

## **Grammaticalization as conventionalization of discursively secondary status:**

### **Deconstructing the lexical-grammatical continuum**

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#### ABSTRACT

Despite intense research on grammaticalization, no satisfactory definition has so far been proposed. Some would argue that it is indeed impossible to come up with a precise definition as grammaticalization is an epiphenomenon. After pointing out problems in existing definitions, this paper proposes a new definition of grammaticalization as a distinct kind of change. The definition is based on the theory of the lexical-grammatical distinction in Boye & Harder (2012), but also on a rejection of the definition of grammaticalization offered there. The proposal is that grammaticalization is a distinct kind of conventionalization: the conventionalization of discursively secondary status. It is argued that in addition to avoiding problems intrinsic to earlier definitions, this definition captures canonical and non-canonical cases of grammaticalization, and allows us to be precise about what to include and what not to include under grammaticalization. Finally, three important implications are discussed. 1) Grammaticalization is not a type of overall change, but rather one part of overall changes that simultaneously include other aspects. 2) Grammaticalization involves gain rather than loss. 3) A lexical-grammatical continuum does not exist, but grammaticalization is bound up with other continua, including: a social-level conventionalization continuum, a splitting continuum and a discourse prominence continuum.

## 1. INTRODUCTION<sup>1</sup>

‘Grammaticalization’ has over the years become established as a name for the diachronic changes that give rise to grammatical elements. There is also wide agreement about the types of changes that are covered by the term. Most, if not all, linguists would take it to include at least a type that will be referred to as ‘delexicalization’, viz. changes like those in (1) and (2) by which a lexical element gives rise to a grammatical one.

(1) *going to* (lexical verb + particle) > *gonna* (auxiliary)

German<sup>2</sup> (e.g. Schoonjans 2012)

(2) *glaube ich* (lexical parenthetical clause) > *glaub* (particle)

Some linguists also take it to cover what has been called syntacticization, viz. the development of new syntactic constructions (see especially Givón 2018: 151, fn. 1; 171). A classic illustration case, provided by Givón (1979), consists in the development in which an erstwhile extraposed topic position develops into a subject position (note that this development also involves the development of a new grammatical agreement marker).

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<sup>2</sup> Schoonjans (2012: 781, fn. 12) suggests that the development in (2) may be restricted to ‘dialects spoken in the southern half of Germany or in Switzerland’.

‘[N]oneducated American English’ (Givón 1979: 209; cf. Givón 2018: 154)

(3) My ol’man, he rides with the Angels

TOP<sup>3</sup> PRO

>

My ol’man he-rides with the Angels

SBJ AGR-

While there is thus wide agreement about approximately what grammaticalization is, a more profound understanding faces two major challenges. One is that the presupposed distinction between grammatical and lexical is itself hard to get a grip on. As discussed in Boye & Harder (2012: 1-6), existing definitions are problematic, and the distinction is often invoked in ways that appear pretheoretical and intuition-based rather than theoretically grounded. The other challenge is that even with a theoretically anchored and well-defined distinction between grammatical and lexical, it is not clear that grammaticalization is a distinct type of language change rather than an epiphenomenon (e.g. Campbell 2001: 151; see also Section 4).

In Boye & Harder (2012), we offered a solution to the first challenge, arguing for an understanding of grammatical elements as defined by conventionalized discursively secondary status (roughly, attentional background status). However, we circumvented the second challenge. Rather than attempting to define grammaticalization as a diachronic phenomenon, we defined it in terms of its result: as ‘the diachronic change that gives rise to linguistic expressions that are by convention ancillary and as such discursively secondary’ (Boye & Harder 2012: 22).

The present paper has three aims.

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<sup>3</sup> Glossing abbreviations used in this paper: 1 = first person; 2 = second person; 3 = third person; AGR = agreement marker; COMP = complementizer; F = feminine; INDF = indefinite article; PRO = pronoun; PRS = present tense; PT = particle; PTCP = participle; SBJ = subject; SG = singular; TOP = topic.

1. A rejection of result-based definitions of grammaticalization, including the one in Boye & Harder (2012).
2. A proposal for a definition of grammaticalization, which is still based on the understanding of grammatical elements in Boye & Harder (2012), but which targets the nature of grammaticalization as a diachronic phenomenon: grammaticalization is a distinct kind of conventionalization, namely the conventionalization of discursively secondary status.
3. A discussion of the three important implications of the proposed definition.
  - i. It entails that grammaticalization is a (small) part of larger overall changes.
  - ii. It entails that grammaticalization consists in gain rather than loss.
  - iii. It entails that the lexical-grammatical continuum (or ‘cline’), which has been a persistent constituent of the grammaticalization literature, disappears: other aspects of grammaticalization-related change are clines, but not the distinction between grammatical and lexical status.

The second aim is central. Since it consists in a proposal for a definition of an existing term, (‘grammaticalization’), it requires two comments. First, defining a term anew entails a risk of severely altering the extension of the term. In other words, the second aim is bound up with the risk that ‘grammaticalization’ is defined as covering a range of phenomena that differs considerably from that covered by the term in original usage. For this reason, it is important to ensure that the proposed definition captures at least uncontroversial cases of grammaticalization (cf. Boye & Harder 2012: 21). In Section 4 below, I argue that it does, but due to obvious space limitations, I only consider a small number of cases.

Second, proposing a new definition of grammaticalization would be futile unless the definition brings something new to our understanding of grammaticalization. It therefore needs to be stressed that while derived from the theory of grammatical status in Boye & Harder (2012), the definition proposed in the present paper refers to a feature that has so far been ignored in grammaticalization: conventionalization of discursively secondary status. As will be discussed in Section 4-7, the proposed definition has consequences both for our understanding of the extension and nature of grammaticalization as a process, and for our understanding of the lexical-grammatical contrast.

The rest of the paper is structured as follows. Section 2 outlines the theory of grammatical status in Boye & Harder (2012). Section 3 points out inherent problems in result-based definitions of grammaticalization, and eventually rejects the definition in Boye & Harder (2012). Section 4 discusses process-oriented definitions of grammaticalization, and proposes the definition of grammaticalization as a distinct kind of conventionalization. Subsequently, Section 5, 6 and 7 each discuss one of the three above-mentioned implications of the proposed definition. Section 8 sums up the main points of the paper.

## 2. A USAGE-BASED THEORY OF GRAMMATICAL STATUS

A basic claim in Boye & Harder (2012) is that the contrast between grammatical and lexical elements (whether meanings, morphemes, words or constructions) involves a prioritization of attention allocated to parts of complex messages. This places the grammatical-lexical contrast in the context of a range of other features of language (see e.g. Talmy 2007) that can be subsumed under the name ‘discourse prominence’. As one example of such features, one conceptual part (*profile*) is an attentionally prominent part of a conceptual whole (the *base*), as in the case of *radius*, which is profiled against the background of the *circle* (e.g. Langacker 1987: 183-189). As another example, the perceptually based division into *figure* and *ground* (Talmy 1975) involves a choice between

what the attentionally most salient part of the whole should be in relation to another one (*landmark, ground*).

In the case of the grammatical-lexical contrast, the relevant kind of prominence is what may be termed ‘syntagmatic discourse prominence’. This term refers to the relative attentional prominence of parts of a complex linguistic message in relation to other parts (Boye & Harder 2012). This basically concerns meanings – i.e. the attentional prominence which a meaning has relative to syntagmatically related meanings in a complex linguistic message. We may also describe it as applying to the level of the whole sign (i.e. the level of an expression-meaning unit), however. That is, we may describe it as applying to the attentional prominence a given sign, whether simple or complex, has relative to syntagmatically related signs by virtue of its meaning.

Under this notion of syntagmatic discourse prominence, two values are distinguished in Boye & Harder (2012): ‘discursively primary prominence’ and ‘discursively secondary prominence’. A meaning or sign is discursively primary if it is the most prominent element in the syntagm. This is meant to correspond to describing it as the centre or foreground of attention, or ‘at issue’ (cf. Potts 2004). A meaning or sign is discursively secondary, on the other hand, if it is less prominent than another element in the syntagm (i.e. background; ‘not at issue’).

Syntagmatic discourse prominence is basically a pragmatic phenomenon. That is, it is basically context-dependent (cf. Himmelmann & Primus 2015). As an illustration, consider (4):

(4) Avoid football!

The message encoded in (4) may have two context-dependent variant interpretations. In the context of a discussion of attitudes towards football, *avoid* is likely to be discursively primary, as this word

provides the relevant and non-redundant contribution. In the context of a discussion of things that are to be avoided, on the other hand, *football* is likely to be primary, for parallel reasons.

However, the assignment of discourse prominence is not solely the responsibility of the context. Languages possess various conventional means for indicating syntagmatic discourse prominence. To indicate what is discursively primary, one conventionalized instrument is emphatic stress:

(5) Yesterday SHE was absent.

To indicate what is discursively secondary, we have, e.g., parentheses in written language:

(6) After the starter (which was served at 8) we had an excellent beef steak (vegan).

The specific claim in Boye & Harder (2012) is that the grammatical-lexical contrast belongs among these means; it is a contrast pertaining to conventional discourse prominence options. Accordingly, lexical and grammatical elements can be defined as follows (cf. Boye & Harder 2012: 13).

### **Definition of lexical elements**

Lexical elements (meanings, morphemes, words, constructions) are by convention potentially discursively primary: they can, but need not, be the attentional main point of a syntagm.

### **Definition of grammatical elements**

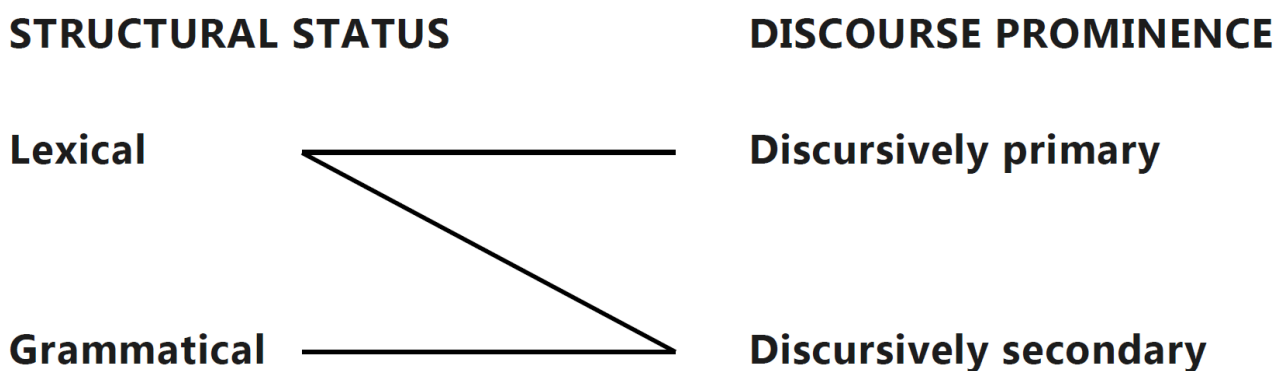
Grammatical elements (meanings, morphemes, words, constructions) are by convention discursively secondary: they cannot be the attentional main point of a syntagm (except in metalinguistic contexts where conventions are overridden).

With these definitions of the contrast goes a functional rationale: the contrast between grammatical and lexical elements helps us to decide which part of a linguistic message to direct our attention towards. Consider (7).

(7) The **dean** has **always wanted** to **buy** a **Velázquez**.

If you know the conventions of English, you know immediately after a superficial processing of (7) that the main point has to do with either of the lexical elements (marked by bold-face). This means that you can concentrate your attention and processing efforts on these elements.

To sum up the main point of the theory in Boye & Harder (2012), there is an obvious link between grammatical and lexical elements, in that both may be discursively secondary. The difference is that grammatical elements may only have one of the two possible values for prominence, while lexical elements may (depending on the context) have either value. The relationship between grammatical and lexical elements is illustrated in Figure 1.



*Figure 1: The relationship between grammatical and lexical elements*



The theory in Boye & Harder (2012) entails a set of diagnostic criteria for identifying and distinguishing between grammatical and lexical elements (on (non-)modifiability, see Messerschmidt et al. 2018).

Since lexical elements are potentially primary,

1. they can be focalized,
2. they can be addressed in subsequent discourse,
3. they can be elaborated through modification,
4. they can (at least some of them) stand alone in an utterance (as in *fire!*).

Conversely, since grammatical elements are secondary by convention,

1. they cannot be focalized,
2. they cannot be addressed in subsequent discourse,
3. they cannot be elaborated through modification,
4. they cannot stand alone in an utterance.

The contrast between the English full verb *go* and auxiliary *gonna* may serve to show how the modifiability and addressability criteria work. By both criteria, *go* and its ‘motion’ meaning come out as lexical, while *gonna* and the associated ‘future’ meaning come out as grammatical. Thus, as illustrated in (8), *go* and its motion meaning can be modified by means of *secretly*, and addressed by means of *how*.

(8) - I am (secretly) going (in order) to resign. (‘secretly going’)

- How? ('how resign?', 'how go?')

In contrast, as illustrated in (9), *gonna* and the associated 'future' meaning can be neither modified nor addressed.

- (9) - I am (secretly) gonna resign. ('secretly resign', \*'secretly gonna').
- How? ('how resign?', \*'how gonna?')

Of course, *secretly* and *how* may be incompatible with *gonna* and the associated 'future meaning' for purely semantic reasons, but the point is that there is no way to modify or address these elements (except in metalinguistic contexts) because they are by convention discursively secondary.

The focusability criterion is based on a predicted incompatibility between focus and grammatical status (outside metalinguistic contexts where conventions may be overridden): grammatically encoded information is (according to the theory in Boye & Harder 2012) less prominent, whereas focus points out what is most prominent. In order to see how this criterion works, consider the contrast between the English pronouns *that* and *it*. By the focus criterion, *that* is lexical: it can be focused by means of, for instance, stress (10b) and pseudoclefting (10c).

- (10) a. I like that.  
b. I like THAT.  
c. What I like is that.

On the other hand, *it* comes out as grammatical; it cannot be focused.

- (11) a. I like it.  
b. \*I like IT.  
c. \*What I like is it.

While they are intended to be crosslinguistically applicable, the criteria mentioned above obviously depend on language-specific means for focusing, modifying and addressing. Moreover, there are obvious limitations to them. For instance, some focus mechanisms are restricted to signs that form constituents (Boye & Harder 2012: 16).

These limitations notwithstanding, a number of studies have shown that the criteria – and thus the theory from which they are derived – are significant for empirical analysis. More generally, a number of studies have garnered empirical support for the theory, showing that:

1. It entails precise and correct predictions regarding which elements are affected in agrammatic speech (e.g. Ishkhanyan et al. 2017; Nielsen et al. 2019).
2. It entails correct predictions regarding language perception: grammatical elements attract less attention than lexical ones in eye-tracking, ‘change blindness’ tests, and letter detection tasks (e.g. Christensen et al. 2021; Klein & Saint-Aubin 2016).
3. It entails correct predictions regarding language production (e.g. Michel Lange et al. 2017; Michel Lange, Messerschmidt & Boye 2018).

The theory of what constitutes grammatical status is thus arguably empirically well founded.

### 3. RESULT-BASED DEFINITIONS OF GRAMMATICALIZATION

With a theory of what constitutes grammatical status, there appears a road to defining grammaticalization that may at a first sight look attractive: grammaticalization may be defined in terms of its result, i.e. grammatical elements. In the literature, this road has been taken on a number of occasions (on many of which the presupposed task of defining grammatical status – or ‘degree of grammatical status’ – has been ignored). Below, some examples of such result-based definitions are listed, including the definition in Boye & Harder (2012).

Grammaticalization consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status [...]. (Kuryłowicz 1965: 69)

As a term referring to actual phenomena of language, ‘grammaticalization’ refers most especially to the steps whereby particular items become more grammatical through time. (Hopper & Traugott 2003: 1)

We argue that grammaticalization is the creation of new functional material. (Roberts & Roussou 2003: 2)

Grammaticalization is defined as the development from lexical to grammatical forms and from grammatical to even more grammatical forms. (Kuteva et al. 2019: 3)

[Grammaticalization is] the diachronic change that gives rise to linguistic expressions that are by convention ancillary and as such discursively secondary. (Boye & Harder 2012: 7)

Result-based definitions like these display a number of problems that make them unsatisfactory. One of two basic problems is that ‘grammaticalization’ becomes very broad, and arguably too broad to be a useful notion (cf. Himmelmann 2004: 39, fn 10). If grammaticalization is defined as a change that leads to grammatical elements, it includes all kinds of changes that have this result. It thus comes to include what has been called ‘regrammaticalization’ (Greenberg 1991) or ‘regrammation’ changes (Andersen 2006; 2008), in which there is already a grammatical sign at the input stage to the process, but there is a change in the meaning of that sign (Andersen 2006: 233; see also Section 4). Moreover, it comes to include all sorts of phonological or distributional changes, as long as the output is a grammatical element. This has the effect that the resulting notion of ‘grammaticalization’ is not only too broad to be useful, but also devoid of any special substance. For instance, it would be hazardous to claim that there is any substantial difference between phonological reduction of a grammatical sign and phonological reduction of a lexical one.

In order to minimize this first basic problem, one might add a restriction on the input to grammaticalization. This is done in some of the definitions cited above. For instance, Kuryłowicz’s definition mentions that the input must be ‘lexical’ or ‘less grammatical’. This operation leads to new problems, however. First of all, it excludes syntacticization from the domain of grammaticalization. In addition it would depend on positing a basis for distinguishing degrees of grammaticity. As will be argued in Section 7.3, the idea of degree of grammaticity is a mirage.

In any case, the second basic problem in result-based definitions is unsolvable: Result-based definitions only indirectly address the question of the diachronic nature of grammaticalization. Preferably, a definition should characterize the process itself, instead of merely the products that it leaves behind (viz. grammatical elements) – specifying what kind of change it consists in, rather than what emerges from it.

#### 4. DEFINING GRAMMATICALIZATION AS A CHANGE OR PROCESS

There have been several previous attempts to provide definitions of grammaticalization in terms of the nature of the process. Examples include the following.

From a construction-based point of view grammaticization is essentially a process of context-expansion [...]. (Himmelmann 2004: 32)

[Grammaticalization is] an evolution whereby linguistic units lose in semantic complexity, pragmatic significance, syntactic freedom, and phonetic substance. (Heine & Reh 1984: 15)

[...] grammaticalization is a complex phenomenon which is constituted by [...] and has no existence independently of [changes in six ‘properties of signs’: integrity, paradigmaticity, paradigmatic variability, structural scope, bondedness, and syntagmatic variability]. (Lehmann 2015: 132).

All these definitions are faced with problems that render them less than fully satisfactory. As pointed out by (Traugott & Trousdale 2013: 107), context expansion, the main feature of Himmelmann’s definition, is not a sufficient condition for grammaticalization (see also Himmelmann 2004: 34), but can also affect lexical elements. As for the familiar characteristic features of grammaticalization referred to in the definitions of Heine & Reh and Lehmann – e.g. phonological reduction (or ‘attrition’) and semantic bleaching – they are neither sufficient nor necessary conditions. In Campbell’s words:

It is not necessary for the kinds of changes most commonly encountered in grammaticalization to be present in order for a change to qualify as an instance of grammaticalization, and these kinds of changes are encountered commonly also in instances of changes which have nothing to do with grammaticalization. (Campbell 2001: 151; see also Hopper 1991: 21; Newmeyer 2001; Joseph 2001)

Cambell concludes that there is no such thing as a distinct phenomenon of grammaticalization (see also Hopper 1991: 21; Newmeyer 2001). From a generative point of view, where grammaticalization is basically an anomaly (cf. Boye & Harder 2012: 2), this conclusion is natural: grammaticalization cannot be defined as a distinct type of process because it is at best an epiphemonen (Roussou 2020: 92) concerning E-language and parameter change (Van Gelderen 2011; Roberts & Roussou 2003: 3).

That conclusion is wrong, however. A definition of grammaticalization as a distinct kind of change or process can be based on the definition of grammatical elements in Boye & Harder (2012). In Section 2, the definition of grammatical elements was formulated like this:

### **Definition of grammatical elements**

Grammatical elements (meanings, morphemes, words, constructions) are by convention discursively secondary: They cannot be the attentional main point of a syntagm (except in metalinguistic contexts where conventions are overridden).

Based on this, grammaticalization can be defined as follows.

### **Definition of grammaticalization**

Grammaticalization is the conventionalization of discursively secondary status.

In contrast to the definition given in Boye & Harder (2012), this definition concerns the nature of grammaticalization as a process. Essentially, it defines grammaticalization as a special type of conventionalization. It thus entails a claim that this special type of conventionalization is always and only found in changes that involve grammaticalization.

This definition captures the standard cases of grammaticalization, referred to in Section 1 as delexicalization and syntacticization. In addition, it covers some non-standard cases, including borrowing and calquing of grammatical elements.

Consider first delexicalization, by which a lexical element gives rise to a grammatical one. Section 1 gave two examples of this type of grammaticalization, (1) and (2), repeated here respectively as (12) and (13).

(12) *going to* (lexical verb + particle) > *gonna* (auxiliary)

German

(13) *glaube ich* (lexical parenthetical clause) > *glaub* (particle)

Both cases clearly involve conventionalization of discursively secondary status. As already discussed in Section 2, the full verb *go* and its ‘motion meaning’ are unquestionably potentially discursively primary, while *gonna* and its associated meaning of ‘future’ are clearly grammatical, as evidenced by the fact that only *go* can be modified and addressed; cf. (8) and (9), repeated here as respectively (14) and (15).



(14) - I am (secretly) going (in order) to resign. ('secretly going')

- How? ('how resign?', 'how go?')

(15) - I am (secretly) gonna resign. ('secretly resign', \*'secretly gonna').

- How? ('how resign?', \*'how gonna?')

Accordingly, the development of *gonna* must involve conventionalization of discursively secondary status.

Similarly, German *glaube ich* ('I think') is lexical, as demonstrated by its addressability (16), whereas *glaub* is grammatical, as demonstrated by its non-addressability (17).

German

(16) - Ich glaube dass sie noch lebt.

1SG think.PRS.1SG COMP 3SG.F still live.PRS.3SG

'I think that she is still alive'.

- Wirklich?

Really

'Is she really still alive?', 'Do you really hold that opinion?'

(17) - Sie lebt noch, glaub.

3SG live.PRS.3SG still PT

'she is still alive, I think'.

- Wirklich?

Really

‘Is she really still alive?’, \*‘Do you really hold that opinion?’

Thus, just like the development of English *gonna*, the development of the German particle *glaub* must involve conventionalization of discursively secondary status (see Boye & Harder 2021 for a thorough discussion of the relationship between parentheticals and grammaticalization).

Consider now syntacticization and Givón’s example of this type of grammaticalization, (3), repeated here as (18).

‘[N]oneducated American English’ (Givón 1979: 209; cf. Givón 2018: 154)

(18) My ol’man, he rides with the Angels

TOP PRO

>

My ol’man he-rides with the Angels

SBJ AGR-

The marking of subject status (‘most topical argument’) by means of agreement is discursively secondary (non-focusable, non-addressable, and non-modifiable). Thus, the conventionalization of this function straightforwardly qualifies as grammaticalization by the definition proposed above.

Finally, consider borrowing of a grammatical sign from one language to another, and calquing of a grammatical meaning. An example is the borrowing in Balto-Finnic languages of the intensifier -*pa*, -*pä* from Baltic languages (see Campbell 2001: 143, and the references therein). Such changes lead to new grammatical elements, but they are excluded from grammaticalization by many definitions (including those in Kuryłowicz 1965: 69; Heine & Reh 1984: 15; Hopper & Traugott 2003: 1; Lehmann 2015: 132; Kuteva et al. 2019: 3; all cited above), and this may be seen as a

problem for those definitions (cf. Campbell 2001: 143). The definition proposed above does not share this problem (nor, of course, does the result-based definition in Boye & Harder 2012). Since the element being borrowed or calqued is initially foreign to the target language, hence non-conventional, the process must involve conventionalization. To the extent that the element is from the very beginning used with discursively secondary status (in accordance with its grammatical status in the source language), the conventionalization process must involve conventionalization of discursively secondary status.

The definition of grammaticalization proposed above does not only capture cases of grammaticalization, but also avoids the problems that affected the other process definitions discussed above. Above all, it excludes a number of phenomena related to but different from grammaticalization, and hence does not lose theoretical significance (cf. Himmelmann 2004: 39, fn. 10). Among the phenomena excluded is regrammaticalization, that is, the change in meaning of an already grammatical sign (cf. Section 3). At least at a sign level of analysis,<sup>4</sup> regrammaticalization does not involve conventionalization of secondary status, as the sign undergoing regrammaticalization is (as a grammatical sign) already conventionalized as discursively secondary to begin with.

Also excluded are changes that are often regarded as indications of grammaticalization, including phonological reduction, bondedness and semantic bleaching. Such changes are not inherently bound up with conventionalization of discursively secondary status, and hence do not in themselves qualify as cases of grammaticalizations. However, they may co-occur with such conventionalization, and at least some of them may even be motivated by conventionalized discursively secondary status (cf. Boye & Harder 2012: 29-30). This is the case with phonological

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<sup>4</sup> Regrammaticalization is defined as a sign-level change (Andersen 2006: 233). At a meaning level of analysis, however, it does involve grammaticalization in so far as the new meaning of the sign undergoing change starts out as a non-conventional (i.e. context-dependent, pragmatic), discursively secondary meaning which is subsequently conventionalized.

reduction: since the hearer pays less attention to discursively secondary elements, the speaker may invest less articulatory resources in such elements. With conventionalization and hence consistent use of an element with secondary status, this will eventually lead to phonetic and subsequently phonological reduction. Similarly, bondedness is a direct consequence of being discursively secondary by convention, hence grammatical: a grammatical element depends on combination with another element (a host element) in relation to which it is discursively secondary.

The sections that follow address three important implications of the proposed definition.

#### 5. IMPLICATION I: GRAMMATICALIZATION IS A SMALL PART OF LARGER CHANGES

The first implication is that grammaticalization must be understood as a small part of larger changes. This is an important point rather than a technicality. Sometimes discussions in the literature tend to presuppose that grammaticalization as a category of diachronic processes has to constitute a very special and full categorization of everything that happens from the etymon to the final product. This is why it has been assumed that the identification of shared features between grammaticalization and processes that affect lexical elements that remain lexical undermines the existence of a phenomenon that deserves the name of grammaticalization. When it is realized that grammaticalization is only one part of larger processes, this objection evaporates.

In order to appreciate this implication, consider the development of English *gonna* in more detail. Based on Danchev & Kytö's (1994) account and later revisions discussed in Petré and Van de Velde (2018), the crucial steps may be illustrated as in (19).<sup>5</sup>

(19) The development of English *gonna*

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<sup>5</sup> (19) is a simplified illustration. Among other things, it ignores an initial 'intention' meaning, and an initial restriction of the 'future' meaning to 'immediate future'. Also, of course, it ignores splitting, divergence and layering (see Section 7.2), and the fact that step 2 may not have come to an end before step 3 sets in.

Stage n: *go* – *I am going.*

Step 1: > + purposive INF – *I am going (in order) to buy some apples.*

Emergence of discursively secondary ‘future’ inference

Stage n+1: *going to* + INF – *I am (soon) going to buy some apples.*

**Step 2: > Conventionalization of discursively secondary ‘future’ meaning**

Stage n+2: *going to* + INF – *It’s going \*(in order) to rain.*

Step 3: > Phonological reduction

Stage n+3: *gonna* + INF – *It’s gonna rain.*

On traditional approaches to grammaticalization, the whole development from Stage n to Stage n+3 would be considered a case of grammaticalization. Based on the definition proposed in Section 4 above, however, only one part of this overall development is grammaticalization, namely Step 2 (highlighted in (19)) which consists in a conventionalization of the discursively secondary ‘future’ (or ‘prospective’) meaning. At the immediately preceding Stage n+1, this discursively secondary ‘future’ meaning exists only as a non-conventional meaning, that is, as a context-dependent inference (in this specific case arguably an entailment due to the purposive infinitive).

The remaining parts – Step 1 and 3 – do not in themselves constitute grammaticalization.

However, the definition of grammaticalization proposed in Section 4 makes possible an account that

motivates the close relationship between grammaticalization and those remaining parts without making the definition of grammaticalization dependent on features that are sometimes there and sometimes not there, and which also occur in other contexts. Notably, as argued in Section 4, the phonological reduction in Step 3 is motivated by the conventionalization, and hence consistent use, of an element with discursively secondary status.

The account of grammaticalization as a narrow and well-defined type of change also allows us to raise new and precise research questions, such as: ‘What makes ‘future’ as a discursively secondary meaning a candidate for conventionalization – and hence grammaticalization?’

#### 6. IMPLICATION II: GRAMMATICALIZATION IS GAIN RATHER THAN LOSS

An recurrent theme in grammaticalization research is whether grammaticalization, in the words of (among others) Heine, Claudi & Hünnemeyer (1991: 109) and Brems (2011: 111), involves loss or gain, or both. Traugott & Trousdale (2013: 104-105) argued that the account in Boye & Harder (2012) models grammaticalization as loss (‘reduction and increased dependency’). This characterization is justified because the account in Boye & Harder (2012) focused on the sign level of analysis, and on that basis described delexicalization in terms of the loss of a competition for discourse prominence. So, loss is inherently bound up with delexicalization the way it is described in Boye & Harder (2012).

However, the definition proposed in Section 4 emphasizes that grammaticalization is not basically a sign-level change, but a meaning-level change: the conventionalization of discursively secondary status basically applies to meaning; grammatical signs are grammatical by virtue of being conventionalized with (only) discursively secondary meaning (and no potentially primary meaning). Accordingly, on the new definition, grammaticalization is decidedly gain:<sup>6</sup> as a subtype of

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<sup>6</sup> See von Stechow (1995) for a similar conclusion on a rather different background.

conventionalization, grammaticalization creates something that was not there before, namely a new convention.

Moreover, since (on the proposed definition) grammaticalization covers only a special kind of conventionalization, and not any possibly co-occurring processes, such as semantic or phonological reduction, it is clear that nothing is lost in grammaticalization. Phonological reduction and semantic bleaching are not part of grammaticalization, but distinct processes. Likewise, in delexicalization, the lexical source element is not lost, but co-exists with the grammatical descendent (see e.g. Heine & Reh 1984: 57 on ‘split’, Hopper 1991: 22 on ‘divergence’, Kuteva et al. 2019: 8 on the ‘A>A/B>B’ scenario, and Hopper & Traugott 2003: 49 on ‘layering’; see Section 7.2). When sources do get lost, it is therefore most natural to regard the loss as a separate category of change, one that deserves its own place in an overall theory of language change.

#### 7. IMPLICATION III: THE LEXICAL-GRAMMATICAL CONTINUUM DOES NOT EXIST

The third implication is one that may come across as surprising in relation to a large part of the literature on grammaticalization: the lexical-grammatical continuum (or ‘cline’) does not exist.

This claim does not follow from the theory of the lexical-grammatical distinction in Boye & Harder (2012); while that theory does make a rather sharp division between lexical and grammatical, this division is compatible with the idea of a continuum (see Boye & Harder 2012: 6, and the references there for discussion). Rather, the claim is made possible by the fact that the proposed definition, as an added advantage of its enhanced analytical precision, allows us to be precise about the question of those respects in which grammaticalization depends on other continuous phenomena.

If grammaticalization is considered at the basic meaning level of analysis (cf. Section 6), it is clear that there is no intermediate position between lexical and grammatical. Consider again, from this perspective, the development of English *gonna* in (19), repeated here as (20):

(20) The development of English *gonna*

Stage n: *go* – *I am going.*

Step 1: > + purposive INF – *I am going (in order) to buy some apples.*

Emergence of discursively secondary ‘future’ inference

Stage n+1: *going to* + INF – *I am (soon) going to buy some apples.*

**Step 2: > Conventionalization of discursively secondary ‘future’ meaning**

Stage n+2: *going to* + INF – *It’s going \*(in order) to rain.*

Step 3: > Phonological reduction

Stage n+3: *gonna* + INF – *It’s gonna rain.*

There is no continuum between the ‘motion’ meaning of *go* and the ‘future’ meaning of *going to* and later *gonna*. Rather, the meaning of ‘future’ arises in a particular context as a non-conventional (i.e. pragmatic) meaning – a context-dependent inference – and subsequently becomes conventionally associated with *going (to)*, which is later reduced to *gonna*.



There are cases, of course, where the grammatical target meaning and the lexical source meaning are highly similar. An example is the development of grammatical inceptive or ingressive markers from verbs meaning ‘begin’ or ‘start’ (Kuteva et al. 2019: 70-71). For some such cases, at least, it may be hypothesized (with Boye & Harder 2012: 22-24) that the input to grammaticalization is a discursively secondary use of the lexical source, and that grammaticalization simply consists in conventionalization of this use. Even in cases like these, there is strictly speaking no lexical-grammatical continuum, however. Grammaticalization does not consist in a gradual loss of lexical properties, and a gradual gain of grammatical properties, but in the conventionalization of secondary status. What is special about these cases is only that the discursively secondary input meaning is a lexical meaning, which also has the potential for primary status, rather than a fully context-dependent inference.

Grammaticalization does not depend on a lexical-grammatical continuum, then, and does not represent evidence for such a continuum. However, grammaticalization is embedded in a number of other continua that can be mistaken for lexical-grammatical continua. These concomitant continua include:

a social-level conventionalization continuum

a splitting continuum

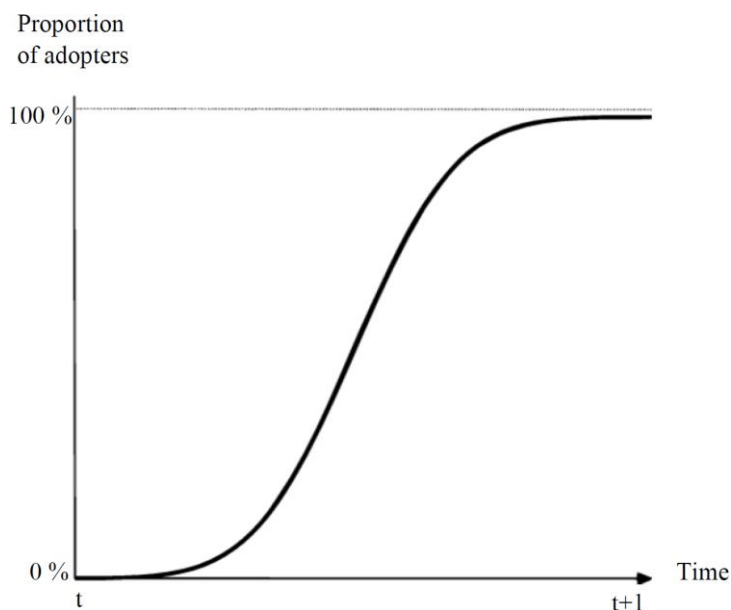
a discourse prominence continuum

The three subsections below discuss these continua in turn. Subsequently, the proposed understanding of grammaticalization is briefly discussed in relation to the idea of a lexicon-syntax continuum emphasized in construction grammars.

### *7.1 The social-level conventionalization continuum*

For the present purpose, conventions may be understood, in the vein of Searle (1995), as collective intentional status functions, or more basically, with Lewis (1969) and Clark (1996), as regularities obtaining across a community such that members adapt their expectations and their social behaviour towards a shared target. In either case, conventions cannot be defined at the level of individuals belonging to a community. While they presuppose individuals, they basically exist at the social level of the community. As conventions require coordination of community members, it is natural to assume that conventionalization, i.e. the process by which conventions are formed, is a continuous process – at least when it takes place bottom-up rather than top-down, as when conventions are formed by decree (see Petré & Van de Velde 2018 for a discussion of the relationship between social-level conventionalization and individual-level processes in language change). Candidates for new conventions (e.g. hugging instead of shaking hands; cf. Clark 1996: 71-72) are only gradually established as local conventions. Moreover, they are only gradually accepted in the larger community in which they are found, and we cannot assign a precise figure to the proportion of community members who have to follow up before the new convention is established. It follows that there may be periods where there is no established convention in place. The corona virus wreaked havoc with greeting conventions, with the result that there was no longer any shared behavioural target, and rituals had to be negotiated anew instead of being simply relied on.

This social-level conventionalization continuum is a built-in feature of the definition of grammaticalization proposed in Section 4. Grammaticalization is the conventionalization of discursively secondary status, and since conventionalization is itself a continuous process, so is grammaticalization. Grammaticalization therefore conforms to the standard S-curve model of social spread in Figure 2.



*Figure 2: The gradual rise of a new convention in a given language community.*

It should be pointed out that the existence of such a continuum does not in principle exclude a theoretical cut-off point. Setting up lists of ‘new words in English’, for example, forces the analyst to make a distinction – even if the cut-off point may be difficult to determine in actual analysis, and there is a grey zone between obvious new conventions and obvious one-off cases. If we decide to let the continuum have the last word, the consequence is that we have to give up describing additions to the English vocabulary.

In any case, according to this understanding, the social-level conventionalization continuum does not pertain to the lexical-grammatical distinction, but to the conventionalization of an originally non-conventional element.

### *7.2 The splitting continuum*

Following Heine & Reh (1984: 57), the second of the three continua under discussion may be referred to as the splitting continuum. This continuum pertains to the scenario in which a

grammatical descendent is gradually differentiated from its lexical source, with which it co-exists. As mentioned, this scenario has also been dealt with under the terms ‘divergence’ and ‘layering’, and it has been described as the ‘A>A/B>B’ scenario (see Section 6 and the references there). The scenario is illustrated in Figure 3, which comes with the proviso that the ordering of the different onsets may be variable.

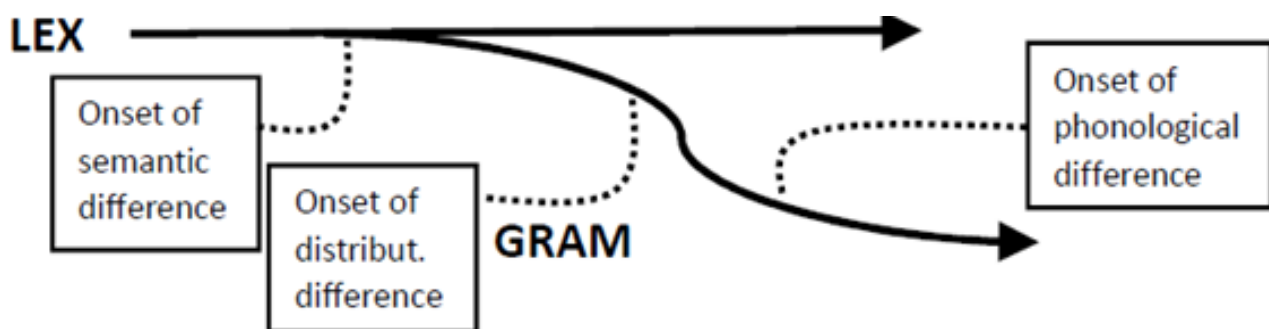


Figure 3: The splitting scenario

The development of English *gonna* may serve to exemplify the scenario (cf. (19) and (20)). As discussed in Section 5, the point of departure for the grammaticalization process is the non-conventional, discursively secondary inference of ‘future’ that depends on the construction of the motion verb *going* with a purposive infinitive. Grammaticalization consists in the conventionalization of this discursively secondary inference. This means that a semantic distinction is introduced between the old motion meaning and the new ‘future’ meaning. At some point, this semantic difference becomes reflected in a distributional difference. For instance, only the ‘future’ meaning variant is compatible with a weather verb (see Stage n+2 in (19) and (20)). At some point, moreover, the semantic difference becomes reflected in a phonological difference between *going to* and *gonna*.

The scenario raises the question, when exactly do grammatical and lexical *going* split apart as distinct linguistic signs? In other words, when exactly does *going* cease to be a single, polysemous sign with a lexical meaning and a grammatical meaning? Is the distributional difference criterial, or the phonological difference? There is no theoretically independent correct answer, and one reason for this is exactly the gradual, continuous nature of the splitting process.

Again, however, this continuum – while interwoven with grammaticalization – is not a lexical-grammatical continuum. Rather, it is a continuum between a source sign and a descendent sign. As argued in Section 6, grammaticalization is (on the understanding proposed in Section 4) basically a meaning-level phenomenon, and at the meaning level of analysis, there is no continuum: the lexical and grammatical meanings of *going* are clearly distinct.

### 7.3 *The discourse prominence continuum*

So far, attention and thus discourse prominence have been discussed as relative and discrete phenomena. When viewed in the context of a competition between syntagmatically linked elements in an utterance, attention and discourse prominence take on discrete values: an element is either more or less prominent in relation to a competing element.

At the same time, however, attention and discourse prominence are also scalar, gradable and continuous phenomena: you can increase or decrease the degree of attention you pay to something, and a given linguistic element may be more or less prominent in the context in which it occurs. That is, discourse prominence is inherently bound up with a third type of continuum: the discourse prominence continuum.

Occasionally, this continuum is reflected in semantic paths of change that involve grammaticalization. An example is the development of ‘have’ verbs into first anterior and then past tense auxiliaries. (21) illustrates a simplified version of this development (cf. Hengeveld 2011: 588-

592); note in particular that due to layering, the different stages may co-exist at a given point in time. Since English *have* has not proceeded all the way, the final step is illustrated with the German cognate *haben*.

(21) The grammaticalization of *have*

a. Possession

*I have a book.*

**present state**

b. Resultative

*I am bored – I have read a book*

*and done the dishes, so now I don't know*

*what to do.* (Mads Nielsen, p. c.)

**present state** as a result of anterior action

(cf. Comrie's 1976 'perfect of result')

c. Anterior

*I have lost a book.*

**anterior action** relevant to present state

(cf. Comrie's 1976 'perfect of recent past')

d. Past (German)

*Ich habe ein Buch gelesen.*

**anterior action** relative to utterance time

1SG have.PRS.1SGINDF book read.PTCP

'I read a book'.

Bold face and underscore indicate scalar discourse prominence values of the verbs involved: bold face + underscore = maximum prominence; bold face + no underscore = high prominence; normal + underscore = low prominence; normal + no underscore = minimum prominence.

The point is that the verbal prominence values indicated are reflected in the meanings associated with each of the four stages.

In (21a), ‘have’ is the only verb and therefore has maximum verbal prominence. This is reflected in the meaning of the construction: present tense ‘have’ determines the construction as designating a present state of possession.

In (21b)-(21d), the participle accompanying ‘have’ may be thought of as competing with ‘have’ for discourse prominence, and as taking over some of the prominence of ‘have’. (21b) represents resultative ‘have’. In this construction, ‘have’ is still the most prominent verb, as reflected in the fact that the resultative construction designates a present state. But the participle is prominent enough to contribute to the overall meaning: it contributes a designation of the anterior action of which the present state is a result.

(21c) represents anterior ‘have’, i.e. ‘have’ in a construction which designates ‘an anterior action presented as relevant to a later state’. Here, the participle is the most prominent verb, as reflected in the fact that the overall construction designates an anterior action. Present tense ‘have’ still has enough prominence to contribute to the constructional meaning, however: it contributes the designation of the present state for which the anterior action is relevant.

Finally, (21d) represents past tense ‘have’, i.e. ‘have’ in a construction which designates ‘past tense’. In (21d), ‘have’ has only little prominence left. The construction simply designates past tense, as dictated by the anterior participle. ‘Have’ only contributes the present tense reference point presupposed by the use of the anterior participle to designate past.

On this account, the development illustrated in (21) involves two changes along a scale of discourse prominence: i) a gradual decrease of the prominence of ‘have’, and ii) a gradual increase in the prominence of the participle. One might think that the former change could be described as a case of semantic bleaching, without invoking the notion of discourse prominence. A bleaching analysis would ignore the latter change, however.

For this reason, a bleaching analysis would also miss the fact that the two changes are closely interwoven and present a gradual shift in the relative prominence of ‘have’ and the participle. This gradual shift in relative prominence is significant for understanding the grammaticalization aspect of the development in (21). However, just as is the case with the social-level conventionalization continuum and the splitting continuum, the discourse prominence continuum is not a lexical-grammatical continuum.

In the case of the anterior participle, this is obvious. Initially in the development, the participle contributes less prominently to the constructional meaning, but it is clearly lexical from the very beginning and stays lexical through all stages. For instance, the participle *read* in (21b) can be modified by means of *thoroughly*, as in (22), thus meeting the modifiability criterion of lexical status (cf. Section 2).

(22) I am bored – I have read a book thoroughly...

Turning now to ‘have’, this verb does indeed undergo grammaticalization. However, grammaticalization imposes a discrete transition from lexical to grammatical upon the discourse prominence continuum running from (21a) to (21d). At least as far as English is concerned (and possibly German), this transition can be identified with the transition from resultative (21b) to anterior (21d). That is, it can be identified with the transition from stages (21a) and (21b), where



‘have’ contributes more prominently to the constructional meaning than the accompanying participle, to stages (21c) and (21d), where ‘have’ contributes less prominently. The lexical-grammatical dividing line is illustrated in (23).

- |   |      |
|---|------|
| (23) a. Possessive: <i>I <b>have</b> a book.</i>                        | LEX  |
| b. Resultative: <i>I am bored – I <b>have</b> <u>read</u> a book...</i> | LEX  |
| <hr/>   |      |
| c. Anterior: <i>I <u>have</u> <b>lost</b> my cat.</i>                   | GRAM |
| d. Past: <i>Ich <u>habe</u> ein Buch <b>gelesen</b>.</i>                | GRAM |

Thus, in (23a) and (23b), English *have* is lexical because it is the most prominent verb and as such has the potential to be discursively primary in the clause in which it occurs. In (23c) and (23d), on the other hand, English *have* and German *haben* are grammatical because they are inherently secondary relative to the co-occurring participle, and therefore incapable of being primary in the clause.

The cut-off point can be justified through the criteria of grammatical and lexical status mentioned in Section 2. The analysis of possessive and resultative *have* as lexical is supported by the fact that these two meaning variants are focusable (cf. Section 2).

(24) - You cannot enter class without a book.

- But I HAVE a book.

(25) - Why do I always have to tell you what to do?

- I HAVE done the dishes!

The analysis of anterior *have* and German past-tense *haben* as grammatical is supported by the fact that these variants are not focusable (outside metalinguistic contexts, and outside verum focus contexts, where stress on the verb does not indicate verbal focus).

(26) - Why are you looking so sad?

- \*I HAVE lost my cat.

(27) - Was hast du gestern gemacht?

what have.2SG 2SG yesterday do.PTCP

‘What did you do yesterday?’

- \*Ich HABE ein Buch gelesen.

1SG have.PRS.1SG INDF book read.PTCP

#### 7.4 A word on construction grammars' lexicon-syntax continuum

The rejection of the idea of a grammatical-lexical continuum may seem at odds with the idea of a lexicon-syntax continuum advocated in construction grammars. At closer inspection, however, there is no necessary conflict.

The main claim in construction grammars is that the item-rule dichotomy associated with earlier approaches to grammar is a false one, and that syntactic constructions are like morphemes, words and idioms in being symbolic sign units (e.g. Croft 2007: 463). Hence, instead of distinguishing between an item storage and a set of rules for combining items, all kinds of syntactic constructions are grouped together with morphemes, words and idioms in one all-inclusive storage termed the

‘construction’. Often, moreover, all members of the construction – whether schematic syntactic constructions or words, etc. – are referred to as ‘constructions’. In order to capture the obvious differences between these constructions, they are often seen as differing in terms of a number of dimensions, including complexity and schematicity (e.g. Langacker 2005: 107-108), and there are good arguments for conceiving of these dimensions as continuous. In the case of schematicity, for instance, it is clear that there is a gradual difference between fully or predominantly schematic constructions like the English interrogative construction, partially schematic constructions like *X spill the beans*, and full substantial ‘constructions’ like *banana*.

Like the continua discussed in Section 7.1-7.3 above, however, these continua are not lexical-grammatical continua. Rather, a discrete distinction between grammatical and lexical constructions can be superimposed on them. On the one hand, potentially discursively primary substantial ‘constructions’ like *banana* are clearly lexical. On the other hand, inherently secondary substantial constructions like English *gonna* are clearly grammatical. The same goes for fully or predominantly schematic constructions. For instance, the meaning of ‘polar question’ associated with the English interrogative is never discursively primary: the focus of attention when hearing a question is on what the question is about; the information that a question is being asked is important enough, but ancillary. In between these poles, we find partially schematic constructions. Whether they are lexical or grammatical depends on whether they are bound up with lexical signs or only with grammatical signs. For instance, *X spill the beans* is lexical due to the lexical status of the verbal part of the idiom, *spill the beans*.

The point is that the idea of a construction is fully compatible with a strict distinction between lexical and grammatical along the lines originally outlined in Boye & Harder (2012). Whether a given construction is lexical or grammatical is an empirical question that can be answered by means of the criteria outlined in Section 2.

Of course, the distinction between lexical and grammatical may not be important from the point of view of construction grammars, but this does not entail that it can be ignored. It may be desirable to be precise about the nature of grammar for other reasons. One example is the occurrence of forms of aphasia where the difference between lexical and grammatical elements is striking in informant profiles. For instance, studies of agrammatic aphasia have repeatedly documented that grammatical word production is more compromised than lexical word production (see Boye & Bastiaanse 2018; Nielsen et al. 2019, and Martínéz-Ferreiro, Bastiaanse & Boye 2020 for recent studies; and see Boye et al. 2023 for a usage-based account), and definitions of agrammatic speech therefore standardly refer to a sparsity of grammatical elements. In order to get to the bottom of the neurocognitive (and patient-related) issues that arise in that context, it is important to be aware of what the distinction between lexical and grammatical features of language consists in. The interest in being clear about precisely what characterizes grammatical elements therefore remains.

## 8. CONCLUSION

It has been argued that grammaticalization as well as also the relation between grammaticalization and other aspects of linguistic change can be better understood by taking an extra analytic step, filtering out grammaticalization as a type of change or process from both its results and from other processes that grammaticalization have often been defined in relation to. The proposal offered is based on the theory laid out in Boye & Harder (2012), but goes beyond that theory in rejecting the definition of grammaticalization in terms of its result. The definition offered in Boye & Harder (2012) – like other definitions of grammaticalization that have been proposed over the years – does not precisely enough capture the defining feature of the type of change or process.

The core of the revised theory proposed is that *grammaticalization is the conventionalization of discursively secondary status*. This definition separates grammaticalization from closely related phenomena such as regramm(aticaliz)ation, which does not bring an additional grammatical sign into being but changes the nature of an existing grammatical sign.

This revised theory has implications which can be stated as claims that represent significant deviations from widespread and well-established assumptions about grammaticalization. First of all, instead of seeing grammaticalization as a type of overall diachronic development, subsuming all essential properties of certain processes of change, the revised theory suggests that grammaticalization should be seen as one aspect of overall changes that simultaneously include many other aspects.

Secondly, instead of hovering uneasily between gain and loss, grammaticalization now comes out unambiguously as involving gain. The processes of attrition and loss that have typically been viewed as defining features of grammaticalization, have now been factored out and stand as independent types of change, which may or may not be associated with grammaticalization.

Thirdly, the greater analytic differentiation argued for allows us to reject the assumption of a continuum between lexical and grammatical that has been a persistent feature of the discussion. There are continua involved in many cases of grammaticalization, but the clines in question are not clines between lexical and grammatical. Rather, they include a social-level conventionalization continuum, a splitting continuum, and a discourse prominence continuum. This has important consequences for our understanding of the nature of grammar: grammar as a design feature of human languages is not merely one indistinguishable part of the whole mix of properties of language, but has its own distinctive nature that needs to be captured in order to be precise about what characterizes a human language.

Denying the existence of a continuum between lexicon and grammar may be difficult to accept for many functional-cognitive linguists. After all, it is patently obvious that many elements have properties that place them somewhere in between the prototypically lexical and prototypically grammatical, and surely it follows that there is a lexical-grammatical continuum? According to the theory proposed above, this is precisely what does not follow. One can set up a cline between prototypical and less prototypical birds, but this does not preclude a need to distinguish between birds and non-birds. And even if there are cases where it may be hard to determine, intermediate cases do not invalidate categorical distinctions: the existence of cases where it is hard to figure out whether the football crossed the goal line does not put into question the distinction between ‘goal’ and ‘no goal’.

The proposal presented here, finally, provides a take on the role of pragmatics in relation to language change. As is apparent, the proposal attaches great weight to the phenomenon of conventionalization. The special focus is on the conventionalization of a very specific semantic trait, namely discursively secondary status – but conventionalization is a core phenomenon in all forms of language change and indeed in social life generally: the rise of established customs, including formal laws, reflect essentially the same type of process. This process is inherently social and pragmatic, depending on the spreading of patterns of behaviour in populations, with adaptational pressures and mutual accommodation as key features.

However, as a crucial aspect of this overall pragmatic process, phenomena arise that are not pragmatic, in the sense that they are totally context-dependent. Conventions are precisely those features that persist from one context to the next, and which thereby add relatively stable features to the architecture of the social environment in the speech community. When you enter into a new speech community, you are better off if you know those features beforehand (for instance through

taking language classes!) – instead of relying purely on your ability to adapt to the immediate context in all situations.

Grammaticalization as a special type of conventionalization must be understood at the interface between situational pragmatics and conventions. Before grammaticalization can take place, there must be non-conventionally secondary meanings around, and they can only arise through situational processes of communication. Once they are available, however, they can undergo conventionalization as meanings that are secondary and ancillary in relation to other meanings. This is what constitutes grammaticalization. Grammaticalization may combine with a number of other processes (some of which are functionally motivated in relation to conventionalized discursively secondary status; see Section 4), but these other processes do not constitute grammaticalization, they merely tag along.

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