

Context types in grammaticalization as constructions¹

Gabriele Diewald

Universität Hannover

Abstract

In recent grammaticalization studies, the notion of “context types” has been employed to describe the successive diachronic stages that are associated with grammaticalization processes. It has been shown that a new grammatical function does not arise homogeneously in all uses of the linguistic item concerned, but in its origin is bound to specific linguistic “contexts” or “constructions”. However, the notions of “context” as well as “construction” differ greatly among scholars, and research into the impact of constructions in grammaticalization scenarios, and into ways to formalized context types and constructions for diachronic purposes has only begun. The present study advances in this direction as it links the notion of context types of grammaticalization studies with central concepts of construction grammar. Using diachronic data from grammaticalization phenomena of German, successive types of contexts, i.e. critical contexts and isolating contexts, which are typically found in grammaticalization processes, are analyzed as specific types of idiomatic constructions in the sense the term is used in construction grammar.

1. Introduction

This paper deals with problems of diachronic linguistics with the focus on the historical rise and re-patterning of grammatical markers and grammatical paradigms. The overall aim, to which this article contributes a first step, is to develop a format for modelling the prominent stages in grammaticalization scenarios by uniting the findings of grammaticalization studies with concepts that are central to construction grammar.

Recent grammaticalization studies show an increasing interest in the impact of contextual factors in linguistic changes, and the notions “context types” and “constructions” have been employed to describe the successive diachronic stages that are associated with grammaticalization processes, i.e. with the development of grammatical functions in linguistic items that had lexical or less grammatical functions before. However, scholarly definitions of both “context” and

¹ I would like to thank two anonymous reviewers for their helpful comments and suggestions.

“construction” differ considerably, and research into the impact of constructions in grammaticalization scenarios, as well as research on the question of how to formalize context types and constructions for diachronic purposes has only just begun (see also Traugott 2003).

The present study takes up these issues and links the notion of context types used in grammaticalization studies with central concepts of construction grammar as proposed in Fillmore, Kay and O’Connor (1988), Fillmore and Kay (1995), Goldberg (1995), Kay and Fillmore (1999), Michaelis (2004) and others. The point of departure is the model of context types suggested in Diewald (2002), which distinguishes between three stages in the diachronic development of grammatical functions that are associated with three different, chronologically ordered types of context. I will argue that these context types are diachronic variations of specific constructions and that the general framework of construction grammar as well as some of its central notions can be applied in order to develop a more systematic and general way to describe these types of context, and to help solve some notorious problems of investigating diachronic change. The diachronic data used to illustrate this central idea are taken from the grammaticalization of German modals into epistemic mood markers.

The structure of the paper is as follows: section 2 provides some very brief definitions of contexts and constructions as they are used in grammaticalization theory. Section 3 argues for the integration of grammaticalization studies and construction grammar by pointing to the convergence of some prominent theoretical and methodological aspects. Section 4 exemplifies in how far it is useful to describe particular types of context in grammaticalization as constructions in terms of constructional approaches.

2. Grammaticalization, contexts and constructions

From the diachronic perspective, grammaticalization is a process whereby lexical entities develop grammatical functions in the course of time, or where elements which already display grammatical

functions develop further or more central grammatical functions.² As Lehmann (2004: 155) points out, the essence of the process can be characterized by two general features, which are the loss of autonomy of the linguistic material involved and the integration into the obligatory rules of the grammatical system.

In recent grammaticalization studies, it has been shown that a new grammatical function does not arise homogeneously in all uses of the linguistic item concerned, but is bound in its origin to specific linguistic “contexts” or “constructions”. Bybee, Perkins and Pagliuca (1994: 11), for example, state that “it is the entire construction, and not simply the lexical meaning of the stem, which is the precursor, and hence the source, of the grammatical meaning.” In a similar vein, Bisang (1998: 20) concludes that “constructions provide the framework within which combinations of syntactic units and semantic components can be analysed in a new way which may lead to language change if it is propagated from a linguistic individual to a language community.” Finally, under the heading “Constructions in Grammaticalization”, Traugott (2003) explicitly takes up this problem and suggests the following definition of grammaticalization which includes the notion of “construction”. Grammaticalization is seen as “the process whereby lexical material in highly constrained pragmatic and morphosyntactic contexts is assigned grammatical function, and, once grammatical, is assigned increasingly grammatical, operator-like function” (Traugott 2003: 645).

It is, therefore, only natural that grammaticalization studies have taken up the task of developing detailed models for describing the various context types in grammaticalization. Heine (2002) puts forward a concept of relevant contexts that concentrates on semantic changes and the accompanying interpretational procedure in grammaticalization processes.³

² This is, of course, a grossly simplified description, which is, however, adequate for the purpose of this paper. For a detailed account of the diachronic aspects of grammaticalization see e.g. Hopper & Traugott (2003 [1993]).

³ For example, the context type which Heine (2002: 86) calls “bridging context” is described as “a specific context giving rise to an inference in favour of a new meaning” so that the “target meaning [is] foregrounded”. Also the third *Constructions* SV1-9/2006 (www.constructions-online.de, urn:nbn:de:0009-4-6860, ISSN 1860-2010)

The model suggested here (following Diewald 2002) integrates semantic, morphological and structural aspects into the definition of context types, and emphasizes the role of paradigmatic relations among constructions at a certain historical stage in the language as well as the influence of paradigmatic oppositions in the target category. This model distinguishes three chronologically ordered stages in the diachronic rise of grammatical functions, each of them associated with a particular type of context. These stages are summarized in table 1:

Stage	Context	Meaning/Function
I preconditions of grammaticalization	untypical contexts	conversational implicature
II triggering of grammaticalization	critical context	multiple opacity
III reorganization & differentiation	isolating contexts	polysemous/heterosemous

Table I. Context types in grammaticalization

In the first stage, the preconditions of the grammaticalization process develop. It shows an unspecific expansion of the distribution of the lexical unit to contexts in which it had not been used before. These contexts are called “untypical contexts”. In them, the new meaning, which may be grammaticalized in the further development, arises as a conversational implicature, i.e. this meaning is contextually and pragmatically triggered and not explicitly encoded in the linguistic items themselves. Untypical contexts may persist after grammaticalization has taken place.

The second stage describes the actual triggering of the grammaticalization process. It is associated with a highly marked construction, called the “critical context” here. This is characterized by multiple structural and semantic opacity, thus inviting several alternative

stage of the process, the “switch context”, which Heine describes as “incompatible with the source meaning” (2002: 86), is taken to comprise semantic factors exclusively. Furthermore, in contrast to the model suggested here, which provides for specific context types to be lost during the historical process, the contexts described by Heine form an “implicational scale”, which means that “if a given language is found to have a stage IV situation [the last stage in the grammaticalization process], then it can be expected to also distinguish all preceding stages” (2002: 95).

interpretations, among them the new grammatical meaning. The critical context functions as a kind of catalyst; it is found only during stage II and disappears in the later development.

Stage three shows the consolidation of the grammaticalization process, i.e. the re-organization and differentiation of the grammatical formatives and the paradigm that is the target category of the ongoing grammaticalization process. In this phase, the new grammatical meaning is isolated as a separate meaning from the older, more lexical, meaning. This separation of the two meanings is achieved by the development of *isolating contexts* for both the lexical and the grammaticalized readings, i.e. specific linguistic contexts that favour one reading to the exclusion of the other (cf. section 4.1 for an example). As soon as the opposition between the isolating contexts is established, the process of grammaticalization can be said to be completed: it is not reversible to an earlier stage. The new grammatical meaning is no longer dependent on conversational implicature, as the linguistic element under grammaticalization has become truly polysemous.

This is – in brief – the suggestion for a general context-sensitive grammaticalization scenario. In the following it will be argued that it is useful to conceive of some of these context types as constructions in the sense of construction grammar. Before this is exemplified in detail with the case of the grammaticalization of the German modals (section 4), the next section points out some general reasons why the concept of construction grammar might profitably be integrated into the investigation of grammaticalization in language change.

3. Converging concepts in construction grammar and grammaticalization studies

There are at least four areas in which the assumptions of construction grammar⁴ converge with basic concepts of studies in language change in general and grammaticalization in particular.

⁴ Notwithstanding the fact that there are several trends in constructional approaches to language, which differ in formal as well as conceptual matters, it is here taken for granted that there is a common core of ideas centring on the notion of “construction” that is shared by all branches of constructional approaches.

These are the definition of the basic unit, the range of phenomena covered, the dynamic potential of the concept, and the flexibility and openness of the formalism. The following sections briefly discuss these issues.

3.1 The definition of the basic unit

The standard assumption of any constructional approach to language is the notion that the basic unit of language as well as of linguistic description is the construction, i.e. a conventionalized form-meaning correspondence. This reading of construction comprises linguistic units of variable size ranging from morphemes to larger units. It is reflected in Goldberg's definition of constructions:

According to Construction Grammar, a distinct construction is defined to exist if one or more of its properties are not strictly predictable from knowledge of other constructions existing in the grammar: C is a CONSTRUCTION iff_{def} C is a form-meaning pair $\langle F_i, S_i \rangle$ such that some aspect of F_i or some aspect of S_i is not strictly predictable from C's component parts or from other previously established constructions. (Goldberg 1995: 4)

This definition is a guideline for deciding what types of entities are to be treated as constructions, which, as far as sheer size is concerned, by definition range from morphemes to multi-word strings. Again, Goldberg states this quite clearly:

Phrasal patterns are considered constructions if something about their form or meaning is not strictly predictable from the properties of their component parts or from other constructions. That is, a construction is posited in the grammar if it can be shown that its meaning and/or its form is not compositionally derived from other constructions existing in the language. In addition, expanding the pretheoretical notion of construction somewhat, morphemes are clear instances of constructions in that they are pairings of meaning and form that are not predictable from anything else [...]. (Goldberg 1995: 4)

This notion is unanimously agreed upon, as can be checked by a look at the great number of similar definitions in studies on construction grammar (see e.g. Kay and Fillmore 1999: 2-3; Croft 2001: 18-19 Michaelis 2004: 8), and there is no need for further discussion here. What is *Constructions* SV1-9/2006 (www.constructions-online.de, urn:nbn:de:0009-4-6860, ISSN 1860-2010)

important for the purpose of this paper is the fact that this definition accords with one of the main tenets of grammaticalization studies, namely the gradience between lexicon and syntax and the intermediate stages that continuously arise while (more) grammatical items develop out of (more) lexical ones. It is this type of gradience that is dealt with in the well-known scales and clines of grammaticalization studies which are set up for grammaticalization in general, for single categories or for particular aspects of the process. To illustrate this very prominent concept in grammaticalization theory two examples may be in place here. Bybee, Perkins and Pagliuca (1994: 40) suggest a scale representing “degrees of fusion”, which proceeds from syntactic realizations to non-bound grams to inflection, derivation and lexical realization, thus spanning all formal levels of linguistic structure. A category-specific example is Lehmann’s cline for the development of case affixes, which has the following shape: “Relational noun > secondary adposition > primary adposition > agglutinative case affix > fusional case affix” (Lehmann 1985: 304).

As these clines, which lie at the core of grammaticalization processes, represent typical stages of an otherwise continuous, gradual shift through several levels of formal linguistic structure, they presuppose a view of language that does not draw a sharp line between syntactic structure and lexical entities, or between lexical entities and morphemes. Examples like these show that the notion of construction easily lends itself to such scales. And, conversely, the definition offered by constructional approaches can help isolate the relevant syntagmatic strings in a particular grammaticalization process.

3.2 The range of phenomena covered

In contrast to other syntactic models, construction grammar is not only concerned with the regular and productive part of language but gives equal consideration to its idiomatic structures and thus is devoted to a much larger range of phenomena than other models. This aspect, too, is generally

agreed upon (see, for example, Fillmore, Kay & O'Connor 1988; Goldberg 1995: 7; Michaelis 2004: 8; Wildgen 1990: 69). It is highlighted by Kay and Fillmore in the following way:

To adopt a constructional approach is to undertake a commitment in principle to account for the entirety of each language. This means that the relatively general patterns of language, such as the one licensing the ordering of a finite auxiliary verb before its subject in English [...], and the more idiomatic patterns [...], stand on an equal footing as data for which the grammar must provide an account. (Kay & Fillmore 1999: 1)

The authors go on to illustrate their point by discussing the English expression *what's X doing Y* (as in *What am I doing reading this paper?* Or *What is it doing raining?*), which combines conventional as well as idiosyncratic linguistic features of English, and thus is a typical instance of a (partially) idiomatic construction (Kay & Fillmore 1999).

In studies of language change, the question of how to treat idiomatic or otherwise non-compositional structures is of the greatest importance for one simple reason. In the initial stages of change, any innovation – by definition – is not part of the regular and productive segment of language. Instead, it is marginal and irregular, and – regarded from the perspective of the existent linguistic system – deviant or even wrong. This applies, for example, to the stage of the critical contexts, as will be explained in Section 4. In order to describe these crucial stages in language change, a linguistic model is called for that a priori is prepared to account for this type of unprecedented structure in a principled way.

3.3 The dynamic potential

Construction grammar assumes that the constructions of a language are not just a collection of unrelated items but are hierarchically ordered, so that similar or common features among constructions can be motivated by their relationship to other constructions. These relations are described via the notions of unification, inheritance, and coercion.⁵ In order to solve the problem

⁵ See for example Goldberg (1995: 67):

Constructions SV1-9/2006 (www.constructions-online.de, urn:nbn:de:0009-4-6860, ISSN 1860-2010)

of polysemy of constructions, Goldberg (1995) postulates inheritance relations whereby both formal and semantic features may be transmitted from one construction to another, and thus similarity relations as well as polysemy may be accounted for (Goldberg 1995: 67-72). Furthermore, as inheritance links are uni-directional, this model accounts for “motivation” in grammatical structure. As Goldberg (1995: 70) – drawing on suggestions by Lakoff – points out: “A given construction is motivated to the degree that its structure is inherited from other constructions in language.”

A further concept that adds to the flexibility of the descriptive tools is the notion of coercion, as applied by Michaelis (2004). She uses the term coercion to account for the possibility to unify constructions, which due to mutually exclusive semantic restrictions, should not allow unification in the first place. The author argues that constructional meaning under certain conditions induces a shift in “the designations of content words” used in the construction (Michaelis 2004: 1). This means that conflicts of compatibility are solved by the reinterpretation of certain lexical items in terms of their fit for the constructional meaning. This mechanism does not merely serve to resolve semantic conflicts or conflicts between constructional meaning and lexical meaning. Instead, it is employed to interpret regular as well as irregular combinations of constructions with lexical items – i.e. it “is responsible for both coerced and compositional meaning” (Michaelis 2004: 1) –, and thus allows a powerful generalization.⁶

So far, these concepts have been applied to synchronic variation only, and the question whether they could be fruitfully used in the description of diachronic variation has not yet been taken up. However, it is obvious that in this area there is a particularly close relationship between

It is argued that constructions form a network and are linked by inheritance relations which motivate many of the properties of particular constructions. The inheritance network lets us capture generalizations across constructions while at the same time allowing for subregularities and exceptions.

Similar views are expressed in Michaelis & Lambrecht (1996: 216-217).

⁶ Compare as well Michaelis (2004: 7): “Coercion effects, rather than representing a special form of composition, are by-products of the ordinary significations of constructions.”

diachronic linguistics and construction grammar. The principle of inheritance as used by Goldberg has a clear resemblance to analogical change, which in historical linguistics has long been treated as one of the central mechanisms of language change. Paul (1995 [1920]: 106-120) attributes analogical change to the effect of “proportional equations” (“Proportionsgleichungen”), i.e. the transposition of a relation from one domain into another, which, under certain conditions, may be conceived of as a kind of inheritance relation.

In addition, coercion, understood as the use and reinterpretation of lexemes in previously incompatible constructions, is based on cognitive and pragmatic procedures like metaphorical extension (which, too, may be treated as a kind of analogical transfer) and conversational implicatures in Grice’s sense. Speakers employ metaphorical (or metonymic) extension in first using a particular linguistic item in a new way (in a new construction); hearers interpret “new” linguistic utterance, i.e. use conversational implicatures, which are based on the same cognitive procedures as those used for production.

Though Michaelis does not explicitly mention this connection, it becomes quite evident in quotes like the following, which (focussing on the hearer’s side) defines coercion as a pragmatically motivated interpretation by the participants of the speech event: “Coercion effects are triggered when the interpreter must reconcile the meaning of a morphosyntactic construction with the meaning of a lexical filler” (Michaelis 2004: 7).

These cognitive and pragmatic procedures constitute the basis of the general and ubiquitous linguistic creativity of language users (who are always speakers and hearers at the same time), which has long been known to be one of the driving forces of linguistic change (cf. Lehmann 1985). Thus, to give just one straightforward example, the metaphorical extension of a word, which first becomes visible in a “coerced construction”, may become generalized and independent of that construction (via the creativity of the speaker/hearer), which results in semantic change of that linguistic item.

The concept of “coercion”, as it is understood here, does not refer to a newly discovered cognitive or pragmatic procedure; instead, it seems to be a useful notion to refer in a summarizing way to the linguistic results of the cognitive and pragmatic procedures speakers and hearers resort to in using their language. It is this area in particular where important synergetic effects between constructional concepts and principles of language change and grammaticalization are to be expected.

3.4 The flexibility and openness of the formalism

Two aspects will be treated under this heading: first, the possibility to describe constructions with varying degrees of depth and detail and, second, the principle for handling syntactic, semantic and pragmatic features in a uniform way.

In contrast to most of the more rigidly formalized grammatical descriptions, construction grammar allows for structural descriptions with varying specification, including the possibility to assign particular features to constructions in a holistic way. As Wildgen (1990: 69) points out, this means that the principle of compositionality, which in most models of grammar is strongly adhered to, in constructional approaches is restricted in favour of a holistic conception of constructional meaning.

The option to choose descriptions of varying degrees of specification is of a great advantage in diachronic investigations, because of the trivial but far-reaching fact that for past stages of a language there are no longer speakers available whose competence one could draw on. Therefore, in any linguistic analysis of historical language, no matter how carefully it is conducted, gaps and uncertainties remain. Descriptive models requiring a complete analysis of the whole linguistic structure inevitably run the risk of anachronistic distortions, as the linguist is forced to transfer his or her own system onto the historical data.

In contrast to that, the descriptive practice favoured by constructional approaches provides for analytical solutions that avoid over-specified, non-provable descriptions and that better reflect the actual state of linguistic knowledge about an imperfectly known, past linguistic system.

A second merit with regard to formal aspects is the fact that constructional approaches do not make a sharp distinction between syntactic, semantic and pragmatic features, but postulate a “gestaltlike interaction of formal, semantic and pragmatic constraints” (Michaelis & Lambrecht 1996: 215). This again is conducive to the investigation of grammaticalization processes. The rise of grammatical markers is fundamentally based on the interrelation and gradual transition from one level of linguistic organization to another: new meanings arise out of stereotypical pragmatic inferencing, lexical forms acquire grammatical functions, the free ordering of discourse elements may become obligatory and syntactically constrained, syntactic structures become morphologized, morphemes erode and become phonological features, etc. The essence of this process was first described by Givón (1979: 209) in the famous grammaticalization scale, which is reproduced here:

“discourse > syntax > morphology > morphophonemics > zero”.

In summary, in a study of the rise of grammatical markers, a neat separation along the lines of the traditionally distinguished linguistic levels is as impossible as it would be counter-productive.

4. Constructions in the grammaticalization of the German modals

This section discusses in how far context types in grammaticalization can be seen as constructions. The examples chosen here are taken from the grammaticalization of the German modals, a case which unites two desirable features for the purpose of this paper. First, it is a highly complex, long-term process involving changes on several levels of the linguistic structure and interacting with linguistic as well as extra-linguistic environments (the latter will not be treated here). Second, the development of the German modals has been the topic of a number of studies, which provide *Constructions* SV1-9/2006 (www.constructions-online.de, urn:nbn:de:0009-4-6860, ISSN 1860-2010)

us with sufficient reliable data from all historical periods. In the following, emphasis is put on two stages in particular: the isolating contexts in Present-Day German, and, second, the critical context in Middle High German (for a full account of the grammaticalization of the German modals see Diewald 1999).

4.1 *The isolating contexts in Present-Day German*

The six German modals *dürfen* ‘to be allowed to’, *können* ‘can, to be able to’, *mögen* ‘to like, may’, *müssen* ‘must, to have to’, *sollen* ‘shall, to be to’ and *wollen* ‘to want’ are a paradigm case of grammaticalization. They all have a less grammaticalized use, in which they are stative verbs with typically narrow scope, and a highly grammaticalized wide-scope use as factuality markers, where they approach the stage of auxiliaries. The two uses are illustrated with the modal *müssen* in (1) and (2):

(1) Aber jetzt mußt du natürlich erst das Semester zu Ende bringen, ne?

(Texte 63)

‘But now, of course, you must finish the semester first, right?’

(2) Dann muß ihm langsam sein Kollege [...] unheimlich geworden sein.

(Zeit 52)

‘Then his colleague [...] must have started giving him the creeps.’

In (1) *mußt* predicates the state of ‘being obliged’ of the subject, i.e. the modal has narrow scope and lexical meaning. This is a prototypical example of the lexical use, which in the literature is often called deontic or agent-oriented. In (2) *muß* does not contribute to the propositional content of the sentence, i.e., unlike *mußt* in (1) it does not express the obligation of the subject. Instead, it has wide, i.e. propositional scope and expresses uncertainty on the part of the speaker concerning the factuality value of the whole proposition. The degree of uncertainty can be made explicit by a paraphrase with a sentence adverbial that roughly conveys the meaning of the modal. For the meaning of *muß* in (2) this is illustrated in (3):

- (3) Bestimmt ist ihm langsam sein Kollege [...] unheimlich geworden.
 ‘His colleague [...] definitely started giving him the creeps.’

In their use as speaker-based factuality markers the modals are integrated into the grammatical paradigm of verbal mood, i.e. they participate in a deictic grammatical category (Diewald 1999: 167-248).

It is well known that the uses of the modals illustrated in (1) and (2) are context dependent, insofar as there are contexts that favour one use to the exclusion of the other. The most important factors here are structural ones, or to be more exact, the morphological categories of the modal verb and the morphological categories of the infinitive. These factors are linked to the two readings in the following way: the grammaticalized modals do not allow periphrastic tenses, which means that, if a modal is used with a periphrastic tense, it can only have the less grammaticalized meaning. This is shown in (4), which allows only a lexical reading of *hat müssen*, etc.):⁷

- (4) Er hat/habe/hatte/hätte/wird... erst das Semester zu Ende bringen müssen.
 ‘He has been/had been/would have been/will be ... obliged to finish the semester first.’

On the other hand, there is a type of context in which the lexical reading is virtually excluded and the grammaticalized reading is highly favoured. This is the combination of the modal with an infinitive perfect, as in (2). (5) gives two further examples of this context type with other modals. They, too, have a grammaticalized reading only:

- (5a) Ich kann mich getäuscht haben.
 (Radio)
 ‘Perhaps I was mistaken.’

⁷ In terms of the grammaticalization parameters developed by Lehmann (1985), this is an instance of the loss of “morphological integrity”, i.e. the loss of inflectional distinctions pertaining to the main word class the item originally belonged to.

(5b) Der Arzt und die Kosmetikerin sollen 1993 noch zwei weitere Morde geplant haben.

(FN 95)

‘The doctor and the beautician are said to have planned two more murders in 1993.’

Summarizing this section, it can be said that for both of the central uses there is a specific morphologically marked context type that favours one reading to the exclusion of the other. As these contexts have the capability to distinguish the most grammaticalized reading of the modals from their prototypical lexical reading, they are called the isolating contexts here. Table II gives an overview:

I) isolating context for the less grammaticalized, lexical reading
<p>Relevant structural feature:</p> <ul style="list-style-type: none"> • modal verb in a periphrastic tense, e.g. <i>hat müssen</i> in 4 with <i>haben</i> or <i>werden</i> as auxiliary <p>and</p> <ul style="list-style-type: none"> • modal verb as past participle, which is realized as the so-called “Ersatz-infinitiv”, i.e. a past participle looking like an infinitive, like <i>müssen</i> in 4 <p>and</p> <ul style="list-style-type: none"> • lexical verb as infinitive (complement of the modal), like <i>(zu Ende) bringen</i> in 4 <p>Example:</p> <p style="padding-left: 40px;"><i>Er hat sie loben können.</i></p> <p style="padding-left: 40px;">he has her praise can-PASTP</p> <p style="padding-left: 40px;">‘He has been able to praise her.’</p> <p>Constructional meaning:</p> <p style="padding-left: 40px;">‘a modal state being predicated of the subject of the sentence’</p>
II) isolating context for the grammaticalized, deictic reading
<p>Relevant structural features:</p> <ul style="list-style-type: none"> • finite modal verb, like <i>kann</i> in 5a, <i>sollen</i> in 5b <p>and</p> <ul style="list-style-type: none"> • infinitive perfect of the main verb, like <i>getäuscht haben</i> in 5a, <i>geplant haben</i> in 5b <p>Example:</p> <p style="padding-left: 40px;"><i>Er kann sie gelobt haben.</i></p> <p style="padding-left: 40px;">he can her praised have</p> <p style="padding-left: 40px;">‘He may have praised her.’</p> <p>Constructional meaning:</p> <p style="padding-left: 40px;">‘uncertain factuality value being attributed to the whole proposition by the speaker’</p>

Table II. The isolating contexts of PDG modals

As can be derived from the description above, an isolating context for the different readings of the modals must consist of at least three verbal elements, which are represented by the examples in Table II. To give an overview, the schematic structures of these two isolating contexts are rendered in Table III as set a) e.g. *loben hat können*, and set b) e.g. *gelobt haben kann*, respectively:⁸

	first verbal element	second verbal element	third verbal element
a) lexical reading	infinitive of main verb	inflected auxiliary (<i>haben/sein</i>) tense	“Ersatzinfinitiv” of the modal substituting the past participle of a modal verb
b) grammaticalized reading	past participle of main verb	infinitive of auxiliary (<i>haben/sein</i>) tense	inflected modal verb

Table III. Schematic features of the verb group in the isolating contexts of the German modals

It is suggested here that these two isolating contexts are constructions in the construction grammatical sense. More precisely, they belong to a subtype of idioms which in Fillmore, Kay & O’Connor (1988) are classified as “formal or lexically open” idioms. The authors define these idioms as “syntactic patterns dedicated to semantic and pragmatic purposes not knowable from their form alone” (Fillmore, Kay & O’Connor 1988: 505). Formal idioms are constructions whose compositionality is reduced, i.e. at least some part of their form-meaning correspondence has to be treated holistically and cannot be derived in its totality from other constructions or from a combination of other constructions. However, they are still fully productive, as their syntactic positions are not filled with lexically fixed items.

⁸ In modal constructions built by two verbal elements like in *Er kann/konnte sie loben* (‘he can/was able to praise her’) the opposition of the isolating contexts is neutralized, and none of the two readings is part of the constructional meaning.

The arguments for classifying the isolating contexts as formal idioms are the following. First, the opposition between the two constructions exists only for the modal verbs (and for *brauchen*). No other German verb has this constructional choice. It is a relation between constructions that is specific to the modals.⁹ This is illustrated in the examples (6) to (10):

- (6a) Er hat sie loben können.
‘He has been able to praise her.’
- (6b) Er kann sie gelobt haben.
‘He can have praised her.’
- (7a) Er hat sie loben lassen.
‘He has let her praise/be praised.’
- (7b) *Er lässt sie gelobt haben.
*‘He allows her to have praised.’
- (8a) Sie hat ihn singen hören.
‘She has heard him sing.’
- (8b) *Sie hört ihn gesungen haben.
*‘She hears him have sung.’
- (9a) Sie hat ihm tragen helfen.¹⁰
‘She has helped him carry it.’
- (9b) *Sie hilft ihm getragen haben.
*‘She helps him having carried it.’
- (10a) *Er ist sie loben worden.
*‘He has become praise her.’
- (10b) Er wird sie gelobt haben.
‘He will have praised her.’

⁹ The number of potentially eligible verbs is small and restricted to auxiliary-like verbs taking an infinitive and showing the so-called “Ersatzinfinitiv”; besides the modals and the verbs in the examples above, i.e. *werden* ‘become’, *lassen* ‘let’, *helfen* ‘help’, *sehen* ‘see’, there are some further verbs like *heißen* ‘order’, *fühlen* ‘feel’, *hören* ‘hear’.

¹⁰ The German verb *tragen* usually requires a direct object like the English verb *carry* which is given with a pronominal object in the translation of 9a and 9b. It is the highly restricted construction with *helfen* that changes the valency requirements of German *tragen*. This, however, does not affect the relevant point in 9 and the other examples, which are the combinatorial properties of the verbal elements.

(6) repeats the opposition of the two isolating contexts for the modals. (7) to (10) show that other verbs taking the so-called “Ersatzinfinitiv” do not allow the second construction (finite verb and infinitive perfect of a main verb) that is available to the modals. (10) illustrates the difference between the modals and the verb *werden*, which has the construction with finite *werden* and the infinitive perfect of the main verb, but no construction with an “Ersatzinfinitiv”. In short, only the modals have access to both constructions constituting the isolating contexts.

The second argument for regarding the isolating contexts as constructions rests on their semantics. As already mentioned and as noted in table II, both structures are associated with a discrete and unambiguous constructional meaning, i.e. a meaning which is not present in any other construction involving modal verbs. The isolating context for the lexical reading has a constructional meaning which predicates a modal state on the subject of the sentence. The isolating context for the grammaticalized reading, on the other hand, has a constructional meaning that can be paraphrased as “speaker attributes an uncertain factuality value to the whole proposition”. The distinctive semantic features added by the lexical content of each modal (the meaning of *können* versus *müssen*, etc.) are not part of the overall constructional meaning but part of the lexical construction of the modal itself.

Thus, though there are partial similarities with other constructions which indicate partial inheritance relations, the isolating contexts of the modals display a unique form-meaning correspondence which cannot be reduced to combinations of other constructions. They therefore qualify as partially productive, idiomatic constructions in the constructional sense of the term elaborated above.

4.2 The critical context of Middle High German (MHG)

The isolating contexts of the modals developed as the third stage of the grammaticalization process in the Early New High German period, roughly between 1500 and 1650 (Diewald 1999: 379-384). The preceding second stage, which represents the triggering of the grammaticalization

process, is characterized by another type of context, the critical context. As already described in section 2, the critical context is a highly ambiguous structure, which through morpho-syntactic opacity allows several options for its interpretation, among them the new grammaticalized meaning. It is important to note that, in contrast to the other context types, the existence of the critical context is restricted to a fairly narrow time span in history and does not exist before or after that critical period. For the grammaticalization of the modals it is found in Middle High German, around 1200. It is the construction shown in table IV:

modal with dental suffix <i>-t-</i> & (nominal object) & <i>haben/hân/sîn</i> & past participle

Table IV: The critical context for the grammaticalization of the German modals

The critical context consists of the modal with the dental suffix *-t-* (“DS”) plus an optional nominal object plus *haben/hân/sîn* plus a past participle of a lexical verb. Although this construction is not attested before the middle of the 12th century, it is already found with all six modals around 1200 with a relatively high frequency (Westvik 1994; Deeg 1948), which means it spread rapidly. What is most important for the topic of this paper is the fact that this construction is only attested for the modals. There are no other verbs found in this construction at that time (Paul, Wiehl & Grosse 1989: 295f.). (11) gives an example with the modal *können*, which will be used here for further illustration:¹¹

- (11) von Veldeke der wîse man!
 der kunde se baz gelobet hân.
 he can-DS her better praised have
 ‘He can/could have praised her better.’
 (Parz 8, 404,29f.)

¹¹ Examples proving that the critical context is attested with each of the six modals can be found in Diewald (1999: 361-431); cf. also Deeg (1948).

The interpretation of this construction is difficult, to say the least. It is highly ambiguous (which is not rendered fully in the semantic paraphrase in (11)). Thus, disregarding the further linguistic context, (11) can be translated into Present-Day German (PDG) in at least the following three ways (compare Deeg 1948 and Westvik 1994):

- (11) der kunde se baz gelobet hân.
(Parz 8, 404,30)
- (11a) Der hätte sie besser loben können (subjunctive pluperfect)
'He could have praised her better.'
- (11b) Der konnte sie besser als Gelobte haben (past participle as a predicative adjective)
'He was better able to have her praised (in a praised state).'
- (11c) Der könnte sie besser gelobt haben/Der hat sie vielleicht besser gelobt (deictic reading)
'Perhaps he has praised her better.'

This three-way ambiguity is not present in every instance of the construction, and even if it is, not all of the three readings are equally plausible in a particular context. However, and this is the decisive point, whenever this construction is used in that period, there is ambiguity, which includes the deictic reading. The next passage, for example, is ambiguous between the deictic reading (12a) and the (older) reading of the participle as an object complement, which finally developed into the periphrastic perfect tenses (12b):

- (12) der karakter â b c muoser hân
The-GEN characters abc had-to/must-DS he have
gelernt ê.
learned before
(Parz 9, 453,15f.)
- (12a) Der Buchstaben abc mußte er vorher gelernt haben/hatte er sicher vorher gelernt
(deictic reading)
'He must have learned the letters' abc before/Certainly, he had learned the letters' abc before.'

- (12b) Der Buchstaben abc musste er vorher lernen/als gelernte haben (past participle as a predicative adjective)
 ‘He had to learn the characters’ abc before/He was obliged to have learned the characters’ abc before.’

The opacity of this MHG construction is not only a semantic one. The morphological forms that build it are highly opaque themselves. First, the non-finite structure *hân* + past participle is ambiguous between a reading in the sense of the infinitive perfect of PDG, in which the participle is the main verb and *hân* or *sîn* is the auxiliary, and a reading as a complex predicative structure where ‘have’ is the main verb and the past participle functions a predicative adjective (like in 11b: *der kunde sie gelobet hân* ‘der konnte/könnte sie als Gelobte haben’).

Second, the morphological form of the modal itself is ambiguous, too. For MHG modals with a dental suffix it is not possible to distinguish between the indicative and the subjunctive of the past (Westvik 1994), because the formal marking of the subjunctive by “Umlaut”, which today provides a clear and systematic opposition between *mochte* vs. *möchte*, *konnte* vs. *könnte*, had not yet developed at that time and there was a large amount of formal syncretism (see Birkmann 1987: 194). Therefore it is reasonable to assume that the MHG modals with a dental suffix express a distal value which – depending on context – can be interpreted as modal and/or as temporal distance.

Thus, the critical context is characterized by the coincidence – or rather the clash – of two verbal forms that were both morphologically and morpho-syntactically ambiguous. These forms could not therefore mutually disambiguate each other. Being confronted with this construction, the recipient had several possibilities for interpreting it without gaining a clear indication from the construction itself.

It is proposed here that it is this structure, the critical context, in which the deictic reading and its necessary wide scope was not only one alternative interpretation among equally plausible

others, but the most likely, the favoured, reading.¹² It could be reached from different starting points, i.e. from different ways of interpreting the opaque morphological forms, by similar conversational implicatures. However, as this is not the topic of this paper, it will not be followed any further. Instead, table V very briefly summarizes the different possibilities of resolving the opacity of the critical context:

¹² The possibility of an epistemic reading as a conversational implicature already existed before the rise of the critical context, though, in OHG, it was very rare, restricted to a very small number of contexts, and almost exclusively found with the modal *mugan* (cognate of E. *may*). Through the rise of the critical context, which had itself come into existence due to independent changes in several places in the verbal morphological paradigms, this reading suddenly became a prominent and frequent option for interpretation. In the further development the German modals – in sharp contrast to their English counterparts – built up a complete periphrastic morphological paradigm for the more lexical uses of the modals, which led to the two isolating contexts described in Section 4.1. For details of the diachronic development of the system of modals in German, which – notwithstanding the close relationship of both languages – differs from the development in English in fundamental ways, cf. Diewald (1999).

1. lexical, non-deictic reading:
<p>1.1. modal as indicative preterite (i.e. temporal distance only): predicates a past modal state on the subject; past participle is interpreted as modifying the direct object. Result as in (11b): Der konnte sie besser als Gelobte haben. ‘He was better able to have her as a praised one.’</p> <p>1.2. modal as subjunctive preterite (i.e. temporal and modal distance): predicates a modal state, which existed as a possibility in the past, on the subject; past participle is interpreted as modifying the direct object; Result as in (11a), corresponds to PDG subjunctive pluperfect: Der hätte sie besser loben können. ‘He could have praised her better.’</p>
2. deictic reading:
<p>modal has wide scope; predicates a factuality value on the whole proposition; infinitive & past participle are interpreted as infinitive perfect. Result like in (11c), corresponds to PGD deictic reading: Der könnte sie besser gelobt haben. ‘Der hat sie vielleicht besser gelobt.’ ‘Perhaps he has praised her better.’</p>

Table V. Options for interpreting the critical context of the MHG modals

Again, it is proposed here to treat this kind of multiple structural and semantic opacity as an idiomatic construction in the sense of Fillmore, Kay and O’Connor (1988). This time, however, we are confronted with what the authors call an extragrammatical idiom, and which they define as follows: “Such expressions [i.e. extragrammatical idioms] have grammatical structure, to be sure, but the structures they have are not made intelligible by knowledge of the familiar rules of the grammar and how those rules are most generally applied” (Fillmore, Kay & O’Connor 1988: 505).

As the critical context of the modals in MHG is a new and peripheral structure restricted to a small group of verbs and not fully analysable by the rules of the relevant linguistic system, it clearly is an instance of this type of idiom.

Having reached this conclusion, we are still presented with a problem. This construction neither shows an unambiguous though idiomatic form-meaning correspondence (like the isolating contexts of PDG), nor can it be treated as a simple case of polysemy or vagueness, because the different meanings correlate with different structural analyses. Instead, we are confronted with a complex structure containing several potential meanings, each of them associated with a distinct structural analysis. This raises the question which semantic and structural analysis should be assigned to this construction in the first place. Without being able to provide a complete answer to this question, I would like to end with a brief indication of the direction a solution could take.

As for the structural description, I propose to model it closely according to the attestable distinctions of the surface forms, i.e. to those features already mentioned in the description of the critical context. In particular, the dental suffix of the modal should be interpreted as a marker of a distal value without assigning a particular mood or tense, and, second, one should refrain from stipulating a particular interpretation as a periphrastic verbal phrase for the non-finite verbal forms (infinitive, past participle) present in the construction. As far as the meaning of the construction is concerned, there are indications that this construction may have had a specific stylistic function, namely that of reinforcement or emphasis. Thus, it seems reasonable to assume a “pragmatic” meaning which is assigned holistically to the construction. The content of this pragmatic meaning might be circumscribed as an iconic relation between the structural and semantic layer on one side and the pragmatic and stylistic layer on the other.¹³ This suggestion rests on the assumption that the extraordinary semantic and structural opacity (which surely originates in conscious creative

¹³ Iconicity is understood here in the broad sense of the term as a semiotic mechanism representing the parallelism between different layers of structure (see e.g. Croft 2001: 108).

choices of the authors) is meant to iconically indicate an extraordinary stylistic salience, and thus serves as an instruction to the hearers or readers to recognize and evaluate the interpretational options and choose a suitable one themselves. This, however, needs further empirical investigation, and is beyond the scope of this article.

5. Conclusion

The aim of the foregoing has been, first, to demonstrate in which areas grammaticalization theory and Construction Grammar are compatible so that a linking of the two provides an excellent basis for increasing our knowledge of linguistic change. Second, and more specifically, it has been suggested that central concepts of construction grammar help to sharpen the notion of context types of grammaticalization studies. This has been demonstrated with data on the grammaticalization of the German modals, whereby the isolating contexts were shown to qualify as formal idioms, while the critical context was described as a kind of extragrammatical idiom.

6 References

6.1 Text sources

[FN] = *Fürther Nachrichten*, 21/22 January 1995.

[Texte] = *Texte gesprochener deutscher Standardsprache*. Erarbeitet im Institut für deutsche Sprache Forschungsstelle Freiburg i. Br. Volume 3. *Alltagsgespräche*. Fuchs, Harald P. & Gerd Schank (eds.) (1975). München: Hueber.

[Zeit] = *Die Zeit*, Nr. 5, 27 January 1995.

[Parz] = Wolfram von Eschenbach. *Parzival*. 2 volumes. Nellmann, Eberhard (1994) (ed.). Frankfurt/Main: Deutscher Klassiker Verlag.

6.2 Secondary Literature

Birkmann, Thomas (1987). *Präteritopräsentia: Morphologische Entwicklungen einer Sonderklasse in den altgermanischen Sprachen*. Tübingen: Niemeyer.

Bisang, Walter (1998). Grammaticalization and language contact, constructions and positions. In Ramat, Anna Giacalone & Paul Hopper (eds.) *The Limits of Grammaticalization*. Amsterdam/Philadelphia: Benjamins. 13-58.

Bybee, Joan, Revere Perkins & William Pagliuca (1994). *The Evolution of Grammar. Tense, Aspect, and Modality in the Languages of the World*. Chicago: University of Chicago Press.

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

Deeg, K. (1948). *Der Infinitiv Perfekt im Frühmittelhochdeutschen*. Dissertation Universität München (Typoscript).

Diewald, Gabriele (1999). *Die Modalverben im Deutschen: Grammatikalisierung und Polyfunktionalität*. Tübingen: Niemeyer.

Diewald, Gabriele (2002). A model for relevant types of contexts in grammaticalization. Wischer, Ilse & Gabriele Diewald (eds.). 103-120.

- Fillmore, Charles & Paul Kay (1995). *Construction Grammar*. Stanford. CSLI Publications (CSLI Lecture Notes) (Manuscript).
- Fillmore, Charles, Paul Kay & Catherine O'Connor (1988). Regularity and idiomaticity in grammatical constructions: the case of *let alone*. *Language* 64: 501-538.
- Givón, Talmy (1979). *On Understanding Grammar*. New York: Academic Press.
- Goldberg, Adele E. (1995). *A Construction Grammar Approach to Argument Structure*. Chicago: Chicago University Press.
- Grice, Paul (1989 [1975]). Logic and conversation. In Grice, Paul *Studies in the way of words*. Cambridge, MA: Harvard University Press. 22-40.
- Heine, Bernd (2002). On the role of context in grammaticalization. Wischer, Ilse & Gabriele Diewald (eds.). 83-101.
- Hopper, Paul & Elizabeth ClossTraugott (2003 [1993]) *Grammaticalization*. 2nd edition. Cambridge: Cambridge University Press.
- Kay, Paul & Charles P. Fillmore (1999). Grammatical constructions and linguistic generalizations: The *What's X doing Y?* construction. *Language* 75: 1-33.
- Lehmann, Christian (1985). Grammaticalization: Synchronic variation and diachronic change. *Lingua e Stile* 20: 303-318.
- Lehmann, Christian (2004). Theory and method in grammaticalization. *Zeitschrift für germanistische Linguistik* 32(2) (special issue "Grammatikalisierung" edited by Diewald, Gabriele): 152-187.
- Michaelis, Laura & Knud Lambrecht (1996). Toward a construction-based theory of language function: The case of nominal extraposition. *Language* 72: 215-247.
- Michaelis, Laura (2004). Type shifting in construction grammar: An integrated approach to aspectual coercion. *Cognitive Linguistics* 15: 1-67.
- Paul, Hermann (1995 [1920]). *Prinzipien der Sprachgeschichte*. 10th edition. Tübingen: Niemeyer.

- Paul, Hermann, Peter Wiehl & Siegfried Grosse (1989). *Mittelhochdeutsche Grammatik*. 23th edition. Tübingen: Niemeyer.
- Traugott, Elizabeth Closs (2003). Constructions in grammaticalization. In Joseph, Brian & Richard D. Janda (eds). *The Handbook of Historical Linguistics*. Oxford: Blackwell. 624-647.
- Westvik, Olaf Jansen (1994). Die Struktur *hätte* + Infinitiv + Modalverbinfinitiv: Aspekte von Vorgeschichte und Geschichte. In Leirbukt, Oddleif (ed.) *Proceedings of the 11th international Tromsø symposium on language: "Modalität im Deutschen"* (Nordlyd: Tromsø University working papers on language and linguistics 22). Tromsø. 142-161.
- Wildgen, Wolfgang (1990). Konstruktionsgrammatik. In Wagner, Karl Heinz & Wolfgang Wildgen (eds.) *Studien zur Grammatik und Sprachtheorie*. Bremen: Univ. Bremen (Bremer Linguistisches Kolloquium 2). 65-84.
- Wischer, Ilse & Gabriele Diewald (2002) (eds.). *New Reflections on Grammaticalization. International Symposium, Potsdam, 17-19 June, 1999*. Amsterdam: Benjamins.