-studies described processes of change affecting strings of words as cases of grammaticalization, e.g. the development of complex conjunctive adverbials such as *all the same*, *at the same time*, *in fact*, and complex prepositions such as *instead of*, *while*, (König 1985; Traugott & König 1991; Schwenter & Traugott 1995; Hoffmann 2006). Later descriptive work included more and more instances of phrases grammaticalizing into complex constructions, e.g. complex quantifiers such as *a lot of* (Brems 2003), complex degree modifiers such as *a bit of* (Traugott 2008a, 2008b), reflexives such as *each other* (Haas 2007), as well as semi-filled constructions such as *that is X for* you (Gonzálvez-García 2007), to name a few. This fed into the debate whether similar developments involving the creation of a new item out of originally separate items should be considered as cases of grammaticalization or lexicalization or both (see Section 2).

The question about the *delimitation of grammaticalization* on the basis of its formal input and output has not only been asked in relation to complex or semi-filled constructions, but also regarding larger types of structure. For example, Meillet (1912: 147–148) ended his seminal paper by suggesting that the grammatical fixing of word order from Latin to modern French is an example of grammaticalization. Another example is Givón's (1979) cline which not only includes morphologization, but also syntactization (change from discourse to syntax).

discourse > syntax > morphology > morphophonemics > zero (Givón 1979: 209)

Over the years several studies have proposed that the development of, for example, verb second is an instance of grammaticalization. More recently, Lehmann (2008) has argued that information structure can be both the input and the output of grammaticalization. This idea has been developed by, for instance, Patten (2010) who analyses the development of the *it*-cleft construction. With the introduction of Construction Grammar approaches to grammaticalization, questions concerning limits and delineation of grammaticalization become even more urgent: given that any form-meaning pairing is considered a construction, as popularized in the by-now famous adage "it's constructions all the way down" (Goldberg 2006: 18), we need to ask whether the formal range of constructions that can serve as input or output for grammaticalization/grammatical constructionalization is unrestrained?

5.   Motivations of grammaticalization

One last question that has always intrigued grammaticalization scholars is *why* it occurs. Why is there a specific set of processes that give rise to new grammatical

formatives? In asking this question, it is recognized that grammaticalization itself is not an explanatory mechanism, but has itself to be explained. In the course of time, several explanations have been proposed.

Older research tended to adopt a *causal explanation of grammaticalization*, typically using the imagery of so-called 'push' and 'pull chains'. A construction B was said to grammaticalize either to fill a gap left by the grammaticalization of a construction A or its grammaticalization was said to be the reason for the loss of A. According to Lehmann (1985:9), these explanations miss the mark, because they do not explain why a system that functions today could not function in the same way tomorrow; in other words, they fail to explain why change occurs. A more tenable position, he proposes, is to see constructions A and B as being in mutual harmony. Diewald (1997:109–110) observes that many languages have synchronically competing strategies for instance for the expression of the future tense. Given a causal explanation one would expect the older construction to vanish, so that it could be replaced, yet this is not always the case. A similar non-causal interpretation of chains or cycles of grammaticalization from a formalist perspective is proposed in the works by van Gelderen (especially van Gelderen 2011) and Abraham (2010).

Another approach explains grammaticalization by means of *typological universals* such as Economy and Clarity. Most famous are the *Bequemlichkeitstrieb* 'urge towards ease' and the *Deutlichkeitstrieb* 'urge towards clarity' of von der Gabelentz (1901 [1891]:256). People's desire towards ease of communication leads to attrition and erosion of forms, but the fact that the meaning of these forms must still be expressed leads to the formation of new communicative strategies. In a comparable vein, Langacker (1977:105), speaks of 'signal simplicity' and 'perceptual optimality'. Within the generative tradition that locates languages change in language acquisition, Roberts & Roussou (2003) and van Gelderen (2004, 2011) propose that change is not merely the result of transmission errors, but instead is driven by a design preference for structure simplification. According to Roberts & Roussou (2003), upward reanalysis, i.e. realization in a higher position in structure, can trigger grammaticalization. Focusing on lexical rather than derivational characteristics, van Gelderen (2008, 2011) proposes that reanalyses that can be responsible for certain grammaticalizations are motivated by Feature Economy.

Lehmann (1985) argues that in order to explain grammaticalization, we must see the language system not as given, but as created by *language activity*. Language activity is an unrestricted creation of interpersonally available meanings or signs, but it occurs to solve a set of ever-recurring problems, and is therefore systematic. As language activity is interpersonal and speakers are born into a certain tradition, this system will be largely similar, but not necessarily identical, across speakers. On the one hand speakers have the freedom to be creative, on the other they are restricted by rules and traditions. Within this rule-governed creativity, "[e]very speaker wants

to give the fullest possible expression to what he means" (Lehmann 1985: 10). Grammaticalization is ultimately driven by the speakers' wish for more expressivity.

The notion of *expressivity* as motivation of grammaticalization in the context of a language community has been further elaborated by Haspelmath (1999). Building on Keller (1990 [1994]), he proposes to view grammaticalization (and language change in general) as an invisible-hand process, which results from the individual actions of speakers realizing similar intentions. He amongst other things identifies as set of Maxims that guide language change. The final and most important maxim is Extravagance (Haspelmath's term for expressivity), which states that you should talk in such a way that you are noticed. However, as pointed out by amongst others Waltereit (this volume), the need for expressivity is less easily conceived for grammatical items than for lexical ones.

Another recent proposal which places the origin of grammaticalization in language use is Croft (2010). Croft suggests that morphosyntactic change, including grammaticalization, is triggered by *natural variation* of verbalization in discourse. Morphosyntactic change, including grammaticalization, is the distillization of essentially arbitrary speaker choice when it comes to verbalizing the same piece of experience. Grammaticalization is hence the result of the inherent variability of speech, rather than of singular events of innovative language use. Croft's proposal captures the fact that grammaticalization is a ubiquitous and frequent phenomenon – it happens all the time in ordinary speech, rather than being rare, as the expressivity – and rhetoric-based accounts of grammaticalization would lead one to believe. This proposal chimes in with many of the usage-based accounts that have emphasized the determining role of frequency and routinization for grammaticalization.

Finally, a recent set of papers (including Traugott 2008c; Waltereit & Detges 2008; Schwenter & Waltereit 2010; Couper-Kuhlen 2011; Waltereit 2011, this volume) explore the idea that grammaticalization can be motivated by another aspect of language use, i.e. *language as interaction*. They propose that several types of grammatical items, such as discourse markers, develop out of discursive interaction strategies. Again these studies emphasize the role of routinization and the procedural character of the ensuing constructions.

6.   Contributions to this volume

With this review of the tradition within which this volume is situated, we have set the scene for a discussion of the contributions it makes. The volume is divided into two parts, a more theoretical and a more descriptive one. The first, *theoretical*, part deals with "New theoretical perspectives on grammaticalization and other processes of change: sources and motivations, recognition criteria and outcomes".

The first two contributions in this part deal with the *origins* of grammaticalization from two different perspectives. *Holger Diessel* makes an important theoretical point with regard to the *sources* of grammaticalization. He challenges the standard assumption in much of current grammaticalization theory that *all* grammatical markers are based on content words. The main challenge is formed by demonstratives, which provide a frequent historical source of definite articles, third person pronouns, relative pronouns, complementizers, conjunctive adverbs, copulas, focus markers and other grammatical markers, yet cannot be related to a lexical source. At the same time, the communicative function of demonstratives differs from that of genuine grammatical markers, which serve language-internal, organizational functions, whereas demonstratives are commonly used with reference to things and situations in the outside world. Diessel therefore proposes to view demonstratives as a unique source class for the development of grammatical markers. While currently an isolated position in the grammaticalization literature, this view is found in the work of earlier historical linguists such as Wegener (1885) and Brugmann (1904), which inspired Bühler's (1934) more psychologically-oriented work. It is on the latter that Diessel's contribution focuses. In Bühler's organon model of communication, speakers using deictic expressions, often with added pointing gestures, actively guide the addressee's search for a particular referent in perception. This led Bühler to develop his two-field theory, which identifies the two basic types of linguistic signs as pointing and naming. Pointing, or deictic, words belong to the deictic field, the physical or verbal context of the speech event. Lexical items belong to the symbolic, or the synsemantic environment of relations to other lexemes. Bühler did not posit a separate class of grammatical markers, because he saw their (communicative) function as relating both to the deictic and symbolic fields. With regard to demonstratives, Bühler argued that 'pure deictic signals' are particles, while demonstrative pronouns and articles exhibit features of both the deictic and symbolic fields, serving pointing functions like deictic particles but exhibiting also semantic and morphosyntactic features like symbolic terms. For the diachronic development of demonstratives into grammatical morphemes, the crucial step is the emergence of *anaphoric* uses. These involve pointing specific to language, with a 'disembodied' origo, located in the unfolding stream of words and sentences. They direct the addressee's attention backwards and forwards along the speech stream, creating links between non-adjacent elements. Here lies the diachronic functional basis for grammatical elements such as relative pronouns, definite articles and conjunctions and conjunctive adverbs, which he views as syntactic pointing words. From the perspective of Bühler's two-field theory, Diessel points out that, while there are grammatical morphemes that may originate from *both* deictics and symbols, e.g. sentence connectives and copulas, some of the most frequent grammatical

markers derive exclusively from *either* symbols, e.g. adpositions, *or* deictics, e.g. definite article and third person pronoun singular.

In the next contribution *Richard Waltereit* considers the basic question *why* grammaticalization and language change more generally *occur in the first place*, when there is no apparent need for it, since any language, including its grammar, is perfectly serviceable at any given time. This 'paradox of language change' (Roberts & Roussou 2003) has been tackled in both formal and functional approaches. In generative grammar, change has tended to be located in first language acquisition, which according to van Gelderen (2004) is driven by a design preference for structural simplification. In the functional-cognitive camp, Croft (2010) has recently challenged the idea of deliberate departure from linguistic conventions. Instead, he sees diachronic change as driven by synchronic morphosyntactic variability. Against this, Waltereit holds on to the idea of change as non-abidance, or 'tweaking' (Keller 1994 [1990]), of the current conventions of language, i.e. the use of forms not for their actual meaning but for perceived advantages in communication. Waltereit's basic claim is that grammaticalization, and related types of change, arise as a side-effect of strategic, rhetorical language use by speakers. The outcome of these processes is determined by the strategy for which the underlying lexical items are used, rather than by the lexical content of these items or by pre-set characteristics of types of change. He illustrates this with the three grammatical uses that derived from lexical *bien* in French: modal particle, concessive conjunction and discourse particle. In each case, he argues, the scope of the grammaticalized use can be related to specific strategic uses that were still ideational but in which *bien* had the tweaked communicative function and scope that led to the grammatical uses.

Waltereit argues that this approach to grammaticalization and other changes sheds new light on persistence, subjectification and pragmaticalization. Lexical-semantic persistence links grammaticalized meanings to the lexical source from which they developed. Looked at pragmatically, lexical source meanings have a degree of suitability to be used for particular strategies, but there is nothing 'hard-wired' to change in the lexical meanings as such – given suitable circumstances, meanings may be pragmatically linked in a way that would seem unlikely in the abstract. Subjectification, or the shift from ideational to speaker-centred, interactional meaning, is a by-product of metonymic meaning change motivated by argumentation. The relation between the source and the outcome is characterized by pragmatic affinities such as similarities between the ideational effect of the underlying lexical meaning and its interactional purpose in the case of subjectification. Waltereit also notes that while metonymy-based primary grammaticalization incorporates subjectification as an integral part, this is less so with secondary grammaticalization, the 'un-marking' of marked subjective

uses, which tends to involve loss of subjectivity. As to the controversial distinction between grammaticalization and pragmaticalization, Waltereit proposes that, rather than being distinct historical trajectories 'out there', they reflect the widely different diachronic trajectories source items may follow, motivated by similarities between bridging contexts and target uses at different levels of abstraction. Waltereit concludes that high-level generalizations such as subjectification, pragmaticalization and persistence do not become obsolete under his approach but they need to be complemented with lower-level generalizations about the rhetorical strategies that are driving them.

The next two contributions of Part 1 focus on the *recognition criteria* of grammaticalization and related changes. *Muriel Norde*'s contribution focuses on the recognition criteria of the hitherto neglected phenomenon of *degrammaticalization*. She sets out to develop, for all Lehmann's (1995 [1982]) parameters of grammaticality and grammaticalization, the counterparts of decreasing grammaticality and degrammaticalization. In the process, she also elucidates Lehmanns's parameters, for, as she points out, they have been widely used in *à la carte* fashion as criteria of grammaticalization, but have been the subject of remarkably little scrutiny and reflection in their own right. She first surveys Lehmann's parameters in relation to primary grammaticalization (from lexical to grammatical) and secondary grammaticalization (from grammatical to more grammatical). She concludes that the parameters identify primitive changes whose diagnostic potential may vary in relation to primary and secondary grammaticalization and the earlier and later stages of these processes. She then goes on to define the inverse parameters of degrammaticalization and its primitive changes. On the paradigmatic axis, these are: resemanticization, phonological strengthening and recategorialization of the linguistic sign, deparadigmaticization, and deobligatorification and increasing paradigmatic variability. On the syntagmatic axis, they are scope expansion; severance, deinflectionalization or debonding, and syntagmatic flexibilization. She explores these criteria systematically for instances advanced in the literature of primary and secondary degrammaticalization. Again, not all parameters need apply to establish these processes, and the strength as recognition criteria of the other parameters depends on the type of degrammaticalization. Phonological strengthening and scope-related criteria do not prove very useful. For degrammation, she finds resemanticization and recategorialization to be crucial. Deinflectionalization is characterized primarily by inflectional affixes ceasing to form part of inflectional paradigms, i.e. deparadigmaticization, and is further accompanied by a degree of severance and resemanticization. For debonding, severance is the crucial parameter. She concludes that Lehmann's taxonomy, albeit not perfect, provides a very useful set of criteria to distinguish (sub)types

of (de)-grammaticalization, because the parameters correlate with primitive changes related to the inherent properties of (de)-grammaticalization.

Gabriele Diewald & Elena Smirnova approach grammaticalization from a construction grammar perspective. They propose a constructionist scenario of grammaticalization, spelling out the four diachronic stages constitutive of the grammaticalization process. They argue that this model is sufficiently general to capture all types of grammaticalization, but also allows one to distinguish grammaticalization from other types of change by the fourth, newly proposed, stage of paradigmatic integration. This new model builds on and expands their previous work on the three successive stages of untypical, critical and isolating contexts (Diewald 2002, see above). In unatypical contexts the lexical source unit shows via conversational implicature (cf. Traugott & Dasher 2002) an unspecific expansion of its distribution. In this first stage, which still involves *compositional* processing of the construction, the *preconditions* of grammaticalization are created. Critical contexts are characterized by multiple structural and semantic ambiguities. They can be related to Fillmore, Kay & O'Connor's (1988: 505) notion of *extragrammatical* idioms, expressions whose "structures... are not made intelligible by knowledge of the familiar rules of the grammar". Critical contexts invite several alternative interpretations, including the new grammatical meaning. It is thus in this second stage that the grammaticalization process is actually *triggered. Isolating* contexts, in which the new grammatical meaning is *consolidated as a separate meaning*, can be equated with Fillmore, Kay & O'Connor's (1988: 505) *formal and lexically open idioms*, whose "syntactic patterns [are] dedicated to semantic and pragmatic purposes not knowable from their form alone". Isolating contexts are often in complementary distribution with contexts featuring the older more lexical meanings.

This three-step model, Diewald & Smirnova argue, can be applied to all types of grammaticalization, but also to other processes of change such as lexicalization and the development of polysemy. They therefore introduce paradigmaticization, or paradigmatic (re)integration, as the fourth criterial stage, which distinguishes grammaticalization from other diachronic processes. In the stage of *paradigmatic integration*, the new grammatical sign is gradually more tightly integrated into its new grammatical paradigm (cf. Lehmann 2002). Its semantic contrasts with other members of the paradigm are sharpened and it becomes increasingly associated with the more abstract grammatical meaning serving as common denominator for the whole paradigm. These paradigmatic oppositions and general features integrate the constructions involved into a closely interrelated network of constructions. Paradigmaticization thus conceived, it is argued, is unique to grammaticalization and allows to distinguish it from lexicalization and semantic change.

The last two contributions of the theoretical part deal specifically with the distinction between *grammaticalization* and *lexicalization*. *Laurel Brinton* confronts this issue for 'ghost morphology'. She first makes the point that, even though inflections figure at the end of the typical grammaticalization clines such as posited in Hopper & Traugott (2003 [1993]), they have not received conclusive treatment in grammaticalization studies so far. Ghost morphology is inflectional material that has lost its grammatical function, but which is neither refunctionalized ('exapted') nor shed. Examples of such morphological residue are adverbial genitives such as *once, nowadays*, erstwhile comparatives, e.g. *near, rather*, and superlatives, e.g. *next, erstwhile*. In the literature, these cases have been variously treated as (the final stage of) grammaticalization, degrammaticalization, lexicalization, and trans- or recategorization. Brinton reviews these various proposals and observes that they focus on different aspects of the formation of ghost morphology. How this process of change is classified also depends on the definitions given of grammaticalization and lexicalization. Both processes are generally viewed as affecting constructions, not individual items, and as involving fusion and loss of compositionality. Grammaticalization theorists are agreed that lexicalization leads to a new linguistic sign with specific referential meaning entering the lexical inventory, without any systemic effect on the grammar. Grammaticalization, by contrast, yields a unit with schematic meaning. Some theorists stress that it becomes part of a (new) grammatical paradigm, after having undergone decategorialization as a crucial element of grammaticalization. Others focus more on the 'expansion' of the pattern – its productive, instance-sanctioning effect. According to Lehmann (2002), lexicalization involves holistic access to a unit because the internal relations of the source construction are lost. By contrast, grammaticalization involves analytic access to a unit, with the internal relations becoming increasingly regulated by the constraints of the grammar.

Brinton argues that the cases of ghost morphology cannot plausibly be construed as either grammaticalization, degrammaticalization or lexicalization. Arguments against, for instance, the adverbial genitives and erstwhile comparatives and superlatives resulting from grammaticalization are: they are not productive patterns, they are not analytically accessed and are not subject to constraints of grammar, and there is no increased schematicization. They cannot be viewed either as instances of degrammaticalization according to its most thorough discussion to date by Norde (2009, this volume), as they fail to show most of its parameters such as resemanticization, phonological strengthening, recategorialization, severance, etc. Nor are they likely exemplars of lexicalization in that the affixes themselves do not become more contentful, but are simply emptied of any content and frozen onto forms that are already themselves lexical or grammatical

(adverbial) to begin with. She concludes that ghost morphology is best treated as petrification, i.e. freezing and simple loss of grammatical meaning.

Graeme Trousdale's contribution outlines a constructional approach to grammaticalization and lexicalization with reference to both morphological and grammatical constructions. He distinguishes grammaticalization and lexicalization in terms not only of their outcomes, but also of their necessary and sufficient conditions. Traditional approaches to grammaticalization have tended to focus on the formation of atomic schematic elements, for instance the modal auxiliary *should* from the lexical verb *sceolde*. A construction approach conceives of grammaticalization clines more holistically. It considers the emergence and development of whole constructional types, and how these are optimized in constructional networks. A construction approach seeks to clarify in what way complex schematic constructions such as the Modal Auxiliary construction (not just one modal auxiliary) grammaticalize, i.e. become more grammatical, by reconfiguration of the constructional taxonomy they belong to. This involves investigating the interaction between the Modal construction and other related constructions, such as the Passive, Perfect and Progressive constructions, and how these meso-constructions converged in a macro-construction such as the Auxiliary construction.

Situating himself to the "more cognitive end" of the Construction Grammar cline, Trousdale posits that grammaticalization, or grammatical constructionalization, involves

– an increase in generality, with. the constructional schema licensing an increasing number of micro-constructional types;
– an increase in productivity, or token frequency;
– a decrease in compositionality, i.e. erosion of the predictability of the form-meaning pairing.

He illustrates this with the Degree Modifier construction, of which new types such as *hella*, as in *hella worried*, are emerging in analogy with more entrenched types such as *a lot/a bit happier*. All of these originate in the NP of NP construction (Traugott 2008b). Some of them developed the Degree Modifier construction from the Partitive over the Quantifier Construction, e.g. *a lot/a bit*. Others developed it from the Evaluative NP *of* NP construction, e.g. *hella*. The complex network of partly related and partly different constructions undergoes 'crystallization', that is, users exploit similarities and differences between layered forms of constructions to fulfil their particular communicative goals. It is this crystallization that constitutes grammaticalization in the constructional approach.

The only other type of language change recognized in this constructional approach is lexical constructionalization, conventionally called lexicalization. It is

illustrated with the development of some English words from possessive phrases. For example, an historical instance of the genitive construction is *fool's cap*, which came to be used metonymically for a piece of paper of a certain size, and has been reanalysed as *fullscap* in Present-day English. Other erstwhile instances of genitive phrases are *kinsman* (from Old English *cynnum*-GEN *man*), *craftsman, spokesman*. The Nsman pattern is no longer productive. Lexical constructionalization may thus result from the bonding of atomic and substantive (lexically filled) constructions, like *fullscap*, or from more schematic ones, like the Nsman set. In all cases, lexical constructionalization is characterized by

–   a decrease in generality;
–   a decrease in productivity;
–   no change, or decrease, in the compositionality of the construction.

The diachronic construction grammar model of grammatical organization, Trousdale concludes, is equipped to deal with both grammaticalization and lexicalization, and gives equal attention to form and function.

The five papers in the second part, "New perspectives on the description of grammaticalization", relate to theoretical issues dealt with in the first part, such as paradigmatization and obligatorification (De Mulder & Lamiroy, Ronan), construction grammar and constructionalization (Melis & Flores), pragmatic and discourse perspectives on language change (Vazquez Rozas & García, Eckardt). At the same time, they constitute original *descriptive case studies* in their own right.

De Mulder & Lamiroy propose that the notion of grammaticalization as a gradual process can be extended to language typology. Within the same language family, grammaticalization phenomena can be ongoing in one language and have reached a stage further down the cline in another language. In other words, languages may represent different degrees of grammaticalization, even though they all started from the same sign. This entails that diachronically languages of the same family may grammaticalize at a different speed. De Mulder & Lamiroy make their case for the main Romance languages, French, Italian and Spanish. They operationalize 'degree of grammaticalization' as degree of paradigmatization with reference to Lehmann (2002). The reduction of alternatives is viewed as representing a higher degree of paradigmaticity and of grammaticalization. They note the same line of thinking in Haspelmath's (1998: 318) broad definition of grammaticalization as "the gradual drift in all parts of the grammar towards tighter structures, toward less freedom in the use of linguistic expressions at all levels". They compare the development of paradigmaticity thus conceived in two verbal domains, auxiliaries and mood, and one nominal domain, demonstratives. For aspectual auxiliaries, they observe that, purely in terms of numbers, Italian has

roughly twice as many as French, and Spanish even three times as many. As to subtypes, French, in comparison with Italian and Spanish, has fewer auxiliaries with inchoative meaning, no iterative or habitual auxiliaries, and it has lost the equivalent of *to be/to go* + gerund to express progressive aspect. As the class of French auxiliaries is smaller and also shows less syntactic heterogeneity than the corresponding classes in Italian and Spanish, it scores highest on the scale of paradigmaticity. The diachronic studies of the subjunctive and of demonstratives in the Romance languages reveal very similar tendencies. De Mulder & Lamiroy conclude that in Romance we find the following cline of grammaticalization: French > Italian > Spanish, i.e. with French being most grammaticalized, Spanish least, and Italian inbetween.

Ronan investigates the development of periphrastic progressive and perfective constructions in Irish and Welsh of the form 'be' + temporal preposition + gerund'. The analysis of these developments as cases of grammaticalization refers to the well-established parameters of Hopper and Lehmann. In the two languages, the periphrastic progressive, 'be at' + gerund, emerged first, based on earlier spatial expressions, which came to be interpreted temporally. It gradually spread into subordinate as well as main clauses, becoming necessary in all possible contexts, i.e. it obligatorified. Particularly in Welsh, it spread even further, being now used as a general present tense in the spoken register. The two languages later also developed periphrastic perfective structures, 'be after' + gerund. Ronan argues that it is unlikely that the perfective structures developed from prepositions, a trajectory of which Bybee et al. (1994: 55–6) found no instances. From the Old Irish to Middle Irish texts, no increase in numbers of temporal adverbial structures can be observed. Nor can a gradual change be observed by which expressions of 'after' + verbal noun come to be complemented by full periphrastic expressions with be + after + gerund. The history of the Welsh periphrastic perfect is very similar. Ronan concludes that in both languages perfective periphrasis developed on the analogy of the prepositional structures that had previously grammaticalized to express the progressive. The similarity in development seems due to drift, rather than language contact, i.e. to the mechanism of long-term evolution that changes the grammatical characteristics of (groupings of) languages over time.

Melis & Flores's case study of the development of the Spanish Accidental Event construction relates in interesting ways to Trousdale's (this volume) work on diachronic construction grammar and constructionalization. The Accidental Event construction features the originally reflexive morpheme *se*, the dative clitic pronoun, a transitive or intransitive verb, and a subject NP referring to a typically inanimate entity, e.g. *Se me rompío el vaso* 'I broke the vase'. The most intriguing feature of this construction is the dative marking of the volitional but inadvertent actor who brings about the accidental event, as datives generally

have a feature of 'affectedness'. However, in this construction it is the subject that is the affected and the dative is the actor. This construction is traced back to the historical source of the Spontaneous Event construction with external dative. Here, the dative codes an external participant *affected* by the change of state undergone by the inanimate subject. This change of state is expressed by *se* + the intransitive form of the verb, which abstracts away from possible causes and presents the event as spontaneous. This source construction extended through time, taking new verbs, coding different types of processes, thus causing the meaning of the construction to shift. The first shift was to the Involuntary Mental Event construction, which emerged with the verb *olvidar* ('forget'). In this new construction, the dative profiles the experiencer, which entails a change from event-external to event-internal participant. With *olvidar*, the experiencer is a real patient with little control over the event. The next shift was to the Involuntary Mental Event construction, which takes more active cognitive verbs such as 'think', and in which the dative codes more instigative and controlling experiencers. In the final stage, the *se* dative pattern extended to the domain of volitional causal actions. This led to the Accidental Event construction, in which the dative codes the actor who accidentally causes a change in another entity without actually being himself affected. The meaning resulting from the interaction between the semantics of the frame and the semantics of the verb is modified to such an extent that the emergence of a new construction has to be recognized. The whole process from source to resulting construction can be viewed as grammatical constructionalization (Trousdale this volume), as it involves schematization of meaning, greater productivity (more verbs are sanctioned by the schematic construction), and decreased compositionality (the meaning of the construction is less derivable from the meaning of its constituent elements).

Vázquez Rozas & García Salido focus on Spanish clitic object doubling, i.e. the copying by a clitic of the DO or IO from a diachronic perspective. In recent work it has been shown to be an agreement affix, with the clitic realizing a copy of some features of the object attached to the verb. Hence, its diachronic development can be viewed as grammaticalization, which in this contribution is approached from a discourse angle to grammaticalization. Vázquez Rozas & García Salido first verify the hypothesis of Topic Continuity, which associates the development of agreement from pronouns with the so-called Topic-Shift construction. The Topic-Shift construction is a device for reintroducing an entity that has not been referred to in the immediately preceding context with a fronted strongly referring expression, which is picked up by an anaphoric expression within the clause. According to Givón (1976), this construction sets up the context that allows a pronominal element to be reanalysed as an agreement affix.

The Topic-Shift theory has been used to account for the origin and extent of object agreement in several languages, including Spanish clitic doubling (Silva-Corvalán 1984). Vázquez Rozas & García Salido point out a number of problems with this hypothesis: amongst others, the Topic-Shift construction was and is too infrequent in Spanish to be the source of object agreement, and it cannot account for the unequal spread of clitic doubling, which is found with the majority of IOs, but only with preverbal DOs. They also argue that a fundamental shortcoming of descriptions so far is that they have paid little attention to constructions which have only a clitic. They then offer a diachronic usage-based study of IO and DO constructions with clitic doubling, systematically comparing them with constructions containing only clitics and constructions containing only non-clitics. (The term "clitic" is used as a cover term for clitic pronouns and the affixes they developed from.) They advocate an alternative explanation to Givón's Topic-Shift account, viz. an approach in terms of the accessibility of discourse referents (Ariel 1990). Their data study reveals that clitic doubling and encoding by clitics alone have come to be preferred by IOs, while coding by NPs or more complex constituents is favoured by DOs. They conclude that the difference in accessibility of the discourse referents is the main factor determining the grammatical forms of IOs and DOs in Spanish.

Eckardt's study of negative polarity items (NPIs) can be related to Waltereit's (this volume) reflections about the role played in language change by rhetorical strategies and such pragmatic processes as presuppositions, implications and entailments. Like Waltereit, she draws attention to the persistence of pragmatic ingredients of old uses in new uses. She focuses on "[t]he many careers of negative polarity items", taking a diachronic perspective on NPIs in general and on scalar NPIs in particular. Her main thesis is that scalar NPIs are prototypical NPIs. The downward entailing contexts of NPIs can be explained and made cognitively accessible by the pragmatic mechanisms associated with scalar NPIs, viz. the capacity to evoke alternatives (ALT) and the scalar interpretation of these alternatives (SCALE). Moreover, NPIs with standard contexts of distribution are, or are otherwise tied to, scalar expressions, while NPIs with an idiosyncratic range of contexts are not. Finally, the diachronic development of core NPIs crucially involves the loss, change or replacement of ALT and/or SCALE. ALT and SCALE are, for instance, present in emphatic negation, found in expressions such as *not sleep a wink*. In their original uses, they evoke alternatives, which are discharged according to a scale. For instance, *not sleep a wink* discharges alternatives such as *sleep* (even) *a minute/five minutes/a quarter of an hour*/etc. thus conveying 'not sleep at all'. As illustrated by the well-known example of Old French *ne pas/point/ mie/rien*/etc. such pragmatically licensed emphatic scalar NPIs may eventually develop into non-pragmatic, structurally licensed elements such as Present-day

French *(ne) pas* (Hopper 1991). Eckardt views this as the "traditional" career of "well-behaved" NPIs. English *any* is another example, with regard to which Eckardt shows how the pragmatic ingredients of ALT and SCALE persist in the newer 'indiscriminative' and 'universal quantifier' uses, which developed from its original existential ('some') sense. Indiscriminative *any*, illustrated by *We need a doctor – any doctor*, is currently being investigated as an epistemic indefinite. All analyses agree that epistemic indefinites refer to different possible extensions of the head noun, which can be viewed as a further development of the earlier ALT alternatives, accessed as denotations of alternative nouns. The universal quantifier reading of *any*, e.g. *Sue can solve any problem*, also involves a – changed – ALT ingredient: it refers to alternative dimensions of quantification, allowing for variation over possible worlds.

Eckardt recognizes that non-scalar elements can also become NPIs. She distinguishes three cases:

1. escort particles, which accompany scale-licensed material and therefore occur in downward entailing contexts;
2. analogy NPIs, viz. nonce words which adopt the meaning and restrictions of scalar NPIs;
3. mimicry NPIs, with no ties at all to scalar elements, which occur in standard NPI contexts, which cannot be captured by any known logical or pragmatic mechanism.

These three types are non-prototypical NPIs with non-standard careers and marked properties in comparison with the prototypical scalar NPIs.

All the studies in this volume contribute, in their own right and in dialogue with each other, to a more precise identification of sources, paths and outcomes of grammaticalization. Diessel's article, for instance, points out the unique status of demonstratives as source of a rich and distinctive cluster of grammaticalization paths. They also deepen our understanding of recognition criteria of grammaticalization and related processes, mainly lexicalization. The robust parameters of Lehmann (1985 [1982]) and Hopper (1991) are reflected on and, in a number of cases, proposed to be complemented by additional recognition criteria in the contributions by Brinton, Diewald & Smirnova, Norde, Trousdale, De Mulder & Lamiroy, Melis & Flores and Ronan. If we situate the work in this volume in the history of grammaticalization studies, it is characterized by increasing integration of the structural-semantic and discourse-pragmatic perspectives. This is perfectly evident in the contributions by Waltereit, Eckardt and Vázquez Rozas & García Salido. In all these ways, this volume reflects the current state of the field but also points ahead at the directions it is heading to in the future.

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