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NEW REFLECTIONS
ON
GRAMMATICALIZATION

Edited by

ILSE WISCHER
GABRIELE DIEWALD

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New Reflections on Grammaticalization

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Volume 49

New Reflections on Grammaticalization

Edited by Ilse Wischer and Gabriele Diewald

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Foreword

This volume contains papers from the International Symposium “New Reflections on Grammaticalization,” organized by Ilse Wischer and held at Potsdam University from June 17th to June 19th 1999. Due to lack of space not all papers presented at the symposium could be included in this volume. Those papers that are published elsewhere are referred to in the Appendix.

An event like this could not have been arranged without the help of many people. We are especially grateful to a number of people and organizations who have contributed to make the symposium a big success. Special thanks are due to the German Research Society, the Ministry for Science, Research and Culture of the Land Brandenburg and the Universitätsgesellschaft Potsdam e.V. for their financial support.

Also we would like to thank the reviewers and all those colleagues who made helpful comments on this volume. We are greatly indebted to Michael Noonan, the editor of the TSL-series, for accepting this volume and giving us all possible support in completing it. Finally we thank Malte Urban and Mike Unger for the great care they took in preparing the final version of the manuscript.

Introduction

Gabriele Diewald and Ilse Wischer

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Grammaticalization refers to the degree of grammatical function a linguistic item has on a scale between purely lexical and purely grammatical meaning. This entails both a diachronic and a synchronic perspective.

The term “Grammaticalization” was apparently first used by Meillet in 1912, although reflections on grammaticalization in general have a very long tradition (cf. Lehmann 1995 [1982]; Heine, Claudi and Hünemeyer 1991). In the first two decades of the 20th century the topic was taken up mainly by Indo-Europeanists in order to explain the origin of grammatical forms. Thus it had a strictly diachronic orientation. This and the fact that it allowed no clear-cut borders between lexical and grammatical categories must be considered as the reasons why grammaticalization subsequently, especially during the flourishing of structuralism and generativism, was merely – if at all – of secondary interest. Only in the 1970s did its enormous revival begin, probably starting with Givón’s paper entitled “Historical syntax and synchronic morphology; an archaeologist’s field trip,” containing the famous slogan “Today’s morphology is yesterday’s syntax.” (Givón 1971:413). Since then we can also notice an expansion of grammaticalization studies from predominantly diachronic approaches to synchronic and typological investigations of linguistic material.

During the last two decades there has been an enormous increase in research on grammaticalization phenomena, which is attested, among others, in several conference volumes and collected works (e.g., Traugott and Heine (eds) 1991; Pagliuca (ed.) 1994; Giacalone Ramat and Hopper (eds) 1998).

The goal of the Potsdam conference was to once more bring together linguists who work in this area, and thus to provide a forum to further the understanding of old problems as well as to discuss new approaches, developments and controversies in this still expanding field of research.

The contributions to the conference met with these expectations in exploring grammaticalization phenomena that had not previously received much attention,

and in presenting data from a large number of languages, often based on extensive empirical investigations of written and spoken text corpora. The papers cover a wide range of theoretical and methodological issues and raise a number of new questions that indicate the future direction of this lively area of research.

Among the topics that were most intensely discussed and that came up in several contributions are theoretical and terminological questions concerning the relationship between grammaticalization, lexicalization and the unidirectionality hypothesis. It turned out that these concepts are essential in delimiting the range of application of grammaticalization theories (cf. also Giacalone Ramat and Hopper (eds) 1998), and the controversial discussion proved that, although the issue is far from being settled, there are several promising new suggestions.

A second focus of interest was the relevance of contexts for grammaticalization. While most earlier studies on grammaticalization were mainly devoted to developing the conceptual and methodological framework of the theory, and to the description of grammaticalization phenomena in single linguistic items, it has become evident that grammaticalization processes interact with linguistic contexts of various types and structural levels and with different types of texts or discourse. Several contributions took up this issue, exploring different types of contexts for specific grammaticalization phenomena as well as suggesting ways of modelling the concept of context in order to integrate it into grammaticalization theory.

Furthermore, the study and description of grammaticalization paths played an important role in many papers. As this topic is central to grammaticalization theory it has been of major importance from the very beginning of research in this field (e.g., Lehmann 1995 [1982]). While earlier studies focussed on grammaticalization paths for major grammatical categories, like the development of tense or case markers, much of the current work concentrates on such categories, as e.g., discourse markers, honorifics or classifiers, which have not previously been central to works on grammaticalization. Other studies take a new perspective on known grammaticalization paths by applying concepts adopted from other linguistic fields (such as prototype theory) or by discussing their findings from a comparative or typological angle.

A further new tendency that emerged in several papers is the aim of confronting and integrating grammaticalization theory with models in neighbouring areas, such as philosophically and philologically oriented frameworks of language change and cognitive approaches.

Thus, as an overall picture, the conference has shown that new reflections on grammaticalization pertain to the delimitation and sharpening of the theory as well as to the expansion of the range of linguistic phenomena that are profitably explored within this theory.

The first group of papers deals with central theoretical issues. **Christian Lehmann** gives a synopsis of the relevant concepts of grammaticalization theory

with a focus on the relation between grammaticalization and lexicalization. The paper by **Johan van der Auwera** takes up terminological and conceptual problems with the notions of degrammaticalization and lexicalization, and suggests that research into degrammaticalization phenomena should be intensified.

In a second group of papers the unidirectionality problem is approached from various perspectives. **Jurgen Klausenburger** studies grammaticalization within a theory of morphocentricity and thus presents a new theoretical approach in which morphology constitutes the central constant of language. His evidence from Romance languages argues for a strong definition of morphocentricity, which permits only unidirectional morphologization and no demorphologization, the latter entailing both (re)phonologization and (re)syntacticization (= degrammaticalization). Discussing the rise and fall of nominal inflections in Swedish **Muriel Norde** offers a potential explanation for the – albeit exceptional – occurrence of degrammaticalization phenomena by referring to Lass's (1997) framework on "exaptation." In a similar way the contribution by **Adrian Doyle** on the development of a personal ending into a clitic in Irish questions the assumption that the progression clitic > affix is universal and unidirectional. He suggests that renewal may be responsible for the reversability of grammaticalization.

The following papers are detailed studies of the types of contexts in which linguistic elements grammaticalize. Using data from a wide range of African languages **Bernd Heine** proposes a scenario of contextual requirements that are necessary for grammatical meanings to evolve, describing in particular the development from reflexive to passive morphosyntax and from volition to proximative aspects. Giving a detailed description of the grammaticalization of German modal verbs, **Gabriele Diewald** suggests that the diachronic development of grammatical items can be divided into successive stages that are associated with highly specific linguistic contexts.

The next group of papers is mainly concerned with the specific make-up of source and target concepts in grammaticalization processes. In a cross-linguistic study **Soteria Svorou** aims to sort out constraints on the degree of grammaticalization that locative constructions can reach. She concludes that internal factors such as the semantics of the locative construction and the morphological typology of an individual language can account for the degree of grammaticalization that a construction can attain. **Gunter Lorenz** explores the mechanisms of semantic change within the intensification paradigm – notably the conceptual resources from which new intensifiers are taken and progressively delexicalized, in some cases to the point of complete grammaticalization. His studies are based on meticulous corpus analyses. **Gerda Haßler** chooses a diachronic and comparative approach and describes the development of the aspectual semantic features of motion verbs in Romance languages into grammatical categories. She shows that analogous periphrastic constructions with motion verbs in different Romance languages cur-

rently display different stages of grammaticalization. Focussing on the cognitive mechanisms of semantic change **Philippe Bourdin** demonstrates how deictic directionals are reinterpreted as modulators of temporal distance in various genetically unrelated languages. His comparison reveals a number of diverse coding strategies and pathways of reanalysis, which he aims to analyse in terms of a potential grammaticalization process.

Several other papers are concerned with the exploration of specific paths of grammaticalization. **Concepcion Company Company** argues that the concept of prototypicality is useful in explaining the spread of grammaticalization processes within a category. She illustrates her claim by describing the development of the Spanish preposition *a* as an accusative case marker which first appeared with peripheral members of the category of accusative case with locative semantics and later successively affected more central members of the accusative up to prototypical inanimate accusatives. **Shoichi Iwasaki, Carol Lord and Foong Ha Yap** examine the grammatical uses of verbs of transfer (e.g., ‘give’, ‘take’, ‘get’, ‘receive’) in benefactive and causative constructions in a number of languages that have serial verb constructions in West Africa, East and Southeast Asia. They show that there are different possible ramifications of a path of grammaticalization that lead from verbs of lexical transfer to benefactive and causative constructions. Providing ample evidence from diverse North American languages **Marianne Mithun** argues that lexicalization may be an important factor for the grammaticalization of lexical affixes into causative markers. She claims that the reinterpretation could occur only if the meanings of the derived verbs were learned as wholes. **Colette Grinevald** proposes that the concept of grammaticalization is an extremely useful tool for describing different systems of nominal classification, since this linguistic domain is notorious for its high amount of gradience between lexicon and grammar. She goes on to illustrate this with classification systems of Amazonian languages that so far have not been described exhaustively. Based on a careful study of language data collected from everyday conversations in Beijing Mandarin, **Liang Tao** develops the scenario of a synchronic phono-syntactic conspiracy by which a lexical tone changes into a grammatical tone thereby taking over the function of a nominal classifier. Her study indicates that such change is positively correlated with the frequency of co-occurrences of elements. **Taru Salminen** explores the development of the so-called quasi-construction in Finnish, which is a verbal construction entailing the essive case that is grammaticalized to denote different types of polyphony. Taking up the issue of “persistence” or “retention” of former, more lexical meaning in grammaticalized forms, Salminen shows that this grammaticalization process and the actual usage of this form is partially influenced by the persisting semantics of the essive case, and concludes that the phenomenon of persistence is not restricted to lexical meaning but applies also to more abstract meanings such as that of a grammatical case marker. A particular path of grammaticalization is described by **Sung-Ock**

Sohn in her paper on the emergence of honorific case markers from two different lexical sources in Korean, one with a verbal origin and the other from a distal demonstrative. She illustrates how the two different sources converge into the same target form.

The papers of **Lea Laitinen**, **Dagmar Barth-Weingarten** and **Elizabeth Couper-Kuhlen**, **José Pinto de Lima**, and **Heide Wegener** investigate the grammaticalization of connectives and discourse particles. This area has received increasing interest during recent years, and there has been much progress in establishing various grammaticalization paths and exploring the cognitive and pragmatic mechanisms involved in this type of change, especially the increase in subjectivity. Furthermore, as the grammatical status of discourse markers and other particles is controversial, this area is especially appropriate for discussing the range of phenomena that can profitably be investigated within grammaticalization theory. With differing emphases, differing methods and differing language data, the four papers concerned with this topic take up these issues and present a good overview of the state of art in this field. The paper by Laitinen explores the development of logophoric pronouns in Finnish and Saami to enclitic discourse particles. Barth and Couper-Kuhlen present a detailed study of the development of final *though* from a concessive clause connector to a discourse marker connecting the utterance to discourse structure. Pinto de Lima presents a diachronic study of the grammaticalization of the phatic marker *pois* in European Portuguese. Wegener describes the development of the German modal particle *denn* from its origins in adverbial uses.

The volume closes with two papers that take a broader view of grammaticalization and related issues. **Wallace Chafe** shows how the process of grammaticalization can be embedded into a general conception of language, including grammar, semantics and phonology, relating thoughts to sounds. He distinguishes between the processes of idiomatization and grammaticalization in that the former creates new categorizations of ideas, whereas the latter creates new orientations between thoughts and sounds. **Esa Itkonen**, finally, discusses grammaticalization as hypothetico-deductive thinking, characterizing it as a two-stage process consisting of reanalysis and extension, whereby reanalysis can be identified as abductive reasoning.

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New reflections on grammaticalization and lexicalization

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1. Introduction

The content of this contribution may be summarized as follows: Grammar is concerned with those signs which are formed regularly and which are handled analytically, while the lexicon is concerned with those signs which are formed irregularly and which are handled holistically. A sign is lexicalized if it is withdrawn from analytic access and inventorized. On the other hand, for a sign to be grammaticalized means for it to acquire functions in the analytic formation of more comprehensive signs. Both processes regularly, but not necessarily involve a reductive component. Consequently, grammaticalization is not the mirror image of lexicalization.

The genesis of members of minor word classes, in particular adpositions and conjunctions, has often been treated as an instance of grammaticalization. However, minor word classes are not necessarily classes of grammatical formatives. In particular, there are more lexical and more grammatical adpositions. For instance, before *auf Grund (von)* ‘on the basis of’ can ever get grammaticalized to a grammatical preposition, it must first be lexicalized to the lexical preposition *aufgrund (von)*. In this sense, grammaticalization presupposes lexicalization.

Thus, lexicalization and grammaticalization are processes that have much in common and are, to a certain extent, parallel. The mirror image of grammaticalization is degrammaticalization, and the mirror image of lexicalization is folk etymology.¹

2. Theoretical bases

The purpose of this contribution is to clarify the concepts of ‘grammaticalization’ and ‘lexicalization’ in their mutual relationship (cf. Moreno Cabrera 1998). Such an explication cannot possibly justify all previous uses of these concepts, in particular not all of those reported or endorsed in Lehmann 1989. Also, to the extent that it tries to be consistent, the explication necessarily leads to unwonted results.

2.1 Analytic and holistic approaches

Given an object of cognition of some complexity, the human mind has two ways of accessing it. The analytic approach consists in considering each part of the object and the contribution that it makes to the assemblage by its nature and function, and thus to arrive at a mental representation of the whole by applying rules of composition to its parts. The holistic approach is to directly grasp the whole without consideration of the parts. This can be done if the object itself is already familiar or if, by its contours or its contextual setting and function, it bears an essential analogy to some familiar object.

The two approaches complement each other in various ways.

1. If confronted with a familiar object, we tend to take the holistic approach; if confronted with an unfamiliar object, we take the analytic approach.
2. For a given specific object, we can often switch between the two approaches by making a fresh analysis of what used to be familiar or by disregarding compositional parts in favor of the function of the whole.
3. A given complex object may only be analyzed in certain parts or aspects, while the internal structure of other parts remains out of consideration.

To illustrate:

- E1. a. X chooses the correct approach to Y.
b. X takes the correct approach to Y.

In E1.a the combination of the relational noun *approach* with its prepositional dependent, and the combination of the transitive verb *choose* with its direct object, are interpreted by general rules of semanto-syntax.

In E1.b the combination X [*takes (Z) approach*] to Y constitutes a proper part of the sentence. Its contour and function are analogous to the simpler construction *X approaches Y (in a Z way)*.

E1 thus illustrates the above generalizations:

1. The relatively unfamiliar collocation *choose ... approach* is construed analytically, while the familiar collocation *take ... approach* is construed holistically.

2. The collocation *choose ... approach* could instead be accessed holistically, whereby the specific contribution of *choose* would essentially be foregone, and the whole would be largely synonymous with *take ... approach*; and again, the collocation *take ... approach* could instead be accessed analytically, whereby *take* would regain a more literal sense (contrasting, e.g., with *abandon*), and the resulting constructional meaning would be slightly different.
3. The holistic approach treats *take ... approach* as a proper part of the construction, which it is not in the analytic approach. However, this does not mean that the construction of E1.b is an unanalyzed whole, since we can still integrate the contributions of each of the elements in the slots X, Y and Z with the help of general compositional rules.

2.2 Lexicon and grammar

The system of linguistic signs is subdivided into lexicon and grammar. The relationship between the two components and their organization in terms of subcomponents is represented in S1.

S1. Lexicon and grammar

approach	<i>idiosyncratic</i>	↔	<i>regular</i>	
complexity level	<i>holistic</i>		<i>analytic</i>	
<i>higher</i>	lexicon	phraseology syntax		grammar
↕		morphology		
<i>lower</i>		word formation	inflection	
	morphemicon			

On the horizontal axis of S1, the lexicon differs from the grammar. The vertical axis is associated with the hierarchy of levels of grammatical structure. The latter is, of course, only partially represented in the lexicon. The most idiosyncratic part of the lexicon is the morphemicon, which contains all the lexical and grammatical morphemes of the language.

Accessing a collocation XY holistically means treating it as an entry of the inventory, as a lexical item. If this mode of access to XY gets more prominent in language activity, it is the initial step of the lexicalization of this sequence.

Accessing a collocation XY analytically means treating it as a grammatical construction in which the structural properties of either X or Y or both matter

and make a regular contribution to the pattern. If this mode of access gets more prominent in language activity, it is the initial step of the grammaticalization of XY.

In the following two sections, we will see that lexicalization and grammaticalization apply alternatively to a construction, while they apply successively to an item.

3. Lexicalization and grammaticalization as alternatives

3.1 Verb and coverb in Jaminjung

The initial step in the processes of grammaticalization and lexicalization does not yet involve any noticeable changes in the collocation. So far, those are but alternative modes of treating the collocation XY. However, they lay the ground for the further fate of XY. To see this, let us take an example from Jaminjung, a Non-Pama-Nyungan language of Northern Australia.² The language has two word classes which are at stake here. One is the class of verbs which is closed and comprises about 30 members. Understandably, these verbs have a very general meaning, are highly polysemous and in this resemble the function verbs or even auxiliaries of more familiar languages. The other class is called coverbs. It is an open class which comprises such concepts as are covered by verbs and adverbs in more familiar languages. The coverbs have valence just like the verbs, but they do not take a subject and instead combine with a verb much like an adverb does. E2 is an example, combining the verb *-angga* with the coverb *warlnginy*.

- E2. *jirrama buny-angga warlnginy*
 two 3.DU-GO.PRS on.foot³
 ‘two are walking’ (Schultze-Berndt 2000, DB, D14105)

Now the collocation of verb plus coverb can be accessed either analytically or holistically. In the former case the verb functions like a grammatical verb. E3 is an example.

- E3. *jiwayurru buru-mayan ga-gba=biya*
 bower.bird return-CONT 3.SG-BE.PST=NOW
 ‘the bower bird was going back and forth then’
 (Schultze-Berndt 2000, 2–79)

The meaning of the sentence is construed in a bottom-up fashion by the following compositional operations. First, the coverb is combined with its (nominal) dependents – none in E3. Then the verb is first combined with its nominal dependents – here, the subject – and next with the coverb phrase. If they have nominal depen-

dents in common, these and their roles are unified. In this way, the meaning of the whole is a regular function of the meaning of the parts and their relations.

In this approach, the collocation of verb and coverb works as a pattern, with two slots to be occupied by members of two clearly distinct categories, one of which – the verb – constitutes a structured paradigm. The two slots can be filled essentially in mutual independence. To the extent that the bulk of the concrete meaning of the whole is contributed by the coverb, the verb only functions as an aspectual operator which converts the coverb into a finite clause. In this construction, it is a grammatical verb.

If, instead, the collocation of verb plus coverb is accessed holistically, the verb retains a concrete meaning, as in E4.

- E4. *jirrib ga-rdba-ny*
 married 3.SG-FALL-PST
 ‘he/she got married’ (Schultze-Berndt 2000, JAM 013)

Here, the verb and the coverb do not each take their dependents. Instead, the complex formed by the two essentially functions like a derived verb in whose meaning the meaning of the parts in isolation cannot necessarily be re-identified and which takes dependents as a whole. Although the collocation bears an outer resemblance to the pattern observed in the former case, no filling of the slots is possible which could bear a semantically regular paradigmatic relationship to the one of E3. In this approach, the collocation of verb and coverb functions as a simple verb, enriching, as it were, the inventory of the verbs. The complex is, thus, lexicalized.

3.2 The German preposition *zu*

Similar examples could, of course, be adduced from serial verb constructions all over the world. Often it is the same verb which gets both grammaticalized to a function verb and, finally, to an aspectual operator, and in other collocations gets lexicalized by merging with a contextual component. This will be illustrated with the German preposition *zu*. Synchronically, this preposition has a number of uses which vary in the extent to which they form regular patterns. Originally, this was a local preposition with allative and locative functions, similar to French *à*. These two functions appear in E5.

- E5. a. *Der Prinz begab sich zur Königin.*
 ‘The prince betook himself to the queen.’
 b. *Der Prinz residierte zu Potsdam.*
 ‘The prince resided at Potsdam.’

The allative use of *zu* evolves into a purposive one, which in the end gives us the subordinator of the infinitive. The development can be envisaged as proceeding along a gradience whose steps are illustrated by E6.

- E6. a. *Der Prinz begab sich zur Königin.*
‘The prince betook himself to the queen.’
b. *Der Prinz begab sich zur Jagd.*
‘The prince betook himself to the hunt.’
c. *Der Prinz begab sich zum Jagen.*
‘The prince betook himself to hunting.’
d. *Der Prinz entschied sich zum Jagen.*
‘The prince decided in favor of hunting.’
e. *Der Prinz entschied sich zu jagen.*
‘The prince decided to hunt.’

At each stage of this evolution, the preposition is sensitive to the syntactic categories that constitute its context.⁴ The dependent is a concrete and an abstract NP, respectively, in E6.a and b. The noun in the abstract NP is an infinitive in E6. c and d. Finally, the complement of the preposition is a bare infinitive in e. At the same time, the superordinate verb is one of locomotion as long as the preposition has an allative or purposive sense. Once the latter does no more than subordinate an infinitive, the superordinate verb can be a complement-taking verb. In the end, such verbs may even require *zu* as a marker introducing the dependent infinitive. At this endpoint of the grammaticalization process, *zu* is but an obligatory slot filler in a construction which is formed by compositional rules of syntax.

The uses of *zu* which form the chain leading from E5.a = E6.a to E6.e instantiate productive patterns. This is not so with the locative use appearing in E5.b. The combination of locative *zu* with town names is obsolete. If a toponym which is not a town name, such as *Capri*, *Hessen*, *Dänemark*, is substituted for *Potsdam*, the sentence becomes outright ungrammatical. The combination of locative *zu* with common nouns is illustrated in E7.

- E7. a. *Der Prinz war zu Hause.*
‘The prince was at home.’
b. *Der Prinz kam zu Pferde.*
‘The prince came on horseback.’
c. *Der Prinz siegte zu Wasser und zu Lande.*
‘The prince triumphed on land and sea.’

Each of the collocations of *zu* with its dependent in E7 is lexicalized. In E7.a, we cannot substitute *Hause* by *Hotel*; *Esel* ‘donkey’ instead of *Pferde* in E7.b, and *Fluß/Ufer* ‘river/bank’ instead of *Wasser/Lande* in E7.c are impossible. The col-

locations do instantiate a pattern, viz. the one illustrated by E5.b; but the pattern is obsolete. Consequently, the phraseologisms of E7 are but remnants of an earlier pattern. In regular locative prepositional phrases, *zu* is replaced by other prepositions.

3.3 Grammaticalization of a construction

The examples show that one cannot properly say that a given element as such is either grammaticalized or lexicalized. Instead, it is the construction of which the element is a constituent which may embark on either course.⁵ If this is so, then the grammaticalization of a construction does not entail the grammaticalization of any of its component elements. Consider, for example, the construction consisting of a *verbum dicendi* as superordinate verb and a subordinate clause, as in E8.b.

- E8. a. *Irvin apologized, he didn't hit me on purpose.*
b. *Irvin said he didn't hit me on purpose.*

It seems appropriate to say – as it has been said for at least a century – that the collocation of a *verbum dicendi* and a sentence specifying the content of the communication, as it appears in E8.a, has been grammaticalized into a complex sentence in E8.b. No formative is visible in E8.b which would have specifically undergone grammaticalization in this process.

E9 translates E8 into German.

- E9. a. *Erwin entschuldigte sich; er habe mich nicht absichtlich getroffen.*
b. *Erwin sagte, er habe mich nicht absichtlich getroffen.*

Here, the sentence rendering the content of the speech act is in the subjunctive present in both cases. In E9.a, the subjunctive expresses that the speaker does not vouch for what he is saying. In E9.b, it is triggered by the governing verb. Consequently, the subjunctive becomes more grammaticalized in this development.

The analogy between the English and the German case warrants the generalization that the grammaticalization of a particular formative is but a by-product of the grammaticalization of a construction. If there is an element that mediates the relation between the constituents of a construction, then grammaticalization of the construction will involve grammaticalization of this element. But if there is no such element present, grammaticalization may proceed, anyway.

Those who are familiar with my earlier work on grammaticalization will notice that this implies a slight extension of the concept. The traditional conception, which centers around the grammaticalization of a linguistic sign, sees this in the intersection of a set of paradigmatic and syntagmatic relations. This, of course, entails the existence of a construction that the sign in question is a part of and that is gram-

matalized together with the latter (cf. Lehmann 1995a, §2 and 1995b:175–178). What I propose here is to apply the criteria of paradigmatic and syntagmatic autonomy to a construction regardless of whether it contains a constituent in which the symptoms of grammaticalization crystallize. This is a small and controlled extension which avoids the undesirable consequence that anything which enriches the grammar must be called grammaticalization. The extension is of relevance for the analysis of isolating structures, on whose grammaticalization much more empirical work is necessary.

4. Lexicalization and grammaticalization in succession

4.1 Lexical and grammatical members of word classes

Up to now, we have viewed grammaticalization and lexicalization as two alternatives which may apply to a given construction. However, there is yet another sense in which the two processes complement each other. Before we can turn to it, the theory of word classes needs some clarification.

Word classes are sometimes divided into lexical and grammatical word classes. It is, for instance, assumed that nouns, adjectives and verbs form lexical word classes, while prepositions and conjunctions form grammatical word classes. As a matter of fact, there are lexical and grammatical words in each of the word classes, as illustrated in T1 from Spanish (the English translations illustrate the same point).⁶

The subdivision in T1 shows that word classes do not differ in that some are lexical and others are grammatical. Instead, the criterion of lexical vs. grammatical is independent of the word classes and yields two subclasses of each of them. Needless to say, no sharp boundary between these two subclasses is intended.

By consequence, it is not the case that the so-called minor parts of speech have something particularly grammatical about them.⁷ Therefore the transition of, e.g., a relational noun into a preposition or a conjunction does not amount to the grammaticalization of the former, as is so often assumed. If, for instance, a relational

T1. Lexical and grammatical members of word classes in Spanish

category	lexical		grammatical		
	example	meaning	category	example	meaning
noun	posesión	possession	pronoun	suyo	his
adjective	rojo	red	pro-adjective	tal	such
verb	existir	exist	auxiliary	estar	be
adverb	atrás	behind	deictic adverb	ahí	there
preposition	tras	behind	gramm. prep.	de	of
conjunction	mientras	while	subordinator	que	that

noun such as Span. *base* appears in a preposition like *a base (de)* ‘on the basis (of)’, this is often called grammaticalization of the noun *base* to the preposition *a base de*. In reality, however, the appurtenance of any linguistic unit to a word class – preposition in the case at hand – implies first and foremost its appurtenance to the inventory, i.e. to the lexicon.⁸ The genesis of a preposition like *a base (de)* is therefore, first of all, a process of lexicalization of this sequence. Once such new lexical items have been created, they can undergo grammaticalization.

If grammaticalization changes a lexical element of a given category into a grammatical one, then it follows that grammaticalization by itself does not touch the syntactic category or may, at any rate, leave it untouched.⁹ These are cases of grammaticalization which cannot be construed as reanalysis.¹⁰

4.2 Lexicalization and grammaticalization in Spanish

In what follows, we consider the relationship between lexicalization and grammaticalization in three different areas of Spanish, viz. prepositions, conjunctions and verbs with prepositional government.

4.2.1 *Complex prepositions*

Just like other languages, Spanish possesses a number of structural types of complex prepositions.¹¹ Of these, only the type illustrated in E10 is of present interest.

- E10. *Tenemos que venderlo por debajo del precio.*
‘We have to sell it under price.’

Prepositions of this structure have been formed since the Old Castilian stage. T2 shows a selection of Spanish prepositions which were complex at the stage of Old Castilian and are mere secondary prepositions nowadays.¹²

All the prepositions of the first column of T2 have in common that their last element is a primary preposition, namely either *de* or *a* (cf. Meyer-Lübke 1899:295–298). Only when the complex preposition changes into a (secondary) simple one, the primary preposition may disappear.

T2. Complex prepositions in Spanish

form		meaning
Old Castilian	Mod. Castilian	
des de	desde	since
baxo de	bajo	below
a cabo de	cabe	beside
ante de	ante	before
face a	hacia	towards

S2. Genesis of complex prepositions by reanalysis

a. <i>input</i>	[[SSR	[primary prep	[NP]	]PrepP	]PrepP
b. <i>transition</i>	[[SSR	primary prep	] [NP]		]PrepP
c. <i>output</i>	[	secondary prep	[NP]		]PrepP

We see that the syntactic pattern of the formation of complex prepositions is based on the combination of two components, as schematized in S2.a. The first is a semantically specific expression, to be called semantically specific relator (SSR) in what follows. The second is a PrepP which, in turn, is formed with a primary, thus, semantically empty, preposition. The latter only serves the structural function of forming a PrepP. Once this is guaranteed, the syntactic nature of the SSR and its syntagmatic relation to the PrepP are of secondary importance. In the SSR slot we find prepositions (*de*, *ante*), adverbs (*bajo*) and relational nouns (*face*); and the syntactic relation between the two syntagms varies accordingly. If the SSR is a preposition or a relational noun, we have government; in the other cases, we have modification or apposition. As the example of *des de* (< Vulgar Latin *de ex de*) in T2 shows, this pattern is of old age. Comparison with French *dès* reveals that it goes back to Proto-Romance.

It is probably not too important that the internal syntax be entirely correct here, because the SSR is not meant to function as a compositional constituent of a syntactic construction, but to create a semantically specific form of prepositional subordination. Since language is a goal-directed activity, we may assume that the reanalysis shown in S2.c is already targeted with the formation of those syntactically complex expressions.

The reanalysis goes hand in hand with the lexicalization of the complex preposition, since step S2.b subtracts the formation from the rules of syntax.¹³

In the initial phase, the primary preposition was needed for its structural function. After lexicalization, this function is integrated into the complex consisting of the adverb plus preposition. The internal structure of the latter is no longer relevant. It may either be blurred by phonological attrition, as in *cabe* and *hacia*;¹⁴ or the primary preposition may be dropped, as in *bajo*.¹⁵

4.2.2 *Complex conjunctions*

Just like other languages, Spanish possesses a number of structural types of complex conjunctions.¹⁶ Of these, only the type illustrated in E11 is of present interest.

- E11. *No parece mal que los españoles tengan sus patatas, con tal que nosotros tengamos nuestras papas.*

‘It seems o.k. for the Spanish to have their pommes de terre, provided we can have our potatoes.’

T3. Secondary conjunctions in Spanish

form	meaning
en la medida en que (c. ind.)	to the extent that
a pesar de que (c. ind.)	despite the fact that
a no ser que (c. subj.)	lest
después de que (c. ind./subj.)	after
pese a que (c. ind.)	although
con tal que (c. subj.)	provided
siempre que (c. subj.)	as long as
para que (c. subj.)	in order that
aunque (c. ind./subj.)	though
porque (c. ind.)	because

S3. Genesis of complex conjunctions by reanalysis

a. <i>input</i>	[[SSR [SR [S]]NP]PrepP]AdvP
b. <i>output</i>	[[sec. conj.] [S]]AdvP

T3 shows a mixed selection – this time, at the synchronic level – of complex and other secondary conjunctions of Spanish.

All these conjunctions have in common that their last element is a primary conjunction, viz. *que*.¹⁷ Only when the complex changes into a (secondary) simple conjunction, such as *como*, ‘as’ and *mientras* ‘while’, *que* disappears. For several of these complex conjunctions, the subordination is syntactically completely regular. For instance, in *a pesar de [que S]*, *después de [que S]*, *pese a [que S]*, we can substitute a concrete NP such as *mis esfuerzos* ‘my efforts’ for the constituent [*que S*]. This state is represented in S3.a (where SR stands for ‘[generic] subordinator’).

We see that the syntactic pattern of the formation of complex conjunctions is based on the combination of a SSR with a subordinate clause which, in turn, is formed with a semantically empty conjunction. The latter only serves the structural function of subordinating the clause. Once this is guaranteed, the syntactic nature of the SSR and its syntagmatic relation to the subordinate clause are of secondary importance. In the SSR slot we find prepositions, adverbs and combinations thereof; and the syntactic relation between the two syntagms varies accordingly.¹⁸ If the SSR ends in a preposition, it governs the subordinate clause, otherwise it bears a modifying or appositive relation to the latter.¹⁹

The conjunction thus developed functionally contains a subordinator and by virtue of this directly takes a clause as its complement. This state is symbolized in S3.b. In this last phase, the subordinator *que*, which remains visible in *porque* and *aunque*, may be suppressed, as in *como* and *mientras*.

At the last stage of the evolution of complex prepositions and conjunctions, the structural element which subordinates the complement and which differs be-

tween PrepPs and subordinate clauses, disappears. As a result of this, there are several particles such as *como*, *mientras* which function both as preposition and as conjunction.

Incidentally, the mood to be observed with complex conjunctions cannot be derived from their constitution, but is simply the same which is used in the respective subordinate clause types if they are introduced by a simple conjunction. This is further evidence for the conception that the passage through S3 is a goal-directed process, where new collocations are fitted into a given schema.

4.2.3 *Prepositions governed by verbs*

Verbs govern their complements in different syntactic functions. Among these is the PrepP as complement. Just as a verb governs the case of its complement, it may govern the specific preposition of this PrepP. T4 contains some Spanish examples.

T4. Prepositional government in Spanish

form	meaning
acabar/terminar por	end with
creer en	believe in
parecerse a	resemble
asombrarse de	wonder at
acabar de	finish
abusar de	abuse

Just as in complex prepositions, those prepositions which are used to govern the complement are exclusively primary prepositions. No Spanish verb governs any of the prepositions of T2. This is, thus, completely parallel to the complex prepositions. We might therefore feel tempted to speak of a lexicalization of verb-preposition collocations in T4. However, the combination here remains discontinuous. Neither is there any evidence for a reanalysis, analogously to the previous cases, whereby the verb would form a constituent together with the governing preposition. Therefore the traditional description is to be preferred, whereby the verb is a lexical unit in itself and determines the occurrence of a particular preposition in its complement. Anyway, this property of the verb is a lexical-grammatical property, just as if the preposition were part of its lexeme.

5. Reanalysis, grammaticalization and lexicalization

The reanalyses shown in S2 and S3 destroy a regular syntactic construction with no compensation at the syntactic level. The reanalysis therefore entails a loss in compositionality. It is the essential step in the lexicalization of complex prepositions and conjunctions. It is true that, in the cases reviewed, a new preposition

or conjunction evolves by reanalysis. However, as was said in the beginning, this is not a case of grammaticalization, because the particle thus developed is not a grammatical element. It could be further grammaticalized, such as Latin *de, ad, in* were grammaticalized to Spanish *de, a, en*. This process, however, does not involve further reanalysis.

5.1 Grammaticalization vs. lexicalization

Every monomorphemic unit is, by definition, already in the lexicon and therefore cannot be lexicalized. Only complex units may be lexicalized. Again, relatively few morphemes and even fewer complex units are contained in the grammar. Morphemes, and also complex units, may therefore be grammaticalized.

Complex units may be grammaticalized without having been lexicalized. For instance, the combination of a preposition with its governed case, or the combination of a conjunction with a mood, may be grammaticalized. These constellations are usually not analyzed as discontinuous linguistic units (cf., however, Touratier 1979). This would, in fact, presuppose a reanalysis and ensuing lexicalization of the combination.

Grammaticalization involves an analytic access to a unit, lexicalization involves a holistic access to a unit, a renunciation of its internal analysis. Both processes do not concern signs in isolation, but signs in their paradigmatic and syntagmatic relations. However, this is just where the essential differences between the two processes are.

Let $[XY]_Z$ be a complex construction which undergoes grammaticalization or lexicalization. Then the differences between the two processes consist in two aspects. First, in grammaticalization there may be a constituent of Z, e.g. X, which is the focus of the process and which is changed into a grammatical formative by it. In lexicalization, there is no such constituent; the lexicalization affects Z as a whole. From this it follows that lexicalization necessarily concerns an internally complex unit, whereas we may reasonably speak of grammaticalization even with respect to simple units.

Second, in grammaticalization the internal relations of Z become more strict and constrained. This regards, in particular, the relation between X and Y or between X and Z. Again, in lexicalization the internal relations of Z become irregular and get lost.

A consequence of this explication of the notion of lexicalization is that the coalescence of two grammatical morphemes must be called lexicalization. Here are a couple of examples. In Spanish *desde*, appearing in T2, the grammatical prepositions *de, ex* and *de* are combined to a new preposition. In English *himself* (with the other inflected forms), the accusative of the personal pronoun is combined with

the semigrammatical morpheme *self* to yield the reflexive pronoun. From this perspective, the evolution of German *möchte* into a new lexeme (infinitive *möchten*; cf. Diewald 1999) is a merger of the semigrammatical lexeme *mögen* ‘may’ with the inflectional category of the subjunctive II into a new attenuated volitive meaning.

5.2 Lexicalization and its converse

What was said on lexicalization may be summarized in T5.

T5. Lexicalization

Complex unit	Component	
	lexicon	grammar
access	holistic	analytic
structure	opaque	transparent
function vs. structure	irregular	compositional
process	← lexicalization → folk etymology	

The horizontal axis of T5 is the horizontal axis of S1. Lexicalization is a process constantly involved in ordinary language activity. T5 shows that the inversion of lexicalization is not grammaticalization. Bestowing structure onto a hitherto opaque expression is not an automatic ingredient of language activity, but demands an enhanced measure of creativity. The operation is called folk etymology (cf. Untermann 1975) and is by magnitudes rarer than lexicalization.

A final terminological remark is necessary. The adjective *lexical* has two meanings in linguistics, 1) belonging to the inventory, 2) having a specific, concrete meaning. In the latter sense, *lexical* is opposed to *grammatical*, as displayed in S1. In the former sense, however, both words with a concrete meaning and grammatical formatives belong to the inventory. In particular, the morphemicon (core of the lexicon) contains both the lexical and the grammatical morphemes of a language. Lexicalization is a process in which something becomes lexical in the first of the two senses. The term *idiomaticization* has essentially the same meaning. Lexicalization as a process in which something becomes lexical in the second sense would be the same as degrammaticalization, to which we turn in the following section.

5.3 Grammaticalization and its converse

What was said on grammaticalization may be summarized in T6.

T6. Grammaticalization

level	higher		lower
complex unit function vs. structure	sentence iconic	word	stem arbitrary
unit concerned manipulation meaning	word free specific	morpheme	feature obligatory abstract
process	→ grammaticalization ← degrammaticalization		

The horizontal axis of T6 is the vertical axis of S1. Grammaticalization is a process constantly involved in ordinary language activity. T6 shows that the inversion of grammaticalization is not lexicalization. Giving autonomy to a hitherto dependent expression is not an automatic ingredient of language activity, but demands an enhanced measure of creativity. The operation is called degrammaticalization (cf. Ramat 1992) and is my magnitudes rarer than grammaticalization.

6. Summary

Both lexicalization and grammaticalization are reductive processes which constrain the freedom of the speaker in selecting and combining the constituents of a complex expression. Insofar, both processes can be regarded as a transition of an expression from *parole* into *langue*. This is in consonance with the conception of *langue* as the language system whose semantic subsystem consists of the lexicon and the grammar. Lexicalization and grammaticalization are the two janus-faces of the creation of the language system in *parole*, of the *Versprachlichung* of the world.

Grammaticalization and lexicalization are not mirror images, but orthogonal to each other. Both are reduction processes (cf. Lehmann 1989), but in a different sense. Grammaticalization reduces the autonomy of a unit, shifting it to a lower, more strictly regulated grammatical level, more precisely, into the right lower corner of S1. Lexicalization reduces the inner structure of a unit, shifting it into the inventory, more precisely, into the left lower corner of S1.

While we may reasonably speak of lexicalization only with respect to complex units, grammaticalization concerns a complex unit and may simultaneously affect in particular one of its constituents. The latter then evolves into a (more) grammatical formative. Such a unitary constituent is created by lexicalization to begin with. Insofar lexicalization plays a role as the first phase, or perhaps rather

preparatory phase, of grammaticalization. Again, it is not excluded that lexicalization and grammaticalization occur jointly in a given case. English *wanna* and *gonna* would be cases in point. In the former, the combination of a lexical and a grammatical morpheme lexicalizes to a modal, in the latter, the combination of semi-grammaticalized *going* with a grammatical morpheme is lexicalized and further grammaticalized.

We have seen that prepositions and conjunctions come about not by grammaticalization, but by lexicalization. Once they have come into existence, they may then be grammaticalized. Lexical change, however, is much more ephemeral than grammatical change. From among all the new prepositions and conjunctions, only a fraction is grammaticalized. All the others are abandoned and replaced by other neologisms. Those numerous complex prepositions and conjunctions which constantly come and go do not indicate incomplete grammaticalization processes, but are simply products of lexical change.

Notes

1. This paper was first presented at the Philosophical Faculty of the University of Tübingen in December 1998. I thank the participants of that guest lecture and the audience of the Potsdam symposium, in particular Carmen Pensado and Martin Haspelmath, for helpful criticism and suggestions.
2. All the data and most of the analyses of this language are taken from Schulze-Berndt 2000.
3. CONT continuous, DU dual, PRS present, PST past, SG singular.
4. Cf. Diewald (in this vol.) for a detailed analysis of the role of the context in grammaticalization.
5. As Meillet (1915:170) says: “c’est le rôle dans la phrase qui décide de tout.” Cf. also Bybee et al. (1994:11).
6. Kortmann and König 1992:684 arrange some deverbial English prepositions on a continuum from least to most grammatical.
7. The category of the particle is especially often associated with the notion of grammatical word or morpheme.
8. This insight is already foreshadowed in the *Cours de linguistique générale*. Saussure (1916[1985]:186) writes: ‘on attribue généralement les prépositions à la grammaire; pourtant la locution prépositionnelle *en considération de* est essentiellement lexicologique, puisque le mot *considération* y figure avec son sens propre.’
9. ‘Decategorialization’ is presented in Hopper and Traugott 1993, ch. 5.3 as something essential in grammaticalization. However, this should not be interpreted as ‘shift from major to minor category’, but rather as ‘shift from content words to function words’ (Haspelmath 1998:329).

10. Cf. Haspelmath 1998 for critical discussion.
11. Cf. Raible 1992, ch. I.1 and, in particular, p. 11f on the strength of the subtype *a N de*.
12. This is, of course, not to say that all Spanish prepositions originate in this way. There are also deadverbial prepositions (on which s. Meyer-Lübke 1899:159–164) such as *dentro* ‘inside’ (< Vulgar Latin *de intro*), which initially govern a direct complement (*dentro la casa* ‘inside the house’), but from the second half of the the 13th century on govern their complement by means of *de* (*dentro de la casa*).
13. Cf. Vincent 1997. He derives Ital. *dopo cena* ‘after dinner’, by the reanalysis formalized in S2 (with Prep instead of SSR in the first position), from Vulgar Latin [*de* [*post cenam*]]. – It should be obvious in general that the univerbation of *bc* in *abc* presupposes a bracketing *a[bc]*, and consequently, in particular, that lexicalizations of the kind observable in T2 presuppose the kind of rebracketing shown in S2. It is not clear how Haspelmath (1998:330–333) avoids this conclusion.
14. Intervocalic *d* may get lost more generally from the 15th century on; thus *puede* ‘can’ may appear as *pue*.
15. This development would go in the opposite direction of the one mentioned in fn. 12. In the case at hand, an alternative analysis is possible, as pointed out by M. Haspelmath (p.c.). Namely, the phrase *bajo de NP* never passes through S2. Instead, *bajo* at first governs a prepositional complement; later, government becomes direct, so that *de* is dropped. This analysis, while plausible in the cases at hand, is obviously not available for the cases of T2.
16. See Raible 1992 for a cross-linguistic survey and a universal theory of clause linkage.
17. Cf. Meyer-Lübke (1899:611f). Meillet 1915 is among the first to analyze the genesis of Romance conjunctions in terms of grammaticalization.
18. Cf. Kortmann 1996 for the various combinations found in European languages and Herlin 1999 for complex temporal conjunctions in Finnish.
19. The same schema applies, of course, to the formation of conjunctions in other Romance and, mutatis mutandis, numerous further languages. Cf. Harris & Campbell (1995:288) for Romance.

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More thoughts on degrammaticalization¹

Johan van der Auwera

1. Introduction

The work that is most responsible for the present-day interest in grammaticalization is Lehmann (1982) *Thoughts on Grammaticalization*. In Chapter 2 of that *Working Paper* he discusses (a) the notion of grammaticalization, and sets it apart from (b) renovation, (c) innovation, (d) reinforcement, and (e) degrammaticalization. In (1) the processes (a) to (d) are exemplified.

- (1) a. grammaticalization
e.g. when Latin *clara mente* ‘with a clear mind’ turned into Italian *chiaramente* ‘in a clear way’
- b. renovation
e.g. when Latin *clare* ‘in a clear way’ was replaced by Italian *chiaramente* ‘in a clear way’
- c. innovation
e.g. when Italian developed the definite article, a category that Latin did not have
- d. reinforcement
e.g. when Latin added *unus* ‘one’ to *aliquis* ‘someone’ yielding **aliqui-uni*, the ancestor of Italian *alcuno*

Degrammaticalization is not exemplified, because in Lehmann’s view (1982:19) there simply are no cogent examples, which might mean that it really does not exist. This view is often called the “unidirectionality” hypothesis. It has since been called into question, not least because of Ramat’s “Thoughts on degrammaticalization” (1991) – cp. also Hagège (1993:209–210). In the present paper, I want to take Ramat’s thinking a bit further, relative to the research of the nineties. In Section 2 I will briefly consider the demarcation problem of the notion of degrammaticalization, more particularly with respect to grammaticalization and lexicalization. Section 3 sketches some tasks of degrammaticalization theory. Section 4 discusses a subtype

of degrammaticalization which has not been recognized yet in the literature. This subtype is nothing other than reinforcement. That there is such a phenomenon has never been in doubt and was brought into the discussion by Lehmann (1982). The point I make, however, is that reinforcement is a type of degrammaticalization.

2. Definitions

The universe of discourse of discussions on grammaticalization tends to comprise two types of entities, grammatical formatives and lexical items. The former have a grammatical function, and the latter don't. Having a grammatical function is a matter of degree. This function can be stronger or weaker, and there is no clear boundary between a weak grammatical function and the absence of a grammatical function of a lexical item.

Table 1. Grammatical formatives and lexical items

lexical item	grammatical formative		
no grammatical function	lower degree of grammatical function	...	higher degree of grammatical function

Grammaticalization is usually looked upon as the making of grammar or of more grammar, i.e. a diachronic move from the left to the right:

- (2) Grammaticalization is
 - a. the making of a grammatical formative out of a lexical item, or
 - b. the making of a grammatical formative out of a grammatical formative with a weaker degree of grammatical function.

What would the opposite kind of move be like? It would be the change of a grammatical formative into a lexical item or the decrease of its grammatical function or, what should amount to the same, the making of a lexical item or the increase of lexicality. The undoing of grammar invites the term “degrammaticalization” and the making of lexicon invites the term “lexicalization.” But there is only one process: with “degrammaticalization” one looks at it from one end, and with “lexicalization” from the other. With the same reasoning, “delexicalization” could be coextensive with “grammaticalization.”

The universe of discourse depicted in Table 2 is of course a simplification. Take the English noun *songwriter*. It is now a lexical item. It derives from two lexical items, viz. *song* and *writer*. So here we are dealing with the making of a lexical item, but one that does not come from a grammatical formative. We are dealing with lexicalization, but not with degrammaticalization. Or take German *zum* ‘to.the’.

Table 2. (De)grammaticalization and (de)lexicalization

lexical item	grammatical formative		
no grammatical function	lower degree of grammatical function	...	higher degree of grammatical function
	→ → → <i>grammaticalization/delexicalization</i> → → →		
	← ← ← <i>lexicalization/degrammaticalization</i> ← ← ←		

It is a grammatical formative. It does not derive from a lexical item, and it also does not result from another grammatical formative that is weaker in grammatical function. It simply derives from two grammatical formatives, *zu* ‘to’ and *dem* ‘the’. We are dealing with grammaticalization, but not with delexicalization. So apart from single grammatical formatives and lexical items, we also have combinations of these.

Another entity that may derive from or lead to grammatical formatives and lexical items can be defined negatively as that which is neither a grammatical formative nor a lexical item, nor even a combination. Take the modern English verb *twit* ‘reproach’. It derives from the Old English *æt-witan* ‘at-blame’ ‘reproach’ and, of course, modern *t-* derives from the earlier verbal prefix *æt-*. What kind of entity is this *t-* in modern English? It is something, it is phonological material, but nothing else, indeed not a lexical item nor a grammatical item, and not a combination. One could say about this *t-* that it degrammaticalized, but that it did not lexicalize.

Relative to a more populated universe of discourse – comprising lexical items, grammatical formatives, items that are neither one nor the other, and combinations of lexical items or grammatical formatives – I propose the three definitions (3) to (5).

- (3) Grammaticalization is
 - a. the making of a grammatical formative out of something other than a grammatical formative, or
 - b. the making of a grammatical formative out of a grammatical formative with a weaker degree of grammatical function
- (4) Degrammaticalization is
 - a. the undoing of a grammatical formative into something other than a grammatical formative, or
 - b. the undoing of a grammatical formative into a grammatical formative with a weaker degree of grammatical function
- (5) Lexicalization is the making of a lexical item out of something other than a lexical item.²

In this perspective the processes of lexicalization and degrammaticalization are not co-extensive: English *songwriter* is a lexicalization, but not a degrammaticalization. The English and Scandinavian genitival ‘s is degrammaticalization – probably the most widely discussed case – but not lexicalization. The English noun *if*, as in the phrase *the ifs and buts*, is both lexicalization and degrammaticalization.

Table 3. Lexicalization and degrammaticalization as overlap categories

<i>lexicalization</i>		
Eng <i>songwriter</i>	Eng Noun <i>if</i>	Eng/Scan genitival ‘s
<i>degrammaticalization</i>		

The definitions in (3) to (5) are found in the literature (e.g. Ramat 1987, 1992; Moreno Cabrera 1998), but they are not universal. Especially the overlap between lexicalization and degrammaticalization is found objectionable. In a narrower definition (e.g. Haspelmath 1999; Norde 2002, this volume) “degrammaticalization” is restricted to the non-lexicalizing cases of the wider definition, i.e. including the English genitival ‘s, but excluding the English noun *if*.³

Table 4. Wide and narrow concepts of degrammaticalization

<i>lexicalization</i>	
<i>wide degrammaticalization</i>	
<i>narrow degrammaticalization</i>	

3. Degrammaticalization research: past and future

In the preceding subsection I have assumed that degrammaticalization is a real phenomenon. As the introduction made clear, Lehmann (1982) was not convinced of this. A skeptical attitude can also be found in Hopper and Traugott (1993:236), Moreno Cabrera (1998:224) and in Giacalone Ramat (1998:123). A clear denial of its existence is expressed by Haspelmath (1989:302). Meanwhile, however, there is a general consensus that degrammaticalization does exist (cf. Diewald 1997:18). There is a further consensus that it is much rarer than grammaticalization. It is difficult to quantify just how rare a phenomenon it is. Heine, Claudi, and Hünnemeyer (1991:5) call it statistically insignificant, Haspelmath (1999:1046) claims that grammaticalization would occur about one hundred times as often as degrammaticalization, and Newmeyer (1998:275–276) settles for the claim that the ratio is ten to one. Even so, we are beginning to have a sizeable literature, best referenced

by Janda (2001). So we can begin to study it in its own right, not just as a falsification of the claim that it would not exist⁴ or as supporting the more general critique that grammaticalization theorists pursue something by far not as exciting as they think.⁵

One issue that can be put on the agenda now or that can be investigated more thoroughly is whether the general properties characterizing grammaticalization also apply to degrammaticalization. I will provide two examples. The first one concerns the temporal ordering of the component processes of grammaticalization and degrammaticalization. For grammaticalization, the classic view, dating back to at least Givón (1975) – see also Heine, Claudi, and Hünnemeyer (1991:175) and van der Auwera and Plungian (1998) – says that meaning changes first. I am doubtful about the other two scenarios, though other linguists are not. Thus the view that meaning and form change together is argued by e.g. Bybee, Perkins, and Pagliuca (1994); and according to Newmeyer (1998:249) perhaps even form may change first. What now is the ordering for degrammaticalization? With lexicalizing degrammaticalization, as when *if* is converted to a noun, it seems obvious that meaning changes first (cp. also Norde this volume). Can form change and meaning change go hand in hand? I am not aware of any claim to that effect. And finally, can form change first? Consider cases of “de-univerbation,” described for Greek and Romance by Méndez Dosuna (1997) and for Danish by Nedergaard Thomsen (1998) and hinted at for Dutch by van der Auwera (1995:92, 1999:123). Take the medieval Galician-Portuguese particle *er/ar*, which comes from the Latin verbal prefix *re-*. The prefix first separated from the verb – formal change – and it then changed its meaning. The facts are described in Brea (1988), and Méndez Dosuna (1997) brings them into the (de)grammaticalization literature. A possible upshot of a serious investigation of this issue may be that whereas in grammaticalization it is (predominantly) meaning that takes the lead, in degrammaticalization in the narrow, non-lexicalizing sense, it is (predominantly) form that changes first.

A second instance of a property that characterizes grammaticalization that should also be checked for degrammaticalization is “divergence” (Hopper and Traugott 1993:116–120) or “split” (Heine and Reh 1984:57–59), the fact that when a lexical item grammaticalizes, it may continue as a lexical item as well.

- (6) *going to* → ‘go’
 [lexical] [lexical]
 ↘ future allows the contraction *gonna*
 [grammatical]

Divergence is claimed to be a “very natural outcome of the process of grammaticalization” (Hopper and Traugott 1993:117). Is it natural for degrammaticalization too? The least one can say at this stage of research is that degrammaticalization may

also involve divergence. A case in point is the fact that the Swedish modal *må* ‘may’ degrammaticalized into a regular verb ‘feel’, with a new conjugation, but that it continued as an auxiliary, with a different conjugation.

- | | | |
|---------------------|----------------|--|
| (7) <i>må</i> ‘may’ | → ‘may’ | present <i>må</i> , past <i>måtte</i> |
| [grammatical] | [grammatical] | |
| | ↘ ‘feel’ | present <i>mår</i> , past <i>mådde</i> |
| | [more lexical] | |

The facts are described by Birkmann (1987:311) and have been drawn into the (de)grammaticalization literature by van der Auwera and Plungian (1998).

Perhaps the most important task is to describe and explain the typology of possible degrammaticalization.⁶ It is in this domain that the next section will offer a contribution.

4. Reinforcement as degrammaticalization

In modern English one can express the continuation of an action with *keep* followed by an *-ing* form, but also by *keep on* and the *-ing* form.

- (8) a. Keep smiling.
b. Keep on smiling.

It seems (Cappelle 1999) that the simple pattern, the one without *on*, is the older one, with the *keep on* pattern getting momentum only in the second half of the 19th century. The phrase *keep on* has more of a lexical meaning ‘persevere, carry on’, as shown in (9).

- (9) a. It is important to keep on.
b. *It is important to keep.

What we get when *on* is added to the pattern *keep V-ing*, plausibly in analogy with other verbs allowing the *V on V-ing* pattern, is a process of “reinforcement,” a phenomenon discussed already by Lehmann (1982). He did not consider it to be degrammaticalization, but he was not well disposed to degrammaticalization, in general. Seventeen years later, with a clearer understanding that degrammaticalization does exist, we may decide differently. Surely, when *keep on V-ing* joins *keep V-ing* we do not witness (i) shortening, (ii) morphologization, (iii) reduction of paradigmatic variability or (iv) development of a more abstract and less lexical meaning – all parameters of grammaticalization. Rather, we get the opposite: (i) *keep on V-ing* is longer than *keep V-ing*, (ii) *keep on* involves more syntax than *keep*, (iii) with a *keep on* pattern next to the *keep* pattern, we get an increase of paradigmatic vari-

ability, and (iv) the meaning of *keep on* is more lexical than that of *keep*. I conclude that reinforcement is a subtype of degrammaticalization. And since it is not recognized as such in either Newmeyer (1998) or Janda (2001), I argue that this is a new finding.

Degrammaticalizing reinforcement is not a rare phenomenon. In the syntax of the Romance verb, we find it in Spanish and in Sardinian. In Spanish one can express necessity both with *deber* and *deber de*. The latter is the younger pattern; it might have arisen in analogy with *haber de* (Rübel 1911:32). Or take Sardinian: the typical ‘have’ future was earlier expressed by *áere* plus infinitive, with *áere a* plus infinitive progressively taking over and with at least some linguists (e.g. Blasco Ferrer 1994: 110) assuming that *a* was added to the bare infinitival pattern – but for a discordant view, see Bentley (1999, 2000). For the syntax of the Germanic verb, the most widely discussed phenomenon of possible reinforcement is the replacement of bare infinitives by particle infinitives. The traditional view is well expressed by Jespersen (1927: 10–11): the original directional and purposive meaning of prepositions/particles like English *to* or German *zu* weakened to the extent that the particle infinitive became the unmarked infinitive, and in so doing it replaced the bare infinitive and relegated it to relic uses. For English, the classical view has now been criticized, especially by Fischer (1995, 1997, 1998): bare infinitives have also been replaced by *-ing* forms (Fischer 1997:277), and *to* infinitives have also taken over uses of finite *that* constructions (Fischer 1997:268, 274; Los 1998). At least for Dutch, the classical view may hold its place better, not least because Dutch has no counterpart to *-ing* complements. There are verbs that now only allow the particle infinitive but earlier accepted both the particle and the bare infinitive (e.g. *begeren* ‘desire’, *beginnen* ‘begin’, *denken* ‘think’, *menen* ‘think’ or *plegen* ‘be used to’) or earlier still only the bare infinitive (e.g. *schijnen* ‘seem’, *dunken* ‘think’, *wanen* ‘imagine’, *weten* ‘know’ (Stoett 1923:202; Pijnenburg et al. 1997:124). And there is still one verb, viz. *durven* ‘dare’ that would seem to be in the transition stage now (De Bonth et al. 1997:422). Interestingly, the spread of the Germanic directional/purposive particle to infinitives is often discussed as a good illustration of grammaticalization (Haspelmath 1989; Cuyckens and Verspoor 1998). This is fully appropriate: relative to the original preposition, the infinitival particle is a grammaticalization. Relative to the bare infinitive, however, the particle infinitive constitutes a degrammaticalization.

5. Conclusion

I have argued that two decades of relatively intensive research on grammaticalization have shown that degrammaticalization exists, whether or not one allows it to

comprise lexicalization – a wide vs. a narrow definition – and that it should be studied in its own right, and not as a quirky, accidental exception to grammaticalization. One of the tasks on the agenda is to compare the properties of grammaticalization and degrammaticalization. Another one is to classify all types of degrammaticalization, and one type is reinforcement.

Notes

1. This paper is dedicated to Ekkehard König on the occasion of his sixtieth birthday. Its fourth section partially relies on van der Auwera and Bultinck (2000). Special thanks are due to Muriel Norde and to César Montoliu.
2. Note that (5) covers *songwriter*. *songwriter* is made up out of *song* and *writer*. They are both lexical items, but together and before they are lexicalized they are neither.
3. For other interesting definitions and for refinements, see esp. Lehmann (1989), Plank (1995), and Norde (2001).
4. Another way of saying that a degrammaticalization phenomenon falsifies the claim that degrammaticalization would not exist is to claim that the phenomenon constitutes an exception to a unidirectionality thesis saying that changes in degree of grammatical function are always increases.
5. A “deconstructive” critique is found in Newmeyer (1998) – cp. also Janda (2001), Joseph (2001), and Joseph (in press). Newmeyer holds that grammaticalization is not an independent phenomenon, but only an “epiphenomenon” resulting from the interacting of other phenomena. I take this critique to be misguided, for most (?all) grammaticalizationists have always taken grammaticalization to be a complex process, moving along various dimensions or, better, subdimensions of the two basic dimensions of meaning and form. In the classical grammaticalizationist’s view grammaticalization comprises formal change as well as semantic change, and what is phenomenally interesting is that certain types of formal changes tend to go together or closely follow or precede certain types of semantic changes.
6. The best survey so far is Newmeyer (1998:263–275) and the best collection of relevant bibliographical references is Janda (2001).

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Grammaticalization within a theory of morphocentricity

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1. Introduction

In a paper read at the Milwaukee Morphology Meeting in 1986, Joseph and Janda (1988:208) propose

... a morphocentric theory, one in which morphology occupies a central place in the grammars of particular languages and hence in the underlying architecture of universal grammar...

As seen under Figure 1, a complete representation of morphocentricity considers *morphologization* in a global sense, incorporating *de-syntacticization* (equivalent to *grammaticalization* in this paper) and *de-phonologization*. *De-morphologization* describes the opposite process, including both *syntacticization* (i.e. *de-grammaticalization*) and *phonologization*.

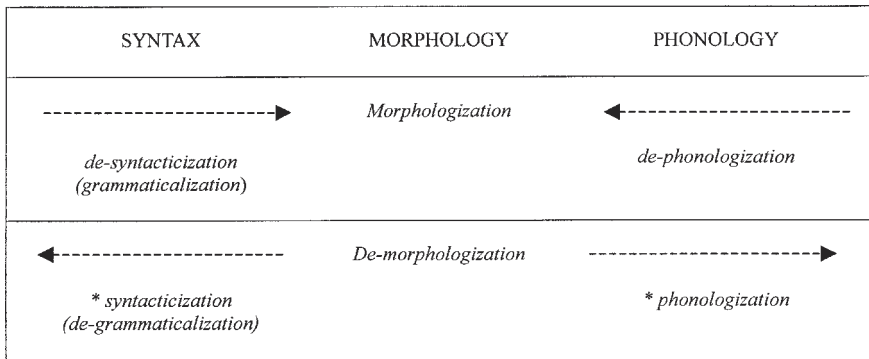


Figure 1. Morphocentricity

Succinctly put, (global) morphologization, according to Joseph and Janda (1988: 195–196), may be defined as

... any transition ... from a state in which a generalization is non-morphological in nature to a state in which the corresponding generalization is morphological in nature. De-morphologization ... describes the opposite process ...

The central claim made concerns “a lopsided asymmetry between historical morphologization and historical de-morphologization in grammatical change” (1988:202). [See Section 6 of this paper for a more detailed discussion of morphocentricity]. As a matter of fact, Joseph and Janda (1988:207) contend that

... the centrality of morphology (with its concomitant of frequent morphologization) can ... be overcome, via de-morphologization, only by massive accidental convergences of linguistic circumstances ...

The purpose of this paper will be two-fold. First, the lopsided asymmetry in favor of (global) morphologization will be illustrated by the rich data to be found in the history of the Romance languages, both as *de-phonologization* and *grammaticalization* processes. This analysis will be proposed within the current model of morphocentricity. In the second half of this paper, however, a revision of the latter will be attempted, in order to account for recent objections raised, specifically with respect to the unidirectionality hypothesis.

2. Morphologization

A sketch of one conception of morphologization, equivalent to *de-phonologization* only, is found under Figure 2, taken from Klausenburger (1979).¹

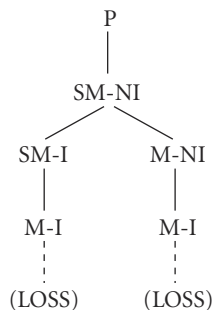


Figure 2. De-phonologization

A crucial ingredient incorporated in this diagram is the SM (or *semi-morphological*) stage, proposed as intermediary between phonology and morphology, a necessary step before (complete) morphologization takes place, in a continuum such as:

$$P > SM > M > (\text{Loss}).$$

In addition, the dichotomy of non-inverted rule (NI) vs. rule inversion (I) is featured prominently. “Loss,” the potential end-point of the evolution, means “loss of a rule,” resulting in paradigmatic leveling. Let us now review very briefly some relevant data.

[The segments under analysis are underlined in each set of examples].

2.1 Rhotacism in Latin

As indicated in the data under Figure 3, it is assumed that this evolution reached the M-I, or morphological and inverted rule, $r > s / \text{nom. sg.}$, as manifested in Classical Latin *honos/honoris*, coexisting, however, with *honor/honoris*, where the leveling signifies the loss of M-I:

	Pre-rhotacism	Rhotacism	Classical Latin	
Nom.	<i>amos</i> <u>̄</u>	<i>amos</i> <u>̄</u>	<i>amor</i> <u>̄</u>	“love”
Gen.	<i>amos</i> <u>̄</u> <i>is</i>	<i>amor</i> <u>̄</u> <i>is</i>	<i>amor</i> <u>̄</u> <i>is</i>	
Nom.	<i>honos</i> <u>̄</u>	<i>honos</i> <u>̄</u>	<i>honos</i> <u>̄</u> / - <i>r</i>	“honor”
Gen.	<i>honos</i> <u>̄</u> <i>is</i>	<i>honor</i> <u>̄</u> <i>is</i>	<i>honor</i> <u>̄</u> <i>is</i>	
Nom.	<i>tempus</i> <u>̄</u>	<i>tempus</i> <u>̄</u>	<i>tempus</i> <u>̄</u>	“time”
Gen.	<i>tempus</i> <u>̄</u> <i>is</i>	<i>tempor</i> <u>̄</u> <i>is</i>	<i>tempor</i> <u>̄</u> <i>is</i>	
Nom.	<i>flos</i> <u>̄</u>	<i>flos</i> <u>̄</u>	<i>flos</i> <u>̄</u>	“flower”
Gen.	<i>flos</i> <u>̄</u> <i>is</i>	<i>flor</i> <u>̄</u> <i>is</i>	<i>flor</i> <u>̄</u> <i>is</i>	

Figure 3. Rhotacism in Latin

The phonological step, of course, involved the sound change of rhotacism, $s > r / V _ V$, producing the “post-rhotacism” forms for the given nouns. But this phase must also be considered SM, or semi-morphological, since the sound change has been “anchored” in the extant morphological alternation of nom. and gen. singular in the Latin noun.

2.2 Diphthongization in French

In the data shown under Figure 4, Old and Modern French are clearly distinguished in terms of the degree of morphologization of the diphthongization process reached:

	Old French	Mod. French	
3s	<i>lie<u>v</u>e</i>	(il) <i>lè<u>v</u>e</i>	“raise”
1p	<i>lev<u>o</u>ns</i>	(nous) <i>lev<u>o</u>ns</i>	
3s	<i>ai<u>m</u>e</i>	(il) <i>ai<u>m</u>e</i>	“love”
1p	<i>am<u>o</u>ns</i>	(nous) <i>am<u>o</u>ns</i>	
3s	<i>vi<u>o</u>nt</i>	(il) <i>vi<u>o</u>nt</i>	“come”
1p	<i>ve<u>o</u>ns</i>	(nous) <i>ve<u>o</u>ns</i>	

Figure 4. French diphthongization

It is claimed that Old French combines phonological and morphological conditioning in the accounting of these verbal alternations, in the form of both non-inverted and inverted morphophonological rules: *lieve/levons* is accounted for by the SM-NI $e > ie$ / [+stress, open syllable], 3s, in light of the Modern French leveling *lève/levons* (which suggests the loss of SM-NI), but *aim/amons* reflects an SM-I $ai > a$ / [-stress], 1p, in view of the Modern French leveling to *aime/amons*, due to the loss of SM-I, the original, non-inverted, sound change, of course, going from a single vowel to a diphthong in Old French. Modern French, however, also maintains this alternation, in so-called irregular verbs. For *viens/venons*, for instance, the erstwhile phonological change is assumed to have been obscured, and today only morphological conditioning remains, in the form of an M-NI.

2.3 Diphthongization in Spanish

As can be seen under Figure 5, the diphthongization process of Spanish is directly comparable to that of Old French, in having reached the SM stage of morphologization:

	Indicative	Subjunctive	
3s	<i>cali<u>e</u>nta</i>	<i>cali<u>e</u>nte</i> ‘	‘heat’
1p	<i>cal<u>e</u>ntamos</i>	<i>cal<u>e</u>ntemos</i>	
3s	<i>v<u>ue</u>la</i>	<i>v<u>ue</u>le</i>	“fly” (Standard)
1p	<i>v<u>o</u>lamos</i>	<i>v<u>o</u>lemos</i>	
3s	<i>v<u>ue</u>la</i>	<i>v<u>ue</u>le</i>	“fly” (Chicano)
1p	<i>v<u>ue</u>lamos</i>	<i>v<u>ue</u>lenos</i>	

Figure 5. Spanish diphthongization

In Standard Spanish, that is the end-point, but in the Chicano dialect, the leveling of *vuelar*, with the diphthong throughout the paradigm, signals the loss of a previous rule inversion, $ue > o$ / [-stress], 1p. This formulation is to be contrasted to the SM-NI, without loss, of Standard Spanish, $e,o > ie, ue$ / [+stress], 3s, which consti-

tutes a “hooking on” of sound change on the morphological conditioning present in the verbs.

2.4 Velar palatalization in Italian

Here we find the well-known consonantal alternations between /k/ and /g/ and the palatal affricates /č/ and /j/, respectively, in both nominal and verbal paradigms. The historical sound change of palatalization of /k/ and /g/ before front vowels has been morphologized to SM, since an alternation like *amico/amici* can be said to be conditioned by both the plural category and the final vowel /i/. However, the SM has been lost, as an SM-NI in a noun like *banco/banchi*, or *amica/amiche*, and a verb like *manco/manchi*, and as an SM-I in *collegio/collegi* and a verb like *mangio/mangi*. Whether existing SMs, like *amico/amici* and *vinco/vinci*, are to be accounted for by non-inversion or inversion is difficult to determine, since no leveling trend exists. The data are given under Figure 6.

Nouns	Singular	Plural	
	<i>am<u>ico</u></i>	<i>am<u>ici</u></i>	“friend (m.)”
	<i>ban<u>co</u></i>	<i>ban<u>chi</u></i>	“bank”
	<i>am<u>ica</u></i>	<i>am<u>iche</u></i>	“friend (f.)”
	<i>colleg<u>io</u></i>	<i>colleg<u>i</u></i>	“colleague (m.)”
Verbs	Indicative	Subjunctive	
	1s <i>vin<u>co</u></i>	<i>vin<u>ca</u></i>	“defeat”
	2s <i>vin<u>ci</u></i>	<i>vin<u>ca</u></i>	
	1s <i>man<u>co</u></i>	<i>man<u>chi</u></i>	“miss”
	2s <i>man<u>chi</u></i>	<i>man<u>chi</u></i>	
	1s <i>man<u>gio</u></i>	<i>man<u>gi</u></i>	“eat”
	2s <i>man<u>gi</u></i>	<i>man<u>gi</u></i>	

Figure 6. Velar palatalization in Italian

3. Phonologization?

A reversal of morphologization has been proposed by Morin et al. (1990:523) in the existence of a Modern French phonological word final tensing rule, $O > [+tense] / _]$, which, they claim, must have developed from a morphophonological rule of plural tensing, $O > [+tense] / _] N, A [+pl]$. Specifically, this change-over took place because the morphophonological rule was “progressively stripped of its morphological and lexical conditioning, so as to become maximally general ...” (1990:520). It is a plausible scenario and, if accepted, would constitute

a breach of the unidirectionality of morphologization. However, an alternative solution would posit the loss of the previous MP rule, evident in a leveling like *gigot/gigots* (both pronounced with final tense [o]), signaling the end of “the MP story.” The phonological rule today is then conceived of as a generalization of the phonetic/phonotactic residue of the leveling, not a direct continuation of the alternation.

4. Grammaticalization

Under Figure 7, a composite of scenarios of grammaticalization is presented:²

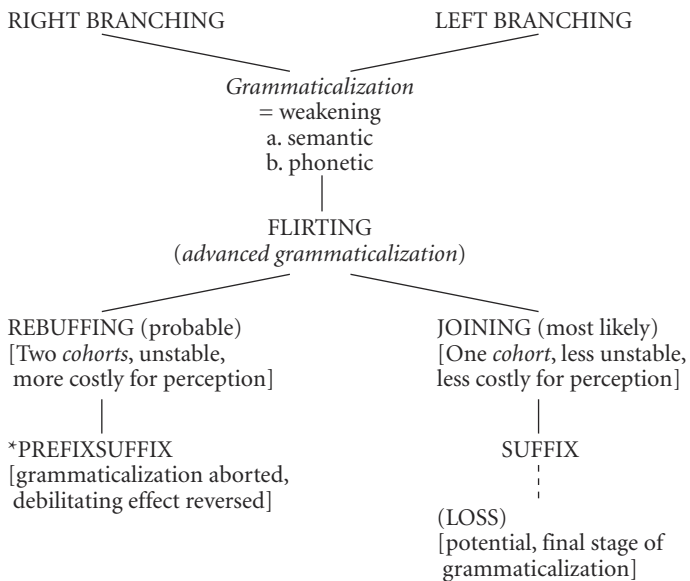


Figure 7. Grammaticalization scenarios

This sketch incorporates notions of syntactic branching (Bauer 1995), semantic and phonetic weakening (Heine 1993), and perception and processing concepts, like *flirting*, *rebuffing*, and the *prefixation dispreference*,³ taken from Hall (1992). The global evolution may also be sketched in terms of the well-known cline,

LB / RB > CLITIC > AFFIX > (ZERO).

In this case, ‘zero’ signifies the actual loss of a form, not that of a rule, as in the case of morphologization, above. The complexity of the scheme will become apparent by way of the analysis of some of the better known grammaticalization processes in the Romance languages.

4.1 The Romance future

Shown under Figure 8, the Romance future tense formation constitutes the ideal example for the illustration of the steps outlined for grammaticalization:

Latin	Italian	Spanish	French
<i>cantare habeo</i>	<i>canterò</i>	<i>cantaré</i>	<i>(je) chanterai</i>
<i>cantare habes</i>	<i>canterai</i>	<i>cantarás</i>	<i>chanteras</i>
<i>cantare habet</i>	<i>canterà</i>	<i>cantará</i>	<i>chantera</i>
<i>cantare habemus</i>	<i>canteremo</i>	<i>cantaremos</i>	<i>chanterons</i>
<i>cantare habetis</i>	<i>canterete</i>	<i>cantaréis</i>	<i>chanterez</i>
<i>cantare habent</i>	<i>canteranno</i>	<i>cantarán</i>	<i>chanteront</i>

Figure 8. The Romance future

It began with Latin left-branching, infinitive + auxiliary, underwent grammaticalization by the semantic and phonetic erosion of *habere*, entered the “flirting” stage and, since the structure was originally left-branching, the auxiliary joined with the preceding infinitive, resulting in suffixation ever since the first Romance textual attestation, the French *Serments de Strasbourg* (842). The suffix stage has been stable throughout, with no phonetic erosion trend signaling eventual “loss.” However, in French and also in Spanish a new right-branching *go*-future is very much alive and is in the process of replacing the extant future. The grammaticalization scheme given predicts, however, that such a combination, French *va chanter*, Spanish *va cantar*, will not result in inflectional prefixation.

4.2 The Romance compound past

The Romance compound past, illustrated under Figure 9, reaches, even today, only the clitic phase, proclitic specifically:

Latin	Italian	Spanish	French
<i>habeo cantatum</i>	<i>ho cantato</i>	<i>he cantado</i>	<i>(j') ai chanté</i>
<i>habes cantatum</i>	<i>hai cantato</i>	<i>has cantado</i>	<i>as chanté</i>
<i>habet cantatum</i>	<i>ha cantato</i>	<i>ha cantado</i>	<i>a chanté</i>
<i>habemus cantatum</i>	<i>abbiamo cantato</i>	<i>hemos cantado</i>	<i>avons chanté</i>
<i>habetis cantatum</i>	<i>avete cantato</i>	<i>habéis cantado</i>	<i>avez chanté</i>
<i>habent cantatum</i>	<i>hanno cantato</i>	<i>han cantado</i>	<i>ont chanté</i>

Figure 9. The Romance compound past

As this structure derives from a Latin right-branching alignment of the auxiliary and the past participle, its “flirting” stage was followed by “rebuffing,” and it did

not result in prefixation. One can say that the grammaticalization process was thus aborted and the debilitating effect surrounding it was, at least to a certain degree, reversed: the auxiliary *habere* (re)gained some robustness, although inside the compound past structure itself it does constitute a clitic, not a full lexical verb, that status being in existence elsewhere, at least in French and Italian, as the lexical verb of possession.

4.3 The Rumanian definite article

This is another example of left-branching syntax in Latin, the combination of the noun followed by the demonstrative pronoun *ille*, evolving, as predicted, into suffixation, as shown under Figure 10:

Masculine	Latin	Rumanian	
sg.	<i>dominu(m) illu(m)</i>	<i>domnul</i> (N/A)	“master”
	<i>arbore ille</i>	<i>arborele</i> (N/A)	“tree”
	<i>dominu illui</i>	<i>domnului</i> (G/D)	
pl.	<i>domini illi</i>	<i>domnii</i> (N/A)	
	<i>domini illorum</i>	<i>domnilor</i> (G/D)	
Feminine			
sg.	<i>casa illa</i>	<i>casa</i> (N/A)	“house”
	<i>casae illaei</i>	<i>casei</i> (G/D)	
pl.	<i>casae illae</i>	<i>casele</i> (N/A)	
	<i>casae illorum</i>	<i>caselor</i> (G/D)	

Figure 10. The Rumanian definite article

The Rumanian structure differs from the other Romance languages in two respects. First, the other Romance languages derive from a Latin variant with the demonstrative *ille* preceding the noun, thus constituting right-branching and, as a consequence, only developing to the proclitic stage. Second, Rumanian has two cases, the nom./acc. (N/A) and the gen./dat. (G/D), both signaled by the suffixed definite article, not by the noun root. One has to add, of course, that throughout Romance the grammaticalization of the Latin demonstrative pronoun to a definite article occurred.

4.4 The French subject pronoun

Over the past century, if not longer, Romance linguists have argued over the status of the subject pronoun in Modern French, as illustrated under Figure 11:

Latin		French
<i>ego canto</i>	>	<i>je chante</i>
<i>tu cantas</i>	>	<i>tu chantes</i>
<i>ille, illa cantat</i>	>	<i>il, elle chante</i>
<i>nos cantamus</i>	>	<i>nous chantons</i>
<i>vos cantatis</i>	>	<i>vous chantez</i>
<i>illi, illas cantant</i>	>	<i>il(s), elles chantent</i>

Figure 11. The French subject pronoun

Is it to be considered a prefix to the verb or is it a separate word? The theoretical apparatus proposed above rejects verbal prefixation for French, simply because the syntactic sequence at the outset, the Latin personal pronoun followed by the verb, was right-branching. The *flirting*, but *rebuffing* scenarios, must, as a consequence, be assumed here also, like in the evolution of the Romance compound past. The proclitic status of the subject pronoun, of course, still distinguishes French clearly from Italian and Spanish, where the (optional) use of the subject pronoun may possess a degree of grammaticalization; but in these languages, the clitic stage has not been reached in the subject pronoun, although such a status must be assigned to their object pronouns.

5. Syntacticization?

Janda (1995:126) analyzes the occurrence of an apparent suffix *-nos* in New Mexican Spanish (and other dialects), as shown in the data under Figure 12:

	<i>-mos</i>		<i>-nos</i>
Pr.Ind.	<i>cantámos</i>	Pr.Sub.	<i>cánte nos</i>
Pret.	<i>cantámos</i>	Imp.I.	<i>cantába nos</i>
Fut.	<i>cantarémos</i>	Imp.S.	<i>cantára nos</i>
		Cond.	<i>cantaría nos</i>

Figure 12. New Mexican Spanish *-nos*

He concludes that

... the switch from *-mos* to *-nos* involves the mutation of an agreement-affix into a subject-marking ‘clitic’ pronoun (or at least the acquisition of a subject-marking use by a former object-‘clitic’).

If this claim is taken literally, it would be an instance of an affix that was “upgraded” to a clitic, a case of (partial) syntacticization, a reversal of the unidirectionality of

grammaticalization on the usual cline from clitic to affix. However, it is best to consider the change involved here as a *replacement* of *-mos* by *-nos* as the first person plural marker of the verb, made overt by the apparent stress shift to proparoxytonic in the Present Subjunctive, Imperfect Indicative and Subjunctive, and the Conditional.

6. Theoretical discussion of morphocentricity

From the sketch on morphocentricity given at the outset, three meanings of this concept may actually be extracted:

- Meaning 1: morphology is the “central component” of language and there is a preponderant move of both syntax and phonology in its direction;
- Meaning 2: morphology is conceived of as a “residue” of both syntactic and phonological evolution, or even as “used up” or “worn out” phonology or syntax;
- Meaning 3: morphology “by happenstance” constitutes the end-point of both syntactic and phonological developments.

These characterizations may be considered ‘positive’, ‘negative’, and ‘neutral’, but morphology is placed at the center of the sketch no matter which of the meanings is chosen. As a consequence, both *de-syntacticization* and *de-phonologization* may further be seen as *morpho-centripetal* changes, while the two branches of *de-morphologization*, *syntacticization* and *phonologization*, add up to *morpho-centrifugal* movements. The preponderance of morphologization over demorphologization, from this dichotomy, could be attributed, as a matter of fact, to the morpho-centripetal nature of the former, apparently preferred over morpho-centrifugal developments.

In his most recent critique of the “unidirectionalist” approach, Janda (1999) makes the following insightful observation (Ms., p. 21):⁴

If there were at issue only two competing hypotheses - that grammaticalization either has a predominant directionality or else it doesn't - then even a large number of instances running directly counter to the overall downgrading-trend ... might still be tolerable. But the choice to be made is actually between (i) the claim that grammaticalization is unidirectional and (ii) the view that the set of disparate phenomena known by that name have a predominant directionality but are countered by a small number of opposite-direction changes which arise from the non-unity and discontinuity inherent in grammaticalization and are relatively infrequent only because they depend for their origin on various accidents of euphemism, homophony, hypercorrection, metonymy, and the like. Given that one view ... wrongly pre-

dicts that there could essentially be no violations of unidirectionality, while the other hypothesis predicts ... that both directions of change should exist ..., it is clear that the relevant statistics turn out to disfavor the unidirectionalist approach, which has dozens of counterexamples, and to support the alternative ..., which basically has no violations at all.

If such an assessment is taken seriously, perhaps an alternative conception of morphocentricity is in order, tentatively sketched under Figure 13. At the center of this diagram, language structure globally consists of three “clusters,” each of which joins morphology to one of the other components, phonology, syntax, and the lexicon (the last two may be combined for the present discussion). Such bundles are thought of as natural units, characterized by “pre-existing morphophonological conditioning,” a “pre-existing syntax-morphology continuum,” and a “pre-existing lexical-morphological” continuum.

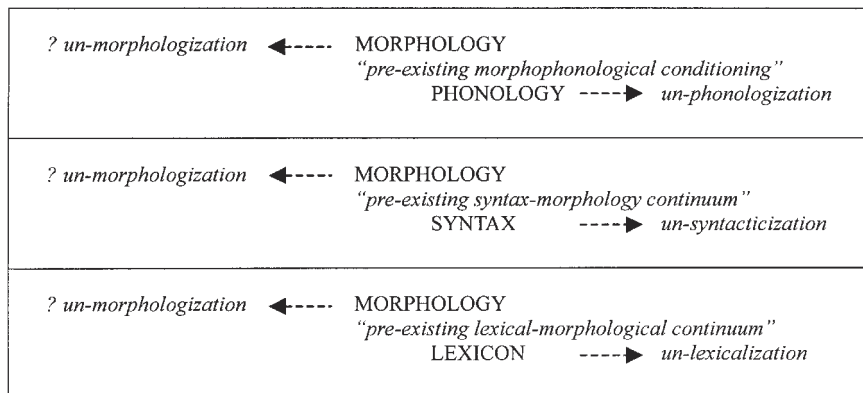


Figure 13. Morphocentricity (revised)

Three principal movements affect these clusters in language change, essentially constituting *stripping* processes, the loss of phonological, syntactic, and lexical features. These are labeled *un-phonologization*, *un-syntacticization*, and *un-lexicalization*, respectively. Why the new terminology, one may ask?

The prefix *de-* is currently used as part of various concepts which specifically indicate *reversals* of the process lacking such a prefix. *No reversal is implied in this new set of changes*. The *un-* prefix refers to the *removal* of characteristics, not only those of phonology, syntax, and the lexicon, but, conceivably, although certainly in the minority, also those of morphology, labeled *un-morphologization*. As can be seen, all changes envisioned are *centrifugal*, stripping off one of the components of the three clusters. As a result, *the issue of unidirectionality has been rendered moot*. Since they both originate in the pre-existing bundles, *un-phonologization* and

un-morphologization are equally accommodated, in principle equally possible. The crucial issue remaining now, of course, is to explain why the *centrifugal* changes are much more frequent than the *centripetal* ones. Naturally, the same arguments will be brought to bear on this decision as were relevant for the *morphologization* vs. *de-morphologization* dichotomy. In addition, it is apparent that the “results” of un-phonologization, un-syntacticization, and un-lexicalization are the same as those of de-phonologization, de-syntacticization, and de-lexicalization, namely, morphologization, the existence of morphological characteristics by themselves. It is significant, however, that these results are obtained in radically different ways: the *unmarked* nature of morphologization, opposed to the *marked* nature of un-morphologization (formerly: phonologization, syntacticization, and lexicalization), is captured in the revision proposed.

The revised schema no longer allows for three “meanings” of morphocentricity, as outlined above. Rather, the initial positing of morphology as a partner for *each* of the other components underlines the centrality or “omnipresence” of morphological structure. As a consequence, morphocentricity now receives this unambiguous definition:

The uncovering, or laying bare, of morphology, the central constant of language, its “minimal” structure, by the stripping of phonological, syntactic, and lexical characteristics.

Notes

1. See also Hooper (1976).
2. Cf. Klausenburger (2000) for details on this approach to grammaticalization.
3. Bybee (1999) confirms that “the typological evidence suggests that post-posed grammatical material affixes more easily than preposed grammatical material.” She then hypothesizes that this “chunking” is based on frequency of co-occurrence, and that “left-to-right bias gives the suffixing preference.”
4. For strong arguments in favor of “irreversibility,” see Haspelmath (1997).

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The final stages of grammaticalization: Affixhood and beyond*

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1. Introduction

In this paper, I will discuss the penultimate stage of grammaticalization: the stage of affixhood. This stage has not been the object of much study, probably because inflectional affixes are considered to be the most grammaticalized of elements. Having thus reached the very end of a one-way street, they cannot develop any further, and the only remaining change for them would seem to be loss. If however the history of some of these inflections is examined more closely, it will be seen that loss is not the only option. Using diachronic evidence from Swedish, I will show that inflectional endings may be maintained as “less cumulative” inflections, or even degrammatize into a derivational suffix or a clitic. These developments were made possible by the loss of inflectional case, which rendered many endings redundant and hence available for other purposes. Such changes will turn out to be paradigm examples of Lass’s concept of exaptation. Finally, I will address the question of why degrammatization changes are so rare and how they could be integrated into the grammaticalization framework.

2. Terminological preliminaries

2.1 Deflexion

The term “deflexion” is potentially misleading: it suggests the mere loss of inflectional material, but what it really entails is the disappearance of grammatical categories. If we confine ourselves to Swedish nominal morphology, deflexion does not merely imply the loss of endings. In that case, nouns would not be inflected at all in Modern Swedish, but as a matter of fact, quite a few endings have been retained.

This may be illustrated by the ending *-ar*, which like many Old Swedish¹ suffixes was an inflectional homonym. Among other things, *-ar* could be used as a nominative plural marker with some masculine stems and a genitive singular marker with some feminine stems. Now, the category of case disappeared, but the category of number was retained. Hence, *-ar* has been lost as a FEM.SG.GEN ending, but it is still in use as a plural marker (see also 3.2). In other words, it was not the ending *-ar* that disappeared, but an entire grammatical category. In the case of nominal morphology, deflexion thus refers to the loss of case as an inflectional category.²

From Table 1 it becomes evident that deflexion in Swedish was less profound than deflexion in English. The categories of gender (even though masculine and feminine gender merged into a common gender) and number have been preserved, and so have case marking on the pronoun (if in residual form) and the opposition between strong and weak inflection of the adjective.

It should also be noted that it would be incorrect to regard the loss of nominal inflections as the continuation of grammaticalization, that is, further erosion.³ Although the disappearance of case as an inflectional category may have been partly motivated by phonological reduction in the first place, this was only one among several factors (both language-internal and language-external) that may be held responsible for deflexion in Swedish (see Norde 1997a: 27ff. and Norde 1997b for discussion).

Swedish is eminently suited for a study of the history of inflections, since it has developed from a comparatively heavily inflected language – its inflectional morphology was very similar to that in Old Norse – to a language with very little inflection. This process of deflexion covered more than three centuries and is well documented in both runic and written sources, which enables us to follow it closely.

Table 1. Deflexion in Swedish

	Old Swedish	Modern Swedish
nouns	3 genders 2 numbers 4 cases	2 genders 2 numbers 0 cases
adjectives	3 genders 2 numbers 4 cases “strong” vs. “weak” inflection	2 genders 2 numbers 0 cases “strong” vs. “weak” inflection
pronouns	3 genders 2 numbers 4 cases	2/3 genders 2 numbers 2 cases

2.2 Degrammaticalization

The status of degrammaticalization within grammaticalization studies is a controversial one, and it is usually left out of consideration. As far as I can tell however, this rejection of degrammaticalization as a potential process of language change is largely due to how it is defined. In some works, for example, degrammaticalization is perceived as the mirror image reversal of grammaticalization processes:

Once affixation has occurred, grams do not ordinarily detach themselves and assume a free form again, so that growing dependence on surrounding lexical material is not usually reversed (Bybee, Perkins and Pagliuca 1994: 13; cf. also Lehmann 1995: 16).

If degrammaticalization is thus interpreted, it is indeed not likely to occur. For example, one would not expect the French future markers (as in *chanterai* ‘I will sing’ < Latin *cantare habeo*) to detach themselves from the verb stem and develop into a full verb meaning ‘to have’ (Östen Dahl, LINGUIST 7.1170). In other words, degrammaticalization is not the mirror image of grammaticalization in the sense that it cannot be the complete reverse of a grammaticalization cline. This would be extremely odd, since grammaticalization frequently involves semantic and phonological reduction, and while the grammaticalization into a reduced form may be predictable from the original full form, a full form is evidently not predictable from a reduced form (except in the case of spelling pronunciations).

Confusingly, the term degrammaticalization is also used to denote the loss of grammatical meaning or function (e.g. in Heine, Claudi and Hünemeyer 1991:26; Koch 1996:241), resulting in “empty morphs,” such as *for-* in *forget*. In yet other works (e.g. in Ramat 1992) it is more or less equated with lexicalization of grammatical items, e.g. the change from preposition to verb (*to up the price*) or from affix to noun (*fascism and other isms*).

To my mind, however, degrammaticalization needs to be distinguished from both grammaticalization and lexicalization. This may be illustrated with the help of Hopper and Traugott’s well-known “cline of grammaticality” in Figure 1.⁴

content item > grammatical word > clitic > inflectional affix (> Ø)

Figure 1. The cline of grammaticality

In general, degrammaticalization may be defined as the type of grammatical change which results in a shift from right to left on the cline of grammaticality, e.g. the shift from affix to clitic (see 3.3.3) or the shift from clitic to grammatical word (see e.g. Campbell 1991). It should be noted however that different clines have been suggested in other works (e.g. one in which derivational suffixes are in-

cluded as well), and hence there may be more kinds of degrammaticalization (see further 3.3.1).

Degrammaticalization changes thus differ from grammaticalization changes in that they result in a less grammatical status. On the other hand, they also differ from lexicalization changes in that they are gradual (see also 4.2), whereas lexicalization may also result in a straight jump to the leftmost end of the cline (as in the shift from affix to noun). The relation between grammaticalization, degrammaticalization and lexicalization is schematized in Figure 2 (see further Norde 2001a and Van der Auwera, this volume).

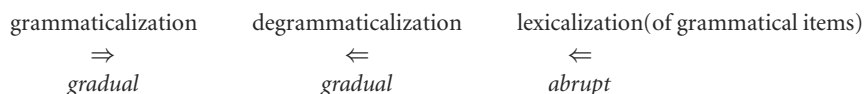


Figure 2. Grammaticalization, degrammaticalization and lexicalization

2.3 Unidirectionality

The main reason why degrammaticalization changes are largely ignored in grammaticalization studies is that they are not in accordance with the so-called *unidirectionality hypothesis*, according to which lexical items may develop into grammatical items and grammatical items may develop into more grammatical items, but not vice versa. In many works (e.g. Heine, Claudi and Hünemeyer 1991; Traugott and Heine 1991), unidirectionality is implicitly defined as an inherent characteristic of grammaticalization. But as critics of grammaticalization theory (see Campbell 2001) have pointed out, unidirectionality cannot be used as an empirical hypothesis when it is built into the very definition of grammaticalization. For in that case, “unidirectionality of grammaticalization is a tautology” (Janda 2001).

However, many authors have claimed, either implicitly or explicitly, that it is not just grammaticalization that is unidirectional, but (virtually) *all* grammatical change. Heine (1997: 4), for example, writes: “Grammatical change is unidirectional, leading from lexical to grammatical, and from grammatical to more grammatical, forms and structures.” (see also Heine, Claudi and Hünemeyer 1991: 221; Heine 1994; Lehmann 1995: 19 and Lass 1997: 267f.).

A few authors have been arguing though that counterdirectional changes should not be excluded from the grammaticalization framework. Ramat (1992: 553), for instance, suggests that: “The question we have to deal with is therefore, why is it that grammaticalization and degrammaticalization coexist in natural languages?” Similarly, Hopper and Traugott (1993: 126) assert that:

Extensive though the evidence of unidirectionality is, it cannot be regarded as an absolute principle. Some counterexamples do exist. Their existence, and

their relative infrequency, in fact help define our notion of what prototypical grammaticalization is.

Thus far however, Ramat's and Hopper and Traugott's proposals have had little resonance. This is remarkable, for although it is evident that degrammaticalization changes are far less common than grammaticalization changes, grammaticalization studies might benefit considerably from an examination of the circumstances that lead to changes in the reverse direction. By now, extralinguistic factors such as taboo strategies have generally been accepted as counterdirectional forces (e.g. in Heine 1997), but *language-internal* factors have been largely neglected. One of the few works that explicitly deals with such factors is Plank (1995). According to Plank, degrammaticalization changes are not 'natural' (and hence far less common) changes, but the result of *Systemstörung* 'disruption of the system'. In another paper (Norde 2001a), I have argued deflexion may appropriately be identified as a kind of *Systemstörung*. In my opinion, counterdirectional changes should not be ignored or rejected, but instead incorporated in grammaticalization studies. In the final section of this paper, I will propose my own explanation for the near-absence of degrammaticalization changes and outline the circumstances under which they can occur nevertheless.

3. Affixhood and beyond: Evidence from the history of Swedish

3.1 The loss of inflections

As becomes evident from Figure 1, inflectional affixes are located at the very end of the cline of grammaticality. Strictly speaking, this implies that they can only become zero, which is the last stage within the cycle of linguistic evolution.⁵ A lot of endings did in fact become zero even though, as I argued earlier, this is due to the general loss of case as an inflectional category rather than the result of further grammaticalization of individual suffixes. The differences between Swedish nominal paradigms before and after the reductive effects of deflexion are striking. This is illustrated by the inflection of the Old Swedish noun *fisker* 'fish' (a masculine a-stem) in Table 2 and Modern Swedish *fisk* in Table 3. The inflection of masculine a-stems was maximally differentiated, with different forms for each grammatical function, both in the indefinite and definite forms (though it should be noted that some reduction is perceivable in the oldest manuscripts already).⁶ Modern Swedish *fisk*, now a common noun, has only four forms left.

Table 2. Nominal inflection in Old Swedish

SG.NOM.INDEF	fisker	SG.NOM.DEF	fiskrin
SG.GEN.INDEF	fisks	SG.GEN.DEF	fisksins
SG.DAT.INDEF	fisk(e)	SG.DAT.DEF	fiskinum
SG.ACC.INDEF	fisk	SG.ACC.DEF	fiskin
PL.NOM.INDEF	fiska(r)	PL.NOM.DEF	fiskani(r)
PL.GEN.INDEF	fiska	PL.GEN.DEF	fiskanna
PL.DAT.INDEF	fiskom	PL.DAT.DEF	fiskomin
PL.ACC.INDEF	fiska	PL.ACC.DEF	fiskana

Table 3. Nominal inflection in Modern Swedish

SG.INDEF	fisk	SG.DEF	fisken
PL.INDEF	fiskar	PL.DEF	fiskarna

3.2 The maintenance of inflections: functional reduction

Some suffixes were neither degrammaticalized nor lost, but underwent some subtle functional shifts nevertheless. The most evident cases are petrified expressions, but these are of no relevance to the present discussion (see Pettersson 1996:152 for examples). More interesting are the quite substantial number of inflections that were retained as gender and/or number markers.

For example, as we have seen in Table 3, the suffix *-ar* seems to have been retained in the plural indefinite form *fiskar*. It will be seen however that Old Swedish *-ar* and Modern Swedish *-ar* are not one and the same morpheme. In order to understand the difference between these two, it is important to note that Old Swedish nominal inflections were typically cumulative (or: portmanteau) morphemes, that is, simultaneous realizations of gender, number and case. But whereas case disappeared as an inflectional category, gender (common vs. neuter) and number (singular vs. plural) were retained.⁷ Such a development whereby cumulative morphemes lose one of the grammatical functions they used to denote may be termed *functional reduction*.

Functional reduction of the suffix *-ar* is illustrated in Figure 3 and Tables 4 and 5. As Table 5 shows, Old Swedish *-ar* could be used to denote nominative and/or accusative plural with a variety of masculine and feminine stems. In Modern Swedish, on the other hand, it only denotes PLURAL and COMMON.

Old Swedish <i>-a(r)/-æ(r)</i>	Modern Swedish <i>-ar</i>
MASC.PL.NOM; FEM.PL.NOM/ACC	COMM.PL

Figure 3. Functional reduction of *-ar* in plural forms

Table 4. *-a(r)*, *-æ(r)* in Old Swedish

Stem class	Gender	Number	Case	Example
A-STEMS	MASC	PL	NOM	fisker–fiska(r) ‘fish’
JA-STEMS	MASC	PL	NOM	væver–væfia(r) ‘woven cloth’
IA-STEMS	MASC	PL	NOM	øri(r)–øra(r) ‘ounce of silver’
AN-STEMS	MASC	PL	NOM	granni–granna(r) ‘neighbour’
Ō-STEMS	FEM	PL	NOM/ACC	agn–agna(r) ‘chaff’
JŌ-STEMS	FEM	PL	NOM/ACC	æg–æggia(r) ‘cutting edge’
IŌ-STEMS	FEM	PL	NOM/ACC	heþ–heþa(r) ‘heath’

Table 5. *-ar* in Modern Swedish

Gender	Number	Example
COMM	PL	fisk–fiskar granne–grannar agn–agnar

One final thing that ought to be mentioned about the functional reduction of *-ar*, is that the history of this suffix is quite complex. In Table 4 I give several variants of this suffix that appear in the Old Swedish sources. Since *-ar* was affected by both vowel reduction and drop of final *r* (see Norde 1997a:100ff.), it may not be entirely correct to regard Modern Swedish *-ar* as a direct continuation of the Old Swedish ending. But this discussion would take us too far afield at present, and the fact remains that *-ar*, in whatever form, was not lost, yet it is not entirely the same morpheme. It no longer denotes case, but it continues to mark number and gender (perhaps even more explicitly so because it now unambiguously denotes common gender, whereas in Old Swedish it could signify both masculine and feminine). In other words, *-ar* now forms part of a different inflectional system.

A similar example of functional reduction is the preservation of a masculine–feminine contrast with weak adjectives. Weak adjective inflection was not as differentiated as strong adjective inflection. In the singular forms, the only case opposition was one of nominative versus oblique, and in the plural forms, there was none at all.

Modern Swedish weak adjective inflection has only one form throughout the paradigm, namely *-a*, as can be seen in Table 7 and the examples in (1). Thus, *-a* is used with both common nouns as in (1a), neuter nouns as in (1b), and plural nouns as in (1c).

Table 6. Weak adjective inflection in Old Swedish

MASC.SG.NOM	-i, -e	FEM.SG.NOM	-a, -æ	NEUT.SG.NOM	-a, -æ
MASC.SG.OBL	-a, -æ	FEM.SG.OBL	-u, -o	NEUT.SG.OBL	-a, -æ
MASC.PL	-u, -o	FEM.PL	-u, -o	NEUT.PL	-u, -o

Table 7. Weak adjective inflection in Modern Swedish

COMM.SG	-a	NEUT.SG	-a
COMM.PL	-a	NEUT.PL	-a

- (1) a. *den stora fisken*
the big fish (COMMON)
b. *det stora huset* (NEUTER)
the big house
c. *de stora fiskarna*
the big fishes (PLURAL)

However, the former masculine nominative singular ending is still occasionally attested, but in Modern Swedish it is restricted to male persons. For example, it is used in adjectival nouns, as in (2a). Even in “ordinary” noun phrases masculine *-e* can be found, as is exemplified in (2b), where masculine *min gamle far* ‘my old father’ contrasts with feminine *min gamla mor* ‘my old mother’. Indeed, the use of *-e* has even been extended to the plural (which now normally has *-a*), as in the somewhat antiquated expression in (2c).

- (2) a. *du är den ende/du är den ända*
you (male) are the only one/you (female) are the only one
b. *min gamle far/min gamla mor*
my old father/my old mother
c. *Ädle herrar och svenske män!*
noble gentlemen and Swedish men!

Again, it would be incorrect to say that Modern Swedish *-e* is the same morpheme as Old Swedish *-e*, since it no longer expresses nominative case, yet it continues to denote masculine gender. What the two examples in this section show, then, is that one system of inflections may merely give way to another (functionally reduced) one, when inflectional morphology is of the cumulative type.

3.3 Exaptation

In this section, I will discuss examples of the “reuse” of inflectional endings. For in the history of Swedish there are several instances of morphemes that retained none of their original functions but shifted to a less grammatical status instead. These inflectional suffixes developed into derivational suffixes or an enclitic determiner respectively. Such shifts are adequately captured by the term *exaptation* which Roger Lass borrowed from evolutionary biology (see Lass 1990 and Lass 1997:316ff.). Lass (1997:316) defines exaptation as: “a kind of conceptual renovation, as it were, of material that is already there, but either serving some other purpose, or serving no purpose at all.” Basic to the definition of exaptation is the notion of linguistic “novelty” (Lass 1990:82). For this reason, the examples discussed in the preceding section are not exaptive changes, since they are continuing grammatical functions they already possessed before case was lost as an inflectional category. It should be stressed however that exaptation is not necessarily counterdirectional. In the cases I will discuss in 3.3.1 and 3.3.2, the outcome happens to be a less grammatical status, but according to Lass (1997:318) exaptation may also lead to grammaticalization. One of the merits of Lass’s framework is that it offers a potential explanation of why degrammaticalization can occur at all:

[...] since the point of exaptation is that languages are not fully coherent systems, one might say that ‘junk makes the world go around’. Languages are constantly losing (relatively) ‘deep’ contrasts, but retaining the ‘surface’ material that used to underwrite them, and then (if they don’t dump it), reusing it for new purposes, often at quite different structural levels. In fact junk is crucial, because if languages were ‘perfect’ systems they’d have no room for play, and hence no freedom to change (Lass 1997:317).

I will return to the role of exaptation in degrammaticalization changes in Section 4.

3.3.1 *From inflection to derivation: MASC.SG.NOM -er*

A good example of exaptation of a former nominal suffix is the development of MASC.SG.NOM *-er* into a derivational suffix to form nouns from adjectives (mostly derogatory ones). An example of *-er* as a case suffix is given in (3).

- (3) *mykilhughæpær* *maðpær* *oc* *girughær* Vidh 14
 proud-MASC.SG.NOM man-MASC.SG.NOM and avaricious-MASC.SG.NOM
 ‘a proud and avaricious man’

With nouns, *-er* was largely lost as a case suffix in the Middle Swedish period (Wessén 1968:138), but with adjectives, *-er* was generally better preserved. According to Ejder, who published a monograph on this very suffix, adjectival *-er* may be considered a productive suffix until the first half of the eighteenth century (Ejder

1945:246). However, there is evidence that, even as a productive suffix, adjectival *-er* did not retain its original function. For example, in the writings of the 18th century Swedish poet Carl Michael Bellman, *-er* is evidently no longer associated with either nominative or masculine, as can be seen in the examples in (4). In (4a), the noun phrase is not nominative but accusative, and in example (4b), the noun phrase is not masculine but feminine.

- (4) a. *Hyrde sig en svarter rock*
 hired him a black cloak
 'he hired himself a black cloak'
 b. *Judith var en riker änka*
 Judith was a rich widow

The suffix *-er* thus seems to have developed into a junk morpheme, a stylistic marker that was merely used when metre or rhyme required it.

But *-er* was also used in adjectival noun constructions. Until the 18th century, *-er* did not have exclusively derogatory meaning: it could also be used in such constructions as *en blinder* 'a blind person' (MoSw plainly *en blind*). It is likely that in these constructions, too, *-er* was no longer perceived as strictly MASC.SG.NOM and in Modern Swedish, *-er* has clearly been reanalyzed as a derivational suffix, e.g. in nominalizations such as *en dummer/fjäsker/slarver* 'a stupid/fawning/careless one'. It was in adjectival nouns, then, that *-er* was exapted as a derivational suffix (compare also such definite forms *slarvern* 'the careless one').

A related phenomenon is the use of *-er* to form nicknames (not necessarily deprecatory ones), but this usage is largely confined to fairy-tale style. Consider, for instance, the name of the seven dwarfs in the tale of Snow-white (Disney's version):

- (5) *Trötter, Prosit, Butter, Blyger, Glader, Toker, Kloker*
 'Sleepy, Sneezzy, Grumpy, Bashful, Happy, Dopey, Doc'

Four of these names are derived from adjectives: *trött* 'tired', *blyg* 'bashful', *glad* 'happy', *klok* 'wise'. *Butter*, though synchronically a simplex adjective, likewise derives from an adjective without *-er*: *butt* 'grumpy'. *Toker* does not strictly derive from an adjective, but from a noun: *tok* 'idiot, fool'. Only *Prosit* 'bless you' obviously does not follow this pattern.

The question arises whether or not the change from inflection to derivation may be characterized as a counterdirectional one. Kuryłowicz (1975:52) and Heine, Claudi and Hünnemeyer (1991:213), regard the shift from a derivational affix to an inflectional one as grammaticalization, hence the reverse would be an example of degrammaticalization. And Newmeyer (1998:264f. and 2001) explicitly mentions this shift as a counterexample to the unidirectionality hypothesis. In other works however, such as Hopper and Traugott (1993), derivational and inflectional affixes form part of two different clines, the cline of lexicaliza-

tion and the cline of grammaticalization respectively (see Cowie 1995 for criticism of Hopper and Traugott's position). But irrespective of the cline adopted, there are good reasons to regard derivational affixes as less grammatical. It is evident that there is considerable overlap between inflection and derivation, and various authors have attempted to formulate criteria to separate the one from the other (e.g. Bybee 1985:81ff.; Anderson 1992:77ff.; Haspelmath 1996; Beard 1998:44ff. and Stump 1998:14ff.). The most workable criterion in the present context is also the most decisive one, namely that "inflectional morphology is the area in which principles of syntactic structure and of word formation interact with one another [...]" (Anderson 1992:101). In other words, unlike derivation inflection is syntactically relevant, and hence more grammatical. This may be illustrated by the obvious criterion of Subject-Verb agreement: a derived form such as *lioness* does not affect the form of the agreeing verb in (6a), but the inflected form *lions* does.

- (6) a. *The lion is asleep*
 b. *The lioness is asleep*
 c. *The lions are asleep*

Thus, the development of *-er* may suitably be characterized as degrammaticalization. Not only did it proceed gradually, it also resulted in a less grammatical status.

3.3.2 *Non-junk exaptation*: NEUT.PL.NOM/ACC -ON

But as Lass himself (1997:318) writes: "Not all is junk." In the parallels from the organic world that he quotes, the exaptata did not lose their original function, and Lass terms this kind of change *non-junk exaptation*. Feathers, for instance, were co-opted for flight, yet they continue to be a thermoregulatory device for reptiles in high latitudes (which was their original purpose). In this section, I will discuss a similar linguistic example, viz. the (Old and Modern) Swedish suffix *-on*. This is a suffix that was exapted for derivation, but retained its original inflectional function nevertheless. In Old Swedish, *-on* was the PL.NOM/ACC marker of weak neuter nouns ending in *-a*. In Modern Swedish, it is still found in the plural forms of *öga* 'eye' (PL *ögon*) and *öra* 'ear' (PL *öron*). In Old Swedish original plural forms such as *hiūpon* 'rosehip(s)' (Modern Swedish *nypon*) and *smultron* 'wild strawberries', *-on* may have been reinterpreted as a "berry-suffix," and as such it became quite productive (Hellquist 1980:731; Wessén 1971:45f.). Two examples are *hallon* 'raspberry' (still *hallbär* in some Swedish dialects) < *hall* 'slope/stony ground' and *lingon* 'lingonberry' (still *lingbär* in some Swedish dialects) < Proto-Scandinavian **lingwa* (Modern Swedish *ljung*) 'heather'.

Interestingly, the suffix *-on* underwent a further shift. *Hallon*, *lingon* etc. usually refer to a substance and are hardly ever used in the singular (Wessén 1971:45). At a later stage, however, the meaning of *-on* was generalized even further and suffixed to other fruit-names as well, e.g. *fikon* ‘fig’ (ultimately < Lat. *ficus* ‘fig tree, fig’), *plommon* ‘plum’ (ultimately < Lat. *prunum* ‘plum’) and *päron* ‘pear’ (ultimately < lat. *pirum* ‘pear’). Unlike the berry-nouns, these nouns are clearly count nouns, that is, they are used both in the singular and the plural (they belong to the class of neuter nouns with a so-called “zero plural”). The suffix *-on* thus evolved from a plural suffix to a derivational suffix in berry-names (with predominantly plural usage) to a derivational suffix in count nouns (as in the last three examples).⁸

3.3.3 From inflection to clitic

One of the best known examples of degrammaticalization is the development of genitive *-s* from inflectional affix to phrase-final determiner. This *s*-genitive occurs in both English, Danish, Swedish and Bokmål Norwegian. The historical development of the *s*-genitive in some languages has been studied in detail, by Jespersen (1894) and Allen (1997) for English and Norde (1997a and 2001b) for Swedish.

By now it is generally acknowledged that the *s*-genitive is not a case affix but a clitic (see Norde 1997a:63ff. for theoretical discussion). This grammatical status is most clearly evidenced by so-called “group genitives,” which are given in (7). In example (7a), *-s* is attached to a prepositional phrase, and in (7b) *-s* is even attached to a relative clause. Similar examples from English are given in (7c) and (7d).

- | | | |
|--------|--|---------|
| (7) a. | <i>kungen av Danmarks bröst-karameller</i>
[king-DEF of Denmark]-s throat lozenges
‘the king of Denmark’s throat lozenges’ | Swedish |
| b. | <i>mannen som kom igår’s väska</i>
[man-DEF who came yesterday]-s suitcase
‘the suitcase of the man who came yesterday’ | Swedish |
| c. | <i>the queen of England’s son</i> | English |
| d. | <i>the man I saw yesterday’s son</i> | English |

That *-s* differs in this respect from inflectional markers such as plural suffixes, becomes evident when English genitive ‘*s* is compared to plural *-s*, as in the contrastive examples in (8) and (9). For unlike the *s*-genitive, the plural suffix can never be separated from the noun (Janda 1980:245).

- | | | |
|--------|---|----------|
| (8) a. | <i>two crooks from Philadelphia</i> | (plural) |
| b. | * <i>two [crook from Philadelphia]s</i> | |
| c. | <i>several books that I’ve read</i> | |
| d. | * <i>[several book that I’ve read]s</i> | |

- (9) a. *[the newspaper in the window]'s headlines* (s-genitive)
 b. **the newspaper's in the window headlines*
 c. *[the guy that I mentioned to you]'s address*
 d. **the guy's that I mentioned to you address*

Nevertheless, it is evident that the s-genitive *etymologically* derives from a former Germanic genitive inflection – in the Swedish case, from the former SG.GEN ending of masculine and neuter (i/j)a-stems. In other words, this shift from affix to clitic constitutes a clear case of a development from right to left on the cline of grammaticality in Figure 1. We may thus conclude that the rise of the s-genitive is a paradigm example of degrammaticalization. This conclusion is strongly supported by diachronic evidence. In the following, I will briefly sketch the three stages in the development of -s from word-marking affix to phrase-marking clitic (see Norde 1997a and 2001b for details).

Stage 1: In the oldest attested stages of the Swedish language, -s was a word marker, which implied that all elements in a noun phrase were inflected. This is the common Indo-European type of case marking known as concordial case.

- (10) *ens salogs manz munne* Bur 205
 a-MASC.SG.GEN blessed-MASC.SG.GEN man-MASC.SG.GEN mouth
 ‘a blessed man’s mouth’

Stage 2: In the Old and Middle Swedish periods this system of concordial case marking gradually disappeared. Interestingly, -s was the only case suffix that developed into a phrase marker, and phrase-marking appears to be an essential stage in the development from affix to clitic.

- (11) [...] *kom iak heem til fadhir mins hws* Bir 26
 [...] came I home to father-Ø my-MASC.SG.GEN house
 ‘I came home to my father’s house’

Stage 3: “True” group genitives, of the type exemplified in (7), appear at a later stage, probably not before the second half of the 15th century. An early example is given in (12), taken from Per Brahe’s chronicle from 1585.

- (12) a. *konungen i Danmarcks krigzfolck*
 [king-DEF in Denmark]-s forces
 ‘the king of Denmark’s (armed) forces’

A second clitic-like characteristic of -s that can be found in Old and Middle Swedish texts is that when -s expanded to other contexts, it was no longer attached to stems, but also to all kinds of inflected forms, e.g. to FEM.SG.OBL *domkirky-o-s* ‘cathedral’, to PL.GEN.DEF *ox-a-anna-s* ‘the oxen’ or to FEM.PL.NOM/ACC *menniski-or-s*. These examples show that, unlike ‘ordinary’ case endings, -s was no longer a cumulative

suffix but an edge-located morpheme that could be attached to inflectional suffixes. This strongly suggests that *-s* had ceased to be a grammatical element on the word-level when it expanded to other nouns and noun phrases (see further Norde 1997a: 116ff.).

To sum up, the historical development of the *s*-genitive is both counterdirectional and gradual, and hence in accordance with the definition of degrammaticalization I gave in 2.2 (see Tabor and Traugott 1998 for a similar argument for the English *s*-genitive).

4. The position of degrammaticalization changes within grammaticalization studies

In the preceding sections, we have seen that even a diachronic study of inflection in one single language reveals that loss is not necessarily the only change that inflectional suffixes may be subjected to. They may lose one grammatical function only, or even be “upgraded” to less grammatical elements. The question I would like to address in this final section is: what is the significance of these case studies for grammaticalization studies in general? Not even critics of grammaticalization studies will dispute that grammaticalization changes are far more common than degrammaticalization changes. But a true understanding of this asymmetry requires not only an explanation for the overwhelming unidirectionality of grammatical change, but also a survey of the circumstances that do result in less grammatical forms.

4.1 Earlier explanations

Thus far, the imbalance between grammaticalization and counterdirectional changes has received remarkably little attention. As Haspelmath (1999: 1049) notes: “the most striking fact about previous explanations of unidirectionality is that there are so few of them.” In this section, I will briefly discuss two proposals that have been put forward recently by Newmeyer (1998 and 2001) and Haspelmath (1999). Both authors only discuss the shift from functional to lexical categories, which is a counterdirectional change, but not degrammaticalization (cf. Section 2.2), and in Section 4.2 I will present my own approach to the degrammaticalization of bound morphemes.

According to Newmeyer, one of the reasons for the predominance of grammaticalization is the “least-effort effect”:

Less effort is required on the part of the speaker to produce an affix than a full form. Add the element of frequency-caused predictability to the extreme

amount of redundancy in grammatical codings, and it is not difficult to see why the quick-and-easy option of affixation is frequently chosen. Other downgradings can readily be interpreted as least-effort effects as well. Functional categories require less coding material – and hence less production effort – than lexical categories. As a result, the change from the latter to the former is far more common than from the former to the latter [...] (Newmeyer 1998:276).

Haspelmath (1999) finds this argument of Newmeyer's insufficient, and instead advances a "theory of irreversibility" which is based on the works by Lehmann (1985/1995) and, in particular, the invisible-hand framework of Keller (1994).⁹ According to Keller's usage-based theory of change, language change is the result of human activity, but not the intended goal of it. In their linguistic actions, speakers are guided by maxims, such as "the maxim of economy" ("talk in such a way that you do not expend superfluous energy") or "the maxim of conformity" ("talk like others talk").¹⁰ When individuals follow the same maxims collectively, this may lead to an invisible-hand process of change. Haspelmath (1999:1056f.) suggests that speakers introduce an innovation in order to be noticed, guided by the "Maxim of Extravagance":

What is crucial here is that the speakers' goal is not just being understood at the lowest possible cost, but rather being socially successful with their speech. [...] The crucial point is that speakers not only want to be clear or "expressive," sometimes they also want their utterance to be imaginative and vivid – they want to be little "extravagant poets" in order to be noticed, at least occasionally.

Haspelmath goes on to argue that there are two reasons why speakers would not upgrade a grammatical item when they want to distinguish themselves. First, such a change would violate another maxim, "the Maxim of Clarity" ("talk in such a way that you are understood"), since "functional elements are usually less salient and less explicit than lexical elements." Lehmann (1985:315) similarly argues that counterdirectional changes "would presuppose a constant desire for understatement, a general predilection for litotes." If this were true however, lexicalization of function words, as in (13), would *never* occur. I fail to see why the possibility of such changes would imply a *constant* desire for understatement. Understatement is a common type of expression, and it is not inconceivable that speakers would occasionally use constructions as (13) in order to be noticed. (This may incidentally account for the quite numerous instances of lexicalization of function words.)

- (13) *Is het een hij of een zij?*
Is it a he or a she?

Dutch¹¹

Haspelmath's (1999: 1059) second explanation for the improbability of counterdirectional change runs as follows:

[L]exical elements are freely manipulable by speakers and (more or less) accessible to consciousness, whereas functional elements are processed automatically and unconsciously. So even if a speaker had some motivation for replacing a lexical item by a functional item, s/he would not be able to do this because functional elements cannot be used outside their proper places.

Again, this claim is refuted by examples such as (13), and it seems to contradict his remark in the same paper that in such cases as *ifs and buts*, "words are taken out of their context and employed metalinguistically." For these reasons, I find Newmeyer's "least effort strategy" more plausible as an explanation for the preponderance of grammaticalization changes.

4.2 The how and why of affixal degrammaticalization

In the cases discussed in this paper, deflexion was a prerequisite for the degrammaticalization of inflections. Since deflexion, just like grammaticalization, is a "least-effort strategy" (see Norde 2001b), it is a very common type of change. And there is one additional element that grammaticalization and deflexion have in common: gradualness. This may be paraphrased as follows: when A is grammaticalized into B, there is an intermediary stage in which A and B co-exist (Hopper and Traugott 1993: 36):

$$A > A \sim B > B$$

Similarly, when an inflectional category disappears, there is a stage in which noun phrases are sometimes inflected for case (NP_c), sometimes not (NP_\emptyset). (Note that \emptyset only implies that the NP is not marked for case, not that it is not inflected at all (cf. 3.2).)

$$NP_c > NP_c \sim NP_\emptyset > NP_\emptyset$$

Thus, it will be evident that deflexion (especially if it proceeds as slowly as it did in Swedish), is a process *par excellence* which opens the door to exaptation, since inflectional endings may increasingly have been regarded as "junk morphemes" during the intermediate stage.

But how could inflections subsequently be reinterpreted as less grammatical morphemes? I believe that the key to answer to this question lies in Haspelmath's (1999: 1064) observation that "in grammaticalization the identity of the construction and the element's place within it are always preserved." Since both grammaticalization and degrammaticalization are gradual changes, it seems reasonable to assume that like grammaticalization, degrammaticalization does not affect the iden-

tivity of the construction in which the change occurs. So let us examine the Swedish examples from this perspective.

The suffix *-er* was only reinterpreted as a nominalization suffix in adjectival noun constructions, which themselves are derivation-like. Also in the case of the “fruit-suffix” *-on*, it is not difficult to see how this change could occur. Because neuter nouns ending in a consonant lack a number distinction in the indefinite forms, “collective” forms in *-on* such as *nypon* ‘rosehips’, originally the plural of nouns in *-a*, could easily be reinterpreted as the plural of forms in *-on* (as in *ett päron* ‘one pear’/ *tio päron* ‘ten pears’).

Degrammaticalization of *-s* was somewhat more complex, since it is related to an independent syntactic change which occurred more or less simultaneously. *-S* was initially a word-marking case suffix which changed into a phrase-marking suffix. In the same period, a fixed position for determiners had arisen (Delsing 1991). Since adnominal genitives had become predominantly prepositive, they could be reanalysed as prepositive determiners (see further Norde 1997a: 223ff.).

To sum up, since inflectional endings are as grammaticalized as affixes can get, they are the most specialized of grammatical items. Following Lehmann’s (1985 and 1995) parameters of grammaticalization, this implies that they have little phonological substance, are extensively desemantized (i.e. have no concrete meaning), form part of a small, tightly integrated paradigm and are obligatory in highly specific morphosyntactic contexts. In addition, they cannot modify large syntactic units, only words or stems, and they occupy a fixed morphological position. These properties make them very unlikely candidates for lexicalization (in contrast with derivational suffixes such as *ism*). What is more, it will be obvious that inflectional suffixes have little room for change even within their own constructions. In all the cases I discussed in the previous sections, there happened to be a possibility of morphological and/or syntactic reanalysis, but in many, if not most, other cases it would be hard to conceive how an affix could develop into a less grammatical morpheme within the same construction, apart from being petrified as an idiomatic expression. For example, there seems to have been no way out for adjectival MASC.SG.NOM *-er* in noun phrases such as *mykilhughæpær maðpær* ‘a proud man’ (Example (3)), apart from such fixed expressions as the compound *ungersven* (< *unger sven*) ‘young fellow’. To conclude, affixal degrammaticalization is admittedly rare, but in case of favourable circumstances, such as some kind of internal *Systemstörung* (see 2.3) and a possibility of morphosyntactic reanalysis, it is by no means impossible.

Notes

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1. The main periods of the Swedish language are: Runic Swedish (RSw): 800–1225; Old Swedish (OSw): 1225–1375; Middle Swedish (MiSw): 1375–1526; Early Modern Swedish (EMoSw): 1526–1732; Modern Swedish (MoSw): 1732–

2. On the other hand the loss of a category does not imply that all endings disappeared simultaneously. Some of them were lost much earlier than others, possibly due to phonological factors. See further Norde (2001b).

3. Erosion is the term used in Heine and Reh (1984:21). In Lehmann (1995:26), this change is called phonological attrition.

4. On the basis of this cline, Hopper and Traugott (1993:128f.) predict that all grammatical items ultimately derive from a lexical source. This is too strong a claim however, since new affixes may also be the result of morphological reanalysis (see Haspelmath 1995 and Norde 2001a for examples).

5. The term “loss” should not be taken too literally for there are, in fact, a few other possibilities. In tone languages, for example, all segmental phonemes of a morpheme may disappear, but a perturbation of the neighbouring syllable’s tone may remain (Heine and Reh 1984:25; Matisoff 1991:443). For this peculiar type of change, Matisoff coined the charming term “Cheshirization,” since it is reminiscent of the smile of Lewis Carroll’s Cheshire Cat, which likewise remained after the cat itself had disappeared. Secondly, an affix may be fused with the root, rendering a morphologically opaque lexeme, such as English *drench* (< *drank-jan), which contains a former inchoative suffix (Ramat 1992:552).

6. Like all Scandinavian languages Swedish has a suffixed definite article, and in Old Swedish both the noun and this article were inflected.

7. Gender is not only marked on articles and pronouns or agreeing adjectives, but also (largely) on nouns, since the Swedish plural endings are either exclusively or almost exclusively restricted to one of the two genders (see Norde 2001a for details).

8. The difference between these two groups of nouns is hardly surprising, considering that berries, unlike larger pieces of fruit, are usually consumed in bulk. Compare *I had raspberries for dessert*? *I had a raspberry for dessert* with *I had a pear for dessert*.

9. Note however that Haspelmath’s question “Why is grammaticalization irreversible?” is not the right one to ask. As we have seen in 2.2, a full reversal of a grammaticalization cline would be extremely odd. What is more, since grammaticalization is usually defined as inherently unidirectional, it is rather obvious that it cannot be reversed (see 2.3). The question that Haspelmath actually deals with, is why grammatical change is far more often of the “downgrading” than of the “upgrading” type.

10. The names of Keller’s maxims were coined by Haspelmath (1999).

11. *Hij* and *zij* are listed as nouns in the authoritative Van Dale dictionary, even with attested plural forms. They are thus a clear example of the development from grammatical element to lexical element.

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Yesterday's affixes as today's clitics*

A case-study in degrammaticalization

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1. Introduction

The main focus of this article is the problem of directionality in grammaticalization. It begins with a presentation of some data concerning verbal inflection from Early Modern Irish (EMI) and Modern Irish (MI). These data seem to contradict the claim that grammaticalization is unidirectional, in that they provide evidence of an inflectional suffix being separated from its verbal stem. The traditional accounts of this phenomenon view it as having arisen by means of reanalysis. This article attempts to place this particular case within the context of a more general change which took place in Irish between the 17th and 20th centuries, namely, the move from a synthetic to an analytic type of verb conjugation. I suggest that the shift is due to a resetting of syntactic parameters, reinforced by a change on the phonological level.

Many authors, e.g. Lehmann (1995) argue that grammaticalization cannot be reversed. This article is a plea for a less intransigent statement on the subject. What I wish to claim is that certain diachronic changes, such as a shift from a synthetic to an analytic verbal system, are driven by the need for greater morphological transparency. This, in turn, may lead to certain morphological elements changing their status. The data which are examined constitute convincing evidence that the tendency towards morphological expressiveness is a powerful force, which has to be taken into account in any theory of grammaticalization.

2. The data

I begin by describing a peculiarity of the dialect of Irish spoken in the Conamara region (C). What was historically a verbal suffix has come to be analysed as a pronoun and has virtually replaced the original pronoun everywhere. This can be illustrated by comparing the older literary forms with the contemporary spoken ones.

- (1) a. *molfa-maid* (EMI)
 praise.FUT-1pl.
 b. *molfaidh muid* (C)
 praise.FUT we
 ‘we will praise’

In (a) there is a single word consisting of the future stem and a morpheme indicating person and number. In (b) we have a separate verbal form indicating future, and a clitic pronoun. (The inflected verb is written as a single word, while the verb+clitic are written separately.) The shift from (a) to (b) has received a considerable amount of attention in the literature; interested readers are referred to Greene (1958, 1973), Mahon (1993), McGonagle (1986), Nilsen (1974), Ó Buachalla (1970, 1997), Williams (1968). The explanation provided in these works is something like the following. In the Old Irish period (c. 600–c. 900), only synthetic forms existed for the verb. In the Middle Irish period (c. 900–c. 1200), a parallel set of analytic forms came into being, consisting of the 3rd sg. and clitic pronouns for the various persons. By EMI (c. 1200–c. 1600), verbs had two paradigms, illustrated below for the future tense of *mol* ‘praise’.

(2)		Synthetic	Analytic
	Sg.	1 <i>molfad</i>	<i>molfaidh mé</i>
		2 <i>molfair</i>	<i>molfaidh tú</i>
		3 <i>molfaidh</i>	<i>molfaidh sé/sí</i>
	Pl.	1 <i>molfamaid</i>	<i>molfaidh sinn</i>
		2 <i>molfaidhe</i>	<i>molfaidh sibh</i>
		3 <i>molfaid</i>	<i>molfaidh siad</i>

The history of the two sets of forms is complicated, and need not concern us here. There is clear evidence that they existed side by side for a long time, with the analytic set gradually getting the upper hand, but with some synthetic verbs being retained in certain contexts to the present day (see de Bhaldraithe 1953; Ó hUiginn 1994).

The standard account of the move from affixal to clitic status of the morpheme *muid* is as follows. In the 1st pl. future the pronunciation of the two forms would have been *molfamaid* [molhə midʰ] and *molfaidh sinn* [molhə jinʰ] respec-

tively, which would have facilitated the reanalysis of the former as consisting of 3rd sg.+clitic pronoun. Later, the new ending spread to other tenses. Mahon (1993) and Nilsen (1974) document the replacement of the synthetic 1st pl. preterite by the analytic verb+*muid* in the 19th and 20th centuries.

(3)	Synthetic	Analytic	
	<i>mhol-amar</i>	<i>mhol</i>	<i>muid</i>
	praise.PRET-1pl.	praise.PRET	we
	'we praised'		

The final stage in the diffusion of *muid* is its replacement of the non-verbal 1st pl. pronoun *sinn*. Even after the rise of *muid* as a verbal clitic, *sinn* was retained in other contexts, e.g. as direct object. This led to a certain asymmetry in the paradigm of pronouns.

(4)		Verbal clitic	Non-verbal clitic
	Sg.		
	1	<i>mé</i>	<i>mé</i>
	2	<i>tú</i>	<i>tú</i>
	3 m.	<i>sé</i>	<i>é</i>
	f.	<i>sí</i>	<i>í</i>
	Pl.		
	1	<i>muid</i>	<i>sinn</i>
	2	<i>sibh</i>	<i>sibh</i>
	3	<i>siad</i>	<i>iad</i>

As can be seen, the verbal and non-verbal pronouns are nearly identical everywhere except in the 1st pl. Through analogy, *sinn* has come to be replaced by *muid*, and the former is virtually extinct in the dialect under discussion (for details see Nilsen 1974).

3. Synthetic and analytic forms and agreement

There is nothing particularly unusual about the facts that I have presented in the previous section, nor about the processes that have been invoked in the literature to explain them; both reanalysis and analogy are familiar tools of historical linguistics. However, I would like to go beyond a mere description of what has happened and try to reveal the syntactic structures underlying the change. Before doing so, it is necessary to present an aspect of Irish morphosyntax that is relevant to the issue under discussion.

Apart from the move from a synthetic to an analytic system, the verb in Irish underwent another important change between EMI and MI. Until the 17th century, the inflected verb agreed strictly with its subject in the literary language.

- (5) a. *Molfaid* *na fir na mná.*
 praise.FUT.3pl. the men the women
 **Molfaidh* *na fir na mná*
 praise.FUT
 ‘The men will praise the women.’
- b. *Tángadar* *na fir.*
 come.PRET.3pl. the men
 **Tánuig* *na fir*
 come.PRET
 ‘The men came.’

In the present-day C dialect, however, when the subject is a lexical DP the analytic form of the verb must be used, even if there are synthetic forms available, as in the 3rd pl. preterite.

- (6) a. *Mhol* *na fir na mná.*
 praise.PRET
 **Mholadar* *na fir na mná.*
 praise.PRET.3pl.
 ‘The men praised the women.’
- b. *Mholadar/* *mhol* *siad na mná.*
 praise.PRET.3pl./ praise.PRET they
 ‘They praised the women.’

We can summarise the differences between the 17th and 20th centuries as follows, using the abbreviation Agr to represent agreement between the verb and subject, and Inflected to indicate the synthetic form of the verb.

- (7)
- | | Agr | Inflected |
|------|-----|-----------|
| 17th | + | +(-) |
| 20th | - | -(+) |

The values in brackets indicate that non-inflected and inflected forms are attested marginally in the respective centuries.

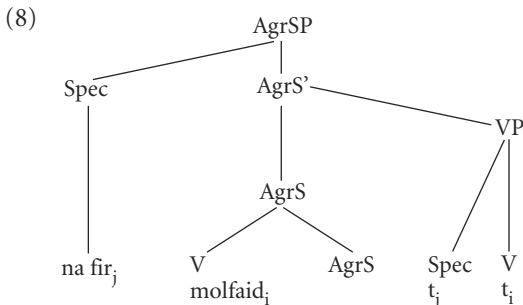
Having presented briefly the facts for Irish as regards inflection and agreement, we are now in a position to proceed to an analysis of the syntactic structures these morphological categories realise. In the next section, I will examine the data from the point of view of the Null Subject Parameter suggested for other languages.

4. Early Modern Irish as a Null Subject language

In recent years much work has been done on the syntax of VSO languages, including Irish. Considerations of space prevent me from giving anything but the sketchiest of outlines of the syntactic structure proposed for this language; detailed accounts can be found in Duffield (1995) and McCloskey (1996). In current syntactic theory, a sentence is made up of functional (grammatical) and lexical projections. In the derivation of a sentence, lexical elements move to functional projections to have various morphosyntactic features checked. Checking involves a Spec-head relationship within an appropriate functional projection. In Irish, there are at least two functional projections for finite verbs, Agreement Subject Phrase (AgrSP), and above it, Tense Phrase (TP). DP subject originates in Spec,VP. Both it and the verb raise to an Agreement Subject projection (AgrSP) so that the strong features of Agr can be checked. The DP moves to the specifier position, and the verb is left-adjoined to the head AgrS. The verb then raises further to the head of Tense Phrase, so that one ends up with VSO word-order.

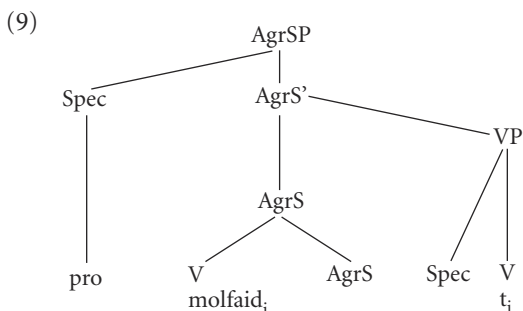
17th century Irish resembles languages with rich inflectional systems which allow pronominal subjects to be optionally omitted. A mechanism called the Null Subject Parameter is used to account for the differences between a language like Italian, which allows pronouns to be dropped, and one like English, where this is not possible (hence the ungrammaticality of the sentence **Went home*). In Null Subject languages, there is assumed to be an empty subject present, which is designated *pro*.

Following work on Italian by Rizzi (1986), Belletti (1990) and Poletto (1995, 1996), I would like to suggest that EMI is a Null Subject language. As in MI, there is movement to an AgrSP in the derivation of a sentence like (5a) *Molfaid na fir na mná*. This movement can be illustrated in the tree below, which represents the derivation of the relevant part of this sentence.



When there is no lexical subject, *pro* is licensed in the Spec, AgrS position. The derivation for *Molfaid* 'They will praise' would be almost identical to that of *Mol-*

faid na fir in (8) above, except that there is no subject in the Spec of VP, and hence no movement to Spec, AgrSP.



5. The position of subjects in Conamara Irish

This kind of material is familiar territory for people conversant with Null Subject languages. The analytic forms of C, however, are more problematic. As noted earlier, there is a kind of anti-agreement at work in the modern dialect, whereby a lexical subject cannot co-occur with an inflected form of the verb (see 6a). Likewise, when there is a subject clitic present, a lexical DP is not allowed.

- (10) *Molfaidh (*siad) na fir na mná.*
 praise.FUT *they the men the women
 ‘The men will praise the women.’

There are two ways of looking at this complementary distribution of lexical DPs and pronouns. One is to say that they both move to Spec, AgrSP, as in English, and hence are incompatible. This, however, does not explain why the lexical subject in (6a) is not possible with the inflected form of the verb.

- (6a) *Mhol *mholadar na fir na mná.*
 praise praise.PRET.3pl.
 ‘The men praised the women.’

Another point is that the pronouns in question are not stressed. Their stressed counterparts are formed by adding an enclitic to the relevant pronoun.

- (11)
- | | Unstressed | Stressed |
|-------|------------|----------------|
| Sg. 1 | <i>mé</i> | <i>mise</i> |
| 2 | <i>tú</i> | <i>tusa</i> |
| 3 | <i>sé</i> | <i>seisean</i> |
| | <i>sí</i> | <i>sise</i> |

Pl. 1	<i>muid</i>	<i>muide</i>
2	<i>sibh</i>	<i>sibhse</i>
3	<i>siad</i>	<i>siadsan</i>

There is some evidence that the distribution of clitics differs from that of stressed pronouns and lexical subjects. The former cannot be separated from the verb but the latter can.¹

- (12) a. *Molfaidh, ar ndóigh, na fir na mná.*
 praise.FUT of course
 'Of course the men will praise the women.'
Molfaidh, ar ndóigh, siad-san na mná.
 praise.FUT of course they-EMPH
 'Of course **they** will praise the women.'
- b. *Molfaidh siad, ar ndóigh, na mná.*
 praise.FUT they of course
 **Molfaidh, ar ndóigh, siad na mná.*
 praise.FUT of course they
 'Of course they will praise the women.'

What (12) suggests is that the complex V+clitic moves to a higher position than AgrSP. This would be possible if they form a phonological unit at an earlier stage in the derivation, and then move to the head of Tense Phrase. This is the line of investigation which I would like to pursue in the following section. Before doing so, however, I will briefly present some data from Italian dialects and an analysis which will offer a solution to the Irish problem.

6. Subject clitics in a Northern Italian dialect

Poletto (1996) examines 3rd person subject clitics in the Northern Italian dialect Basso Polesano. These seem very similar to the Irish clitics in C. First, in both dialects the pronoun is incompatible with a lexical subject. Poletto's example (18), repeated here as (13), illustrates this for Basso Polesano.

- (13) a. **Qualchedun el magna tanto.*
 somebody he eats a.lot
- b. *Qualchedun magna tanto.*
 Somebody eats a.lot
 'Somebody eats a lot.'

Poletto has the subject clitic move from the Spec position of VP not to another Spec position, but to the head of AgrS. This solution would work very well for Irish. If

both the subject clitic and the lexical subject originate in VP, this would explain why they are mutually exclusive. At the same time, if the clitic moves to the head of AgrS, the verb could left-adjoin to it, which would explain why V+clitic functions as a unit, as noted in the previous section.

7. Licensing *pro*

Unlike standard Italian, which is a Null Subject language, in Basso Polesano the 3rd person cannot stand alone without a clitic, as can be seen in Poletto's example (26), repeated here as (14).

- (14) a. **Magna*.
 eats
 b. *El magna*.
 he eats
 'He eats.'

This is also true of Irish.²

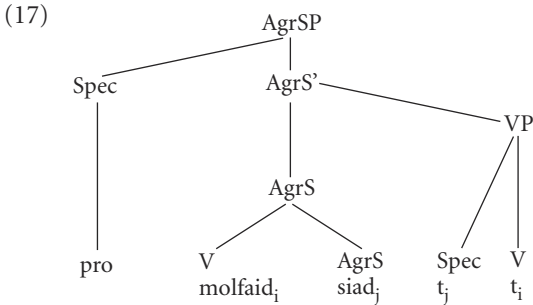
- (15) a. **Itheann*.
 eats
 b. *Itheann sé*.
 eats he
 'He eats.'

We have accounted for why the lexical subject and clitic pronoun are mutually exclusive, but why can the verb not occur without one or the other, as in EMI? Poletto (1995, 1996) links this to the question of *pro*-licensing. If there is a Null Subject present, then there must be some features present to identify it. In Poletto (1995:306) the following conditions for *pro*-licensing are proposed

- (16) a. Agr is a *pro*-drop licenser if it is strong.
 b. Agr is strong when it contains a morphologically realized +person and +number feature.

The author further observes (Poletto 1996: 280) that when in Basso Polesano the subject clitic is not present and the verb is not inflected, the relevant features cannot be assigned to *pro*. This is what provides the motivation for the movement of the subject clitic. Applying this to the Irish data found in the C dialect, we find that it can account quite elegantly for them. Normally the verb does not contain any marker of person or number, hence Agr will be weak, and unable to provide the necessary licensing. Therefore the pronoun moves to license *pro*. The derivation

of the sentence *Molfaidh siad (na mná)* 'They praise (the women)' would be as indicated in the tree below.



If, however, the verb is inflected, e.g. in the 3rd pl. preterite, then the pronoun clitic is not allowed.

- (18) **Mholadar siad na mná.*
 praise.PRET they the women

Here, the strong inflection of the verb is sufficient to license *pro*, and the subject clitic is not required.

One matter that still remains unresolved is why inflected verbs and lexical subjects are incompatible in C, as we saw in (6a).

- (6a) *Mhol *mholadar na fir na mná.*
 praise praise.PRET.3pl.
 'The men praised the women.'

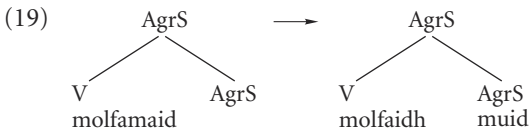
Tentatively, I would like to suggest that this is connected with the question of *pro* and inflection. Synthetic verbal forms can be regarded as a kind of last resort, only to be used when the features of the subject cannot be identified. There is, of course, no question of this when there is a lexical subject. The principle of economy in language ensures that only those features are encoded on the verb which are absolutely necessary for the correct interpretation. In the presence of a lexical subject, it suffices to mark tense, since person and number are indicated for the subject anyway. Obviously, one would have to state this restriction as subject to parametric variation, since in many languages strict agreement is the norm, rather than the pattern found in Irish.³

8. Parameter change and grammaticalization

We are now in a position to better assess the nature of the change that was the starting point of this article, namely, the detaching of an affix from its morphological

stem. Between EMI and the modern dialect of C, there was a change in the AgrS projection, whereby *pro* came to be licensed by a subject pronoun, rather than by an inflected verb. In terms of language change, this can be regarded as a change in the setting of parameters. If we compare the tree in Section 7 above with that proposed for EMI (see (9)), we can see that they differ minimally: the head of AgrS is lexically filled in C but not in EMI. In both cases *pro* is licensed in the Spec, AgrSP position, and the verb raises to adjoin to AgrS.

Now let us look at the context where the degrammaticalization took place, i.e. the first person plural (cf. (1)). The change can be presented in diagrammatic form as follows.



As can be seen, the change is very slight indeed. No extra structure is added. All that happens is that within a complex head, the elements are re-distributed.

The change in parameter setting created the context in which reanalysis could take place. But in itself there was nothing about the change in the verbal system which made the reanalysis inevitable. Given the unusualness of de-grammaticalization, one might ask whether there were other factors which favoured this process. This is the question I turn to in the next section.

9. Clitics and phonology

Greene (1973) discusses a point which seems to have a direct bearing on the issue I am concerned with. Writing about the rise of analytic forms in the Middle Irish period, he notes that the 3rd sg. pronouns came to be encliticised to the verb as emphatic and contrastive particles.

- (20) a. *at-beir*
 ‘he.says’
 b. *at-beir-sé*
 he.says-EMPH
 ‘he says’

In the other persons, the inflectional endings were added to a stem which was identical with the 3rd sg., e.g. the 1st sg. of the verb ‘to say’ was *at-beir-im*. In this way an equivalence was established in the paradigm of the verb between enclitic subject pronouns in the 3rd sg. and inflectional endings in the other persons. This is shown for the present tense of the verb ‘to say’ (Greene 1973: 124).

(21)	Sg.	Pl.
	1	<i>at-beir-im</i> <i>at-beir-mit</i>
	2	<i>at-beir-e</i> <i>at-beir-id</i>
	3	<i>at-beir-sé</i> <i>at-beir-it</i>

This structural equivalence facilitated the rise of the analytic paradigm, since other pronouns now began to be encliticised to the 3rd sg., e.g. side by side with 1st sg. *at-beir-im* there arose an alternative form *at-beir-mé*, with the 1st sg. pronoun *mé* being attached to the 3rd sg. of the verb; the meaning is identical in both cases.

What is important for our purposes is that the distinction between clitics and affixes became blurred, with this being directly reflected on the phonological level. Under the influence of subject clitics with long vowels, the vowel of a number of inflectional endings of the 1st plural became lengthened in Middle Irish (Greene 1973: 126–127). These endings have been retained in the modern dialect of Munster. Normally the stress in bisyllabic words is final in this dialect if the second syllable is long. An exception to this rule are certain verbal endings where the stress is on the first syllable despite the long vowel of the suffix (the examples are taken from Greene).

- (22) a. *bheid-ís* [ˈv-edˈiːʃ]
 be.SUBJ-3pl.
 ‘they would be’
 b. *bei-mid* [ˈb-emˈiːdˈ]
 be.FUT-1pl.
 ‘we will be’

Exactly the same stress pattern is found with subject clitics, namely, the verb receives the accent, even if the clitic has a long vowel.

- (23) *beidh* *sé* [ˈb-e(ː)]
 be.FUT he
 ‘he will be’

In other words, the affix in Middle Irish is treated as a *clitic* on the phonological level.

Returning to the question of the degrammaticalization of *muid*, we can now see that even before the EMI period, a change had set in which favoured the detachment of the suffix. Despite the fact that in morphosyntactic terms the 1st pl. marker was affixal, on the phonological level it was a clitic. Thus there was a mismatch between the syntactic and phonological levels. In the C dialect, this was resolved by having *muid* become a clitic on the syntactic level as well; this became possible when the analytic conjugation became established. It was a conspiracy of syntactic and phonological factors which led to the eventual change in the status

of the morpheme, rather than simply the change in the parameter setting for Agr which we discussed in Sections 4–7.

Of course the question still remains why it was this ending rather than any other which became fully cliticised. There is in fact a considerable body of evidence which shows that other endings have started to detach themselves from their verbal stems. For example, Nilsen (1974) discusses the 3rd pl. preterite inflectional marker *-dar*. Originally this was a bound morpheme, as in *bhíodar* ‘they were’. In C, it can now be found as a clitic pronoun in other tenses among younger speakers (example taken from Nilsen).

- (24) a. *beidh dar* (younger)
 be.FUT they
 b. *beidh siad* (older)
 be.FUT they
 ‘they will be’

What this suggests is that in this dialect the distinction between affixes and clitics is disappearing, with more and more members of the former class migrating to the latter. This is precisely what one would expect, given the predominance of analytic forms. Thus *muid* is not really exceptional, it is merely the first case of a more general tendency.

10. Degrammaticalization and morphological transparency

Obviously, the data I have been examining present a serious challenge to the notion of unidirectionality in grammatical change. One could of course dismiss it as simply an exception, the kind of phenomenon that one notes in passing, but without attaching any great importance to it. In this section I will argue that degrammaticalization is not just accidental, but that it is contingent upon other more general principles.

As we have seen, the verbal system of Irish has been undergoing a fairly drastic overhaul, a process which began in the Middle Irish period, and which is still not complete. My view is that the change from synthetic to analytic should be regarded as motivated by a desire for greater morphological transparency. Clearly, clitic pronouns make for greater transparency than inflectional affixes. Seen in this light, the shift of status that *muid* has undergone is not so surprising. It is quite normal for old forms to be replaced by new ones, or strengthened in some way if they become opaque. In Irish the form itself has not changed, but its morpho-syntactic status has: what was merely an affix is now an independent pronominal argument, in complementary distribution with lexical subjects.

This drive towards greater transparency leads to an interruption in the grammaticalization cycle. What happens after this is unpredictable. However, it might be worth our while to look briefly at a similar phenomenon, namely renewal (see Hopper and Traugott 1993; Lehmann 1995). As Hopper and Traugott (1993: 123) note, renewed forms frequently undergo grammaticalization themselves. Thus, it is not inconceivable that the degrammaticalised affix *muid* may be 'regrammaticalised' as the cycle comes into operation once again.

Finally, it should be remarked that the kind of process represented by the Irish data is not so exceptional. Diewald (1997) draws attention to the de-cliticization of certain morphological elements in the period from Middle High German to Early Modern German. Thus, *diech*, which represents the encliticization of *ich* to *die*, disappears in the modern language. The details are different from those we observed in the case of Irish, but the general tendency is the same, namely an increase in transparency.⁴

11. Conclusion

I have concentrated in this article on a particular example of degrammaticalization in Irish. Most of my argumentation has been concerned with working out the exact conditions under which a particular suffix has become detached from its stem. Apart from their language-specific relevance, I believe that such investigations can enhance our understanding of the process of language change.

Two points in particular stand out. One is the resetting of syntactic parameters that took place between the EMI period and rise of the modern dialect. A comparison with the behaviour of subject clitics in an Italian dialect showed that the resetting involved subject-verb agreement and the licensing of *pro*. Although the overall structural change was minimal, it created the conditions under which reanalysis could take place. Without this change in the morpho-syntax of Irish, there would have been no degrammaticalization.

However, we also saw that the syntactic change by itself was not enough to provoke reanalysis. It was aided by a change which took place in the Middle Irish period, whereby affixes were reanalysed as clitics on the phonological level. Thus, long before *muid* became detached from its stem syntactically, the degree of fusion between the two had been weakened considerably. Set against this background, the final realignment was merely an acknowledgement on the syntactic plane of a change that had already taken place on the phonological level. As we saw in Section 9, this realignment is still taking place in the contemporary language, as more and more endings move over to the clitic category.

Finally, there are the implications of my study for the theory of grammaticalization in general. In Section 10 I argued that the drive towards greater morphological transparency is capable of interrupting the grammaticalization cycle, and even of reversing it. My study does not necessarily invalidate the principle of unidirectionality in grammaticalization. It does indicate, though, that we cannot accept it blindly as a dogma.

Notes

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1. I am not talking here about constructions where the pronoun is ellipted, e.g.

(i) A. *An raibh sí ann?*
PRT was she there
'Was she there?'

B. *Bhí.*
was
'She was.'

2. Once again these remarks do not apply to elliptical constructions of the sort mentioned in Endnote 1.

3. There is undoubtedly some correlation between the overall richness of inflection and agreement. In the Munster dialect, spoken in the south of Ireland, it is not uncommon to find verb-subject agreement even in 20th century texts. It is probably no coincidence that this dialect has preserved the verbal inflectional system of EMI to a much greater extent than the other varieties of the language.

4. I should mention that Diewald regards degrammaticalization as a somewhat marginal phenomenon (see Diewald 1997: 18).

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On the role of context in grammaticalization

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1. Introduction

In many studies on grammaticalization the procedure adopted is to contrast a historically earlier form-meaning unit or construction (A) with a later reflex of it (B) and, by describing the difference between the two, offer an interpretation on what has happened on the way from A to B. What is frequently underrated in such studies is that the process from A to B is a continuous one, involving a multitude of intermediate stages, and that without a more comprehensive understanding of the nature of these intermediate stages, generalizations on the overall process must remain preliminary.

Unfortunately, most processes of grammaticalization that have been studied so far are conventionalized and buried in history – to the extent that much of what happened on the way from A to B is no longer historically clearly recoverable. But there are cases, especially cases involving more recent processes, where the whole range of intermediate stages is accessible in the form of synchronic contextual variation. As has been pointed out in numerous works on this subject, the evolution of grammatical categories is to quite some extent context-driven, and an analysis of contextual variation therefore offers a powerful tool for reconstruction: Different stages of evolution tend to be reflected in the form of different context clusters.

The present paper focusses on what happens on the way from A to B. It is argued that there is one stage in particular, called the switch context stage, which can be held responsible for this process. This stage is characterized by an interaction of context and conceptualization, leading to the rise of new grammatical meanings.

2. Context-induced reinterpretation

2.1 The variables

A survey of a larger corpus of data suggests that there is a catalogue of factors that have been associated with the evolution of new grammatical meanings. These are in particular:

- a. Context,
- b. Frequency of use,
- c. Reasoning processes (inferencing),
- d. Mechanisms of transfer (metaphor, metonymy, etc.),
- e. Directionality (Abstraction/Concretization),¹
- f. Semantic implications (bleaching, generalization).

My concern will be exclusively with context, more specifically with the following question: What are the contextual requirements for grammatical meanings to evolve?

I will propose a scenario which, I hope, will be of help to get closer to an answer to this question. For a better understanding of the following, a few technical terms need to be introduced. I will refer to the “original” meaning an item has prior to the process to start as the *source meaning* and the new grammatical meaning associated with the same form as the *target meaning*. Terms such as “is derived from,” “develops into,” “gives rise to,” and the like refer to diachronic processes, that is, their use is based on linguistic reconstruction work. There are three different kinds of context that need to be distinguished, which are:

Bridging contexts

The first kind can be described in terms of what Evans and Wilkins (1998:5) call “bridging contexts,” which they say are crucial in semantic change (at least of the type studied by them). Bridging contexts correspond roughly to what Diewald (1999) in her analysis of German modals calls the critical context.² They are what in the literature since Grice (1967) has been described in terms of “inferences,” “implicatures,” or suggestions.³ They have the following properties:⁴

- a. They trigger an inferential mechanism to the effect that, rather than the source meaning, there is another meaning, the target meaning, that offers a more plausible interpretation of the utterance concerned.
- b. While the target meaning is the one most likely to be inferred, it is still cancellable (see Grice 1967), that is, an interpretation in terms of the source meaning cannot be ruled out.
- c. A given linguistic form may be associated with a number of different bridging contexts.

- d. Bridging contexts may, but need not, give rise to conventional grammatical meanings.

Switch contexts

Bridging contexts do not lead straight to new meanings. What is required in addition are what I propose to call switch contexts. Switch contexts relate to what Diewald (1999) calls isolating contexts, where the target meaning “is isolated as a separate meaning from the older, more lexical meaning.”⁵ They have the following properties:

- a. They are incompatible, or in conflict, with some salient property of the source meaning.
- b. Hence, an interpretation in terms of the source meaning is ruled out.
- c. The target meaning now provides the only possible interpretation.
- d. Unlike conventional meanings, meanings appearing in switch contexts have to be supported by a specific context (or cluster of contexts).

Conventionalization

Most context-induced inferences remain what they are: they are confined to bridging contexts, they are what has variously been described as “contextual meanings” or “pragmatic meanings.” But some of them, i.e. those acquiring switch contexts, may develop some frequency of use, they no longer need to be supported by context, and they turn into “normal” or “inherent” or “usual” or “semantic” meanings (cf. Hopper and Traugott 1993:73–74). With reference to their source uses, conventionalized meanings have been described as “petrified” and “unpredictable.”

Conventionalization has received quite some treatment in the relevant literature and I have not much to add to that. That a target meaning has been conventionalized can be concluded from observations such as the following:

- a. It can be used in new contexts, other than the ones characterizing bridging and switch contexts.
- b. While in switch contexts, the target meaning is incompatible with the source meaning, conventionalization contexts can violate or contradict the source semantics.
- c. This means that the source and the target meanings can co-occur side-by-side in the same clause.

2.2 A scenario

What the foregoing discussion suggests is that the rise of new grammatical meanings can be described by means of a four-stage scenario, as proposed in (1). At stage

I, there is an expression with a “normal” or source meaning occurring in an array of different contexts.

At stage II there is a bridging context giving rise to an inference to the effect that, rather than the source meaning, there is another meaning, the target meaning, offering a more plausible interpretation of the utterance concerned.

At stage III, there is a new type of context, the switch context, that no longer allows for an interpretation in terms of the source meaning.⁶ Switch contexts may be viewed as a filtering device that rules out the source meaning.

Finally, no longer being associated with the source meaning, the target meaning is now open to further manipulation: It is freed from the contextual constraints that gave rise to it, that is, it may now be used in new contexts. I will refer to this situation as the conventionalization stage IV.

Obviously, the scenario sketched in Table (1) rests on a simplification of the facts considered. First, what it suggests is that there are four discrete stages, while in fact we are dealing with a continuum leading from stage I to stage IV and beyond. Second, it rests on a clear-cut division between context and meaning, although it remains largely unclear how the two interact. And third, I am confined here to describing grammaticalization as a diachronic phenomenon, that is, in terms of a succession of different stages of development. In doing so, I am ignoring the fact that this process can equally well be described as a synchronic state. For example, in the synchronic state of a given language, all four stages may (but need not) surface as contextually defined variants. The effect may be what Hopper (1991:22) describes as layering, in that e.g. the source and the target meanings coexist side by side. Nevertheless, it would seem that the scenario captures some salient properties of grammaticalization, as I now hope to demonstrate.

(1) A scenario of how a linguistic expression acquires a new grammatical meaning (where source meaning = non-grammaticalized, temporarily prior; target meaning = new grammatical meaning derived from the source meaning)

Stage	Context	Resulting meaning
I Initial stage	Unconstrained	Source meaning
II Bridging context	There is a specific context giving rise to an inference in favor of a new meaning	Target meaning foregrounded
III Switch context	There is a new context which is incompatible with the source meaning	Source meaning backgrounded
IV Conventionalization	The target meaning no longer needs to be supported by the context that gave rise to it; it may be used in new contexts	Target meaning only

3. Exemplification

As the preceding remarks may have shown, context is the crucial factor in shaping new grammatical meanings. In exemplifying the scenario sketched in (1), I will pay special attention to the nature of switch contexts. Context is a highly diverse and complex area; in the following discussion I will therefore aim at narrowing down the range of possible contexts to a minimum to illustrate the nature of the process concerned. No claim is made that there may not be alternative ways in which this process can arise. Furthermore, while the number of context types leading to grammaticalization appears to be limited, it is not possible here to treat even a fraction of them. Rather, I will be confined to two recurrent types of context-induced meaning change.

3.1 Treat inanimates as humans

Perhaps one of the most common type of meaning-change involves a participant role typically reserved for humans to be opened for inanimate participants. Agents, experiencers, and benefactives are such participant roles: Typically, they stand for human participants. But once they are placed in switch contexts, where an interpretation in terms of a human participant is ruled out, this may trigger a new grammatical meaning, while the old meaning is suppressed or eliminated in that context.

I will give two examples to illustrate this kind of context manipulation, dealing with the development from reflexive to passive morphosyntax (3.1.1) and from volition to proximative aspects (3.1.2). The first example involves a case role typically reserved for agents, and the second an experiencer case role. Both examples, thus, concern participant marking involving exactly the same kind of context manipulation, the outcome however is strikingly different in each case concerned.

3.1.1 *From reflexive to passive*

It is well-known that in some languages there is polysemy involving one marker which is used to express both reflexive and passive functions. Due to substantial diachronic evidence that has become available, there can be hardly any doubt that polysemy of this kind is the historical result of a process whereby the use of reflexive markers was extended to also express other notions, including that of a passive.⁷ The main contours of this process have been discussed in various works (Givón 1981, 1990; Kemmer 1993; Haspelmath 1990). In the present section I will try to account for this process by using the scenario of grammaticalization presented in Table (1).

In doing so, a number of points need to be considered, which will be taken for granted in the following. Such points concern, first, the fact that reflexive meanings do not necessarily constitute the beginning of the evolution concerned; in quite a number of languages, they themselves can be shown to be derived from expressions for more concrete concepts, in particular from nouns meaning ‘body’ or ‘head’. Second, the evolution does not proceed straight from reflexive to passive but leads via a number of intermediate steps (see Givón 1990; Haspelmath 1990; Kemmer 1993; Schladt 2000; Heine 2000 for details).⁸

Nevertheless, a survey of data from 49 African languages suggests that the overall contours of this evolution can be described by means of the four-stage scenario proposed in (1), adapted in (2) for the process in question.

The nature of this process can be illustrated with an example from !Xun, more precisely from the northern dialect of !Xun, spoken in southern Angola. !Xun (also known as !Kung, !Xū, Ju, Ju-|ōa-si, or Zhu-|’hōa-si), spoken by traditional hunter-gatherers in southern Angola, northern Namibia and northwestern Botswana, is a dialect cluster of what is traditionally called the Khoisan (or “Click”) family. Within this family it forms the northern branch of South African Khoisan.⁹ The language has a fairly analytic-isolating morphosyntax, a noun class system, and nominal modifiers mostly follow their head but possessive modifiers precede the head noun. Consider the sentences in (3).¹⁰

(3) !Xun (North Khoisan, Khoisan)	Stage
a. <i>yà ke !hún yà |’é</i> ¹¹ 3:SG PAST kill his self ‘he has killed himself’	I
b. <i>ma ke g|’é- à mí |’é ke àngòlà</i> 1:SG PAST bear-R my self TR Angola ‘I was born in Angola’	II
c. <i>màlí ke tç’á yà |’é</i> money PAST steal its self ‘the money was stolen’	III
d. <i>g|’ú má ke tch’η ká’η |’é ke mí</i> water TOP PAST drink its self TR 1:SG ‘the water has been drunk by me’	IV

(3a) is suggestive of stage I of Table (2): It is a canonical instance of a reflexive use of the !Xun particle |’é: the reflexive particle, formally the object of the clause, is co-referential with the subject; and the subject referent can be understood to be at the same time an agent and a patient (or undergoer) of the process concerned.

(2) Context-induced reinterpretation of reflexive markers as passive ones (S = subject)

Stage	Context	Resulting meaning
I Initial stage	S is simultaneously an agent and an under- goer	Reflexive
II Bridging context	S is unlikely to be conceived of as an agent, hence S is more likely to be interpreted as an undergoer	Passive foregrounded
III Switch context	S is an inanimate participant; agent is ruled out as a possible meaning of S	Reflexive backgrounded
IV Convent- ionalization	An external agent may be added	Passive meaning only

(3b) is an instance of a bridging context of stage II. It is found with a restricted set of transitive verbs, where there is a human subject participant, but the contextual frame makes it clear that this participant is unable to control the event; hence there is an inference to the effect that the subject referent is an undergoer, even if the possibility that the subject referent is interpreted as an agent cannot entirely be ruled out.

In contexts like (3c), an interpretation of the subject referent as an agent is no longer possible: we have an inanimate subject which must be an undergoer, and the context strongly suggests that there is an implied agent. We now have an instance of a switch context, that is, of stage III. The only reasonable interpretation of (3c) is that we are dealing with an agentless passive sentence.

(3d) illustrates stage IV, the conventionalization stage: With verbs that can appear in such contexts, passive is the only possible meaning, and |'é is freed from the contextual constraints of the preceding stages: An external agent is introduced by means of the transitivizing preposition *ke* (TR).

The !Xun example illustrates a case of context variation that appears to characterize a number of otherwise unrelated instances of grammaticalization. What all these cases have in common is that there is a conventional construction involving an agent case role that is extended to be used in contexts where that case role is made available to participants that cannot be conceived of as agents. Initially it is human participants who, on the basis of the contextual clues available, are disqualified from being interpreted as agents, figure in such contexts, as in (3b), but once the erstwhile agent role can be filled productively with inanimate participants, there remains only an interpretation in terms of an alternative grammatical meaning and construction, where instead of a reflexive construction there is now a full-fledged passive construction.

3.1.2 *From volition to proximative*

It is a commonplace that a volition schema of the kind [X wants Y] forms one of the three main sources for developing future tense categories (Bybee, Pagliuca and Perkins 1991; Bybee, Perkins, and Pagliuca 1994). But this schema may also give rise to a different grammatical function: that of a proximative aspect. The function of this aspect is to define a temporal phase immediately preceding the initial boundary of the situation described by the main verb. Proximative aspects are commonly translated by means of ‘almost’, ‘nearly’, ‘be about to’, ‘be on the point of’, and the like. The structure of the evolution from volition to proximative has been described in some detail (König 1993:294–316; Heine 1992, 1994, 1997; Kuteva 1998; Romaine 1999); I am confined here to one example illustrating a few salient characteristics of this process.¹² Consider the following examples (4) from Standard Swahili.

(4) Swahili (Bantu, Niger-Congo)	Stage
a. <i>a- na- taka ku- ni- ita</i>	I
he- PRES- want INF- me- call	
‘he wants to call me’	
b. <i>a- na- taka ku- fa</i>	II
he- PRES- want INF- die	
(i) ‘he wants to die’,	
(ii) ‘he is about to die’	
c. <i>M- ti u- na- taka ku- anguka</i>	III
C3- tree C3- PRES- PROX INF- fall	
‘the tree is about to fall’	

Example (4a) illustrates the source meaning of ‘volition’, that is, a verb meaning ‘want, wish’, characteristic of stage I. At stage II, there is a situation where a human subject referent cannot really be assumed to ‘want’ what is described by the relevant predication. Stage II-contexts crosslinguistically involve verbs meaning ‘die’, ‘fall down’, or ‘break a body-part’, and the like. The meaning foregrounded in such examples is proximative; an interpretation in terms of volition is possible but less likely. Finally, volition is ruled out in examples where instead of a human referent there is an inanimate referent, as in (4c), unless there is some metaphorical and/or culture-specific conceptualization to the effect that inanimate participants are, or can be, presented as willful beings. (4c) thus appears to be an instance of stage III.

Swahili has not proceeded beyond stage III, but there are other languages that have: some South African Bantu languages, Chamus, a Maasai dialect, or West African Pidgin English (see below).

A schematic description of the process concerned is presented in (5).

(5) Context-induced reinterpretation of volition as proximative (aspect)
(S = the subject referent)

Stage	Context	Resulting meaning
I Initial stage	S is a willful human participant	Volition
II Bridging context	S can be assumed NOT to want what is described by the event concerned	Proximative foregrounded
III Switch context	Rather than a human participant, S is inanimate; an interpretation of 'want' as denoting volition does not make sense	Volition backgrounded
IV Conventionalization	The proximative can now occur with human subjects (not attested in Swahili)	Proximative only

3.2 From temporal limitation to contrast

Finally, I will give an example of quite a different type of switch context, concerning a concessive marker.

In the following discussion I will be dealing with a sequence of two clauses and the kind of links existing between the two. Irrespective of whether the order of the clauses can be reversed, or of what kind of link is involved, I will refer to the first clause as S1 and the second as S2 in accordance with the way they are presented in discourse.

3.2.1 *German dabei*

A look at the current literature suggests a few more general observations on the status of concessives (see especially König 1988):

- a. In spite of all the research that has been done, it has not been possible to define the notion concessive in a more generally accepted way. One way of describing this notion is by contrasting it with causality, in that concessivity can be said to express a causal relation that remains unfulfilled or ineffective (Helbig and Buscha 1988:691). Alternatively, concessive relations are defined in terms of concepts such as surprise, counter-expectation, or incompatibility, conflict or dissonance between a concessive clause (S1) and the second clause involved in a concessive relation (S2), or the non-concessive clause expresses known information and the concessive clause new information (see e.g. Quirk et al. 1985:1089; König 1988). Third, on the basis of a discourse-functional analysis of concessivity, Thompson and Mann (1987; see Section 2.3) argue that with a concessive utterance the speaker tries to manipulate the hearer to have positive regards for the apparent incompatibility between S1 and S2. Without trying

- to evaluate such notions, I will assume that concessivity is cross-linguistically somehow a semantic-functional primitive.
- b. In many languages there is a wide range of different forms to express concessive contrasts and, as a rule, these forms are etymologically fairly transparent.
 - c. The question of how concessive markers arise has received quite some attention in grammaticalization studies (see especially Abraham 1976; König 1985a, 1985b, 1988; Traugott 1988). A seminal study by König (1988) suggests that concessive connectives (and concessive constructions) can be divided into five main types on the basis of their etymology, their historical development, and other more basic uses of their components.
 - d. While concessive connectives tend to be historically derived from such notions as concomitance or incompatibility between the two situations contrasted, they themselves do not give rise to other grammatical meanings; concessive relations are, to put it in König's (1988: 150) wording, "a dead-end street for interpretative augmentation."

My concern here is with the fifth type proposed by König (1988), that is, with connectives that imply co-occurrence or co-existence of two facts as part of their source meaning (König 1988: 155). More specifically, I will be concerned with the modern High German connective *dabei*, whose source meaning can be translated roughly as 'at that (occasion), during that event'.

Among the various conventional items that serve the expression of concessivity in German,¹³ *dabei* has found little scholarly attention. As a source item, it serves primarily as a temporal pronominal adverb (Helbig and Buscha 1988: 340–341), referring to a limited time span. It is a member of a paradigm of anaphoric elements,¹⁴ formed on the same morphological pattern (adverb *da* 'there' + preposition) and functioning as complements or adjuncts, other members being *dafür* 'for that', *damit* 'with that', *darauf* 'on it, on that', etc. All of these adverbs are associated with two different stress patterns, to some extent correlating with their respective role in discourse. For the present purpose this difference can be ignored, I will be concerned exclusively with [da'bei], that is, with the variant having stress on the second syllable. What distinguishes *dabei* from many other concessive connectives is, first, that in a concessive relation, S1–S2, it can only appear at the beginning of S2, and, second, that between S1 and S2 there is something like an utterance-final intonation break.

The various uses of *dabei* are illustrated in (6).

- | | | |
|-----|--|-------|
| (6) | German | Stage |
| a. | <i>Karl geht schlafen; dabei trägt er einen Schlafanzug.</i>
'Karl is going to bed; (at that occasion) he is wearing a pyjama.' | I |
| b. | <i>Karl geht schlafen; dabei ist er gar nicht müde.</i>
'Karl is going to bed; still, he is not tired at all.' | II |

- c. *Karl geht schlafen; dabei geht er um diese Zeit nie schlafen.* III
 ‘Karl goes to bed; although he never goes to bed at this time.’
- d. *Karl geht schlafen; dabei war er eben noch überhaupt nicht müde.* IV
 ‘Karl is going to bed, although a moment ago he wasn’t tired at all.’

(6a) is an instance of stage I: The *dabei*-clause is likely to receive a temporal interpretation, the two situations are described as occurring within the same time span. In such contexts, *dabei* can be placed either clause-initially or following the (auxiliary) verb, that is, instead of preceding the verb (*trägt*) in (6a), *dabei* can equally well follow the verb without any major difference of meaning.

Examples such as (6b) illustrate stage II: There is an inference to the effect that (6b) is meant concessively, since the information contained in the second clause is conceived of as being in contrast, or as being incompatible, with that of the first clause: It contradicts common experience according to which one normally does not go to bed unless one is tired. (6b) can therefore be paraphrased by using a conventional concessive connective like *obwohl* (although), as in (7a).

- (7) German
 a. *Karl geht schlafen, obwohl er garnicht müde ist.*
 ‘Karl goes to bed, although he is not tired at all.’

(6b) is suggestive of a bridging context highlighting a new meaning: concessivity. Still, an interpretation in terms of the temporal source meaning is not entirely ruled out, as (7b) may show, which is a rough paraphrase of the source meaning of (6b):

- (7) German
 b. *Karl geht schlafen; zu der Zeit ist er noch garnicht müde.*
 ‘Karl goes to bed; at that time he is not tired at all.’

(6c) presents a new kind of context, the switch context of stage III: Instead of a temporally limited time span, the *dabei*-clause (S2) now refers to a time-stable situation, that is, it no longer involves a limited time span. A temporal source meaning is no longer possible – the only reasonable interpretation of (6c) is a concessive one.

In examples such as (6b) and (6c), *dabei* is now confined to the clause-initial position. It is possible to place *dabei* after the auxiliary, as in (7c), but only when the temporal source meaning is intended. As we noted above, the source meaning is free from this contextual constraint.

- (7) German
 c. *Karl geht schlafen; er ist dabei gar nicht müde.*
 ‘Karl is going to bed; as he is going to bed, he is not tired at all.’

While the meanings of *dabei* in (6a) through (6c) are context-dependent, (6d) is an instance of the conventionalization stage. The concessive meaning no longer

(8) Context-induced reinterpretation of German temporal *dabei* as concessive (S1 = first clause, S2 = *dabei*-clause)

Stage	Context	Resulting meaning
I Initial stage	(a) S1 and S2 co-occur within a limited time span; (b) <i>dabei</i> can occur either clause-initially or after the (auxiliary) verb	Temporal simultaneity
II Bridging context	(a) The meaning of S2 is in contrast with that of S1; (b) <i>dabei</i> can only occur clause-initially	Concessive meaning foregrounded
III Switch context	S1 and/or S2 refer to a time-stable situation	Temporal meaning backgrounded
IV Conventionalization	Concessive meaning is used in contexts violating the same-time constraint; S1 and S2 may refer to different time-spans	Concessive meaning only

needs to be supported by the context that gave rise to it: Stage-III contexts are incompatible with the same-time-span constraint, still, they do not violate it: Even if S2 denotes a time-stable situation, S1 and S2 are not in temporal contrast. In stage IV, there is now a more dramatic context expansion: the *dabei*-clause contradicts the same-time constraint, in that S1 and S2 refer to different time periods in (6d). That *dabei* is now a fully conventionalized concessive connective is suggested by the fact that it fulfills all three criteria that I proposed for conventionalization (see 2.1).

To conclude, we are dealing with an evolution as sketched in (8).

4. A typological dimension

The scenario proposed is based on diachronic reconstruction, but it can also be made use of for comparative purposes, more precisely for synchronic typology: Since the four stages distinguished can be expected to follow one another in the sequence established, and since languages differ with regard to which stage they have reached, it is possible to establish a crosslinguistic scale on the basis of the degree of grammaticalization a grammatical category has attained in a given language, or in languages in general.

The example of the evolution from reflexive to passive marker and from verb of volition to proximative marker may indicate how evolutionary chains like the ones discussed above can be arranged in a way that allows for a typological description of grammatical meaning. Thus, languages can be arranged along a scale of increas-

(9) Stages along the reflexive-to-passive chain in selected languages (for details, see Givón 1990; Kemmer 1993; Heine 2000)

Language type	I Initial stage	II Bridging stage	III Switch stage	IV Conventionalization
A: Yoruba (<i>ara</i> + Poss), Supyire (<i>-ye</i>)	+			
B: Kxoe (<i>-can</i>)	+	+		
C: Lugbara (<i>i</i>), Logone(<i>zi</i>), Spanish (<i>se</i>) ¹⁵	+	+	+	
D: !Xun (<i>l'é</i>)	+	+	+	+

(10) Stages along the volition-to-proximative chain in selected languages (For details, see Heine 1997; Kuteva 1998; and Romaine 1999).

Language type	I Initial stage	II Bridging stage	III Switch stage	IV Conventionalization
A: English (<i>want</i>)	+			
B: Zulu (<i>-funa</i>)	+	+		
C: Swahili (<i>-taka</i>), Ewe (<i>dí</i>), Tok Pisin (<i>laik</i>)	+	+	+	
D: Chamus (<i>-yyeu</i>), Tswana (<i>-batla</i>)	+	+	+	+

ing grammaticalization according to which stage they have attained, as in Tables (9) and (10). Note that the purpose of these tables is merely to illustrate typological diversity; the information contained in them is based on a restricted set of languages only.

While type A languages are confined to the source meaning, type B languages may be said to have an incipient, contextually defined grammatical meaning which has not developed beyond the bridging stage II. In type C languages, the target meaning has established itself as a distinct meaning, and in type D languages the target meaning is a conventional meaning, no longer in need to be supported by context, and open to further grammaticalizations.

The content of Tables (9) and (10) can be presented in the form of an implicational scale, allowing for generalizations of the following kind: If a given language is found to have reached a certain stage (e.g., II, III, or IV), then it can be expected to also distinguish all preceding stages. The phrase “is expected to” signals that we are not dealing with a law but rather with *probabilities*: It may happen that, in the

course of historical development, a certain contextual use pattern falls out of use, is discontinued, which may have the effect that there will be a gap in scales such as (9) and (10).¹⁶

5. Conclusions

A review of the literature on grammaticalization processes suggests that most previous studies have concentrated on stages II and IV, while there is hardly ever any information on switch contexts, which are usually subsumed under conventionalization. There are a few exceptions, e.g. Bybee, Perkins and Pagliuca (1994), where some examples are provided that can be interpreted in terms of stage III situations.

In the preceding discussion a number of factors had to be ignored that would need to be also considered:

- a. Grammaticalization paths: First, the examples presented illustrate only one way in which target meanings may evolve: passive, proximative and concessive markers have a number of different conceptual sources, and, conversely, the source meanings discussed may give rise to more than one target meaning (for more details, see References).
- b. Time depth: Second, the process that I have sketched takes generations to happen, normally centuries. The speakers proposing bridging contexts are not normally the same as those who create¹⁷ switch contexts.
- c. Context and other parameters.

The description proposed here might seem to be at variance with an analysis in terms of metaphor, metonymy, and other kinds of strategies of meaning transfer. As a matter of fact, however, it is not. Metaphorical transfer, as far as it shapes grammaticalization, has been described in terms of transfers across conceptual domains (see Heine, Claudi and Hünne Meyer 1991), where domains located farther left serve as metaphorical vehicles for domains to their right. (11) presents a catalogue of such domains.¹⁸

(11) PERSON > OBJECT > SPACE > TIME > QUALITY

What the scale in (11) suggests, for example, is that concepts of the PERSON domain, i.e. human concepts, may serve as metaphorical vehicles to describe concepts of the OBJECT domain, that is, inanimate concepts. This is exactly what we were confronted with in switch contexts in Tables (2) and (5): The effect of switch contexts is that participant roles reserved for human referents can be filled with inanimate participants. In creating such switch contexts, therefore, the speaker appears to be guided by exactly this metaphor, whereby inanimate concepts are described in terms of human ones.

Our third example, (6), can be interpreted with reference to another kind of metaphor. The domain of QUALITY consists of abstract concepts, including “logical relations” such as causality, concessivity or adversativity. Now, the switch context that was identified in (8) induces an interpretation of temporal simultaneity in terms of a “logical, that is, concessive, contrast.” What this amounts to is that context manipulation, as discussed here, leads to a transfer from the TIME domain, i.e. a temporal relation, to that of QUALITY, i.e. of a “logical relation.”

To conclude, in spite of everything that seems to argue against it, there is some underlying conceptual transfer strategy, best described in terms of metaphorical transfers between different domains of experience, most of all of human conceptualization and communication. The main purpose of this paper was to show that a study of the various kinds of contexts figuring in grammatical evolution is a *sine qua non* for understanding why existing meanings give rise to new meanings. But such a study does not provide a meaningful answer to the question of why this evolution is necessarily *unidirectional*; what is required in addition is an understanding of the overall conceptual processes that guide context selection and semantic manipulation.

Abbreviations

C1, C2, C3	noun class 1, 2, 3, etc.	S	subject referent
INF	infinitive marker	S1, S2	first clause, second clause
PAST	past tense	SG	singular
PRES	present tense	TOP	topic marker
PROX	proximative	TR	transitivizing preposition
R	relational suffix	1, 2, 3	first, second, third person

Notes

1. Grammaticalization is a unidirectional process, that is, it leads from less grammatical to more grammatical forms and constructions. However, this process is not without exceptions: A number of examples contradicting the unidirectionality principle have been pointed out (see especially Newmeyer 1998:260ff.). Still, as acknowledged by most of the scholars who have identified exceptional cases, such examples are few compared to the large number of cases that conform to the principle (cf. Haspelmath 1999). Furthermore, such examples can frequently be accounted for with reference to alternative forces, and finally, no instances of “complete reversals of grammaticalization” have been discovered so far (cf. Newmeyer 1998:263; see Heine and Kuteva [in press]).

2. A critical context “is characterized by multiple structural and semantic ambiguity,” inviting different interpretations, including the target meaning (Diewald 1999).
3. The term “suggestion” is taken from Geis and Zwicky (1971), who consider it to be a sub-group of invited inferences.
4. One might also draw attention to the fact that the nature of the target meaning is severely constrained, not only by context, but in much the same way by the concretization strategy. This is actually implied in the work of these authors (Evans and Wilkins 1998) on the evolution from ‘hear’-verbs to cognitive verbs in Australian languages: It is unlikely that a cognitive verb meaning ‘know’ will provide the source meaning in a bridging context where the target meaning would be ‘hear’: A semantic change from ‘hear’ to ‘know’ is well attested whereas a reverse change has not been observed so far.
5. Diewald’s isolating contexts mark “the completion of the grammaticalization process,” hence they also appear to include what is called here the conventionalization stage (see below).
6. Nevertheless, some relics of the Stage I meaning tend to survive in certain contexts, cf. Hopper’s (1991) principle of persistence.
7. It goes without saying that this is not the only way in which passive markers can arise; see Haspelmath (1990) for details.
8. I will not deal with what tends to be referred to as “middle” uses of the markers concerned (see Kemmer 1993).
9. Khoisan consists of three sub-families, which are South African Khoisan, Sandawe and Hadza, the latter two spoken in north-central Tanzania (Greenberg 1963). Following Greenberg, a number of other scholars have presented evidence to prove that Khoisan is a genetic unit; still, there are some who would not consider the evidence available to be sufficient to “prove” genetic relationship. The data presented in this paper are taken from my field notes on Northern !Xun, collected during a field research trip to northern Namibia in October/November, 1998. I wish to express my gratitude to the Deutsche Forschungsgemeinschaft (German Research Society) for having sponsored this research, to the Republic of Namibia for granting research permission, and to Joao Dumba for his services as a devoted and always patient consultant of the !Xun language.
10. In the following examples, two different third person possessive modifiers occur: *yà* (noun class 1), and *ká(’η)* (noun class 4).
11. The reflexive marker *’é* is historically derived from the Proto-!Xun noun **’ae* ‘body’; *yà* *’é* means historically ‘his body’. The possessive modifier (*yà*) in this example is co-referential with the subject.
12. My concern will be exclusively with proximative meanings derived from the Volition Schema (involving verbs of volition as a predicate nucleus; see Heine 1992, 1994, 1997; Kuteva 1998; Romaine 1999 for details); I will therefore ignore proximatives derived from the Location Schema. Furthermore, I will not deal with avertive uses of volition verbs (Kuteva 1998).
13. The following items are mentioned in the literature as expressing concessivity in German: *bei all*, *allerdings*, *dennoch*, *derweil*, *gleichwohl*, *indessen*, *mögen + auch*, *obschon*, *ob-*

wohl, unbeschadet, auch wenn, selbst wenn, wenngleich, wiewohl, zwar (see Abraham 1976; König 1988).

14. Note that Helbig and Buscha (1988:341) classify them as pronouns or “substantial words” rather than as adverbs.

15. Spanish can be said to present an incipient stage IV, that is, it has acquired some uses of a “canonical passive,” introducing agents by means of oblique phrases headed by *por* ‘by, with’ (cf. e.g. Givón 1990:604–605).

16. Such a case is reported e.g. by Gabriele Diewald (p.c.) with reference to the evolution of German modals.

17. Concerning the terms “create” and “creativity,” see Heine, Claudi and Hünemeyer (1991).

18. In a number of works on grammaticalization, “metaphor” and “metonymy” have been described as mutually exclusive strategies, and much energy has been spent on whether a certain process is due to metaphor or to metonymy. I have described the structural changes discussed in this paper as being due to metaphorical transfer. However, as pointed out by Traugott and König (1991) and others, there would also seem to be justification to treat such changes, at least in part, as being due to metonymy. As demonstrated by Heine, Claudi and Hünemeyer (1991), the two notions are in no way contradictory, rather they complement one another in accounting for grammatical change. The main reasons for ignoring metonymy here are the following: As more recent psychological research on metaphor and metonymy suggests, the way “metonymy” is applied in studies of grammaticalization is not entirely in accordance with orthodox uses of the term. Second, in spite of all research that has been carried out so far, it remains largely unclear how the kind of directionality characterizing grammaticalization can be accounted for satisfactorily in terms of metonymic processes.

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A model for relevant types of contexts in grammaticalization

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1. Introduction¹

This paper focuses on the influence of different types of contexts in the diachronic development of grammatical items. As has been observed in numerous studies, a new grammatical function does not arise homogeneously in all uses of the item concerned, but in its origin is bound to specific linguistic contexts or constructions (see e.g. Bybee, Perkins and Pagliuca 1994:11; Bisang 1998:20; and Heine [this volume]).

The aim of this contribution is to specify the notion of the interdependence of grammaticalization and linguistic contexts by proposing three successive stages in the diachronic development of grammatical functions that are associated with three different types of contexts. In the first stage, the preconditions for grammaticalization develop. This stage is characterized by an unspecific expansion of the distribution of the lexical unit in question to contexts in which it had not been used before. These contexts are called *untypical contexts* here. In them, the new meaning, which is going to be grammaticalized in the further development, may arise as a conversational implicature.

The second stage marks the actual triggering of the grammaticalization process. It is linked to the rise of a particular type of context, the *critical context*, which is characterized by multiple structural and semantic ambiguities and thus invites several alternative interpretations, among them the new grammatical meaning.²

Stage three shows the completion or consolidation of the 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 due to the development of *isolating contexts* for both readings, i.e. specific linguistic contexts that favor one reading to the exclusion of the other. As soon as the

opposition between these mutually exclusive contexts is established, the process of grammaticalization can be said to be completed, insofar as it is not reversible to an earlier stage. The new grammatical meaning in its isolating context is no longer a merely pragmatically induced implicature, but a semiotic unit independent of the older, more lexical meaning. The lexical item under grammaticalization, having acquired a new meaning while keeping its older one, has become truly polysemous.

In the following, the three context types will be discussed with data from the grammaticalization of the German modal verbs (Diewald 1999).

2. Isolating contexts

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. Beyond several other uses that are restricted to single modal lexemes,³ all six modals 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, in which they approach the stage of auxiliaries.⁴ These 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 gradually have given him the creeps.’

In sentence (1), *mußt* predicates the state of ‘being obliged’ of the subject, i.e. the modal has narrow scope and lexical meaning. This is the typical lexical or less-grammaticalized use. In comparison to the use in (2), the modals in their lexical use still have a distinctly referential meaning, though this meaning may be less lexically differentiated and contain fewer semantic features than the meaning of genuine full verbs, and they show a lesser degree of grammaticalization, though, again, they are grammaticalized to a greater degree than full verbs. In the literature, this use is often called “deontic” or “agent-oriented.” However, both terms do not capture the common features of this use properly: “deontic,” taken in its original sense, refers only to modals of permission and obligation, and thus does not fit well as a label for many instances of modals like *können* and *müssen*. The term “agent-oriented,” on the other hand, prejudices the semantic role of the subject as agent, which is not adequate for many modal uses. Therefore, and because the focus of this paper is

on grammaticalization, i.e. the cline from more lexical to more grammatical, the terms “lexical use” or “less-grammaticalized use” are preferred here.

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 scope and expresses an uncertain degree of the factuality of the whole proposition. The speaker cannot attribute a definite factuality value to the proposition, and, by using the modal, states that the proposition is “either factual or non-factual.” This function of expressing a speaker-based factuality judgement qualifies the grammaticalized modals as deictic signs (for an extended discussion of this claim see Diewald 1999). Their distinctive factuality values can be made explicit by a paraphrase with a sentence adverbial that conveys the specific meaning of each modal. *Muß* in (2), for example, can be substituted by *bestimmt*, as in (3):

- (3) *Bestimmt ist ihm langsam sein Kollege [...] unheimlich geworden.*
 ‘Certainly, his colleague gradually gave him the creeps.’

The use of the modals as factuality markers is the present endpoint of an ongoing grammaticalization process. The target category of this process, i.e. the grammatical category into which the modals are integrated, is verbal mood, which, like tense, is a deictic category. Through the grammaticalization of the modals, this grammatical paradigm of deictic factuality markers is differentiated by additional factuality values that cannot be expressed by any of the inflected moods (Diewald 1999a).

In the literature, the grammaticalized use is commonly called “(subjective) epistemic.” Similar to the terms “deontic” and “agent-oriented” for the less-grammaticalized uses, this term is avoided here as a general label for the grammaticalized readings. Instead, the terms “deictic” or “grammaticalized” are used because they explicitly name relevant features of this new function.

It is well known that the two central uses of the modals are context dependent insofar as there are contexts that favor one reading to the exclusion of the other. The most important factors here are the morphological categories realized in the modal itself and those of the infinitive of the main verb. The grammaticalized modals do not allow periphrastic tenses, which means that if a modal is used in such a tense, it can only have the less-grammaticalized meaning. This is shown in (4), which allows only a lexical reading of *hat/habe/hatte/hätte müssen*:

- (4) *Er hat/habe/hatte/hätte erst das Semester zu Ende bringen müssen.*
 ‘He has/had/would have been obliged to finish the semester first.’²⁵

In terms of grammaticalization theory, this restriction is exactly what is to be expected in grammaticalizing signs. While less-grammaticalized signs can be chosen freely without restrictions as to their morphological realization and the range of grammatical categories they express, the paradigmatic variability of grammaticalized signs is reduced (Lehmann 1985:306ff.).

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

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

These examples show that for both central uses of the modals in PDG, there is a specific morphologically marked context type that favors one reading to the exclusion of the other. These are the *isolating contexts* for the respective readings. Figure (6) gives a survey of the contextual features associated with them:

- (6) The isolating contexts:
- a. The isolating context for the less-grammaticalized, lexical reading consists of a periphrastic modal verb construction, i.e. an auxiliary and a modal in a nonfinite form (the participle II, cf. note 5), and the infinitive I of the main verb.
 Example: *Er hat sie loben können.*
 ‘He has been able to praise her.’
- b. The isolating context for the grammaticalized, deictic reading consists of a non-periphrastic finite modal verb and the infinitive II of the main verb.
 Example: *Er kann sie gelobt haben.*
 ‘Perhaps, he has praised her.’

The isolating contexts play a central role in the synchronic variation as well as in the diachronic development. Through them, the various readings of a modal emerge as separate meanings that are independent of each other.

3. Untypical contexts

Untypical contexts are contexts that do not display definite clues as to their preferred reading. That is, they do not clearly favor one of the prototypical readings. Among the large variety of untypical contexts in PDG, the following two are particularly interesting because they provide a link with the diachronic perspective.

First, there are contexts that allow a narrow-scope reading as well as a wide-scope reading, whereby the latter one may receive either a lexical or a deictic interpretation. Especially sentences with generic or indefinite animate subjects tend to show this type of scope and meaning ambivalence (Gamon 1993; Nordlinger and Traugott 1997):

- (7) *Das muß man alles erst mal wissen.* (Texte 52)
 Narrow scope, lexical: 'You have got to realize all that first.'
 Wide scope, lexical: 'It is necessary: you realize all that first.'

In cases like these, the wide-scope reading typically arises as a conversational implicature in the Gricean sense. It is the result of a reasoning procedure of the hearer in a specific communicative situation in which the narrow-scope reading would not make much sense. In (7) it is unlikely that the speaker wants to predicate something on the subject which is realized by the indefinite pronoun *man*. Instead, the wide-scope reading, expressing the general necessity that the proposition *Man weiß das alles erst mal* is true, is much more informative. Examples of this kind are attested throughout the history of German. This is shown in the following example from the MHG Nibelungenlied, which beyond the lexical narrow-scope reading allows two wide-scope readings: one which keeps the lexical content of the modal, i.e. the notion of possibility or opportunity as part of the real-world situation described in the proposition, and a second, deictic, wide-scope reading, in which the modal is no longer used referentially, but as a deictic factuality marker:

- (8) *Man mac si morgen mehelen einem andern man.* (NL 1928, 1)
 Narrow scope, lexical: 'One is able/has the opportunity to marry her to another man tomorrow.'
 Wide scope, lexical: 'It is possible/There exists the opportunity: One marries her to another man tomorrow.'
 Wide scope, deictic: 'Perhaps, one marries her to another man tomorrow.'

Examples like (7) and (8) validate an important observation that Nordlinger and Traugott (1997) made for the English modals: Scope expansion is not identical with the rise of the deictic meaning as a factuality marker. A deictic reading, for which wide scope is obligatory, may arise with a wide-scope reading, but it need not. While sentence (7) does not allow a deictic reading although it does allow wide scope, sentence (8) has all three options. Beside the narrow-scope lexical reading, there are two possibilities for wide-scope readings, a lexical one and a deictic one.

The second type of untypical context relevant here is constituted by sentences where the modal unambiguously has wide scope and clearly retains the old lexical meaning so that the deictic meaning is virtually excluded in spite of wide scope. This is illustrated in (9) and (10):

- (9) (*Sie haben in der Schule wahrscheinlich auch noch gelernt, nicht zwei Sätze mit demselben Wort anzufangen*) –
das durfte es im Deutschen früher nicht geben. (Spiegel 244)
 Wide scope, lexical: ‘In the old days it was not allowed/permitted: that occurs.’
- (10) (*Damit steht zunächst einmal fest,*)
daß die Soldaten der Bundeswehr nicht als Mörder denunziert werden dürfen. (Spiegel 31)
 Wide scope, lexical: ‘It is not allowed/permitted/it may not be: the soldiers of the Bundeswehr are denounced as murderers.’

Both sentences show the lexical reading of *dürfen*, i.e. the modal has a deontic meaning (in the narrow sense of social obligation/permission). At the same time, however, both modals obligatorily have wide scope. In (9) this is due to the expletive subject *es*, in (10) to the passive infinitive *denunziert werden*. The argument denoting the person who is forbidden something is not in subject position but is demoted and does not appear in the sentence at all. It can be reintroduced into a corresponding sentence with an active infinitive:

- (10) a. *daß niemand die Soldaten der Bundeswehr als Mörder denunzieren darf.*
 ‘That nobody is permitted to/may denounce the soldiers of the Bundeswehr as murderers.’

Here, the agent of the action described in the infinitive appears as the subject. The modal has narrow scope and predicates on the subject the state of being forbidden to complete that action. Again, similar cases are attested throughout history. For *magan* we find examples as early as in the 9th century. (11) shows a case with an expletive subject, (12) is an example with an infinitive passive. Both sentences are from the OHG Tatian.

- (11) *sô thaz in irridon uuerdent gileitet, ob iz mag uuesan, ioh thiê gicoranon.*
 (T 145,17)
 ‘So that, if possible/if there is an opportunity, even the chosen ones are led astray.’
- (12) (*Sênu thô uúîb thaz thâr bluotes fluz tholêta zuelif târ inti uuas managu tholênti fon uuola managên lâhhin inti gispentôta allu irâ,*) *noh fon irô ni-heinîgemo mohta uuesan giheilît.* (T 60,3)
 ‘And could not be cured by any of them.’

Thus, throughout the history of the German modals there are cases with ambiguity and variable scope as well as examples with obligatorily wide scope and the old

lexical meaning. This is the first stage of grammaticalization. It is characterized by two principally independent types of contexts which show clusters of contextual features that had not been customary before. One of these untypical contexts, the one with generic or indefinite subjects, via conversational implicature invites an optional wide-scope reading, which may even be deictic, while at the same time retaining the narrow-scope reading as an alternative interpretation. The wide-scope readings are accompanied by semantic generalization of the modal meaning and thus provide the basis for semantic change, which is one of the prerequisites for grammaticalization.

The second kind of untypical context requires a wide-scope reading but keeps the lexical meaning of the modal. This context arises with expletive subjects or embedded passive infinitives, whereby this latter factor is of particular importance, as it coerces a wide-scope reading because of a morphologically realized grammatical category (the passive), i.e. because of a feature that is not merely semantic but is explicitly expressed in language structure. In short, the second kind of untypical context triggers structural reanalysis without semantic change.

The existence of these untypical contexts marks stage I of the grammaticalization of the modals. Their new semantic and structural possibilities constitute the preconditions for a later grammaticalization process. This is to say that the stage I situation could persist forever without any necessity for the deictic reading to develop into a grammaticalized item. Stage I does not initiate a grammaticalization process; it merely constitutes a necessary though not sufficient precondition for it. The German modals, however, did enter a grammaticalization process, which means they had to pass through stage II, the stage associated with the critical context.

4. The critical context

Stage II represents the onset of the grammaticalization process, which takes place in the critical context. This is a highly ambiguous structure which through morpho-syntactic complexity gives several options for interpretation, among them the newly grammaticalizing meaning. In contrast to stage I, where new structural and semantic possibilities were distributed over different contexts independently of each other, at stage II, semantic and structural factors accumulate in one specific critical context. For the modals, this critical context is found during a narrow time span around 1200. The essential features of this construction are given in (13):

- (13) Critical context for the grammaticalization of the German modals:
 modal with dental suffix *-t-* & (nominal object) & *haben/hân/sîn* &
 past participle

As (13) shows, the critical context consists of the modal with the so-called dental suffix *-t-* plus an optional nominal object plus *haben* ‘have’, its contracted form *hân*, or *sîn* ‘be’, plus a past participle.⁶ Although this construction is not attested before the middle of the 12th century, it is found with all six modals as early as around 1200 with a relatively high frequency (Westvik 1994), and, furthermore, this structure is only attested for the modals. There are no other verbs that are found in this construction at that time (Paul, Wiehl and Grosse 1989:295f.). (14) gives an example with the modal *können*, which will be used for further illustration. (15) shows examples for the remaining modals. Semantic paraphrases have been omitted in (14) and (15), as they will be problematized in the following:

- (14) *von Veldeke der wise man!*
der kunde se baz gelobet hân. (Parz 8, 404,29f.)
 he can-DS her better praised have
- (15) a. *der karakter â b c*
 the-GEN characters abc
muoser hân gelernet ê. (Parz 9, 453,15f.)
 must-DS-he have learned before
- b. *wie mohte wir daz verdienet haben, daz du dich lieze an slahen?*
 (Vorauer Sündenklage 823, from Deeg 1948:70).
 how may-DS we that earned have that you yourself let on nail
- c. *irn dörfet mich niht han gemant so verre, [...].* (Tristan 3662f.)
 you-NEG need-DS me not have admonished so much
- d. *(Trierære gâben ir scaz.)*
daz man in dâ scolte haben erslagen.
 that one him there shall-DS have slain
(wie kûme er dannen entran!) (Kaiserchronik 4360ff.)
- e. *si wolten dar in sîn geslichen:*
 they will-DS there in be crept
(dô was der snê sô michel,
si nehêten wek noch phat.) (Kaiserchronik 16995ff.)

The interpretation of this construction is difficult, because – due to its morphological make-up, which will be presently explained – it is highly ambiguous. Disregarding the further linguistic context, (14) can be translated into PDG in at least the following three ways:

- (14) *der kunde se baz gelobet hân.* (Parz 8, 404,30)
 a. *Der hätte sie besser loben können.* (subjunctive pluperfect)
 ‘He could have praised her better.’

- b. *Der konnte sie besser als Gelobte haben.* (participle II as predicative adjective)
 ‘He was able to have her as a praised one better.’
- c. *Der könnte sie besser gelobt haben.* (deictic reading)
 ‘Perhaps, he has praised her better.’

These alternative possibilities of interpretation show that the MHG construction is not functionally equivalent to the isolating context of the deictic reading in (6b), although on the surface it seems to have a parallel structure. While the isolating context of PDG, i.e. constructions like *er kann sie besser gelobt haben* ‘perhaps, he has praised her better’ only allow a grammaticalized deictic reading, the MHG construction per se, i.e. without contextual or situational clues, is ambiguous in the way illustrated in (14a) to (14c). This can be concluded from the fact that there are instances of the critical context in MHG where, due to contextual disambiguation, only one of the three alternative interpretations is possible, while the other two are excluded.

(15a) for example, clearly has the reading corresponding to (14b). Its meaning is ‘he had to have the characters as learned ones before’, or ‘he had to get them learned before’. This derives from the further context, in which the reader/hearer is informed that the subject is able to tell the story because he had learned the characters of the foreign language, in which the original manuscript had been passed down to him, before. This interpretation receives further plausibility by the temporal adverbial *ê* ‘before’. A reading in the sense of (14a), as an irrealis of the past, as well as a reading in the sense of (14c), as a deictic factuality judgement, is excluded not because the critical context would not allow it, but because of further contextual factors. As similar instances of disambiguation exist for the other two possible readings (14a) and (14c), it is justified to regard the critical context of MHG as an ambiguous structure in the sense defined with three possible readings.

On closer inspection, MGH constructions of the type *der kunde si gelobet hân* are not only semantically different from the isolating context of the grammaticalized reading in PDG, but also exhibit great morphological and syntactic differences as well. In MHG, the morphological forms that build up the critical context are themselves grammatically ambiguous.

First, the nonfinite structure *hân* + past participle is ambiguous between a reading in the sense of the infinitive II of PDG, in which the participle is the main verb and *hân* or *sîn* is the auxiliary, and between a reading as a complex predicative structure where ‘have’ is the main verb and the past participle functions as a predicative adjective related to the direct object (*der kunde sie gelobet hân* ‘der konnte/könnte sie als Gelobte haben’, ‘he was/would be able to have her as a praised one’).

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

Thus, the critical context is characterized by the coincidence – one could even say: the clash – of two verbal forms which both are morphologically or morpho-syntactically ambiguous, and therefore cannot mutually disambiguate each other. Being confronted with this construction, the recipient had several possibilities for interpreting it, without getting a clear indication as to the intended reading from the construction itself. This means that the recipient had to resort to inferencing procedures, to conversational implicatures, as there was no way to process this structure in a routinized way.

One of the central hypotheses of this paper is that in this structure, in the critical context, the deictic reading with its obligatory wide scope was not only one alternative interpretation among others, but became the most likely, the favored, reading. It could be reached from different starting points, i.e. from different ways of interpreting the morphological forms through pragmatic inferencing. The rest of this section will suggest two alternative ways of interpreting the critical context, using (14) as an example.

In the first interpretation of (14), *kunde* is taken to be a subjunctive II without any temporal, i.e. past, component, as in PDG *könnte*; *gelobet hân* is taken to be an infinitive II like PDG *gelobt haben*, which implies past or resultative meaning. An approximative paraphrase of this combination is given in (16):

(14) [...] *der kunde si baz gelobet hân.* (Parz 8, 404, 30)

(16) ‘At the moment of utterance the subject would be able to have praised her better in the past.’

Obviously, it does not make sense to say that the subject could perform an act at the moment of utterance, if that act is situated in the past. The hearer needs to apply inferencing to make sense of this combination of grammatical forms. This inferencing could run as follows:

“It does not make sense to state that the subject could carry out an act which is situated in the past. Therefore the speaker cannot mean that the subject has the ability to carry out the act (and the modal cannot have narrow scope).

Instead, it does make sense to say that it is possible that the subject did carry out that action in the past. Therefore, I, the hearer, assume that the speaker wants to express that he considers it possible that the subject carried out the act. Thus, I conclude that the speaker by this utterance means: ‘Perhaps, he has praised her better.’”

This conversational implicature creates a meaningful utterance. At the same time it leads to syntactic reanalysis and semantic disambiguation. The modal *kunde* receives wide scope and loses its old lexical meaning ‘to be (mentally) able, to know how to’, gaining a more abstract meaning instead, which may be labelled as ‘unspecified possibility’, and which, in the case of the modal *können*, receives a deictic interpretation ‘perhaps’ (‘I regard it as possible that *p* is factual’).

In addition to this first solution of disambiguating the critical context there is a second way to interpret the verbal forms in (14), which, however – and this is crucial here – leads to the same result, namely, the deictic interpretation. In this second analysis *kunde* is taken to be past tense with no subjunctive meaning, like PDG *konnte*, i.e. in the sense of ‘in the past the subject had the ability to do something’ (cf. Westvik 1994: 150–154). The structure *gelobet hân* is taken to consist of a predicative adjective, and a main verb ‘have’, with the meaning ‘to have her as a praised one, to get her praised’. This combination is paraphrased in (17).

- (14) [...] *der kunde se baz gelobet hân*. (Parz 8, 404, 30)
- (17) ‘At a point of time in the past, the subject had the ability to carry out an act which consisted in praising her better.’

The conversational implicature that leads from this morphological analysis to the deictic meaning could be of the following kind:

“The statement that the subject had the ability to carry out the act described in the infinitive is not very informative. Why should the speaker want to tell me such a thing? It makes more sense to say that it is possible that the subject did carry out that action in the past. Therefore, I, the hearer, assume that the speaker wants to express that he considers it possible that the subject carried out the act. Thus, I conclude that the speaker by this utterance means: ‘Perhaps, he has praised her better.’”

The two chains of inference are identical except for their respective starting points, i.e. the different interpretations of the morphological forms involved in this construction. As the deictic reading is reached naturally by several ways of interpreting the ambiguous structure described as the critical context in (13), it is plausible to assume that it constitutes stage II, the actual triggering of the grammaticalization process.

The impulse for grammaticalization at stage II does not directly arise from the grammaticalizing items themselves. As a purely conversational implicature, the

deictic meaning had been possible in different untypical contexts since the OHG period, which means there was no “need” to express a new meaning, nor was there any “need” to do so with the help of a new grammatical item. Instead, the relevant changes that finally may trigger the rise of a new grammatical item (given that stage I is already reached by the item itself) occur in some other place in the linguistic system. In the case of the grammaticalization of the modals, this other place is the morphological syncretism in modals with dental suffix and the restructuring of the complete tense-aspect system that had begun in the OHG period and led to the rise of periphrastic tense forms like the perfect. These two factors, which are external to and independent of the development of the modals, together with the expanded semantic and structural possibilities that the modals themselves had acquired in stage I, culminate in the critical context and set off the grammaticalization process.

However, for the grammaticalization to be completed, there must follow a third stage, which is characterized by the rise of isolating contexts for the less-grammaticalized reading on one hand and the grammaticalized (grammaticalizing) reading on the other.

5. The development of the isolating contexts

Isolating contexts are contexts where only one of the competing interpretations is possible, while the other one is excluded, so that both meanings can be perceived as independent of each other. The rise of these isolating contexts for the modals, again, is connected to the profound restructuring of the verbal system that already proved crucial for stage II. As Valentin (1973) and (1984) points out, until the ENHG period the modals did not form a past participle. Constructions like *hat loben können* (*können* being the participle II, cf. note 5), which today constitute the isolating context for the lexical meaning, were not possible prior to that time, which means that there was no complementary distribution of the lexical use *er hat tun können* and the deictic use *er kann getan haben*. However, as soon as the modals were able to build a past participle, they participated in periphrastic constructions like the perfect tense, and, as soon as they had access to these constructions, the opposition between the two isolating contexts came into existence.

The time span in which this opposition is first attested for each of the six modals extends from the beginning of the 16th to the middle of the 17th century. (18) and (19) give examples of the two isolating contexts for *müssen* and *mögen* (for the other modals see Diewald 1999). The a-sentences show the isolating context for the lexical reading, the b-sentences the one for the deictic reading:

- (18) a. (*Sie haben sich vielleicht vorlassen auff yhre macht/mehr dan auff got/)*
drumb habe(n) sie mussen fallen. (Luther Adel 97, 35f.)
 ‘Therefore they had to fall.’
- b. *Drumb musz das der heubt teuffel selb gesagt haben.*
 (Luther Adel 103, 17)
 ‘Therefore the chief devil must have said this himself.’
- (19) a. *Nu hat der Romisch geytz vn(d) raubstul/nit mocht der zeit erwarten/
 das [...].* (Luther Adel 113,17)
 ‘Now the greedy and criminal Roman see has not been able to wait for
 the time that ...’
- b. *Herr Doktor, es mag der Huß auß forcht also geredt haben.*
 (Cochlaeus 22–17, from Duchâteau 1979:68)
 ‘Doctor, Huß may have spoken thus for fear.’

It should be noted that the critical context of stage II has disappeared. It has been transformed into the isolating context for the newly grammaticalized meaning, with the important difference that the modals, which in the critical context of MHG have the dental suffix (which is responsible for a great part of the ambiguity of this structure), now, i.e. in the isolating context, typically appear in the present indicative.

While the newly grammaticalized meaning occupies and transforms the critical context, the older, lexical meaning acquires new structural possibilities which arise from the fact that the modals in their lexical meaning, and only in this meaning, have developed the full inflectional possibilities of lexical verbs, in our case the formation of a past participle. As soon as there exists the opposition between the two isolating contexts, the modals in their deictic meaning can be said to be grammaticalized. From this point onward, the modals are truly polysemous.

The further development of the grammaticalized modals is characterized by their gradual integration into the grammatical system of factuality markers, i.e. into the mood system. This process takes place between about 1700 and the middle of the 19th century. During that period, each modal develops a specific distinctive value in the grammatical system of factuality markers, which clearly is influenced by the already existing oppositions of the inflectional verbal moods, that is, by the target category of this grammaticalization process. Although this final restructuring and re-evaluation of the grammatical paradigm of verbal mood cannot be discussed here (see Diewald 1999), I would like to conclude this section with the remark that for this process, i.e. the integration into a grammatical paradigm, it might be reasonable to assume a fourth stage of grammaticalization, in which the relevant contextual factors are no longer found in the syntagmatic context of the sentences containing the element under grammaticalization, but in

the paradigmatic context constituted by the grammatical oppositions of the target category.

6. Summary and outlook

Using the grammaticalization of the German modals as a paradigm case, it has been shown that the diachronic development of grammatical items can be divided into three stages which are associated with three types of linguistic contexts. Stage I refers to the preconditions of grammaticalization and shows an unspecific expansion of the distribution of the lexical unit in question to contexts in which it had not been used before (untypical contexts). In the case of the German modals, these untypical contexts are marked either by semantic features (e.g. indefinite animate subjects), which via conversational implicature lead to new meanings and scope variance, or by morphological features (especially the infinitive passive of the main verb), which lead to obligatory wide-scope reanalysis, while retaining the old, lexical meaning. These untypical contexts persist throughout the history of the German modals.

The second stage is linked to the critical context, in which, because of its multiple structural and semantic ambiguity, the grammaticalization process is triggered. For the modals the critical context, which appeared in a short diachronic period around 1200, consists of a modal with a dental suffix, and optional direct object and *haben/hân/sîn* with a participle II. Its opacity leads to several alternative interpretations, whereby the deictic meaning, which is about to be grammaticalized, becomes the favored interpretation, as it is reached by different ways of pragmatic inferencing.

In the third stage, the new grammatical meaning is isolated as a distinct meaning from the older, more lexical meaning. This is made possible by the rise of isolating contexts for each reading, i.e. specific linguistic contexts that are mutually exclusive against the favored reading of the respective other context. The isolating context for the lexical reading is characterized by a periphrastic modal and the infinitive I of the main verb (*hat loben können*), the isolating context for the deictic, grammaticalized reading requires a non-periphrastic modal in the present indicative and an infinitive II of the main verb (*kann gelobt haben*). This opposition becomes possible between the 16th and 17th centuries when the lexical modals gain access to the formation of a participle II and thus to the full paradigm of lexical verbs.

Beyond suggesting these three context types, which in their basic outlines might prove to be relevant for other grammaticalization processes as well, this study has made some observations on grammaticalization in general. First, it has

shown that the decisive factors for the triggering and continuation of a grammaticalization process are not to be found exclusively in the grammaticalizing items themselves, but also in changes in related linguistic categories and subsystems. The rise of the critical context, for example, is due to the restructuring of the verbal system and, especially, the syncretism between temporal and modal values in the dental suffix. A second important point is the observation that the split between the older, more lexical meaning and the newly grammaticalizing meaning, which takes its decisive and irreversible step in the formation of the two isolating contexts, is reinforced not only by changes concerning the new meaning and function, but also by the further development of the older, lexical reading. In the case of the modals, this is achieved by a closer integration into morphological paradigms of full verbs, i.e. the newly developed participle II in the lexical readings.

It is this emphasis on morphological and structural aspects and on paradigmatic relations, like the oppositions of the target category, by which the context model suggested here differs from Heine's model [this volume], which concentrates on semantic changes and their affinity to special contexts. Thus, the assumed stages in both models do not exactly match. For example, Heine's "bridging context," which he describes as "a specific context giving rise to an inference in favor of a new meaning" so that the "target meaning [is] foregrounded," would have to be subsumed partly under the untypical contexts and partly under the critical context. It cannot be fully identified with the latter one because the critical context is defined by semantic *and* structural ambiguity. Furthermore, the critical context does not persist in later stages, while 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." The "switch context" of Heine's model, which is "incompatible with the source meaning," resembles the isolating contexts of the model suggested here. However, it should be noted that there are two isolating contexts (one for the lexical and one for the grammatical reading), which are in semantic and structural opposition, not only one context that excludes the lexical reading by semantic constraints. Furthermore, both isolating contexts are new developments that have become possible because of changes external to the grammaticalizing items. Thus, though principally compatible, both models focus on different aspects of grammaticalization processes.

Abbreviations

DS	dental suffix
ENHG	Early New High German
GEN	genitive
MHG	Middle High German
NEG	negation particle/clitic
OHG	Old High German
<i>p</i>	proposition
PDG	Present-Day German

Notes

1. I would like to thank Bernd Heine and Christian Lehmann for their comments on an earlier version of this paper.
2. The terms “ambiguity” and “ambiguous” are used here to refer to the fact that linguistic items may receive alternative interpretations depending on context and conversational implicatures. This pragmatically induced ambiguity is contrasted with true polysemy, which is found in linguistic items that, independent of their contextualization, have several meanings as part of their semantic content, i.e. they are “semantically polysemous” (Nordlinger and Traugott 1997:314). Grammaticalizing items usually undergo a semantic change that leads from ambiguity to polysemy.
3. For example, the PDG full-verb uses of *können*, *mögen*, *möchten* and *wollen*.
4. “Scope” is used here in the sense of Nordlinger and Traugott (1997). While in narrow-scope readings the modal “serves as a linker relating [its] subject to the rest of the predicate” (p. 301), in the wide-scope readings the modal is “external to the proposition” and modifies “the proposition as a whole” (p. 302).
5. In the modals, the participle II and the infinitive are identical if they are used in verbal constructions with more than two verbal elements, like *müssen* in (4). If this form functions as a participle II, it is called “Ersatzinfinitiv” in German grammars, which, historically, is not quite correct, as this form was the original morphological realization of past participles of some strong verbs.
6. In linguistic descriptions of older stages of German, the affix *-t-* is usually called “dental suffix,” as it is polysemous between temporal and modal values; in PDG it is a past tense marker.

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Semantic constraints in the grammaticalization of locative constructions

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1. Introduction

This paper deals with the grammaticalization of locative constructions. It seeks to establish constraints on the degree that locative constructions can grammaticalize looking at a wide range of languages. The major claim is that the semantics of the locative construction, in addition to the morphological typology of an individual language, can account for the degree of grammaticalization that a construction can reach. To this end, six instances of the locative construction are compared: INTERIOR REGION, TOP REGION, BOTTOM REGION, FRONT REGION, BACK REGION, and LATERAL REGION. Data from twenty six languages provide support for the claim. Morphophonological reduction, loss of autonomy, loss of obligatory marking, and schematization of each instance of the locative construction reveal a higher degree of likelihood for INTERIOR REGION constructions to reach advanced levels of grammaticalization over all the other instances.

2. The relation of input to output of grammaticalization

A central question in grammaticalization theory involves the relation of input to grammaticalization, the source, to the output of grammaticalization, the resulting grammatical construction. While it is generally agreed that language change is not deterministic, in that languages, or even speakers, do not have a specific outcome in mind that leads to change, at the same time studies have shown that the source restricts the range of meanings or functions that may develop from it by preserving the image-schematic structure of the source (Lichtenberk 1991; Sweetser 1988). This position has been articulated by Bybee, Perkins, and Pagli-

uca (1994:9) as *The Source Determination Hypothesis*, which states: “The actual meaning of the construction that enters into grammaticalization uniquely determines the path that grammaticalization follows, and, consequently, the resulting grammatical meaning.”

A question akin to the relation of the source to the resulting construction involves the degree of grammaticalization of the construction. The degree of grammaticalization involves not only the range of functions/meanings associated with a certain construction but also the morphosyntactic shape of the construction. Is the degree of grammaticalization that constructions can reach predictable by any means? What sorts of constraints exist that affect the evolution of locative constructions? Are such constraints motivated by language-internal or language-external principles? The thesis that this paper will try to prove is that the actual meaning of the construction determines the degree of grammaticalization it can reach.

The discussion of these central questions is preceded by a detailed discussion of the locative construction.

3. The locative construction

In her discussion of argument structure constructions, Goldberg (1995) has defined a construction as a form-meaning correspondence which has meaning by itself, independently of the words that instantiate it. This view of constructions is adopted as a starting point in this paper. The locative construction is argued to be a type of the relational construction. In Sections 3.1 and 3.2 the locative construction is defined on the semantic and morphosyntactic levels. In 3.3 the typology of the locative construction is presented and, in 3.4, a model of the evolutionary path of the locative construction is discussed.

3.1 The semantic level

Defining the locative construction requires primarily looking at the act of locating. We talk about location by asking about the location of entities, providing the location of entities specifically or inadvertently. The referential scene of location involves at least three elements: a trajector (TR), an entity to be located, a landmark (LM), an entity with respect to which the locatum is located, and a relation between the two. This referential scene may be construed in a variety of ways depending on the communicative intentions of the speaker. Different construals depend on the choice the speaker makes as to which entity to construe as the trajector and which as the landmark. This choice narrows down the possibilities in terms of the relations that can be conceived between the two. Another factor in how a certain

referential scene is construed is the linguistic machinery that is available in the language in which it is conveyed. Languages may pack information differently. What one language expresses with an adpositional phrase, another may incorporate into the verbal complex (Talmy 1985). Such variation may exist even within the same language. Construals of spatial scenes, then, have universal and language specific elements. Which is universal and which language specific is a point of investigation, and will be addressed here in part.

Recognizing that spatial information may be conveyed by a number of different lexical and grammatical structures, this study focuses on one type of construction, the locative construction, which incorporates the landmark and the relation. There are several reasons for isolating these two elements. First, in specifying location, while the trajector is construed as the topic, the relation and the landmark constitute the focus and provide the information for identifying the location of the topic. So, for example, in ‘The car is in the garage’, ‘the car’ is the trajector and the topic, whereas the rest is the focus. ‘in the garage’ constitutes a predicate prepositional phrase in this English sentence and it answers the question ‘Where is the car?’. Syntactically, it is one constituent, reflecting the conceptual dependence of the relational particle ‘in’ to the landmark ‘the garage’. This conceptual dependence is further reflected in the structure of this construction cross-linguistically in that it is always identical to the structure and markings of the genitive construction (see Section 3.3.1).

The locative construction on the semantic level (Sem) consists of the following three elements:

Sem RELATOR < REGION DESIGNATOR LANDMARK >

The region designator designates the type of relation that exists between the trajector and the landmark. As such, it has instances such as FRONT REGION, BACK REGION, SIDE REGION, TOP REGION, etc. The landmark is the entity that constitutes the ground against which the trajector’s location is specified. The relator connects the region designator and the landmark: the region designator designates a region of the landmark where the trajector is to be found. For example, in ‘He parked the car *in front of the bus*’, the locative construction in italics consists of the region designator ‘in front’, followed by the relator ‘of’, followed by the landmark ‘the bus’.

3.2 The morphosyntactic level

Syntactically, the locative construction behaves as a constituent. In English, for example, it can be fronted as a unit, when it has an adverbial function, as in (1):

- (1) [In the park], Jeremiah confessed his love of poetry for the first time.

Crosslinguistically, the locative construction exhibits variation as to the internal structure. The variation involves the morphosyntactic expression of the region designator and the expression of the relator. The landmark appears generally in the form of a noun phrase.¹ It is argued below that this variation is due to typological differences, the type of region designated, and the degree of grammaticalization of the specific instance of the construction.

On the morphosyntactic level the region designator and the relator are referred to by the term ‘spatial gram’ (Svorou 1994). A *spatial gram* is a unit that includes one or more morphemes used to designate a spatial region and its relation to the landmark. As such, it incorporates not only the region designator but also the relator. The relator does not always receive overt expression, but when it does, it appears as a genitive, or some other morphological case marker (accusative, dative). To illustrate the above we will look at two languages, Modern Greek with inflectional, case marking morphology, and English with non-inflectional morphology. As the region designator we will consider the instance of FRONT REGION. In English, the landmark is a noun phrase, *the house*, the region designator is expressed by a compound preposition ‘in front’, and the relator is also a preposition, the preposition ‘of’. The English spatial gram for FRONT REGION is *in front of*. In Modern Greek, the landmark is also a noun phrase *to spiti* ‘the house’ in the accusative case, which marks both the noun and the definite article, the region designator is an adverb, *brosta*, and the relator is the preposition *s-*, which has cliticized on the article, and the accusative case marker which appears on the landmark noun phrase. The spatial gram for FRONT REGION in Modern Greek is *brosta s- N-ACC*. The English and Modern Greek locative constructions for FRONT REGION, including their semantic (Sem) and syntactic (Syn) aspects, could be represented as follows:

Sem	relator	<REGION DESIGNATOR	LANDMARK >
	GEN	< FRONT REGION	LM >
Syn	PREP	< PREP + N	NP >
	of	in front	the house
ENGLISH in front of the house			
Sem	relator	<REGION DESIGNATOR	LANDMARK >
	ACC	< FRONT REGION	LM >
Syn	PREP ...SUF	< ADV + PREF	NP >
	s- ...-i	brosta	to spit-
MODERN GREEK brosta sto spiti			

This approach is in fact different from traditional accounts of adpositions where the word is the analytical unit. It is motivated by the desire to make sense of the patterns that cross-linguistic and historical data exhibit in a systematic way. It is based on the functionalist assumption that different ways of distributing semantic information across languages may accomplish the same goal in communication. This ‘distributed’ approach has been convincingly argued for by Sinha and Kuteva (1995).

3.3 The typology of locative constructions

In discussing the typology of locative constructions I will restrict my claims to the instances under investigation, that is INTERIOR REGION, FRONT REGION, BACK REGION, TOP REGION, BOTTOM REGION, and LATERAL REGION constructions. I believe, however, that the typology that my data suggest is extendable to other semantic domains as well. The variables that appear to be significant in this typology are (a) the order of region designator and landmark, (b) the expression of relator, whether it displays region designator marking (head marking) or landmark marking (dependent marking) patterns or whether it involves juxtaposing, and (c) the expression of region designator.

3.3.1 *The order of region designator and landmark*

The order of region designator and landmark for all semantic domains in this study are parallel to the order of constituents in the genitive construction. This finding is in line with Greenberg’s (1963) and Dryer’s (1992) findings with respect to the correlation between genitive and adpositional constructions. Two types of languages can be distinguished: Languages in which the region designator precedes the landmark noun phrase, mirroring the Possessed–Possessor order of the genitive construction, and languages in which the region designator follows the landmark noun phrase, mirroring the Possessor–Possessed order in Genitive constructions. Table 1, divided in two parts, presents a classification of the languages in the sample according to the pattern that they exhibit.

Given this correlation, we have ample evidence to consider the locative constructions as an instance of the genitive construction, which would need to be renamed ‘relational construction’ to account for the semantic variation.

3.3.2 *The expression of the relator*

The relator, the connector of the region designator with the landmark, is most commonly expressed by the same apparatus as for the expression of the genitive. Languages vary according to whether there is an explicit marker of the genitive or whether the relation is simply marked by the juxtaposition of the region designator

Table 1. Word Order in Locative Constructions and Genitive Constructions

Genitive construction: N (Possessed) N/PRO (Possessor)		
Locative construction: PREP/PREF (Region Designator) N/PRO (Landmark)		
<i>Language</i>	<i>Locative construction</i>	
	<i>NOMINAL LM</i>	<i>PRONOMINAL LM</i>
BARI	PREP POSSPRO N	PREP POSSPRO–PRO
CAR	PREP N PREP	PRO(GEN)
HALIA	PREP N	(PREP PRO)
ISLAND CARIB	PRO(GEN)–PREP N	PRO(GEN)–PREP
MELAN. PIDGIN	PREP POSSPREP N	(PREP POSSPREP PRO)
MWERA	PREP LOCPOSS–N	PREP LOCPOSS–PRO
PALAN. CHIN.	PREP N	PREP PRO
TIGRE	PREP N	PREP–PRO(GEN)
SHUSWAP	PREF-N	(no info)
Genitive construction: N (Possessor) N (Possessed)		
Locative construction: N/PRO (Landmark) POSTP/SUF (Region Designator)		
<i>Language</i>	<i>Locative construction</i>	
	<i>NOMINAL LM</i>	<i>PRONOMINAL LM</i>
!KUNG	N POSTP	PRO(GEN) POSTP
ABKHAZ	N PRO–POSTP	PRO(GEN)–POSTP
BASQUE	N-GEN POSTP	PRO–GEN POSTP
BIHARI	N-GEN POSTP	PRO(OBL)/–GEN POSTP
CHACOBO	N POSTP	PRO–POSTP
DAKOTA	N POSTP	PRO–POSTP
GUAYMI	N POSTP	PRO(GEN) POSTP
HAKA	N POSTP	PRO (–)POSTP
KAROK	N (PRO–)POSTP	PRO(GEN) POSTP
KUI	N-GEN POSTP	PRO-GEN POSTP
NAVAJO	N PRO(GEN)–POSTP	PRO(GEN)–POSTP
PAPAGO	N-SUF	PRO(GEN)–SUF
ISLAND CARIB	N-SUF	(no info)
CHEYENNE	N-SUF	(no info)
GUGU YALANJI	N-SUF	PRO (OBL)–SUF
ZUNI	N-SUF	(no info)
BURIAT	N POSTP	PRO POSTP

and the landmark. If there is an explicit genitive marker, they may also vary according to whether it is a free or a bound form, and moreover, if it is bound, whether it attaches to the landmark (LM-marking) or to the region designator (RD-marking). For languages in which it attaches to the LM, there is further variation depending on the nature of the NP: if it is a nominal (N) or a pronominal (PRO) NP.

Table 2. Distribution of languages according to mode of expression of relator

Languages expressing relation via juxtaposition		Languages with overt relator markers		
<i>with N or PRO</i>	<i>with N only</i>	FREE	BOUND	
			<i>RD-Marking</i>	<i>LM-marking</i>
Dakota	Car	Bari	Abkhaz	Basque
Haka	Guaymi	Melan. Pidgin	Navajo	Bihari
Palan. Chin.	Karok (front)		Island Carib	Kui
Chacobo	Papago			Mwera
Halia	Tigré			<i>w/PRO only</i>
	!Kung			Car
				Guaymi
				Karok
				Papago
				Tigré
				!Kung

A similar typology was presented in Svorou (1994) regarding FRONT and BACK REGION grams. Table 2 provides a classification of the languages in the sample in the categories indicated above.

In some languages, like Modern Greek, the relator is expressed not by the genitive, but rather the accusative, like in the example discussed in 3.2. It is interesting to note, however, that in the case of Modern Greek, the genitive did figure in the locative expression of Ancient Greek, as for example in (2), where *emprosœn* is an adverb.

- (2) *emprosœn* tou oik-ou
 in.front ART.GEN house-GEN
 ‘in front of the house’

3.3.3 *The expression of region designator*

Languages vary with respect to whether the region designator is monomorphemic or compound, and if it is compound, with respect to its composition. The patterns of gram composition that are found in the languages of my sample involve a number of combinations, as presented in Table 3. These patterns are found with all types of region designators. Moreover, a language may exhibit more than one pattern. As the discussion in the next section will show, the compound pattern does not only depend on the typology of a language, but also the evolutionary stage that the construction is at.

Table 3. Patterns of Compound Region Designator Composition

Pattern	Example lg.	Example forms
3SGPOSS-Noun + Locative Adposition	Island Carib	l-igibu 'his-face' gię 'from'
Locative Adposition + Noun	Bari	i 'loc' ηerot 'face' ('in front')
Noun + Noun + Adposition	Haka	hnu 'back' lé 'side' ya 'loc' ('behind')
Noun + Locative Suffix	Basque	aitzin 'front' -ean 'loc' ('in front')
Adposition + Adposition	Abkhaz	a-ç-pnə (a-ç'ə 'at' a-p+n ə 'in front')
Noun + Noun	Karok	vásih 'back' -kam 'side' ('behind')
Adverb + Adposition	Melan. Pidgin	insajd 'inside' lɔŋ 'at, in, on'

3.4 The evolution of locative constructions

Several studies, crosslinguistic and language-specific, converge on the evolutionary path that locative constructions are on. Brugman (1984), Svorou (1986, 1994), Claudi, Heine, and Hünemeyer (1991), Rubba (1994), among others, provide ample evidence for the nominal sources of spatial grams that participate in locative constructions. It is well-established that spatial grams develop from lexical sources that draw from the body-part term inventory (human or animal) and a number of environmental landmark terms. In Svorou (1994) I presented as a hypothesis the semantic and morphosyntactic aspects of this evolutionary path. The following path is an elaboration of the 1994 version. This elaboration has been inspired by work on Construction Grammar, such as Goldberg (1995) and Kay and Fillmore (1999).

The evolution of locative constructions involves grammaticalization. In line with the work of several researchers (Bybee, Perkins, and Pagliuca 1994; Traugott and Hopper 1993; Rubba 1994) the claim is that semantic change drives the grammaticalization of locative constructions. Phonological and morphosyntactic changes that occur on the evolutionary path of locative constructions follow semantic changes in a principled way. Such changes crystallize on the spatial gram within the locative construction. In describing the path, only certain points are observable and available through historical research, and those constitute the various stages on the path.

STAGE 0

Sem	relator	<	BODY PART / ENVIR. LM	LANDMARK >
	GEN	<	(instance)	LM (instance) >
Syn	ADP/AFF/Ø	<	N/NP	NP >
	-s		back	The girl

E.g. The girl's back

SEMANTIC PROCESS ————— > METAPHOR

Sem	relator	<	OBJECT PART	LANDMARK	>
	GEN	<	(instance)	LM (instance)	>
Syn	ADP/AFF/Ø	<	NP	NP	>
	of		the back	the house	

E.g. The back of the house

SEMANTIC PROCESS ————— > METONYMY

STAGE 1

Sem	relator	<	REGION DESIGNATOR	LANDMARK	>
	GEN	<	(region = object part)	LM (instance)	>
Syn	ADP/AFF/Ø	<	Adp + NP	NP	>
	of		in [the back]	the house	

E.g. in the back of the house

SEMANTIC PROCESS ————— > METONYMY

STAGE 2

Sem	relator	<	REGION DESIGNATOR	LANDMARK	>
	GEN	<	(region = adjacent to object part)	LM (instance)	>
Syn	ADP/AFF/Ø	<	ADP + N	NP	>
	of		in back	the house	

E.g. in back of the house

STAGE 3

Sem	relator	<	REGION DESIGNATOR	LANDMARK	>
	GEN	<	(instance)	LM (instance)	>
Syn	Ø	<	ADP	NP	>
			behind	the house	

E.g. behind the house

STAGE 4

Sem	relator	<	REGION DESIGNATOR	LANDMARK	>
	GEN	<	(instance)	LM (instance)	>
Syn	Ø	<	AFF	NP	>

(No examples for this instance of region designator in English)

Stage 0 is a pre-grammatical stage. Via metaphorical extension, a body part term or environmental landmark term, when used in the genitive construction, comes

to refer to a part of an object other than the body or a geographical region. Semantically, this metaphorical extension involves schematization of the source concept (the body part term) and extension of the schema to object parts that show similarity to the body part and its configuration. Morphosyntactically, the same apparatus that is used to indicate the relationship of the body part to its possessor is also used for the expression of the object part to the object. The apparatus is the genitive construction. Languages vary, of course, as to the means of expression of the genitive, from adposition, to affix, to zero expression.

In Stage 1 the transition in the use of the object part term to indicate location by becoming a region designator takes place. This transition involves profile shifting, as described by Langacker (1991), and it is carried out by metonymy. Object part terms profile the gestalt of the part; but region designators profile the relational configuration of the object part, not the part itself. This has also been advanced by Rubba (1994) in regard to the grammaticalization of two Amamaic prepositions. Morphosyntactically, the region designator may be marked by a locative adposition or affix plus a noun phrase and the rest remains the same in the form of the genitive construction.

Stage 2 involves a transition with respect to the region. The region gets expanded to the area adjacent to the object part and the profile shifts to this area. The semantic process is again metonymy. Morphosyntactically, the region designator is expressed by an adposition. The noun phrase loses some of its characteristics (e.g. the ability to take determiners) and gets incorporated with the adposition into a unit.

Stage 3 is a further development towards conceptual and morphosyntactic dependence. The overt marker of the relation between the region designator and the landmark ceases to exist, at least in languages where genitive constructions get overt marking as opposed to simple juxtaposition. This results in the elimination of a level of structure and the creation of a simpler structure. The next stage, Stage 4, involves further fusion of the two elements by affixation of the region designator on to the landmark, which remains a noun phrase.

4. Hypothesis

Assuming the model of the evolution of locative constructions presented above, the hypothesis that I am considering in this paper states that

the degree of grammaticalization that a locative construction can reach is a function of the semantics of the region designator. Specifically, if a language has LATERAL REGION, FRONT/BACK REGION, TOP/BOTTOM REGION, and INTERIOR REGION grams, they participate in locative construc-

tions that exhibit increasing degrees of grammaticalization in the order presented, whereby INTERIOR REGION grams may reach the highest levels while LATERAL REGION grams exhibit the lowest degrees of grammaticalization. This discrepancy is motivated by the cognitive asymmetry of the region designators and the use of the cognitive structures that they reflect.

All but INTERIOR involve regions defined by orientational axes motivated primarily by the upright human body, but also the four-legged animal body: the vertical axis, the frontal axis, and the side-to-side (horizontal axis). I consider such regions cognitively more complex than the interior region, since such regions are external to the landmark and, thus, do not coincide with its boundaries, requiring consideration of orientational axes based on perceptual asymmetries for their specification. Moreover, while the vertical and frontal axes provide such perceptual asymmetries distinguishing two poles (up vs. down, front vs. back), the side-to-side horizontal axis does not, making distinctions such as 'left' and 'right' cognitively more difficult in use and acquisition. This cognitive asymmetry may be correlated with frequency differences among spatial grams for the various instances of region designators, where on the one end of the scale INTERIOR REGION grams have the highest frequency of occurrence and on the other LATERAL REGION grams the lowest, with FRONT/BACK and TOP/BOTTOM REGION grams ranging in between. The question of frequency of occurrence of grams in discourse will not be taken up in this paper, since it involves a different method of investigation.

This hypothesis has important repercussions for grammaticalization theory in that it addresses the question of whether constructions are grammatical to the same degree, once they become grammatical. Moreover, it supports the position taken by several researchers in grammaticalization and in cognitive linguistics that there is no sharp separation between lexicon and grammar.

5. The data

The data considered in this study are from a sample of twenty six genetically unrelated languages that also provided the data base for the Svorou (1994) study. The language sample appears in the appendix below. Six instances of the locative construction are considered: INTERIOR REGION, TOP REGION, BOTTOM REGION, FRONT REGION, BACK REGION, and LATERAL REGION.

For each instance of the locative construction, relevant data from each language include the spatial grams and any information about their phonological and morphological make-up, the syntactic patterns they can appear in, and the uses they may have. Only spatial grams that appear in the locative construction as defined in Section 3 were considered.² The same procedure for data collection and

recording that was used in the Svorou (1994) study was followed here as well. For a detailed description of the coding procedure see Appendix 2 in Svorou (1994).

6. Degree of grammaticalization

Grammatical constructions, such as the locative construction, are the product of evolutionary processes at any point in the history of the construction. Identifying the evolutionary stage which a certain construction has reached in a language involves considering its functional/semantic range as well as a host of morphosyntactic characteristics. The criteria for establishing degree of grammaticalization used in this study are ones that have been used extensively in grammaticalization theory (e.g. Heine, Claudi, and Hünemeyer 1991; Traugott and Heine 1991; Svorou 1994; Bybee, Perkins, and Pagliuca 1994) and are discussed below.

6.1 Morpho-phonological reduction

It is widely accepted and documented that morphophonological reduction accompanies grammaticalization (for example, Lehmann 1985; Bybee et al. 1994). In locative constructions as well, we observe a general tendency towards morphophonological reduction of the spatial gram as the construction becomes increasingly grammatical. The bias toward the spatial gram, as opposed to the landmark, is a result of the fact that the spatial gram is the constant, recurrent unit within the construction, with the landmark being the variable one.³ The aspect of morphophonological reduction that is crucial here involves the number of morphemes that constitute the spatial gram. As mentioned earlier, spatial grams exhibit a range of modes of expression, from monomorphemic to compound (up to four morphemes in my sample). Given that locative constructions have their sources in relational constructions of possession/association which have been metonymically adjusted for location with the addition of the appropriate nominal (noun like 'side') or grammatical elements (a locative preposition or affix), I consider that monomorphemic expression is a development from more complex structures and it constitutes the most advanced stage of grammaticalization.⁴

When we look at the distribution of the six region designators in the languages of the sample with respect to the mode of expression of the spatial grams, we notice an increase in monomorphemic expression as we move from LATERAL REGION to INTERIOR REGION. Table 4 shows the distribution of region designators with respect to the mode of expression of the spatial gram. 74.6% of the INTERIOR REGION spatial grams are expressed monomorphemically, compared with 52.5% for TOP and 54% for BOTTOM REGION grams. FRONT, LATERAL

Table 4. Distribution of region designators with respect to mode of expression of spatial grams

REGION DESIGNATOR	LATERAL	FRONT	BACK	TOP	BOTTOM	INTERIOR
<i>Expression</i>						
<i>Mode</i>						
<i>mono-</i>						
<i>morphemic</i>	10 (34%)	17 (38.6%)	11 (29%)	21 (52.5%)	21 (54%)	56 (74.6%)
<i>compound</i>	18	27	27	19	18	19
# of grams	28	44	38	40	39	75
# of languages	14	20	16	20	22	25

and BACK REGION grams trail behind at only 38.6%, 34%, and 29%, respectively. It is also interesting that while TOP and BOTTOM REGION grams, as polar opposites of the up-down axis, exhibit approximately the same percentages of monomorphemic expression, FRONT and BACK REGION grams, the polar opposites of the front-back horizontal axis, do not behave similarly; FRONT REGION grams receive monomorphemic expression more frequently in the languages of my sample.

To illustrate the role that the semantics of the region designator plays in the mode expression as an indicator of degree of grammaticalization, we will look at some data from Haka, a Sino-Tibetan language. The examples are from Newland (1897).

FRONT REGION, BACK REGION, and LATERAL REGION constructions involve a landmark NP and a postposed compound spatial gram consisting of a spatial noun, a noun *lé* meaning ‘side’, and a locative adposition *yā*, as in the examples in (3).⁵

- (3) a. *kema hmai lé yā a kal*
 me face side in, went
 ‘He went before (in front of) me.’ (:17)
- b. *kwa pin" lé yā, rumluk, a úm"*
 village side side in, jungle, it is
 ‘There is a jungle on one side of the village.’ (:65)
- c. *k'-hnú lé yā, htút" lo*
 me-back side in sit IMP
 ‘Sit behind me’ (:17)

TOP REGION and BOTTOM REGION constructions are formed similarly, except that there may be reduction of the spatial gram when the locative construction is

not in focus, but rather appears unstressed. Compare the examples in (4) where the locative construction is in focus to the examples in (5) where it is unstressed.

- (4) a. *inn chúng" lé yā a úm"*
 house top side in it is
 'It is on TOP of the house.' (:137)
- b. *lúng thung lé yā*
 stone bottom side in
 'under the stone' (:17)
- c. *howka, klang" lé yā maw a úm", shuk" lé yā da?*
 gate below side in entrance is it above side in or
 'Is the entrance gate above or below?' (:63)
- (5) a. *inn chúng ā, a úm"*
 house top in it is
 'It IS on the house' (:16)
- b. *inn thoi yā, shear k'kúm" lai*
 house under mythun I.confine FUT
 'I will confine my mythun under the house' (:17)
- c. *k'inn klang, k'mú"*
 my-house below I-found
 'I found it below my house.' (with reference to hillside) (:17)

The locative constructions in unstressed position, which we can guess is also the most frequent occurrence, are reduced, lacking the noun *lé*, and in the case of *klang* 'below' even the locative adposition.

If we compare the above with the INTERIOR REGION construction, we see that the gram may consist of two elements, lacking the spatial noun *lé*, as in (6a) or even lacking the specific region designator, as in (6b).

- (6) a. *inn chún nā, a it" ko*
 house inside in he sleep PRES
 'He is sleeping inside the house' (:59)
- b. *inn nā, a úm"*
 house in he is
 'He is inside the house' (:11)

The above examples illustrate the asymmetry observed in the crosslinguistic data as to the tendency for morphophonological reduction across instances of the locative construction. We will now consider the second criterion for degree of grammaticalization.

6.2 Loss of autonomy

This second criterion involves the degree of autonomy of the spatial gram. Autonomy can be determined by whether the gram is bound or not and by whether it is dependent upon the morphophonological context exhibiting allomorphy. The prediction is that as locative constructions move towards higher degrees of grammaticalization, the spatial grams tend to lose their autonomy either by becoming agglutinated or even fused with the landmark noun and/or by becoming dependent on the morpho-phonological context, thus exhibiting allomorphy. Table 5 shows the distribution of the region designators with respect to boundedness and allomorphy of the spatial grams expressing them.

Table 5. Distribution of region designators with respect to boundedness and allomorphy of spatial grams

REGION DESIGNATOR	LATERAL	FRONT	BACK	TOP	BOTTOM	INTERIOR
bound	2 (7%)	6 (14%)	3 (8%)	4 (10%)	3 (8%)	35 (47%)
free	26	38	35	36	36	40
# of grams w/ allomorphs	2	0	0	0	1	12 (16%)
# of grams	28	44	38	40	39	75
# of languages	14	20	16	20	22	25

It is striking that, while LATERAL, FRONT, BACK, TOP, BOTTOM region designators are expressed by bound spatial grams very infrequently (7–14% of the time), INTERIOR region designators are at 47%, showing a much greater tendency for dependence. It is also interesting that FRONT and TOP region grams tend to be slightly more dependent than the rest. With respect to allomorphy, a respectable 16% of INTERIOR grams exhibit allomorphy compared to rare allomorphy with the grams for the rest of the region designators.

6.3 Loss of obligatory marking

This criterion applies to languages with an overt relator marker, which may take the form of a genitive affix or adposition or some other case affix, such as accusative or dative. As argued in Heine, Claudi, and Hünemeyer (1991), locative constructions in advanced levels of grammaticalization lose the requirement for a genitive marker which indicates the relationship between the region designator and the landmark noun. With reference to the region designators studied here, we observe a tendency

for progressive loss of the relator requirement as we go from LATERAL REGION to INTERIOR REGION constructions:

region	LATERAL	FRONT/BACK	TOP/BOTTOM	INTERIOR
overt relator	obligatory	obligatory	optional	missing

To illustrate this tendency, we will look at some examples from Bihari, an Indo-European language. The examples are from Jha (1958). In Bihari, the relator takes the form of the genitive suffix when the landmark noun phrase is nominal and, when it is pronominal, the pronoun is in the oblique form. This characteristic of the landmark NP is taken as the expression of relator. In LATERAL, FRONT, and BACK constructions the genitive affix or the oblique pronominal form are obligatory, as is illustrated in (7). In TOP and BOTTOM REGION constructions the genitive marker appears optionally on the landmark nominal, as is illustrated in examples (8). In INTERIOR REGION constructions, however, there is no genitive marker, as is illustrated in (9). Notice, also, that there are two different interior grams, one of which, *me* in (9a) is written bound and is analyzed as an affix.

- (7) a. *gharà-k^a sām^ane*
house-GEN in.front
‘in front of the house’ (:348)
- b. *hamarā pāchā hamà^a bhæ*
1SGOBL behind 1SGOBL brother
‘My brother is behind me.’ (:336)
- c. *ham^arā dīs^a rahāh^a*
1SGOBL on.side.of remain
‘You remain on my side.’ (:332)
- (8) a. *hia-(ka) upara*
breast-(GEN) above
‘above the breast’ (:324)
- b. *banataru tarā*
forest.tree under
‘under a tree in the forest’ (:331)
- (9) a. *ghār^a-me*
house-in
‘in the house’ (:309)
- b. *ghār^a kà rākhⁱāu*
house in go-keep
‘Go and keep it inside the house.’ (:325)

Loss of obligatory marking, like the relator marker, sometimes accompanies morphophonological reduction of the region designator and results in fusion with the landmark noun phrase. This phenomenon can be illustrated with examples from Karok, a Hokan language (Bright 1957). In Karok, the locative construction involves postposing of the spatial gram. The spatial gram is compound, consisting of a compound noun designating the region (*súruk* + *kam* ‘side’) carrying a possessive prefix (*mus-*), as in (10a). In this example, the region designator designates a region in contact with the back/under side of the landmark. In terms of grammaticalization, this is an example of an earlier stage than the stage where the region designator designates a region adjacent to the back/under side. This stage is illustrated by the example in (10b), where the trajector is in a region not in contact, but adjacent to the landmark. In this example the locative construction has undergone morphophonological reduction accompanied by loss of the possessive prefix: *-kam*, a component of the nominal region designator, has been eliminated, and the possessive prefix is not required. The result is the suffixation of the spatial gram onto the landmark.

- (10) a. *xás va pa-yíkkihar mus-súrukam tó ·əríš*
 then thus ART-sick.person his-underside them set
 ‘Then he set them down underneath the sick person.’ (:294)
- b. *čiší. ?uhyári ?amkiras-súruk*
 dog is.standing table- under
 ‘The dog is standing under the table.’ (:306)

The last criterion for degree of grammaticalization involves the meaning of locative constructions.

6.4 Schematization

Semantic change is considered the driving force in the process of grammaticalization. The nature of semantic change involved has been a point of mostly terminological dispute with terms such as ‘bleaching’ and ‘semantic reduction’, which allows inferences of loss in the process of change. While the grammaticalizing elements within the construction lose in referential abilities, they gain the ability to expand the range of uses. This creates a situation where terms such as bleaching and semantic reduction cannot be used felicitously. The term ‘schematization’, proposed within the cognitive semantics framework, appears more fitting for the kind of semantic change involved in grammaticalization. The referential “slimming down” of the gram within the construction gives it a schematic structure, which then makes it fit semantic constraints of other situations and grammatical constructions.

Table 6. Uses of spatial grams

REGIONS	LATERAL	FRONT	BACK	TOP	BOTTOM	INTERIOR
<i>USES</i>						
<i>SPATIAL</i>	lateral along beyond	anterior towards	posterior inferiority	superior superior- contact	inferior downwards contiguity towards over	containment contiguity allative ablative medial region through
<i>TEMPORAL</i>		temporal anteriority	temporal posteriority			temporal region
<i>OTHER</i>		comparative		repetitive superlative	reason	recipient benefactive comitative instrumental partitive exchange

Schematization of the spatial grams under discussion allows them to acquire other spatial uses, temporal uses, and a host of case-like functions. Table 6 summarizes the types of uses associated with spatial grams for the six regions under consideration from the languages of my sample.

In comparing the range of uses of spatial grams in the various instances of the locative construction, we observe that LATERAL REGION grams have few uses in the spatial domain, FRONT and BACK REGION grams have uses in the spatial and temporal domain and in one language a FRONT REGION gram can be used for comparison, TOP and BOTTOM REGION grams have a number of spatial and non-spatial grammatical uses, but no temporal, whereas INTERIOR REGION grams not only do they have many spatial uses, but also temporal and many different uses indicating case-like functions. I interpret this finding as an indicator of the degree of grammaticalization of the different constructions: LATERAL REGION grams are the least grammaticalized, and INTERIOR REGION grams are the most grammaticalized exhibiting increased schematization.

6.5 Generalization

Consideration of the various criteria for grammaticalization of locative constructions leads us to propose a continuum of the likelihood of a locative construction to reach advanced levels of grammaticalization depending on the type of region it designates. We can predict that within the constraints of a certain language, FRONT/BACK/SIDE REGION constructions are the least likely to advance to high

levels of grammaticalization whereas INTERIOR REGION constructions are the most likely, with TOP/BOTTOM REGION constructions occupying an intermediate position, albeit somewhat slanted towards the least likelihood. This continuum of likelihood can be represented graphically as follows:

Degree of likelihood of a construction advancing in high levels of grammaticalization

most likely.....		.....least likely
INTERIOR	TOP/BOTTOM	FRONT/BACK/LATERAL
REGION	REGION	REGION
constructions	constructions	constructions

One familiar with spatial semantics would immediately observe that the asymmetry found in the degree of grammaticalization of locative constructions reflects the asymmetry in the degree of complexity of the schema associated with each construction. FRONT/BACK/LATERAL REGION constructions and TOP/BOTTOM REGION constructions all involve exterior regions of the landmark which are defined by axes: the horizontal frontal axis and the vertical axis, respectively. INTERIOR REGION constructions, on the other hand, do not require any such axes, since the region is defined by the characteristic shape of the landmark. The simplicity of the schema underlying INTERIOR REGION constructions appears to be a catalyst for grammaticalization.

7. Conclusion

This paper addressed the question of the possibility of predicting how much a locative construction can grammaticalize. The hypothesis proposed suggests the semantic content of the region designator as a factor affecting the degree of grammaticalization of a construction.

The first part of the paper involved a detailed discussion of the locative construction. The locative construction was taken as a typological parameter, which exists in a great number of languages. The construction was defined on the semantic and morphosyntactic level, distinguishing, on the semantic level, the region designator, the landmark, and the relator, and on the morphosyntactic level, the spatial gram and the noun phrase. A spatial gram was specified as a grammatical element that incorporates the expression of the region designator and the relator. Several aspects of the construction, including the order of region designator and landmark, the expression of the relator, and the expression of the region designator, vary cross-linguistically. A discussion of such variation, based on a sample of genetically and geographically unrelated languages, set the stage for providing

a model for the evolution of the locative construction on both the semantic and morphosyntactic level.

Offset in this background, the hypothesis of the semantic content of the region designator determining the degree of grammaticalization of the construction was tested. Criteria such as morphophonological reduction, loss of autonomy, loss of obligatory marking, and schematization, all involving the spatial gram, provided evidence in support of the hypothesis. It was found that INTERIOR REGION grams are the most likely to reach advanced levels of grammaticalization, as compared to TOP/BOTTOM REGION grams and FRONT/BACK/LATERAL REGION grams that are less likely in decreasing degree to reach high levels of grammaticalization.

It is interesting that certain concepts, such as containment, encoded by INTERIOR region designators, are more grammaticalizable than others. Such concepts have a simpler semantic structure in the sense that the region is delineated by consideration of the boundaries of the landmark object. In contrast, concepts that require consideration of axes, such as the frontal horizontal axis or the vertical axis for the delineation of the region, have a complex semantic structure. Such a complex structure is probably more difficult to schematize, and the lack of this possibility puts a break on how much such a concept can grammaticalize. It would be interesting to see whether other concepts that do not require axes follow the prediction.

Abbreviations

1	first person
3	third person
ACC	accusative
ADP	adposition
ADV	adverb
AFF	affix
ART	article
FUT	future
GEN	genitive
IMP	imperative
LM	landmark
LOC	locative
NP	noun phrase
N	noun
OBL	oblique
POSSPRO	possessive pronoun

POSSPREP	possessive preposition
POSTP	postposition
PREF	prefix
PREP	preposition
PRES	present
PRO	pronoun
PRO(GEN)	genitive form of pronoun
PRO(OBL)	oblique form of pronoun
PRO-GEN	pronoun with genitive suffix
RD	region designator
Sem	semantic aspect of construction
SG	singular
Syn	syntactic aspect of construction
SUF	suffix
TR	trajector

Notes

1. In some cases where a spatial gram is used in a temporal sense, the landmark may have the form of a clause, in which case the spatial gram functions as a complementizer introducing the clause. For example, 'He arrived before I did'.
2. In several languages spatial grams appear on the verbal complex. The nature and function of such grams appears to be different. Being fused with the verb, they contribute to the internal semantics of the verb, and are, therefore, derivational. Also, they are part of a different way of describing a spatial scene. The comparison of verbal spatial grams to the spatial grams that participate in the locative construction as defined here will not be undertaken in this paper.
3. Frequently occurring landmarks may in some languages appear in the construction by themselves without a spatial gram. For example in English the noun 'home' has this special status as we can see from examples such as 'We went home/*to home.' Compare 'home' to other frequently occurring destinations, 'We went *work/to work', 'We went *school/to school', which do not allow the omission of the spatial gram.
4. In languages in which the relator does not receive overt expression but rather possession and other relational notions are indicated by juxtaposition, the spatial gram may be monomorphemic from the beginning of its evolutionary path, although it is still possible to have 'body part + side' as the gram. This question requires further investigation.
5. Haka also possesses another LATERAL REGION gram which is monomorphemic as in the following example:

k'-pwong v'htút" ko
 me-beside sit IMP
 'Sit beside me' (:18)

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Really worthwhile or not really significant?

A corpus-based approach to the delexicalization and grammaticalization of intensifiers in Modern English

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1. Introduction: Investigating the dynamics of intensification

There is a pertinent link between the stylistic qualities of hyperbole and expressivity on the one hand, and novelty in language on the other. Crudely speaking, the more ‘novel’ or ‘unusual’ a linguistic item in a given function, the more expressive it will be perceived to be. Intensification¹ is a lexico-grammatical category that is mainly employed to achieve expressivity. As such, it thrives on novelty, i.e. on innovation and semantic change.

Such change is typically heralded in the more dynamic text-types, occurring in spoken rather than written language, in informal rather than formal conversation, between younger rather than older speakers. Like all emphatic means of expression, intensifiers lend themselves to being used as ‘shibboleths’, as linguistic clues to the identity and group membership of the speaker. This is particularly apparent in the language of ‘yoof’: every generation of teenagers coins its own set of expressions like *ab fab* (*absolutely fabulous*), *bloody brill* (*brilliant*), *dead cool*, or *well wicked*. And just as they are becoming accepted and adopted on a wider scale, they are ‘out’ and obsolete in their in-group function. Over time, older items gradually shed much of their expressive force and either disappear altogether or become integrated into mainstream usage.

This paper explores the mechanisms of semantic change within the intensification paradigm, notably the conceptual resources from which new items are taken and progressively delexicalised, in some cases to the point of complete grammaticalization. The paper concludes by briefly tracing one intensifier’s micro-diachronical progress across various text-types and corpora.

Two methodological restrictions are made: first, the scope of intensification is here restricted to its prototypical function, namely that of grading adjectives; this paradigmatic reduction makes it easier to focus on subtle semantic changes. And secondly, all data is taken exclusively from corpora of British English. This is mostly for reasons of corpus availability, but again enhances the focus of analysis; in American English, for example, the situation is further complicated by the two rivalling forms of *really* and *real*, the latter of which hardly ever occurs in adjective intensifying (adj-int) function in British English.

As these presuppositions show, this paper is of a firmly empirical and descriptive persuasion; all examples given are actual corpus usage, reducing introspection and speculation as far as possible. Yet it is hoped that the mechanisms under discussion will point beyond the instantial and can make a small contribution to theory-building as well as to the description of modern English usage.

2. The delexicalization and grammaticalization of intensifiers

Intensifiers are a heterogeneous set, comprising well-established closed-class (C-class) items such as *much*, *rather*, *quite*, *well* and *very*, as well as open-class (O-class) adverbs like *highly*, *fairly*, *terribly*, *horrifically* or *absolutely*. Innovation by definition occurs in the open class of *ly*-intensifiers, but morphological marking alone does not say much about an item's semantic load or state of grammaticalization. While there is a distinct contrast in degree between *highly* and *fairly*, for example – with *highly* in upgrading, 'boosting', and *fairly* in more moderating, 'compromising' function (cf. *highly competitive* and *fairly complicated*), the difference between *terribly* and *horrifically* is far less obvious. Both are potential boosters of adjectives, and both have associations of 'shock, fright, disgust' – only to a different extent: *horrifically* is by far the less frequent (10 vs 1253 hits in the BNC), and adj-int *terribly* has come to be perceived as the less forceful of the two.

These latter observations are first indicators of progressive delexicalization and grammaticalization. While delexicalization – or 'blunting', as it has been referred to in the context of intensification – generally goes hand in hand with an item's tendency towards a more grammatical function, large-scale corpora allow us to trace this development both in quantitative and qualitative terms. The more grammaticalised an intensifier, the more it will lose its lexical restrictions and increase in frequency. At the same time, its collocates and contexts of occurrence will change in relation to its own semantic change.

In the case of *terribly*, this becomes particularly apparent in its adjectival right-hand collocates. The top twenty most significant ones² in the BNC still carry an overwhelmingly negative charge (*sorry*, *upset*, *embarrassing*, *sad*, *unhappy*, *disap-*

pointed, painful, boring, afraid, tired, worried, frightened, expensive, complicated, ill), but they also contain three which are positively connoted (*brave, impressed, proud*) and two that are at least neutral (*excited* and *keen*). Since one would expect *terribly* – in its fully lexical meaning – to select negative collocates, and as this expectation is mostly still confirmed, it cannot have incurred full delexicalization: beyond its mere boosting function, it has retained some of its conceptual meaning. And yet the combination ‘*terribly* + ADJ’ clearly no longer means ‘ADJ to an extent that I consider terrible’ – or else *terribly proud* would be semantically incompatible.

This partial state of delexicalization is by no means exceptional. On the contrary, intensifiers seem to be losing in force and denotational meaning from the very moment of their inception. The more often an intensifier is used, the less marked and expressive it becomes. Consequently, all items of the paradigm are located somewhere along a continuum from fully lexical to fully grammatical meaning.³

Towards the more advanced end of the delexicalization continuum there are items such as *absolutely*, which Partington (1993:187) cites as “possibly the clearest example” of intensifiers that “have experienced a steady decline in their ability to function as independent lexical choices.” The OED paraphrases the historical meaning of *absolutely* as ‘in a manner detached from other things, separately, independently’ and ‘viewed by itself, without reference to, or comparison with, others’. In these senses – now obsolete – it used to be contrasted with *relatively* and *comparatively*. The OED glosses the present intensifying meaning of *absolutely* as ‘to the fullest extent, in the highest or utmost degree; entirely, wholly, altogether, quite’, with surprisingly early evidence:

- (1) That they may be **absolutely skillfull**. (1570)
- (2) A Prince **absolutely valorous and vertuous**. (1612)

On closer inspection, this sense allocation appears to be somewhat doubtful: the three items in intensifying scope (*skillfull, valorous* and *vertuous*) are all gradable adjectives and hence incongruously graded with a maximizer such as *entirely* or *wholly*: in affirmative contexts, the combinations *?wholly skilful* or *?entirely valourous and virtuous* would appear somewhat infelicitous,⁴ which casts some doubt on the OED gloss for the above citations. Yet somewhere on the way to present-day English, *absolutely* – as in *absolutely necessary* or *absolutely fabulous* (BNC) – has lost all associations with the semantic field of ‘comparison’ and assumed its present maximizing meaning. The process of delexicalization can be seen as complete.

The most prominent adjective intensifier, *very*, is arguably also the most prominent case of grammaticalization. Its historical meaning is now completely opaque; it is derived from Latin *verus* through Old French *verai* and Middle En-

glish *verray*,⁵ all with a modal meaning of ‘tru(ly), truthful(ly)’. The OED gives, *inter alia*, the following citations for early *very* modifying adjectives:

- (3) But for he was **verray repentaunt** he was exiled for þe fey. (1387)
 (4) None schal be ouer skypped in any wyse for any suche chaunge, withe oute a **very resonable** cause. (1450)

The meaning of the adj-int combination in (3) can be glossed as ‘truly repentant’, and in (4), too, the context suggests ‘truly reasonable’, rather than present-day ‘very reasonable’. According to the OED this old, truth-emphasising meaning of *very* is, in its older instantiations, “not always distinguishable” from that of the modern intensifier.⁶ But this ambiguity is no longer present in the modern use of *very* as modifier of adjectives. Bolinger (1972: 28) notes that “if there are function words, *very* is surely one of them.” *Very* has undergone full delexicalization: it has lost all of its modal, truth-averring meaning and has retreated to its present-day function as prototypical booster of adjectives (and adverbs).⁷

The examples of *terribly*, *absolutely* and *very* illustrate the paradigm’s susceptibility to losing not only in expressivity, but also in propositional content. At the end of this process, an intensifier becomes reduced to its modulating, scaling function – upgrading or downtoning the item in its focus without expressing any denotational meaning of its own. The next section explores what *kinds* of meaning lend themselves to being transferred into an intensifying context and to becoming weakened and finally phased out over time. It is concerned with the ‘conceptual domains’ of intensification, i.e. the sources from which new items are taken when they are first used as ‘unusual’ intensifiers.

3. Conceptual mechanisms: Clines of delexicalization

3.1 Preliminaries

As has been pointed out, the constant need for new expressive items is the driving force behind the continual process of linguistic innovation in the intensifier paradigm, where “all means of emphasis quickly grow stale and need to be replaced” (Bolinger 1972: 18). In Gricean terms, there is good reason why we should be constantly creating new means of emphasis: our utterances must be ‘relevant’, which implies that they should preferably be marked as such. In speech as well as in writing, we are constantly having to justify that X actually *needs* to be said, that it is *frightfully important*, *highly interesting* – or *well wicked*.

There have been several attempts to classify the semantic roles of adjective modifiers (cf. Johansson 1993) or the semantic fields from which adj-int items are

taken (cf. Spitzbardt 1965).⁸ Ideally, such a classification would allow predictions as to which elements of a given semantic set were likely candidates for the next conventionalised intensifier. Unfortunately for the present purpose, this issue does not seem to have been addressed. What still remains to be clarified is the precise connection between semantic roles and a purely intensifying function – possibly one of grammaticalization.

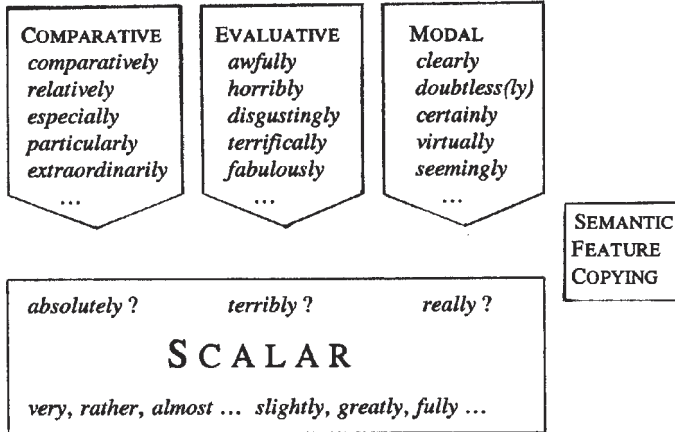
The following pages will propose a classification that not so much focuses on the precise *denotation* of the individual items, but rather on precisely what an adverb *does* to grade an adjectival quality. Broadly speaking, there seem to be five types of adverbs which collocate with adjectives to achieve an intensifying effect: SCALAR, SEMANTIC FEATURE COPYING, EVALUATIVE, COMPARATIVE and MODAL.

3.2 The semantic category ‘SCALAR’

The SCALAR category is the least semantically marked of the five sets, comprising adverbs that are lexically confined to scaling an adjectival quality, with no additional propositional content. These are the ones which are aptly termed ‘adverbs of degree’, as they express *nothing but* the notion of degree.⁹ The SCALAR category falls into two sub-sets:

- a. adverbs which actually depict a certain ‘degree’ or ‘extent’, or – in iconic analogy – ‘spatial extension’, such as *completely, entirely, extremely, fully, highly, largely, totally, wholly* or *widely*. The members of this group can be identified as follows: their adjectival bases slot into the syntactic frame ‘*to a/ the ... degree/ extent*’, and the resulting phrase is near-synonymous with the adverb itself. For example, *to a large degree* is functionally equivalent to *largely*, *to the full extent* corresponds to *fully* etc. In all these instances it is their actual lexical meaning which qualifies them as intensifiers: they are SCALAR by denotation.
- b. adverbs which also stand up to the ‘*to a/ the ... degree/ extent*’ paraphrase, but whose SCALAR meaning is – in contrast to those under (a) – only acquired: items such as *absolutely, fairly, modestly, perfectly, terribly, thoroughly* or *very* have all undergone delexicalization. There is nothing ‘fair’ about being *fairly inactive*, nothing ‘thorough’ about being *thoroughly bored* and nothing ‘modest’ about being *modestly positive*. Yet the grading meaning has over time become firmly established, and in intensifying function the modifiers do not express any meaning beyond that of degree.

As all intensifying items over time tend to shed their conceptual meaning, the SCALAR category can be seen as a diachronical ‘drain’ of delexicalization. Graphically, this can be depicted in the following way:¹⁰



The three vertical arrows represent three clines of delexicalization,¹¹ conceptual resources which over time progressively feed into the inventory of the SCALAR set. Each of them corresponds to one of the three intensifiers discussed in Section 2 above: *terribly* falls into what is here termed the EVALUATIVE set of intensifiers, *absolutely* is a delexicalised COMPARATIVE item, and *very* originally belonged to the MODAL category. These conceptual resources will be discussed below.

3.3 The semantic category ‘SEMANTIC FEATURE COPYING’

Before we turn to the three clines of delexicalization, however, another class of intensifying adverbs deserves at least cursory treatment, namely the one labelled SEMANTIC FEATURE COPYING.¹² On the graph, it has no direct link to the SCALAR set because it does not conform to the same mechanism of delexicalization. It concerns INT+ADJ pairs such as:

acutely aware, blatantly clear, blindingly obvious, clearly visible, closely linked, crucially important, desperately unhappy, firmly implanted, grossly insensitive, loosely structured, mercilessly hard, readily available, ruthlessly callous, or vaguely similar.

In each of these cases, the adverb achieves its intensifying effect by copying a substantial part of the adjective’s denotation, in some cases even resulting in almost exact semantic reduplication. In *blatantly clear* or *crucially important*, for example, there is near-synonymy between the adverb’s adjectival base and the adjective itself. In other pairs, such as *loosely structured* or *vaguely similar*, part of the meaning of the adjective is contradicted or ‘negatively copied’ by the adverb, to achieve a downtoning effect.

Such collocations do not become delexicalised in the same way as the other items under discussion. In the case of *terribly*, for instance, delexicalization has led to an increase in collocability. Its gradual loss of negative evaluation has made it compatible with adjectives like *brave*, *impressed* and *proud* (see above) – a first step towards grammaticalization as an all-round intensifier. FEATURE COPYING items, on the other hand, are too closely bound to their respective collocates to follow that route. When they become individually delexicalised, they tend to *lose* their independent combinability and become progressively ‘co-selected’ as an INT+ADJ pair. Individual delexicalization here does not push these adverbs towards grammaticalization, but towards *co-lexicalization* with the adjectives they modify. Over time, however, the communicative effect of both mechanisms is the same: both grammaticalised and co-lexicalised intensifiers lose in expressivity, and innovation is required. The next three sections are devoted to three conceptual resources of hyperbolic innovation.

3.4 The semantic category ‘EVALUATIVE’

EVALUATIVE adjective modifiers are possibly the most powerful resource of innovation in the intensifier paradigm. They consist of adverbs which, besides scaling their focus, express a judgmental notion on the part of the speaker. In the above discussion of *terribly*, this evaluative meaning has already been paraphrased as ‘*to a degree/ extent that I consider X*’, with X being the adjectival base of the respective intensifier. If we refer to something as *ridiculously low* (FLOB), for example, it is low to an extent that we find ridiculous; and something that we find *hopelessly uneconomic* (FLOB) is uneconomic to a degree that we consider hopeless. There are two kinds of intensifier that conform to this pattern:

- a. adverbs which express a ‘telic’ evaluation, i.e. which presuppose a norm that has to be fulfilled: for a business to be *adequately staffed* (BNC), the number and quality of its personnel have to comply with the speaker’s expectations, and a *sufficiently thrilling design* (FLOB) is one that is stimulating enough to satisfy the speaker’s taste. Likewise, telic evaluation concerns cases where a given norm is not reached or is overreached: ideas which are *insufficiently Jewish* (FLOB) do not meet the speaker’s standards of Judaism and someone who is *excessively humble* (LOB) is more self-effacing than the speaker considers adequate. Telic evaluators, which also include *extortionately*, *extravagantly* and *suitably*, are ultimately a restricted set, as there is only a limited number of adverbs denoting ‘enough to reach, exceed or fall short of a given norm’.
- b. adverbs which express an ‘open’, non-telic evaluation, such as *hopelessly* and *ridiculously* in the uses quoted above. This is an almost boundless resource, comprising potentially all intensifiers derived from an evaluative adjective. It

is entirely up to the speaker to draw a connection between a personal evaluation and an adjectival quality: we may find something *remarkably inexpensive* (BNC), *unbelievably elegant* (LOB), *reasonably plausible* (LOB), or *dreadfully wrong* (FLOB); calling someone *painfully thin* (BNC) or speaking of a *remarkably intelligent French woman* (LOB) is a matter of idiosyncratically personal judgment – in the latter case even one that some might consider racist or sexist, or both.

It is easy to see how non-telic EVALUATIVE intensifiers fuel the cycle of continual innovation and delexicalization. It is a matter of personal choice how we evaluate the fact that a referent possesses a certain quality to a certain degree. Someone who looks *painfully thin* to one person may look *enviably thin* to another; and evaluations such as *disgustingly healthy* may out of context even appear incongruous, or at least peculiar. But this very peculiarity gives them considerable force and makes them susceptible to sarcastic or (self-)ironic usage.¹³ Again, the less novel and unusual such combinations become, the more they lose in expressivity and need to be replaced. Bäcklund (1973:288) notes that “most adverbs expressing a high degree (...) have connotations of nonchalance or insincerity which blunt their intensifying force.” The first person to use *terribly* (or *awfully*)¹⁴ to intensify a quality which they did not really consider to be ‘terrible’ or ‘awful’ paved the way for the delexicalization of the two intensifiers: irony fosters linguistic change.

3.5 The semantic category ‘COMPARATIVE’

The COMPARATIVE class of intensifiers is a rather minor resource for innovation. Like the telic sub-class of EVALUATIVE items, it is restricted to one lexical set, namely that of ‘comparison’. COMPARATIVE items achieve intensification by comparing the referent with its rivals or equals; they are boosters such as *eminently*, *especially*, *extraordinarily*, *uncommonly*, *unusually* and *particularly*, compromisers like *comparatively* and *relatively*, or minimizers such as *not especially*, *not particularly* and *not uncommonly*.

If we call someone *particularly attractive* (FLOB), we find them very attractive, and more so than other people; someone who is *eminently qualified* (LOB) for a particular task is highly qualified, and more than others or more than one might expect. By contrast, someone who is *comparatively wealthy* is wealthy by comparison, but not necessarily wealthy in absolute terms (LOB):

- (5) At a pit I went down, the list of bonuses paid to every miner was pinned up. The largest amounted to two months’ wages – over £100 – and they ranged down to two weeks’ wages. This makes the miners **comparatively wealthy** ...

Despite the fact that the pound today is not nearly what it was in 1961, when the texts in LOB were published, nobody would suggest that miners were ‘wealthy’ in the absolute sense of the word. What the writer meant, of course, was that they were better off than the *average* working-class wage earner – a genuinely COMPARATIVE use.

In some contexts of *relatively*, on the other hand, the note of comparison is not so strong. While it is still present in collocation with positively connoted adjectives, as in *relatively easy/fertile/successful* (all BNC), it seems to have become somewhat delexicalised towards a merely scalar, downtoning function in conjunction with negative adjectives, such as *costly, intolerant* (both FLOB) or *neglected* (BNC).

There is similar ambiguity in the case of ‘minimizing’ COMPARATIVE items. At first sight, *not particularly* or *not uncommonly* seem to be mere negations of boosters, and hence as much concerned with ‘comparison’ as these are. This meaning is present in occurrences such as:

- (6) ... contrary to popular myth, dolphins are **not particularly intelligent**. (FLOB)

In this context, the reading intended by the writer is probably ‘not much more intelligent than other animals’ – clearly a COMPARATIVE meaning. Yet there are numerous counter-examples, like the following:

- (7) Earlier, on the Palladium show I found Stanley Holloway’s act too long and **not particularly entertaining**. (LOB)
- (8) It was a futile gesture. I’m **not particularly proud** of it. (FLOB)

In these two usages, *not particularly* is not used to mean ‘no more than other’ acts or gestures, but rather as a hedged way of saying that (7) the performance was really rather boring, and (8) that the speaker was actually quite embarrassed by his or her own gesture. Its meaning is here confined that of SCALAR *not very* or *hardly*, namely one of ‘hedged negation’.¹⁵

It is not difficult to see why COMPARATIVE intensifiers, too, can be reduced to a purely scalar function; most human judgment is made on a comparative basis: calling someone ‘big’ or ‘small’ amounts to saying they are bigger or smaller than other people, and to find something ‘easy’ or ‘difficult’ implies it is more so than other things or than could be expected. But since the meaning of ‘comparison’ can still be foregrounded, we seem to have a patent need for this conceptual resource.

3.6 The semantic category ‘MODAL’

There is a strong logical link between (epistemic) modality and intensification. Modal adverbs like *apparently, certainly, possibly* or *supposedly* express the extent to

which a speaker is willing to attest to the truth of a proposition. When focusing on an adjective, the communicative effect of modal adverbs is very similar to stating the extent or degree to which an adjectival quality holds true. To say that something is *clearly different* (FLOB) is almost the same as saying it is *completely different*, and finding someone *definitely unattractive* (BNC) is not much different from finding them *totally unattractive*.

This semantic similarity has already received some attention – see Quirk et al. (1985:586), Allerton (1987:27) or Partington (1993:181f), for example. Only the latter, however, seems to view modal adverbs as a diachronic resource for intensification. But as the example of *very* has shown, modal adverbs are capable of developing into the most prototypical and grammaticalised of intensifiers.¹⁶ Moreover, the MODAL inventory is a very rich resource, consisting of:

- a. adverbs expressing a high degree of certainty or speaker commitment, such as *actually, clearly, decidedly, definitely, doubtless, essentially, exactly, genuinely, necessarily, obviously, patently, plainly, positively, precisely, really, seriously, simply, sincerely, surely, truly, undeniably, or undoubtedly*.
- b. adverbs expressing a certain degree of reserve or low speaker commitment, such as *allegedly, apparently, not exactly, not necessarily, not really, possibly, practically, presumably, probably, seemingly, supposedly, and virtually*.

Many of these items are more characteristically known as clause-level modal adverbs. In a mixed corpus of 4 million words,¹⁷ *certainly*, for example, was found to modify adjectives in only 35 out of 810 occurrences (4.3 %), with *definitely* (7 out of 160 = 4.4%) and *surely* (14 out of 313 = 4.5%) displaying almost the same ratio, and *simply* with an even lower share of adj-int occurrences (6 out of 570 = 1.1%). Other items are more likely to focus on adjectives: *plainly*, for example, has an adj-int proportion of one third (16 out of 48 hits), *truly* one of 47.7% (62 out of 130), and *decidedly* occurs in as many as 73.7% of all cases (14 out of 19) in adj-int function.

Not all emphasers are therefore equally likely to become grammaticalised as adjective intensifiers. Indeed, for some of them an adj-int function seems to be the exception rather than the rule. But the latter three cases illustrate that the MODAL cline of delexicalization is still an active link between modal adverbs and adjective intensifiers.

4. Eye-witnessing delexicalization? The case of adj-int *really*

It is hypothesised here that the most likely next candidate for grammaticalization in the intensifier paradigm is adj-int *really*. There is good indication of it being in

the process of becoming fully delexicalised in that function and, in the long run, going the same way that *very* went over hundreds of years. Like the latter, *really* is an originally truth-averring item from the MODAL resource with varying scope and focus. This last section of the paper reports on some observations regarding its progress in becoming grammaticalised, as gleaned from present-day synchronic and micro-diachronic corpus data.

First, some numerical data from the BNC: with its 47,638 occurrences, *really* is a highly frequent wordform – markedly less so still than *very* (122,875), but in an entirely different league from *terribly*, for example, with its mere 1,253 hits. It is used overwhelmingly more in spoken than in written English, with an average of 1701.8 vs 334.2 occurrences per million words, and more in dialogue than in monologue (1773.9 vs 1480.3 per m). Where it appears in written text, it is favoured the most by younger writers between 15 and 24 (706.8 per m) – over twice as much, for example, than by the more advanced age-group of 45- to 59-year-olds (350.8 per m). These figures make plain why *really* is being considered here in the context of language change and grammaticalization: not only is it frequent, but it particularly features in young, informal, and hence dynamic, usage.

Note that these figures pertain to the wordform *really* as such; for *really* in adj-int function, all its occurrences in smaller corpora have been examined:

Table 1. ‘really’ – synchronic comparison of spoken data

Corpora	BNC-c	BNC-d	COLT
No. of tokens	0.5 m	0.5 m	0.5 m
<i>really</i> (total)	654	1096	1521
<i>really</i> (adj-int)	104	281	656
(%)	(15.9)	(25.6)	(43.1)

In view of the aforesaid, *really* can be expected to show significant variation, a good indicator of ongoing development, along two parameters – formality and age. Table 1 charts its frequency profile for three corpora of spoken English which are sensitive to just these factors:

‘BNC-c’ stands for a 0.5 million word sample of the ‘context-governed’ spoken section of the BNC, containing transcripts of speech events such as committee meetings, medical consultations, university lectures, political debates etc. The ‘BNC-d’ corpus contains 0.5 m words from the BNC’s ‘spoken demographic’ component – spontaneous, informal conversation recorded by a number of individual informants. The two sub-corpora differ along dimensions such as ‘public vs private’, ‘factual vs personal’ and ‘distanced vs familiar’ – contrasts which are generally subsumed under the heading of ‘formality’. In simple terms, BNC-c is therefore the

‘more formal’ of the two corpora. And the counts for *really* conform to expectations, increasing sharply with decreasing formality from BNC-c to BNC-d (654 vs 1096 instances).

The third corpus label, ‘COLT’, stands for ‘Corpus of London Teenage English’ – private spontaneous conversations of 13- to 17-year-old Londoners with friends and family members. The average age of speakers is markedly lower than that of BNC-d, which contains a relatively balanced cross-section of age groups. In formality, as expressed by the above parametric dimensions, however, BNC-d and COLT can be seen as comparable;¹⁸ the main contrast between the two corpora is therefore one of speakers’ age. Again, initial expectations are fulfilled by the corpus figures: as it did with formality, the occurrence of *really* correlates negatively with age – younger speakers use it significantly more (1096 vs 1521 instances).

While the first line of figures in Table 1 confirms what was noted earlier for the wordform *really* as such, the second and third lines are considerably more instructive for the present purpose. They show that adj-int *really* (104 vs 281 vs 656 occurrences) correlates with the same parameters as *really* as such, and does this to an even greater extent: BNC-c, the more formal of the two BNC speech samples, not only contains significantly fewer instances of adj-int *really* in absolute (104 vs 281), but also in relative terms; the adj-int share increases with decreasing formality (15.9 vs 25.6%). The same applies to the age factor: juvenile speakers not only use *really* more than an altogether older cross-section of speakers (1521 vs 1096), but are also much more likely to use it in order to grade adjectives (in 43.1 vs 25.6% of all cases).

The evidence from the three spoken corpora would therefore corroborate a progressive grammaticalization of *really*. Its frequency correlates with factors that are commonly associated with linguistic innovation, and at the same time adj-int function is gaining more and more ground. It only seems a matter of time until this development spills over into written usage. And once *really* has lost all connotations of a modal, truth-averring adverb and retreated to a purely grading function, grammaticalization can be said to be complete.

Even for the time being, one may assume that the aforesaid process would be visible in the micro-diachronic development of the last few decades. Fortunately, a real-time comparison spanning the years between 1961 and 1991 has recently become possible with the availability of Frown and FLOB.¹⁹ While most written text-types are clearly more conservative than spoken ones, a high-frequency item such as *really* can be expected to show discernible quantitative or qualitative change in the course of 30 years.

Table 2 contrasts the use of *really* in the two British English corpora. Contrary to expectations, however, there is no significant change in the overall counts for *really* (308 vs 303). And even more surprisingly, the adj-int proportion does not

Table 2. 'really' – micro-diachronic comparison of written data

Corpora	LOB	FLOB
No. of tokens	1 m	0.5 m
<i>really</i> (total)	308	303
<i>really</i> (adj-int)	70	38
(%)	(22.3)	(12.5)

increase from LOB to FLOB, but actually *decreases* to just over half the previous share (22.3 vs 12.5%).

If our hypothesis concerning ongoing grammaticalization of adj-int *really* is to hold, this finding needs to be explained. The search for such an explanation must go beyond the mere figures and include a more qualitative way of analysis through the actual adjective collocates: these would mirror any semantic change adj-int *really* may have undergone in written usage that would explain its decrease from 1961 to 1991. On closer inspection, adj-int *really* carries two types of meaning, depending on what kind of adjective it modifies – and on syntactic context. The first type can be identified as the original, truth-averring use:

- (9) MPs who cannot accept this degree of discipline are **really independent** MPs (LOB)
- (10) Yet despite all this attention, no one has mentioned the **really outstanding** characteristic of Miss Murdoch's new novel. (LOB)
- (11) Shy and retiring, Lawrence is often dismissed as “**not really worth** his reputation.” (LOB)
- (12) Is this **really important**? (FLOB)

In these four contexts, *really* does not boost the meaning of the adjective in the same way as *very* or *extremely* would. In (9) and (10) the latter two intensifiers, if substituted for *really*, would cause a reinterpretation of the adjectives from a 'limit' reading, i.e. that of a quality which is either present or not, to a 'scalar', graded one.²⁰ If anything, *really* could here be paraphrased by *clearly* or *truly* – other items from the MODAL resource which emphasise that an adjectival quality actually holds true. In (11) and (12) *very* and *extremely* would even be semantically incongruent. In fact, in negative and interrogative contexts *really* does not normally function as an intensifier at all, but as a truth emphasiser that happens to be focusing on an adjective.²¹ Here *really* must be read as a modal adverb which modifies limit adjectives and emphasises the 'appropriateness' of the adjectival quality.

In its more recent, delexicalised meaning on the other hand, *really* is to be interpreted as actually grading (boosting) the adjective. This is the meaning which is predominant in modern spoken usage. The top ten adjectives intensified by *really*

in COLT are: *good* (92), *nice* (54), *funny* (29), *bad*, *sad* (both 25), *cool* (14), *pissed off* (13), *weird* (12), *crap*, and *nasty* (both 11). It is easy to see that these are all prototypical gradable adjectives, which could also – though perhaps slightly less expressively – be intensified by *very* or *extremely*. Compare the following citations:

- (13) I thought that was, that was a **really good** line in that cook thief his wife their lover film ... (COLT)
- (13') ... that was an extremely good line ...
- (14) The thing that, that annoys me about Nigel I did think he was a **really good** actor but he's only ever angry ... (COLT)
- (14') ... he was a very good actor ...

In both (13) and (14) *really* has been delexicalised to an extent that in (13') and (14') the boosters substituted are closer to the contextual meaning of *really* than a fully lexical MODAL modifier would be.

Not all adjectives, however, are pure limit or pure gradable adjectives. In many cases there is potential ambiguity: outside the interrogative context of (12), for example, *really important* could well be seen as near-synonymous with *very important*. There is good reason to assume that writers are aware of this ambiguity of 'really + ADJ', and the sharp drop from LOB to FLOB might actually be due to an avoidance strategy on their part.

The adjective collocates in LOB and FLOB confirm this suspicion: in LOB 24 of them are limit adjectives or have a contextual limit reading (*active, alarming, boiling, close, deserving, determined, devastating, effective, established, excellent, first-class* (2), *French, independent, interested, invisible, marine, outstanding, reliable, surprising, top-class, worthwhile* (2), *wrong*). In FLOB, on the other hand, only 7 collocates are construed as having a limit meaning (*determined, different, dubious, outstanding, puzzling, sophisticated, surprising*). A similar contrast can be noted in negative and interrogative contexts: while LOB contains 20 such instances, there are only 9 to be found in FLOB. Both these pairs of figures indicate that fully lexical *really* was used markedly more ($\chi^2 = 9.32$) with adjectives in LOB than in the more recent FLOB corpus.

Subtracting the two former figures from the adj-int share in LOB and FLOB given in Table 2 yields 46 (70-24) for LOB and 31 (38-7) for FLOB. If further all instances of negative and interrogative contexts are deducted, the remaining 26 instances (LOB) vs 22 (FLOB) merely make for adj-int shares of 8.4 vs 7.3%. For two corpora of 1 m words, this numerical contrast can hardly be called significant ($\chi^2 = 0.53$).

The picture that now presents itself seems to be the following: the readiness with which British English speakers increasingly use *really* to intensify adjectives in informal conversation, has not yet spilt over into present-day written usage.

On the contrary, adj-int usage in fact decreased rather drastically between 1961 (LOB) and 1991 (FLOB). While this finding seems to contradict the hypothesis of ongoing grammaticalization, closer examination reveals that the instances that are rapidly decreasing are those where *really* modifies adjectives in its fully lexical, truth-emphatic meaning. At the same time, the cases where it has grading adj-int function remain more or less constant. This is not altogether surprising: the *really* in combinations such as *really good*, *really funny* or *really cool* may still be judged too informal to be used in writing, especially in the more conservative text-types. Further examination would probably reveal that among the text-types of LOB and FLOB, adj-int *really* occurs predominantly in the more progressive ones.

All in all, however, the initial hypothesis of ongoing grammaticalization of *really* as adjective intensifier is corroborated by the present results – albeit to varying extents. There is vast evidence of increasing adj-int usage in spoken English, and a decrease in fully lexical use in written English. The overall stagnation in the latter register may result from the kind of ambiguity that is inherent in an item's ‘re-analysis’.

5. Conclusion

The present paper has tried to explore the mechanisms of delexicalization in adjective intensification. It has outlined how the paradigm draws its individual items from five resources: SCALAR, SEMANTIC FEATURE COPYING, EVALUATIVE, COMPARATIVE and MODAL. For the latter three categories in particular, it has shown how intensifiers have become delexicalised, in some cases to the point of complete loss of their original conceptual meaning. Finally, synchronic and diachronic corpus data were used to test the hypothesis that *really* is the most likely candidate to follow in the wake of *very* and become the next fully grammaticalised adjective intensifier from the MODAL resource.

Notes

1. The term ‘intensification’ is here used in the Quirkian sense (cf. Quirk et al. 1985:589ff) to refer to items such as *extremely*, *very* or *quite*, whose function is to modulate or grade clause constituents, and which are often imprecisely (see below, note 9) referred to as ‘adverbs of degree’. The Quirkian – and present – use of the term seems to have been inspired by Bolinger, for whom ‘intensifier’ denotes “any device that scales a quality, whether up or down or somewhere between the two” (1972:17).

2. The ‘significance’ of collocates is here computed by way of Mutual Information, an arithmetic operation that relates the *observed* frequency of co-occurrence to that which might be statistically *expected*. For a more detailed explanation see Church and Hanks (1990).
3. Cf. Partington (1993: 184), who makes the same point in a slightly more cautious manner: “Since delexicalization is a continuous – and continuing – historical process, it is inevitable that items will be found at various points along the cline from full delexicalization, where the item has solely intensifying function, to more complete lexicalization where the item is usually used to convey meanings other than intensification.”
4. For more on gradability in INT+ADJ combinations see Paradis (1997: 76ff) and Lorenz (1998b, 1999: 154ff). Suffice to say here that intensifiers need to harmonise with their adjectival focus in terms of grading: crudely speaking, gradable adjectives tend to collocate with boosters, compromisers and diminishers, whereas ungradable adjectives collocate with maximizers, approximators and minimizers.
5. Cf. archaic *verily* as well as in French *vrai(ment)* and German *wahr(lich)*.
6. See also Spitzbardt (1965: 349f).
7. ... with one rather minor exception: *very* also acts as intensifying adjective (!) in contexts such as *the very moment* or *this very question* (BNC), but there is no noun among its top 30 most significant right-hand collocates.
8. For a critique see Lorenz (1999: 89ff).
9. It was remarked in note 1 that the term ‘adverb of degree’ is often used to refer to the class of intensifiers *per se*. The present discussion may serve as an explanation of why this label is inadequate: of all adverbs achieving a grading effect, only the SCALAR category is actually *confined* to expressing the notion of ‘degree’.
10. It must be noted that none of the lists of intensifiers in this article, be it in the text or in the graphs, can be regarded as complete inventories. They are merely examples of the kind of usage under discussion. In fact, due to the rapid changes in the intensifier paradigm, no such comprehensive lists can possibly be drawn up. All that could viably be achieved would be to cite complete inventories for a given corpus, but this would not be of any benefit for the present purpose.
11. See Hopper and Traugott (1993: 6f) , who speak of such clines as ‘slippery slopes’.
12. For a more explicit account of the SEMANTIC FEATURE COPYING mechanism see Lorenz (1999: 118ff). To my knowledge, this type of intensification has not yet received sufficient treatment. Johansson (1993: 41) mentions them in passing, calling them ‘tautological’ – a slightly unfortunate label, perhaps, as it obscures the scaling effect of such semantic reduplication. Bolinger (1972: 57) speaks of intensifying ‘hendiadys’, but only in the context of coordinated adjectives, such as *nice and clean*, for example.
13. This collocation was found in an essay about the fashion industry, in which an English teenager complained that fashion models looked, as she put it, *disgustingly healthy* (author’s own corpus material, cf. Lorenz 1999). What she meant, of course, was that they looked so healthy that ‘it makes you sick’ – with envy.
14. Adj-int *awfully* is, judging by its most significant collocates in the BNC (top ten: *jolly, sore, sorry, glad, tired, sweet, careful, nice, cold* and *difficult*) even more delexicalised than

terribly. Yet it is not nearly as frequent (403 vs 1253 hits in the BNC) and hence not as likely a candidate for grammaticalization. In the discussion at the Potsdam conference, Prof Olga Fischer suggested that the mix of positive and negative collocates may be due to a residual positive meaning of *awful*, in the sense of ‘full of awe and respect’. The evidence in the OED is not quite unequivocal, but it actually suggests a strong link between the two senses. The OED describes the ‘awe-full’ sense with religious overtones: ‘commanding reverence’ and ‘causing terror’ may have been two sides of the same coin.

15. For more on the minimizer function of ‘hedged negation’ see Lorenz (1999:194ff).

16. It should be noted that *very* is not the only delexicalised intensifier from the MODAL resource. According to the OED the maximizers *entirely* and *utterly*, for example, were also originally truth-affirming (‘heartily, sincerely, earnestly’ and ‘sincerely, truly, plainly’); both seem to have come down the cline towards full delexicalization.

17. ... comprising 1 m words each of spoken and written British English from the BNC (known as the *BNC Sampler*), as well as LOB and FLOB.

18. From an intuitive point of view, of course, teenagers tend to use language in a way that may be *perceived* as less formal than that of more mature speakers. Methodologically, however, it makes more sense to control extralinguistic parameters and analyse their respective linguistic manifestations than making *a priori* judgments of linguistic form. In actual fact, COLT is identical with the teenage part of the full 5 million words of ‘spoken demographic’ material in the BNC. Inevitably, there is therefore some overlap (10%) between two of the present 0.5 m corpora.

19. Frown and FLOB are two 1-million-word corpora of written English compiled at Freiburg University to match the ‘first generation corpora’ Brown (AmE) and LOB (BrE) as closely as possible for diachronic comparison. The two new ‘clones’ contain the same genres, corpus structure and sample sizes as the original collections – only from data published three decades later.

20. For more on the gradability of adjectives and the classification of adjectives see Paradis (1997:42ff).

21. Stenström (1986) was among the first to draw a connection between the truth-emphasising and intensifying uses of *really*. Yet the present finding casts doubt on her dictum that “it may be safely stated that *really* placed next to an adjective is clearly an intensifier” (p. 51).

Corpora:

BNC:	100 m running words of spoken and written British English
BNC-d:	extract of 0.5 m words of spontaneous spoken British English
BNC-c:	extract of 0.5 m words of more formal spoken British English
COLT:	0.5 m words of spoken London teenage English
LOB:	1 m words of written British English published in 1961
FLOB:	1 m words of written British English published in 1991

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Crosslinguistic and diachronic remarks on the grammaticalization of aspect in Romance languages

Location and motion verbs

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1. Introduction

The way the semantic substance of aspect is molded into grammatical meaning in present day Romance languages reflects several stages of grammaticalization of verbal periphrasis. The aspectual periphrastic forms compete with each other in expressing various qualities and stages of actions, so that from the point of view of the grammaticalization process it would be interesting to study their relations and their specialization.

We will try to explain why in all Iberoromance languages the grammaticalization process is characterized by choosing the *estar*+gerund type of periphrasis to the disadvantage of periphrastic constructions which contain motion verbs. These constructions do not disappear, but they are specialized in the lexical expression of modes of action and modal circumstances. Our hypothesis is that this process is supported in the Iberoromance languages by the existence of a binary copula system, the STARE-type copula already expressing a state of affairs in opposition to the ESSERE-type expressing general properties.

On the other hand, we will study crosslinguistically the different stages of periphrasis with motion verbs that have been attained in various Romance languages. Motion verbs can be regarded as a possible starting point for grammaticalization. Typically, a grammaticalizing lexical item is first used in specific discourse functions, then its structure becomes syntactically fixed, and eventually it may become a morphologically fused element.

2. The STARE-type periphrasis

2.1 The Perfective Progressive: discussion of a grammaticalization path

Bybee/Dahl (1989) and Bybee/Perkins/Pagliuca (1994) have demonstrated that progressives derive most frequently from locative constructions and tend to evolve as general imperfective markers. In Italian and French the STARE-type periphrasis ([auxiliary <lat. *stare*] + [gerund or *a*+infinitive]) is synchronically restricted to imperfective (IP) contexts in which the situation is viewed as ongoing at a given time. Romanian is a special case among the Romance languages because it uses the progressive only to express emphasis (*scrie și scrie*, cf. Coseriu 1976: 108).

In Iberoromance languages the STARE-type periphrasis can be combined with a perfective auxiliary (Simple Past (SP) or Present Perfect (PP)):

- (1) sp. *María estuvo hablando con Jorge durante dos horas.*
 María was (SP) talking to Jorge for two hours
 ‘María spent two hours talking to Jorge.’

These cases of aspectual clustering allow the crossing of two visions of the situation by double aspectual marking (perfectivity and imperfectivity), one from the interior and one from the outside which focuses on the whole process including its end. In this sense sentence (1) contrasts with (2):

- (2) sp. *María estaba hablando con Jorge durante dos horas.*
 María was (IP) talking to Jorge for two hours
 ‘María was spending two hours talking to Jorge.’

The American Spanish STARE-type periphrasis is not even restricted to any actional value, being compatible both with durative and non-durative situations. Gili Gaya (1948: 114) mentions the following constructions which can be traced back to the influence of handbooks of commercial correspondence translated from English:

- (3) sp. *Estamos enviándole esta carta para comunicarle*
 ‘We are sending you this letter to inform you’ instead of
Le enviamos esta carta.
 ‘We send you this letter’

In the other Iberoromance Languages the STARE-type periphrasis behaves as in Spanish, being not only used for an imperfective ongoing situation but also in mainly durative contexts. Diachronic data for Portuguese show that in most older texts gerundial forms prevail and only recently has the infinitival form become more frequent. The distinction between the two is geographical and stylistic, since *estar*+gerund is the standard form in Brazilian Portuguese and in some areas of

Portugal, while *estar* *a*+infinitive prevails in Standard European Portuguese, although *estar*+gerund does occur in literary styles. Both periphrastic forms can be inflected with perfective morphology:

- (4) port. *Ontem* estive a trabalhar *todo o dia*.
 Yesterday I was (SP) working all day long
 ‘Yesterday I was (hard) at work all day long.’

In Galician both constructions *estar*+gerund and *estar*+*a*+infinitive are used and their distribution shows geographical and stylistic variation. It is not restricted to imperfective contexts, but it can also occur with perfective morphology or with durative imperfective situations lacking any focalization on a relevant time (cf. Squartini 1998: 116):

- (5) gal. *Inda* estiveron discutindo *unha boa hora*.
 they were (SP) discussing for one good hour
 ‘They were in discussion for one more hour.’

In Catalan the *estar*+gerund periphrasis is less frequent, being due to the lower frequency of the verb *estar* in general and not only in its periphrastic usage. Apart from differences in frequency in Catalan the distribution is similar to the other Iberoromance languages. The periphrasis is compatible with imperfective and with perfective morphology:

- (6) cat. *vaig estar cantant*
 was_{perf} singing
 ‘I was singing’

The crucial point for understanding the grammaticalization of the Iberoromance STARE-periphrasis seems to be the question of how to explain the aspectual clusters in which the auxiliary appears in a perfective form. This problem has been discussed in different theoretical contexts.

Comrie (1976:21–24) mentions the behavior of the Spanish and the corresponding Portuguese forms as an example of a combination of imperfectivity and perfectivity. The perfect morphology of the auxiliary would present the situation as a complete whole, nevertheless the “situation described is one that lasted through time (in fact, the whole of the afternoon), and consists of a number of distinct phases (the various arrivals)” (Comrie 1976:21). One might object in this case that the imperfectivity of the STARE-periphrasis is not sufficiently distinguished from durativity or iterativity.

Rohrer (1977:123–128) considers as basic another actional phenomenon, namely the detelicizing effect produced by the perfective form of the auxiliary when combined with a telic verb. It seems to be possible to consider durativity and atelicity as two strictly related phenomena, due to the intrinsic actional value

of the auxiliary. In the expression of telic processes the combination of a perfective tense and a STARE+gerund periphrasis means that the end of the process has not really been reached. This can be shown by the Spanish and Catalan examples used by Laca (1998:212):

- (7) sp. *Ayer estuve corrigiendo los ejercicios, pero no terminé de corregirlos.*
 cat. *Ahir vaig estar corregint els exercicis, però no vaig acabar de corregir-los.*
 Yesterday I was_{perf} correcting the exercises, but I did not finish to correct them
 ‘Yesterday I *was correcting* the exercises, but I did not finish correcting them.’

The substitution of the periphrasis by a simple perfective verb would not lead to an acceptable sentence:

- (8) sp. **Ayer corregí los ejercicio, pero no terminé de corregirlos.*
 cat.**Ahir viag corregir els exercicis, però no vaig acabar de corregir-los.*
 Yesterday I corrected_{perf} the exercises, but not finished to correct them
 ‘Yesterday I corrected_{perf} the exercises, but I did not finish correcting them’

Squartini (1998:35–151) gives another description based on the interaction of aspect and actionality, looking at the STARE-type periphrasis as a morphological marker which can be semantically compared to the actional class of activities. The progressive in these cases is considered as an actional property, belonging to the intrinsic character of the situation denoted and does not involve an aspectual point of view. Therefore the STARE-type periphrasis with a perfective auxiliary will be treated as involving an interaction between aspect and actionality. Following Squartini, the comparison with Italian – where these constructions used to exist and are now lost – demonstrates that these cases represent a less advanced stage in the grammaticalization of the progressive marker. Italian has lost such perfective progressive constructions, while maintaining the imperfective usage of the progressive. In Italian the progressive has become specialized as an imperfective marker, so that it does not have the actional restrictions which characterize the Spanish perfective progressive, and is simply an aspectual marker (Squartini 1998:72):

- (9) ital. *Ieri Giulio stava parlando con Marco, quando arrivò Giacomo.*
 ‘Yesterday Giulio *was (IP) talking* to Marco, when Giacomo came.’
- (10) ital.**Ieri Giulio stette parlando con Marco per due ore.*
 ‘Yesterday Giulio *was (SP) talking* to Marco, for two hours.’

Until the 19th century, the Italian *stare*+gerund used to be combinable with perfective morphology as in Spanish (Durante 1981:179–181; Bertinetto 1986:137; Squartini 1998:73):

- (11) ital. *Sono stato un poco pensando meco*
 (P. Aretino, Talanto. Cf. Durante 1981:180)
 ‘I have been thinking for a while.’

As noted by Bertinetto (1995) and Squartini (1998:74), such perfective forms were archaic and obsolete literary devices already during the 19th century, moreover, they exhibited lexical specialization by always occurring with the same verbs (*aspettare* ‘wait’, *ascoltare* ‘listen’, *guardare* ‘look at’) and their frequency abruptly decreased in the second half of the 19th century. Bertinetto (1995) and Squartini (1998:74) have proposed the following representation of the grammaticalization of the *stare*+gerund periphrasis in Italian:

Locativity > durativity > imperfective progressivity > ?			
[+actionality]	>	[–actionality]	
[–aspect]	>	[+aspect]	

In Italian the change of the semantic function of the STARE-periphrasis is accompanied by a clear tendency to increase in absolute frequency. Dietrich (1985:204–206) notes that from the earliest Italian texts up until the last century *stare*+gerund was always less frequent than the more vital *andare*+gerund. Its increase in frequency can be connected to a change in the aspectual value of the periphrasis with its specialization as an imperfective form (Squartini 1998:87). As Hopper and Traugott (1993:110) have pointed out the “sheer textual frequency is prima facie evidence of degree of grammaticalization.” When *stare* becomes a specialized marker of progressive aspect, it strengthens its position in the verb system, becoming more grammaticalized, and therefore increases its frequency with respect to the other gerundial periphrases.

Spanish and Italian also differ in the compatibility of the periphrasis with the infinitive. In Italian the STARE-type periphrasis is rarely formed with the infinitive. With modals such as *dovere* ‘must’ and *potere* ‘can’, which can have both a deontic and an epistemic value, the Italian progressive necessarily requires the epistemic interpretation. The epistemic reading allows one to view the situation as ongoing at some relevant time:

- (12) ital. *A quest’ora Paolo deve star viaggiando verso Madrid.* (epistemic)
 ‘At this time Paolo must *be travelling* towards Madrid.’

In Spanish deontic and epistemic modals are acceptable with the STARE-periphrasis without any requirement as to the ongoing character of the situation:

- (13) sp. *es un hombre que siempre tiene questar haciendo algo, algo fuera de lo común* (Lima Habla Culta Corpus 158)
 ‘he is a man who always *has to be doing* something, something special.’

The imperative progressive is possible in Spanish but not in Italian, because the situation is not visualized as ongoing at a given temporal point but simply as durative:

- (14) sp. *No estés creyendo otra cosa* (J.A. Ramos, Tembladera, p. 79)
 ‘Don’t believe anything else.’

Compatibility with the adverbial ‘always’ also reveals the different behavior of Spanish and Italian (cf. Yllera 1980:25):

- (15) sp. *¡Siempre te estás quejando!*
 ‘You are always complaining!’

The grammaticalization of the STARE-type periphrasis shows that the relationship between actionality and aspect has to be interpreted as a diachronic process. The progressive derives diachronically from constructions which are restricted to a given actional class. A semantic similarity between aspect and actionality can be recognized, for aspect emerges from the same cognitive mold as actionality. But nevertheless, following Squartini (1998: 18), the two must not be confused. Since several progressive forms derive from stative locational constructions, it is obvious that the stative meaning has some influence on the progressive. The main argument in Squartini’s (1998:37–40) discussion of the relationship between aspect and actionality is that the STARE-type periphrasis tends to occur frequently in combination with durational adverbials delimiting the temporal space during which the situation holds.

Even if it seems to be tempting to accept this linear diachronic explanation of the development of the STARE-type periphrasis from actionality to aspect, it seems to be too selective and target-seeking. If the Italian STARE-type periphrasis has reached the highest degree of grammaticalization because it is specialized in expressing imperfectivity and cannot be used with a perfective auxiliary, why should this not be valid for the French periphrasis *être en train de* + infinitive which is highly specialized as well. As we will show below, this is due to the lexical meaning of the elements of the periphrasis and in consequence cannot be regarded as a high degree of grammaticalization. Besides this, languages which have a correlated grammaticalized aspect show aspectual clusterings similar to the use of Iberoromance STARE-type periphrases with perfective auxiliaries. As Bondarko (1971: 14–16) has noted, the imperfective aspect in Russian is compatible with markers of localization and even succession:

- (16) *Прихожу я вчера домой, ужинаю и принимаюсь за работу.*
 I come_{imperf} home yesterday, dine_{imperf}, and go_{imperf} to work
 ‘Yesterday I just came home, had dinner and started working.’

If the perfective aspect focuses on the process as an integral whole, the imperfective does not possess the property of entirety and therefore allows focussing on an interior view of the process. The function of the STARE-type periphrasis seems to be very close to the function of the imperfective part of the aspectual correlation in Russian. It can even be regarded as a sign of a high degree of grammaticalization that Spanish periphrastic constructions can correlate with any form of the verb (*María hablaba: María estaba hablando; María habló: María estuvo hablando* etc.). There is no reason to reject these pairs as not marked by aspectual oppositions. It seems to be possible to ascribe to the auxiliary the function of denoting actionality, for instance repetition, inchoativity, or phases of a process. This also coincides with the behavior of aspect and actionality in languages with fully grammaticalized aspectual correlations. A prefix marking a low intensity of the action and which added to a stem makes the verb perfective (по-, подо-, cf. работать > поработать; ждать > подождать) can be combined with an imperfective suffix and express iterativity in a certain context:

- (17) *Мне это надоело. Три раза подогрела тебе обед.*
 (Bondarko 1971:31)
 ‘It’s enough now. Three times I have warmed_{imperf} up your meal.’

So it seems to be reasonable to return to Coseriu’s (1976:109) and Dietrich’s (1973) account of the perfective progressives who start from a functional description of a form such as *estuve haciendo* and say that, apart from expressing a given *Schau*, this form has a double aspectual value, being both *komplexiv* and *kursiv*. The real problem concerning the compatibility of the STARE-type periphrasis with a perfective form of the auxiliary can be solved by assuming a partially grammaticalized aspectual periphrasis with the possibility of marking actionality, especially phases of a process, by the auxiliary.

There is one factor which is only briefly mentioned in Squartini (1998:87), but it seems to be highly important for the explanation of the different behavior of the STARE-type periphrasis in Italian and the Iberoromance languages. The function of the auxiliary is quite different in these languages. In Italian, *stare*, apart from being the auxiliary in the progressive, has a quite restricted usage, mostly in fixed constructions such as *sto bene* ‘I am fine’. The verb used with predicative adjectives (*María è malata*. ‘María is ill’) is the verb *essere*. In Spanish the distribution of *estar* is much wider: this is the verb used in locational predicates (*Pilár está en casa*. ‘Pilar is at home’) and in general with stage-level predicates (*Pilar está enferma*. ‘Pilar is ill.’). With a singular level it is the verb *ser* that is used (*Pilar es madrileña*. ‘Pilar is

from Madrid’). The result of such a distribution is that the progressive is formed with the same verb as a predicative adjective or participle. In Italian the verb used as an auxiliary is not the same as the one for a predicative adjective:

- (18) sp. *María estaba hablando.*
it. *Maria stava parlando.*
‘Maria was (IP) talking.’
- (19) sp. *María estaba enferma.*
it. *Maria era malata.*
‘Maria was (IP) ill.’

In Spanish the verb which is used as a perfective form for denoting the duration of a state is the same as the one used as an auxiliary for perfective progressives:

- (20) sp. *María estuvo hablando durante dos horas.*
‘Maria was (SP) talking for two hours.’
- (21) sp. *María estuvo enferma durante dos días.*
‘Maria was (SP) ill for two days.’

2.2 Diachronic evidence for the development of the STARE-type periphrasis in Spanish and French

The starting point of the development of *estar* as an auxiliary is its use as a full verb expressing the existence or the subsistence of something during a certain time. As we have seen in the example of Spanish, the binary copula system has been an important factor in the subsequent grammaticalization process in Ibero-romance verbal systems. The STARE-type copula already expresses a state of affairs in opposition to the ESSERE-type, which is used for expressing general properties:

- (22) sp. *Juan está enfermo.* // sp. *Juan es enfermo.*
‘John is ill’ ‘John is an invalid’

In the *Cid* *estar* already appears nine times indicating locations, while there is only one occurrence of *ser* in this function. There are some utterances in which *estar* describes a localization and an action which is being performed in the indicated place. These uses may have been a first step in the grammaticalization of the construction as a periphrasis:

- (23) sp. *Mío Cid don Rodrigo en Valencia está folgando* (Cid 1243)
My Cid Don Rodrigo in Valencia is recovering
‘My Cid Rodrigo is recovering in Valencia.’

The conditions created by the opposition between *ser* and *estar* concern the integration of the STARE-type periphrasis into the verbal system as well as the confirmation of the lexico-semantic value of periphrastic constructions containing motion verbs. This can easily be demonstrated by a comparison of French and Spanish. As frequency studies have shown, the Spanish *estar*+gerund periphrasis as well as its analogues in other Iberoromance languages are much more frequent than the French *être en train de* + infinitive periphrasis, which uses a more complex construction before the infinitive. Apart from this, the infinitive is not specified in expressing aspectuality in itself.

In addition to these synchronic facts there is interesting diachronic evidence for the different grammaticalization of periphrastic aspectuality in French and the Iberoromance languages. The use of the STARE-type periphrasis is very common in 16th century Spanish:

- (24) sp. *Eso me parece – respondió el galeote – como quien tiene dineros en mitad del golfo y se está muriendo de hambre, sin tener adonde comprar lo que ha menester* (Cervantes I, Cap 22, 0238.27)
 ‘This seems to me – responded the galley slave – as if someone has money in the middle of the gulf and *is dying* of starvation without having a place where to buy what he needs’

The frequency of these constructions in direct speech might indicate that they were considered typical features of spoken language. But there are some occurrences in narrative passages as well, where the extended use with three core verbs is especially interesting (25).

- (25) sp. *Todo lo cual se me representa a mí ahora en la memoria de manera que me está diciendo, persuadiendo y aun forzando que muestre con vosotros el efecto para que el cielo me arrojó al mundo y me hizo profesar en él la orden de caballería que profeso [...]* (Cervantes I, Cap 22, 024420)
 ‘All this appears now in my memory in a way which *is telling, persuading and even forcing* me to show you reason why heaven sent me to earth and made me profess in the order of knights in which I profess.’

At the same time in French the *être en train de*+infinitive periphrasis is more context dependent. In the examples taken from the database FRANTEXT, there is a clear dominance of the sequence *mettre en train de* in the 16th and even the 17th century. The uses of the periphrasis *être en train de* which appear in 17th century texts can be regarded as descriptions of results of an action:

- (26) frz. *Voici, ma chère bonne, qui est un peu long et ennuyeux, je le sens, mais il est dangereux de me mettre en train de parler.* (Sévigné. Mme de, Correspondance, 1680–1696 p. 730 (1689)
 ‘Here [is something], my dear maid, which is a little long and boring, I know, but it is dangerous to get me talking (lit.: to put me in the process of talking).’

In the 18th century the *être en train* periphrasis becomes more frequent, but there is still a relation to the resultative meaning of the construction with the verb *mettre* which appears in many *en train de* contexts:

- (27) frz. *On étoit en train de déchirer un honnête homme de notre connoissance [...] (Diderot, D., Lettres à Sophie Volland, T. 1, 1762, p. 231)*
 ‘They were tearing up a gentleman of our acquaintance.’

The derived character of the construction with *en train de* from a transitive clause with *mettre* is confirmed by such constructions as

- (28) frz. *Je le crois en train de faire une petite fortune, car les manufactures vont très bien.* (Voltaire, Correspondance, T. 90–92, 1775, p. 188)
 ‘I believe him to be making a little fortune because products do (sell) very well.’

In this case the STARE-periphrasis is substituted by a predicative construction with a verb of believing. The agent which would be the subject of the periphrasis becomes a direct object of this verb and the *en train de faire*-construction becomes its predicative phrase. In these French examples we can see that there is a relation between the STARE-type periphrasis and the use of *mettre*. The state created by this action (*on le met en train de faire qc.* ⇒ *Il est en train de faire qc.*) becomes the lexical base of the periphrasis which enters very late into a grammaticalization process.

3. Semantic complexity of the IRE-type periphrasis

As we have seen the distribution of functions between the STARE-type periphrasis and the imperfect can be described in terms of specialization (cf. Laca 1998). The periphrasis presupposes that the process, of which only one section is described, has really begun. The imperfect, on the other hand, mainly expresses an inactual process. In sentence (29) the use of the periphrasis allows the conclusion that Maria had really begun to read her paper, in (30) this conclusion is only one of the possibilities presupposed:

- (29) sp. *A las tres,* *estaba dando una conferencia María.*
 ‘At three p.m., *was giving* a paper María.’
- (30) sp. *A las tres,* *daba una conferencia María.*
 ‘At three p.m., *gave (IP)* a paper María.’

A similar process of specialization is occurring with Romance aspectual periphrases. The IRE-type periphrasis consists of a wide range of verbs of motion which are combined with nominal forms of lexical core verbs. In some cases the movement meaning is still maintained:

- (31) port. *Os pais* *vinham acompanhados dos filhos*
 The parents *came accompanied* by the children
 ‘The parents *were being accompanied* by their children.’

In others it becomes secondary or even neutralized:

- (32) sp. *Lleva* *bien estudiado el asunto.*
 He is carrying well studied the matter
 ‘He has been studying this matter very well.’

There are various occurrence restrictions, but even the co-occurrence of a verb of motion with its own nominal form is possible (*andar andando* ‘to go going’).

Periphrastic constructions with IRE+gerund go back to lower Latin uses, and their results can be found in Romance languages. Gougenheim (1929:2) traces its origins back to Merovingian and Carolingian latinity and mentions the example *stellas ire trahendo comas*. Yllera (1980:58–89) has described the systematic use of these constructions in medieval Spanish. So we can find constructions which describe the beginning and the further continuity of an action:

- (33) sp. *Alegrando se va mio Cid con todos sus vassallos (1036) / [...] el amor de mio Cid ya lo ivan provando. (1247)*
 ‘Cheerfully (lit: *being glad*) *leaves* my Cid with all his vassalage. / the love of my Cid, they would still have to prove it (lit.: still *went proving* it).’

Old Spanish IRE-type constructions may describe phases of actions or actions which are difficult to accomplish:

- (34) sp. *Prendiendo de vos e de otros ir nos hemos pagando (1046)*
 ‘Taking from you and from others we *have to go paying*.’

In Old French texts the *aller+gerund* periphrasis is rather frequent. In many cases the gerund gives additional information on the character of the movement: *aller courant* ‘to go running’, *aller galopant* ‘to go galloping’, *aller fuiant* ‘to go escaping’. Others are verbs of communication, a kind of periphrastic construction which can

still be found in the 20th century in frozen and lexicalized examples: *aler disant* ‘to go saying’, *aler conseillant* ‘to go advising’, *aler escriant* ‘to go writing’.

In periphrastic constructions with verbs of motion the lexical meaning of these can be present in different degrees. Gómez Torrego (1988:13) even argues that verbs like *andar* (‘to walk’) or *llevar* (‘to take’, ‘to carry’) would have the same signification in both their uses as auxiliaries or full verbs:

- (35) a. Llevo estudiando *esta cuestión varios años.* (perífrasis verbal)
 I carry studying this question for several years
 ‘I have been studying this question for several years.’
 b. *Llevo con esta cuestión varios años.*
 I carry with this question for several years
 ‘This question has been occupying me for several years.’

The IRE-type periphrases are less determined in their aspectual value, and we have to take into account several formal possibilities of expressing qualities, sections or stages of an action, all of them contributing to the semantic function of such periphrases as a whole: the aspectual value of the nominal form of the lexical core verb, the mode of action this verb denotes, the aspectual value of the finite verb, and the semantic value of this verb.

An important moment in the functional specialization of the STARE-type periphrasis is its compatibility with telic core verbs. Telic durative verbs are always allowed with the periphrasis, and achievements or accomplishments in a gradual durative context are quite compatible with them. Some telic contexts may require an adverbial expressing gradualness and a definite object, telic verbs being acceptable only when interpreted as a gradual process (Squartini 1998:215):

- (36) a. ??it. *Marco va mangiando gli spaghetti.*
 Marco goes eating spaghetti
 ‘Marco is eating spaghetti.’
 b. it. *Marco a poco a poco va mangiando l'intero piatto di spaghetti.*
 Marco little by little goes eating the whole spaghetti dish
 ‘Little by little Marco is eating the whole spaghetti dish.’

In Spanish the *ir*+gerund and *estar*+gerund are contrasted in the acceptability of a telic situation (Squartini 1998:250):

- (37) a. sp. *La falda larga fue poniendose de moda.*
 the long skirt went (SP) becoming fashionable.
 ‘The long skirt was becoming fashionable.’
 b. sp.??*La falda larga estuvo poniéndose de moda.*
 the long skirt was (SP) becoming fashionable
 ‘The long skirt was becoming fashionable.’

The different behavior of the French periphrasis is mainly to be explained by the restricted possibilities of the core verb. While in the Iberoromance languages this verb can appear either as an infinitive, gerund or participle, French allows only the infinitive, except in some frozen forms.

The situation had been different up to the beginning of the 18th century where we find examples of a regular use of motion verbs with the present participle in French. In the 16th century the use of the IRE+a+infinitive periphrasis in the meaning of a future action coexists with the IRE+gerund periphrasis, expressing the progressive. This can be shown by the following examples taken from FRANTEXT:

IRE+infinitive:

- (38) frz. *Va, va apprendre ta leçon!* (Six pièces polémiques du recueil
go, go to learn your lesson de La Vallière, 1530, p. 156)
'Go and learn your lesson!'

IRE+gerund:

- (39) frz. *Et ainsi entre vallées umbrageuses, entre montaignes et rochers elle va consumant petit à petit ses jours.*
(Flore, J., Contes amoureux, 1537, p. 174)
and so between shady valleys between mountains and rocks, she goes consuming step by step her days
'And so, between shady valleys, between mountains and rocks, she is consuming step by step her days.'

These periphrastic constructions developed from the use of verbs describing motions accompanied by other actions. It can be regarded as a sign of the beginning of a grammaticalization process when the finite element may be combined with other verbs of motion in the lexical core of the periphrasis, which, as a consequence, leads to a specialization in the expression of grammatical meaning:

- (40) sp. *Sancho amigo, la noche se nos va entrando a más andar*
Sancho friend. the night REFL us goes getting in by more
to walk (Cervantes II, 8, 0687.31)
'Sancho my friend, the night *will be coming* over us if we go on.'

Another sign of grammaticalization is the use of the imperfect of the auxiliary together with the gerund which is similar to the aspectual clustering in the STARE-type periphrasis. In the following example this coincidence of imperfectivity markers seems to revitalize the lexical meaning of the verb of motion: the person is really walking and speaking to himself:

- (41) sp. *Yendo, pues, caminando nuestro flamante aventurero, iba hablando consigo mesmo* (Cervantes I, 2, 0046.13)
 ‘Walking, our burning adventurer, was going and speaking (lit.: *went speaking*) to himself.’

While the mentioned periphrastic constructions are very productive in contemporary Spanish, in French, the IRE+gerund or participle periphrases have almost disappeared. This process started already in the second half of the 16th century where we still can find examples, but in restricted contexts. Thus they can be found in contexts where the primary meaning of the verbs of motion is actualized. In this case we might even see the beginning of re-lexicalization:

- (42) frz. *David s’en va errant, et triste je demeure.*
 (Des Masures, *David triomphant*, 1566, p. 166)
 ‘David *leaves wandering*, and unhappy I stay.’

One of the conditions which keeps this periphrasis in use for a certain time seems to be the Italian influence, especially in the language of the courtesans.

In the 17th and early 18th centuries the IRE+gerund construction is not very frequent and is more and more restricted to certain core verbs of the periphrasis, such as *ruiner*:

- (43) frz. *va ruinant tant qu’ il peut, et proditoirement la verité de ce mystere, par trois moyens aussi meschans l’un que l’autre [...].*
 (Garasse le père, *Doctrine curieuse*, 1623, page 302)
 ‘*he goes ruining* himself as he can, and treacherously the truth of this mystery, by three remedies one as bad as the other [...].’

The semantic restriction on the expression of feeling and processes of decline are other pieces of evidence that grammaticalization is stopped and lexicalization has begun, setting first of all semantic solidarities between the motion verbs and the core verbs which may be used with them in the present participle.

In modern Iberoromance languages, the STARE+gerund constructions can be combined with inanimate subjects or with stative verbs which do not express any relation to agents (Laca 1998:218):

- (44) sp. *Pablo no entendía lo que le estaba ocurriendo.*
 ‘Paul did not understand what *was happening* to him.’

It can even appear with the passive voice or with a copula in predicative sentences:

- (45) cat. *La ciutat ha estat atacada continuament.*
 ‘The town *was attacked* continuously.’

The STARE+gerund periphrasis in the Iberoromance languages is used to express habits and dispositions, which Bybee/Dahl (1989:82) considered as evidence for a high degree of grammaticalization in the case of English. On the other hand there is no evidence for a generalization of the IRE-type periphrasis. Motion periphrases are gradually losing ground in discourse frequency while maintaining or even increasing their selection restrictions (Squartini 1998:208). There is even a growing restriction of this type to verbs expressing incremental processes (Bertinetto 1986:269). As Yllera (1980:60) has shown for Spanish, the main features of the modern use were shaped in the 13th century. *Ir* is essentially reduced to verbs of motion and indications of change. Giacalone Ramat (1995) has shown that Italian *andare/venire* + gerund have only reached an intermediate stage of grammaticalization and that they even can be conceived as cases of “interrupted grammaticalization.”

4. Conclusion

It can generally be assumed that grammaticalization of a periphrasis manifests itself by the higher textual frequency of the construction, the loss of combinatory restrictions, and the variety of contextual uses of the construction, while its systemic value becomes more abstract. All this can be shown by positive evidence in the case of the STARE-gerund periphrasis in Spanish. This process is less advanced in Catalan and Portuguese, but in all Iberoromance languages this type of periphrasis is very common. Aspectual clustering allows the crossing of two views of the situation by double aspectual marking.

The Spanish perfective STARE-type periphrasis has no corresponding Italian forms. With an imperfective form of the auxiliary, both Spanish and Italian allow the formation of the periphrasis. But with a simple past, namely with perfective morphology, the two languages behave differently.

In the Iberoromance languages the progressive uses as an auxiliary the same form which is used as a copula with a predicative adjective or participle, while in Italian the verb used as an auxiliary is not the same as the one for a predicative construction. This difference can be significant in explaining why the perfective progressive is much more resistant in Spanish than in Italian. In Spanish its usage is supported by a systematic usage of predicative constructions with the same verb, while in Italian the perfective progressive would have been isolated and not supported by similar predicative constructions.

As we have seen in connection with the examples of the STARE+gerund periphrasis in Spanish and the IRE+gerund periphrasis in French there have been two contra-rotating processes. In the first case the periphrasis reaches a high degree of

grammaticalization. It is integrated as a means of expressing imperfective aspectuality sharing this task with the present and the imperfect tenses and expressing, in distinction to these two, an action which has really begun. In the case of the French IRE+gerund periphrases the grammaticalization process is stopped and, from the second half of the 16th century onwards, it appears only in semantically highly restricted contexts.

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The grammaticalization of deictic directionals into modulators of temporal distance*

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1. Introduction

Among the grammatical and notional domains that are a crosslinguistic target for the grammaticalization of ‘come’ and ‘go’-type markers, that of tense and aspect – or, more broadly put, tense, aspect and modality – figures prominently. So prominently, in fact, that the notional repositioning of deictic directionals as prospective, future or irrealis markers has acquired an exemplary status in grammaticalization studies.¹ Other pathways, involving the same markers and the same broad target domain, have been, perhaps as a consequence, largely ignored. One of these pathways is illustrated by the following example:

- (1) [Malagasy (Madagascar; Malayo-Polynesian). Rajaona (1972:314–316)]
- a. *ni-lalao aho*
PAST-play I
‘I played’
- b. *avy ni-lalao aho*
come PAST-play I
‘I (have) played just now.’

It would appear that by combining the ventive morpheme *avy* with the verb in the past tense, Malagasy “reduces” the perceived temporal distance between speech time and event time. In other words, the ventive directional functions here, not as an exponent of motion in space, but rather of what might be called “interval contraction.”

Interval contraction and *interval expansion* are the two actual realizations of a process I have proposed labelling *temporal modulation*.² The interval involved

is the one separating the time of the event from reference time (which, in the default case, coincides with speech time): whereas (1)a) says absolutely nothing about the perceived duration of the interval between the moment of playing and speech time, (1)b) specifies the interval as being comparatively short, in fact as tending towards zero. It so happens that quite a few languages entrust the encoding of temporal modulation to markers otherwise functioning as deictic directionals, i.e. to markers roughly equivalent to English 'come' and 'go'. While systems of directional deixis vary significantly from one language to the next, notably when it comes to their semantics, they prototypically involve at least one set of markers (Italian *venire/andare*), often two (German *kommen/gehen* and *her-/hin-*), and occasionally more. Within each set, the ventive marker prototypically refers to motion towards the deictic centre (which, in the default case, coincides with the speaker's location), while the itive marker refers to motion towards a location distinct from the deictic centre. Much in the spirit of Lichtenberk (1991), I will ignore, for the purposes of this paper, the morphosyntactic status and behaviour of deictic directionals, focusing rather on their semantics.

Two broad issues immediately arise from the above. First, is it legitimate to invoke a distinct and specific pathway along which deictic directionals may be seen to evolve into temporal modulators? Second, what underlying semantic or cognitive mechanisms are involved? As will become gradually apparent, the two issues are largely intertwined. The first one, however, will be specifically addressed in Section 2, while the second will be mostly dealt with in subsequent sections. Section 3 will examine the deicticity of 'come' and 'go'-type markers as a possible trigger for their evolution into modulators of temporal distance. Deixis-based accounts, however, fall short of explaining the behaviour of ventive modulators in a number of languages: Section 4 will address that particular problem by sketching the broad outlines of an alternative account based on the concept of allativity. Such an account leads straight to a consideration of the modal import inherent in the semantics of at least some 'come' and 'go'-derived modulators: this will be the topic of Section 5. Finally, there remain instances of deictic directionals evolving into temporal modulators which appear to be typologically marked, if not downright idiosyncratic: two of these will be examined in Section 6, with a view to sketching out the outlines of a principled account.

Apart from a few examples in French and Somali and one in English, the data have all been borrowed from reference grammars, monographs or articles dealing with the individual languages under review.

2. Grammaticalization vs. notional ambivalence or implicature

In order to establish its credentials as a *bona fide* grammaticalization pathway, it is crucial to determine whether the evolution of ventive or itive markers into temporal modulators is indeed attested across a spectrum of languages. The data I have collected suggest, at best, that this might be the case. Caution is of the essence, however. First, the data are relatively scanty and more importantly the overall picture that they make up is diverse, if not contradictory. Second, it is occasionally unclear whether they should be accounted for in terms of grammaticalization *per se*.

2.1 The role of notional ambivalence

This uncertainty is especially acute when, as in Mohawk, the lexical origin of the relevant grammatical markers eludes reconstruction:

- (2) [Mohawk (New York, Quebec, Ontario; Iroquois).
Bonvillain (1981:61–62)]
- a. *y-ahaté:ko?*
“TRANSLOCATIVE”-he.ran.away
‘He ran away from here to there.’
Or: ‘He ran away (place unspecified) at some time in the relatively distant past.’
- b. *t-ahaté:ko?*
“CISLOCATIVE”-he.ran.away
‘He ran away from some distant place to here.’
Or: ‘He ran away just now (place and direction unspecified).’

Both (2a) and (2b) lend themselves to two distinct construals. On the first reading, the markers in bold are interpreted as indicating motion in space: away from the deictic centre in (a), towards it in (b). On the second reading, they are interpreted as temporal modulators: the interval between event time and speech time is expanded in (a), and contracted in (b). As far as can be ascertained, it is impossible to determine whether the second reading proceeded diachronically from the first; in other words, it is by no means certain that the form lending itself to the second reading should be viewed as a grammaticalized avatar of the form lending itself to the first reading. It is just as plausible to assume that the spatial and temporal meanings are two sides of the same cognitive coin, and perhaps that they have always been so, through the history of the language – in which case *notional ambivalence*, rather than grammaticalization, would clearly be the operative concept.

Further discussion might lead in several separate directions, three of which are of special relevance.

Whereas grammaticalization is at best a remote possibility in the case of Mohawk, it is almost certain to be involved in Berber. This is because, contrary to what happens in Mohawk, the temporal meaning taken on by *dd* is restricted to those contexts in which the verb does not refer to motion in space. Further, reflexes of the ventive morpheme *dd* are attested across all the Berber languages and in all of them they prototypically refer to motion in space towards the deictic centre; on the other hand, the temporal meaning *dd* takes on in (3)a2) and (3)b2) is probably confined to the Figuiq dialect (and possibly some others).

2.2 An implicature effect in Somali

Neither grammaticalization nor notional ambivalence appears to provide a suitable framework for analyzing the contrast between the temporal interpretation of (4a) and that of (4b):

- (4) [Somali (Somalia; Afro-Asiatic, Cushitic).

Examples constructed by Y. Handouleh]

- a. *wuu* *iga* *bax-ay*

FOCUS.MARKER:he me:from exit-PAST:3MASC.SG

'He left my house (... and went shopping).'

Or: 'He's not here any longer.'

- b. [*Telephone conversation*]

wuu *iga* *soo* *bax-ay*

FOCUS.MARKER:he me:from VENTIVE exit-PAST:3MASC.SG

'He has just left my house (and is on his way to your place).'

It would be misleadingly tempting to analyze the recency effect produced by *soo* in (b) as an instance of grammaticalization, along the lines of Malagasy *avy* (cf. (1b) above) or French *venir de* + inf. (cf. Section 3.3. below). In actual fact, *soo* can in no way be analyzed as a grammaticalized modulator in contemporary Somali, and even to speculate that the beginnings of such a mutation are currently under way would be completely unwarranted. This is because contrary to *avy* and *venir (de)*, *soo* unfailingly refers to directed motion in space, *whatever context it occurs in*. Sentence (b) is no exception: the motion at issue is conceptualized as ventive because Somali routinely selects the addressee's location as deictic centre. By implication, the motion is firmly bounded at both ends: my house is the starting point and yours is the endpoint. It seems reasonable to assume, in fact, that it is this very boundedness in space that accounts for the interval-reduction effect conveyed by *soo*. The inferential process involved has all the trappings of a situationally bound implicature: since we live close to each other and since I have no reason to think

that our common visitor is taking a circuitous route, it follows that his departure from my house is very recent.

Furthermore, whereas *avy* and *venir (de)* function as markers of recent past, the interval-reduction capability of *soo* in Somali is by no means restricted to any particular temporal sphere:

(5) [Somali. Examples constructed by Y. Handouleh]

- a. [Situation: I am talking with my son on the phone and asking him to stay with his girlfriend, who is ill.]

la' fadhi

with stay:IMPER

'Stay with her.'

- b. [Situation: I am making the same request, but just before my son leaves our home, where we both are.]

la' soo fadhi

with VENTIVE stay:IMPER

'Go spend some time with her (... before coming back here).'

As always, *soo* behaves, first and foremost, as the deictic directional that it always is: the only motivation for its use here is that the return portion⁵ of my son's trip will lead him back here, i.e. to the deictic centre. Since this implies that the motion event is strictly bounded at both ends, *soo* additionally triggers much the same implicature as obtained in (4b): this time, it is his stay at his girlfriend's house that is understood to be of limited duration.

3. Deixis and interval modulation

Although grammaticalization should not be confused with notional ambivalence, there is no reason why they would not share the same cognitive underpinnings. For instance, the motivation for Figui Berber *dd* behaving the way it does is eerily similar to that which underlies the ambivalence of the cislocative prefix in Mohawk. Just as the coming of a physical entity towards an observer involves a gradual contraction of the distance separating them, the "coming" of an event or a state-of-affairs is nothing but a contraction of the interval between, on the one hand, its location in time and, on the other, speech time as the prototypical localizer.

3.1 Proximal 'come' vs. distal 'go'

The "deixis-based logic," as defined thus, operates in several languages besides Mohawk or Berber.

Aleutian is a case in point:

- (6) [Aleutian (Siberia and Alaska; Eskimo-Aleutian).
Bergsland (1994:93; 504)]
waaḡ[a]-duuk[a-a]
come.here-in.future-(ANAPHORIC.3SG:ABSOLUTIVE)
aqa-ku-ḡ
come-PRES-3SG
(lit.) ‘His future coming comes.’
‘He should be coming here pretty soon.’

There does not appear, here, to be anything grammatically systematic about the use of a ‘come’ verb as a temporal modulator. Rather, the speaker is exploiting the semantics of ‘come’ in order simply to contract the interval established by the future marker in the nominalized proposition of which *aqa-*, ‘come’, is predicated. Indeed, that particular marker, in and of itself, does not refer to a proximal future or, for that matter, to a distal one. As in the previous five sets of examples, temporal *modulation*, as effected by the ventive marker, is formally and semantically independent from temporal *specification*, i.e. from the job of referring, minimally, to a stretch of time either located in the past or the future.

In the following examples, the modulator involved is of the ‘go’-type. In accordance with the deixis-based logic, its semantic contribution is exactly the converse of that made by the ventive marker in Mohawk or Fighuig Berber:

- (7) [Ben, dial. of Moba (Togo; Niger-Congo, Gur, Oti-Volta).
Reinhard (1984:66)]
ī *daāl.daát* *dāɔḡ* *daā* *pà*
of.that.day of.the.wood price ITIVE strong
‘On that (fairly remote day), the price of wood was high.’
- (8) [Manam (Papua New Guinea; Malayo-Polynesian, Oceanic).
Lichtenberk (1983:591–592; 1991:496)]
- a. *zamalu*
 second.day.after.tomorrow
 > *zamalu-la’o*
 second.day.after.tomorrow-**thither**
 ‘some time in the future, later than the second day after tomorrow’
- b. *toira*
 some.time.ago
 > *toira-la’o*
 some.time.ago-**thither**
 ‘some (more distant) time ago’

- (9) [Hawaiian (Malayo-Polynesian, Oceanic). Cook (1996:459)]
- a. *nehinei a ia lâ aku*
 yesterday and PROXIMAL/DISTAL.DEM day **thither**
 ‘the day before yesterday’
- b. *’apôpô a ia lâ aku*
 tomorrow and PROXIMAL/DISTAL.DEM day **thither**
 ‘the day after tomorrow’

In each of these examples, temporal specification *per se* is not encoded by a grammatical morpheme, but by the lexical expression which the itive marker “modifies” (in a loose sense of the word). What the lexical specifier refers to is a particular point or segment in past or future time; thereby it opens up an implicit interval between that point or segment on the one hand and speech time on the other. What the itive marker does, for its part, is stretch that interval. The semantic mechanism involved is transparent, at least up to a point: going away from the deictic centre results in a progressively increasing stretch of time or space between the deictic centre and whatever location the moving entity or the moving event is being associated with at speech time.

3.2 The complex semantics of Hawaiian *aku*

The above explanation needs to be refined somewhat, however.

In the first place, the Hawaiian data in (9) are crucially different from the previous examples in Mohawk, Fiquig Berber, or Manam. In those examples, the specifier pointed to an unstructured stretch of time and merely indicated whether that stretch was located in the past or the future. The specifier in (9), on the other hand, pinpoints a temporal segment which is not merely located in terms of pastness or futurity, but which also has definite boundaries and therefore internal structure. As a result, the modulation effected by the itive marker amounts to “shifting” the temporal segment by one notch – i.e. by one day, one week, etc. as the case may be. *Shifting* is a subspecies of temporal modulation which appears to be instantiated in several other Oceanic languages.⁶

Another issue brought to the fore by the Hawaiian data is the perennial problem of symmetry. Rather than being effected by the ventive marker, as would be expected, interval contraction is encoded in Hawaiian by markers that have to do with directionality on the vertical axis — i.e. *iho*, ‘downwards’, and *a’e*, ‘upwards’. According to Cook (1996), the motivation for this is very straightforward: in normal human experience trajectories on a vertical axis are intrinsically short and limited, whereas motion on a horizontal axis is potentially unbounded. If such is also the motivation for the grammaticalization of *aku* as a marker of interval expansion, then deicticity would be, at best, an ancillary factor. Without invalidating

it altogether, this throws some doubt on the relevance to Hawaiian of the deixis-based cognitive model which has so far been appealed to and which predicts that ventive and itive markers are going to behave contrastively when they function as modulators.

Lastly, the formal devices used in Hawaiian for referring to past time are only partly symmetrical with those referring to future time:

- (10) [Hawaiian. Cook (1996:459)]

kêia mahina a'e
 PROXIMAL.DEM month upwards
 'next month'

- (11) [Hawaiian. Cook (1996:459)]

kêlâ mahina (pule, makahiki) aku nei
 DISTAL.DEM month (week, year) **thither** last
 'last month (week, year)'

Whereas future time reference in (10) is effected by the proximal demonstrative in coalition with the marker signalling upward direction, past time reference in (11) is redundantly encoded by the distal demonstrative, the deictic element *nei* as well as the itive marker *aku*. Evidently, *a'e* in (10) and *aku* in (11) do not modulate anything. Yet it is plausible to assume that their contribution to the overall meaning of the expression is grounded in the cognitive logic suggested by Cook: while a journey upwards is normally a short one, a horizontal trajectory is potentially unbounded.

To sum up, when Hawaiian makes temporal use of its itive marker, it appears to be doing two things. It foregrounds one component of its semantics, namely its reference to a horizontal path, at the expense of another component, namely its deictic value. And it builds on this foregrounded component to effect interval expansion or else to contribute to past time marking. One is dealing here with an either/or situation, in so far as no given occurrence of *aku* can apparently function at one and the same time as modulator and specifier.

3.3 French *venir (de)* and *venir (à)*

To that extent, the behaviour of *aku* differs considerably from that of the French ventive marker in sentences such as the following:

- (12) [French. Example constructed by Ph. Bourdin]

Jean vient de lav-er sa chemise
 Jean **come**:PRES:3SG ABL/ÉLAT wash-INFIN POSSESSOR.3SG shirt
 'John has just washed his shirt.'

The construction *vient de* + inf., as instantiated here, is cumulatively an exponent of perfect aspect *and* a temporal modulator, specifically a marker of interval contraction. It carries, in other words, *dual encoding* of aspectual value and temporal modulation.⁷

It is doubtful, however, whether *venir* as such is responsible for interval contraction. As is obvious from the following example, substituting the preposition *à* for the preposition *de* carries a devastating referential impact:

(13) [French. Example constructed by Ph. Bourdin]

si Joe (en) vient un jour à lav-er
 if Joe (from.there) come:PRES.3SG one day ALL/DAT wash-INFIN
ses

POSSESSOR.3SG:POSSESSUM.PL

chemise-s [... *ce ne sera plus le Joe qu'on connaît*]

shirt-PL

'If some day Joe ends up washing his shirts [... he will no longer be the Joe that we know].' Or: 'If some day Joe goes as far as to wash his own shirts.'

Whatever contribution (*en*) *venir à* exactly makes to the meaning of this sentence is essentially of a modal nature. What is quite striking, beyond that, is the implicature that for the event to take place a period of time which is subjectively felt as lengthy will need to elapse. In other words, substituting (*en*) *venir à* for *venir de* results in substituting interval expansion for interval contraction. While interval expansion is clearly not as crucial to the semantics of (*en*) *venir à* as interval contraction was to the semantics of *venir de*, the fact remains that if there is a locus of temporal modulation in examples (12) and (13), it would appear to be not so much the verb *venir* as the combination of *venir* with either the ablative preposition *de* or with its allative counterpart *à*.

4. The role of allativity and the termination schema

The deixis-based account predicts that ventive directionals will trigger interval contraction because their fundamental contribution to any utterance they occur in is to bring closer to the speaker's *hic et nunc* the particular location under focus – whether it be the spatial location of the moving entity or the temporal location of the event being referred to. Clearly, the semantics of (*en*) *venir à* + inf. in (13) runs decisively counter to such a prediction.

To understand why this is so and to try and come up with an alternative account, it may help to consider some data, borrowed from various languages, in

which the ventive marker also triggers, at least residually and by way of implicature, interval expansion:

- (14) [English. Saturday Night [Canadian magazine], June 1992, p. 87]
 [Activist] Maude Barlow *came* to have quite an influence on [Liberal leader] John Turner.
 = ‘Maude Barlow wound up having quite an influence on John Turner.’
- (15) [Spanish. Torrego (1988:104)]
esa calle viene a da-r a
 DISTAL.DEM street come:PRES.3SG ALL/DAT give-*INFIN* ALL/DAT
ésta
 PROXIMAL.DEM
 ‘In the end, that street leads up to this one.’

Terminativity or culminativity is the aspectual thread common to (14) and (15). As is well-known, ‘come’ verbs tend to throw into relief the endpoint of the path, so much so that in some contexts their deictic force is completely overshadowed as a result.⁸ Presumably, the interval which is being subjectively expanded by the ventive verb in these examples is the length of time that it takes to *reach* the particular state of affairs being described. Similarly, what the ventive marker in (16) emphasizes is that the occurrence of the event coincided with the *end* of a lengthy period of non-occurrence:

- (16) [KiVunjo-Chagga, dial. of Chagga (Tanzania; Niger-Congo, Bantu, E.30). Emanatian (1992:10–11)]
mayí ká'chéwiá papa
 Grandma SUBJ.3SG:CONSECUTIVE:come:INFIN:tell:INDICATIVE Papa
háń' síé chá maká itanû
 SUBJ.MARKER:PERFECT:finish:NON.ASSERTED like years five
 ‘And Grandma told Papa, there having elapsed about five years.’

The *termination schema* proposed by Radden (1996) goes a long way towards accounting for the model of directed motion which is activated in all three examples and which is responsible for interval expansion as a semantic effect.

Come in (14) and *venir* in (15) would be utterly unable to implement the termination schema unless they both governed an allative complement. The allativity of ‘come’ verbs has received some attention in recent years in connection with their grammaticalization into prospective or future markers.⁹ Interestingly, there is scattered evidence, among Niger-Congo languages, that ‘come’ is occasionally a marker of remoteness in the future:

- (17) [Minyanka (Mali and Burkina Faso; Niger-Congo, Gur, Senufo).
Prost (1964: 162–163; 170–171)]
- a. *mi na doro*
1SG FUT pass.by:PERFECTIVE
'I'm going to pass by (shortly).'
- b. *mi na ba doro*
1SG FUT **come** pass.by:PERFECTIVE
'I will pass by (at a later time).'
- (18) [Kinyarwanda (Rwanda; Niger-Congo, Bantu, J.60).
Ingouacka and Shimamungu (1994: 56–57)]
- a. *n-ra-som-a* *igitabo kuva uyu muúnsi*
1-PRES-read-ASPECT book as.of this day
'I'm going to read the book starting today.'
- b. *n-za-a-som-a* *amabáruwá*
1-“DISTANT.”FUT[<'come']-NON.PRES-read-ASPECT mail
ejó ...
tomorrow
'I will read the mail tomorrow (... today, I don't have the time).'

Likewise, in Moore, the addition of the 'come'-verb *wa* to the future-referring marker *na* results in “uncertainty with respect to its date of actualization, and consequently in removing it further in time.”¹⁰ Clearly, interval expansion here is merely a function of modal distance. It may be hypothesized, though somewhat speculatively at this stage, that modal distance itself is somehow a function of the termination schema that was invoked above, in connection with the French, English, Spanish and Chagga data.

5. The interplay of temporality and modality

As the discussion above suggests, the *temporal* baggage carried by ventive markers in such examples as (17) and (18) is likely to be no heavier than their *modal* load. This is just as true of the alternating 'go'- and 'come'-derived morphemes, dubbed “aspectual/modal,” in the following set of Chagga examples:

- (19) [KiVunjo-Chagga, dial. of Chagga (Tanzania; Niger-Congo, Bantu, E.30).
Moshi (1994: 146–149)]

- a1. *ńsúlří*
 nobleman[CL.1]
n-ǎ-ńndè-zřiká [↓]*wári*
 FOCUS-SUBJ.CL.1-NEAR/DEF.FUT:ASP/MOD[<'go']-brew beer
 'The nobleman is expected to brew the beer (soon).'
- a2. *ńsúlří*
 nobleman[CL.1]
n-ǎ-ńcè-zřèzřá
 FOCUS-SUBJ.CL.1-NEAR/DEF.FUT:ASP/MOD[<'come']-speak
 'The nobleman (definitely) intends to speak (immediately).'
- b1. *ńsúlří*
 nobleman[CL.1]
n-ǎ-[↓]cíndé-zřèzřá
 FOCUS-SUBJ.CL.1-INTERMEDIATE/DEF.FUT:ASP/MOD[<'go']-speak
 '(We know that) the nobleman intends to speak.'
- b2. *ńsúlří*
 nobleman[CL.1]
n-ě-[↓]cícé-zřèzřá
 FOCUS-SUBJ.CL.1-INTERMEDIATE/DEF.FUT:ASP/MOD[<'come']-speak
 'The nobleman (definitely) intends to speak (sometime soon).'

Inasmuch as they are fused with the tense morpheme adjoining them immediately to their left, the itive and ventive “aspectual/modal” markers meet very nicely the “bondedness” parameter for grammaticalization, as set out in Lehmann (1995). The tense morphemes, in themselves, specify remoteness from speech time, with the non-past morphemes further encoding evidentiality and degree of certainty or definiteness. In effect, those very temporal and modal specifications are further refined by the itive and ventive markers. As shown for instance by (19a2) and (19b2), the ventive morpheme brings, so to speak, the event closer to speech time, while making it more definite or less uncertain. The itive morpheme carries the converse values. Clearly, temporal and modal specifications are completely intertwined, and the deictic grounding of the underlying logic is inescapable.

6. Other logics, and the limits of grammaticalization

That the use of deictic directionals as markers of interval modulation is not amenable, either formally or semantically, to a fit-all and definitive account is vividly illustrated by the behaviour they exhibit in Luganda and Kiksht.¹¹

6.1 Luganda: a ventive modulator with some way to go

The Luganda verb corresponding to ‘come’ can function as an interval modulator, as in (20a), while also grammaticalizing into a future or prospective auxiliary, as in (20b):

(20) [Luganda (Uganda; Niger-Congo, Bantu, J.10). Chesswas (1963: 138)]

a. *ky-a-jj-e*

OBJECT.RELATIVE[CL.4]-3SG-COME-PERFECT

a-gend-e

3SG-go-“SUBJUNCTIVE”

‘She has just gone.’¹²

b. *a-jj-a* *ku-genda*

3SG-FUT[<‘come’]-PRES INFIN-go

‘She will go.’

As a modulator, *jj-* would appear to reduce the interval between event time and speech time in accordance with the deixis-based logic. However, it does so in a morpho-syntactic environment which is severely constrained: the sentence has the trappings of a relative clause, the ventive marker bears perfect inflection, and the notionally main verb, rather than being in the infinitive, as in (20b), is in fact the predicate of an embedded clause in the “subjunctive.” As is obvious from its compatibility with a ‘go’ verb in both (20a) and (20b), the ventive marker has undergone complete *semantic* reanalysis. However, the very restrictedness of the morpho-syntactic environment in (a) would at the very least suggest that the *formal* reanalysis of ‘come’ as a marker of interval modulation has stopped well short of anything approaching auxiliatation.

6.2 The logic of Kiksht

Kiksht makes full use of both a ventive and an itive modulator, in the past as well as the future:

(21) [Kiksht, dial. of Chinook (Oregon, near-extinct; Penutia). Hymes (1975: 315)]

a1. *ni(g)-*

...

t-

PAST[last.week/last.season]- [PERSON MARKING] VENTIVE-

...

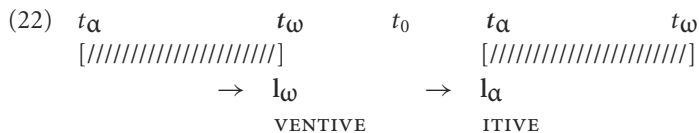
[VERB STEM]

‘... (approximately) last week ...’

- a2. *ni(g)-* ... *u-*
 PAST[*last.week/last.season*]- [PERSON MARKING] ITIVE-
- ...
 [VERB STEM]
 ‘... (approximately) last season ...’
- b1. *a(l)-* ... *t-* ...
 FUT- [PERSON MARKING] VENTIVE- [VERB STEM]
 ‘... in the distant future ...’
- b2. *a(l)-* ... *u-* ...
 FUT- [PERSON MARKING] ITIVE- [VERB STEM]
 ‘... in the immediate future ...’

To put things in a somewhat simplifying nutshell, the ventive prefix *t-* reduces the interval when it is located in the past, as in (21a1), and expands it when it is located in the future, as in (21b1). The itive prefix *u-*, as a modulator, makes the very opposite contribution to the meaning of the sentence.

The account offered by Hymes (1975) may be represented by the following diagram:



Hymes essentially assumes that the beginning and endpoint of a time interval metaphorically correlate with the start and endpoint, respectively, of a journey in space. His key insight is that whichever boundary of the time interval is closest to speech time is going to be given special weight or emphasis. For an interval located in the past, the closest boundary is the endpoint: since ‘come’ prototypically links up the end of a journey with the deictic centre, there is a definite logic in choosing it to encode the notion of proximity in time. By the very same logic, ‘go’ will encode proximity for an interval located in the future.

Much as in Mohawk, the ventive and itive prefixes of Kiksht may lend themselves to a spatial or temporal interpretation:

- (23) [Kiksht. Hymes (1975:322)]
- a. *a-* *š[t]-* *t-* *gitti-a*
 FUT- ... VENTIVE- ...
 ‘It will rain (here, this way).’
 Or: ‘It will rain (in the distant future).’
- b. *a-* *š[t]-* *u-* *gwitti-a*
 FUT- ... ITIVE- ...

‘It will rain (there, that way).’
 Or: ‘It will rain (soon).’

It would be highly misleading, however, to invoke an “either/or” type of ambiguity. That much is clear from data such as the following:

(24) [Kiksht. Hymes (1975:322)]

- a1. *a- n-ḡa- t- gwad-am-a*
 FUT- ... VENTIVE- ...
 ‘I’ll come here to bathe.’
- a2. **a- n-ḡa- t- gwad-am-a kwaiš*
 FUT- ... VENTIVE- ... soon
- b1. *a- n-ḡ-ḡwad-am-a*
 ‘I’ll go there to bathe.’
- b2. *a- n-ḡ-ḡwad-am-a kwaiš*
 ‘I’ll soon go there to bathe.’

According to Hymes, the contrast in acceptability between (24a1) and (24a2) suggests that even when it functions as a space directional, the ventive prefix *t-* does not quite shed its stripes as a modulator: how else to explain that it is quite simply unable to coexist with the adverb *kwaiš*, ‘soon’? Notional ambivalence, rather than straightforward ambiguity, is the operative concept here. Whether the ambivalence is in any way connected with a process of grammaticalization, however, is most unclear. What is quite obvious is the fuzziness of the dividing line between the two values – so much so that the notional planes of space and time are not so much mapped one on to the other as inextricably intertwined.

7. Concluding remarks

Whether the data that have been brought together in the sections above point in the direction of a grammaticalization path remains open to debate, for the evidence is not quite in yet. First, it is not exactly overwhelming in purely quantitative and crosslinguistic terms. Further, it would seem that in at least some languages temporal modulation qualifies as little more than a potentially cancellable implicature – in other words, as a residual pragmatic effect. As well, there is the inescapable reality of dual encoding, whereby a given marker may function at one and the same time as a temporal/aspectual specifier and as a signal of interval contraction or expansion; as a result, to describe a marker like French *venir (de)* merely as a temporal modulator would be unduly restrictive, if not simplistic.

On the other hand, the obvious diversity of the motivating logics to be found across languages should not be viewed as a serious argument against the hypothesis

of a pathway. After all, just because English has grammaticalized *be going (to)* into a prospective marker while Swedish has grammaticalized *komma (att)* does not invalidate our recognition of both as distinct but *bona fide* instances of one major grammaticalization pathway. All it means is that languages dislike straitjackets, cognitive or otherwise.

Notes

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1. Cf. Heine et al. (1991), Bybee et al. (1994) and Lehmann (1995), among other authors.
2. Cf. Bourdin (1992:294–295).
3. On the concept of “cline” as outlined here, cf. Heine et al. (1991:148) as well as Hopper and Traugott (1993:6–7).
4. Abbreviations: ABL = ablative; ALL = allative; ASP/MOD = aspectual/modal marker; CL = nominal class; DAT = dative; DEF = definite; DEM = demonstrative; ELAT = elative; FEM = feminine; FUT = future; INDEF = indefinite; INFIN = infinitive; MASC = masculine; PL = plural; PRES = present; SG = singular; SUBJ = subject.
5. Like Japanese, Somali systematically focuses on the direction of the return portion of a round-trip rather than on that of the outgoing portion: *Go get the meat* is thus rendered something like ‘Get the meat come here’.
6. Tahitian is one of them: cf. Tryon (1974:26).
7. For a typological account of the grammaticalization of *venir (de)*, cf. Bourdin (1999).
8. German *kommen* is a case in point. For thoroughgoing analyses, cf. Radden (1996) and Di Meola (1994).
9. Cf. Comrie (1976:106) and Marchese (1986:125), among others.
10. Cf. Alexandre (1953:106). Moore is a Gur language (Oti-Volta subgroup), spoken in Burkina Faso, Benin, Ivory Coast, Ghana and Togo.
11. Kiksh is actually mentioned by Bybee et al. (1994:n. 8, p. 103) in connection with the topic at hand.
12. I am grateful to Derek Nurse for pointing out to me that the first occurrence of the *-e* suffix is a clipped form of the perfect affix (*-ile*), rather than the “subjunctive” ending as Chesswas (1963) would have it.

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Grammaticalization and category weakness*

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1. Introduction

A widely accepted view in theoretical linguistics is that any category in a language constitutes a continuum with prototype effects: some members are focal or typical, displaying all the morphological, distributional and semantic properties of that category, they are the best instances of the category, they are the prototypes, the focal zone itself being a continuum; other members are less typical and yet others are situated in the borderline area of the category, exhibiting grammatical properties of two or more categories. The greater distance an item has from the focal zone, the weaker its syntactic and semantic resemblance with the prototype entities, and, as a result, it begins to acquire properties of other categories. That is, as the item moves away from the prototype, its category adscription is more and more doubtful, a process of category weakening and/or loss of category properties takes place.

On the other hand, a well-known fact in historical linguistics is that a process of grammaticalization does not affect a category homogeneously, but rather advances progressively from more to less specific contexts, or from marked to unmarked contexts; that is, language change also constitutes a continuum, but one that evolves towards unmarkedness.

Unmarkedness is identified in this paper with the normal, preferred or natural means of expressing a category. Markedness is understood as a binary relation between two opposites which are related in terms of their privileges of occurrence, one of them, the marked member, is assigned to specific conditions, and the other, the unmarked one, is assigned elsewhere, that is, the unmarked member of the opposition has less distributional restrictions, is more flexible and may appear in a greater number of contexts (Andersen 1986; Lehmann 1986). Frequency is an important factor in determining the (un)marked status of a form or construction: the range of application of the unmarked member is always higher than the range of application of the marked member. Relative frequency is a consequence of a difference

in distribution. Distribution, in turn, is the manifestation of the different values of the opposite members. Changes in markedness values always motivate changes in frequency. In language evolution, changes may occur through which the distinctive properties on which an opposition is based may be reinterpreted, then it is said that a markedness reversal or a demarking took place.

The fact that language change does not affect all the members of a category and all the possible contexts at the same time is strong proof that the internal structure of categories is not homogeneous, but rather is comprised of elements that show different grammatical behaviors. The natural consequence of such non-homogeneous behavior is an essential asymmetry inside any category, so that certain members can be considered more genuine, prototypical or basic representatives of the category than others. Another consequence is that the arrangement of the members is hierarchical: the central or prototypical ones are unmarked for the properties of the category, they are syntactically flexible and undergo a large range of grammatical processes, whereas the borderline entities are very marked as to those properties, and do not undergo the full range of processes that in general apply to prototype entities.

Therefore, there is a double parallelism: on the one hand, both a synchronic continuum in the construction of categories, and a diachronic evolutionary continuum in grammaticalization processes. On the other hand, there is a double internal asymmetry with marked and unmarked situations, both in the arrangement of the members of a category and in the progression of a grammaticalization. Continuum and asymmetry go hand in hand, synchronically and diachronically, with markedness. In historical syntax, the usual directionality is towards demarking.

This paper is concerned with the two main linguistic concepts above: prototypes and grammaticalization. They are closely bound together, but, in my opinion, the kind of relationship they establish has not been given enough attention. The aim of this paper is precisely to shed some light on the structural relationship between prototypes and grammaticalization, taking into consideration the dynamic balance between synchrony and diachrony, and between marked and unmarked values. Specifically, the paper is concerned with the renewal of a grammatical category. It analyzes the spread of a new grammatical case-marker over different contexts, and shows that the expansion of the new marker advances with respect to the category continuum, moving towards the prototype.

2. The hypothesis

The proposal of this paper is that there exists a tight connection between prototypes and (a relative) diachronic stability, and, on the other side, between category margins and diachronic instability. That is, prototype situations are diachroni-

cally more stable than non-prototype situations. Grammaticalization first affects the margins of the category, later it affects less marginal or more typical entities, and finally, but not necessarily, it will affect the prototypes. In general, those entities with a low degree of categoriality, placed at the frontiers of the category, and exhibiting properties belonging to two or more categories, are prone to grammaticalize first. Category margins are vulnerable to linguistic change because they can have a double, and many times doubtful, categorial interpretation, a fact which creates permanent potential structural ambiguity.

The existence of prototype effects in language has been researched at length (Givón 1986; Lakoff 1987: Ch. 3; Koch 1995 and many others), however the dynamic and diachronic relationship between prototype effects and grammaticalization in language evolution, that seems to me quite natural, has received scant attention.¹ As far as I know, there are only two explicit and brief comments proposing a connection between prototypes and diachronic stability (Kemmer 1992: 150; Company 1992: 134), and one more extensive paper (Company 1997) proposing a connection between prototypes and diachronic stability and between category margins, diachronic instability and grammaticalization. Mention must be made of the Prague structural linguistic approach that in the fifties-sixties advanced a diachronic thesis closely related to the evolutive relationship I am proposing here. Although not explicitly in terms of continuum, prototypes or grammaticalization, some scholars of the Prague School explained the dynamics of language development as a tendency to integrate peripheral elements: "The system of language might thus be presented as space with an uneven density of elements, structured according to the principle 'Centre-Periphery-Transition' or as masses of centres with their fields of gravitation . . . It does not force us into unambiguous decisions in those cases where the decision has not been made by the language itself . . . As a universal of language development, may (sic) also rank the fact that peripheral phenomena are less stable than those belonging to the centre, which may result either in the total disappearance of the peripheral elements or in some modification enabling them to be shifted on to the centre" (Daneš 1966: 12). A similar opinion is found in many references in Daneš's paper and in Vachek (1966).

Grammaticalization is understood in this paper in a wide sense, as a dynamic process of codification and organization of grammar, a sense quite close to Hopper's (1987) notion of creation of grammar. Grammaticalization covers a number of processes, viewed in a dynamic perspective, and comprises both synchronic and diachronic variation of a certain sort. Grammaticalization has its source in language use, that is, in real discourse. Many times the only indication that grammaticalization is going on is, as it will be seen below, the different frequency of use of a form or construction in one environment vs. another one. The effect of grammaticalization is, as is well known, variation and conflicting data. Grammaticalization produces synchronic variation in which the earlier and the later stages

of a change, i.e. the conservative and the innovative form or construction, coexist, often for centuries. In turn, synchronic variation is a symptom of, and a prerequisite for, grammaticalization. That is, grammaticalization and synchronic variation determine each other.

The diachronic stability of the prototypes is directly related to, and would directly result in, the typological preponderance of distinctive marking for the prototypes. Given that the prototypes have a grammatical marking of their own, the formal and semantic contrasts among them are great. On the contrary, non-prototype uses, specifically borderline entities, do not usually have distinctive, exclusive marking. Therefore, in the margins of the category the contrasts become weaker, and the differences between two adjacent categories are lessened. This process, which I will call category degradation of the margins, undoubtedly creates communicative flexibility, in the sense that the speaker may use the same form for encoding two different categories, but at the same time such category degradation creates signs or forms that are opaque for their categorial interpretation, producing permanent potential ambiguity which becomes a latent trigger for language change.²

Category degradation at category margins and concentration of linguistic changes in that area go hand in hand. For example, we might hypothesize that if the language system exerts some kind of structural pressure towards a certain change, the weakest entities, with no distinctive marking, will yield to that pressure first. We might also hypothesize that if the speaker wishes to manifest his or her own evaluation of linguistic forms, projecting his or her personal point of view about the event, that is, a subjectification process, the entities with a minimum of formal differentiation, placed usually at the margins or at least at non-focal zones, will be easier to manipulate for his or her purpose.

That is, I think that in a process of grammaticalization there are two complementary aspects: on the one hand, the causes of the change, and on the other hand the area where the change takes place. The causes may be of different kinds, formal, semantic or pragmatic, even many times all acting together in a complementary way as converging motivations for a change. As to the second, the margins of the category are the fertile area where those causes take root easily.

The use of a new form or construction in a new context begins always, as is well known, in a very marked and peripheral situation, affecting marked entities, located in non-central category zones; the innovative construction will progressively move forward to more and more contexts, each time embracing less marginal entities, it progressively gains generalization, loses its marked status, and finally, but not necessarily, it may invade the prototype, causing a markedness reversal or a demarking. The last items to grammaticalize are the prototypes. The advancement of the change might even provoke a full restructuring of the category, leading to its re-

definition. The dynamic relationship between grammaticalization and prototypes may be summed up as the following path:

NON PROTOTYPE-MARGINAL-MARKED SITUATION →
 PROTOTYPE-NON MARGINAL-UNMARKED SITUATION.

3. Empirical evidence

Several syntactic changes in Spanish follow the path non-prototype > prototype. The changes are grammaticalizations, each of them with specific motivations, and have already been studied in general, some of them as classic problems in Romance linguistics. Although they are different changes, if we take a careful look at them, we will realize that all the changes show the same basic underlying pattern: the process began always at the margins of the category continuum, on those entities which shared lexical properties with other categories (accusatives that resembled datives, datives that resembled locatives, nouns that resembled adjectives), and/or on the entities which had two structural interpretations (between subject and object, between a complement clause of noun and a relative clause). The fact that the same deep process takes place in different grammatical areas of the language gives more weight to the hypothesis of a sliding non-prototype > prototype. In what follows, for reasons of space, I will analyze in detail only one of the changes: the grammaticalization of a direct object (DO) case-marker in Spanish.³

The grammaticalization of the Latin locative directive preposition *ad* 'to' into the Spanish object case-marker *a*, 'accusative-direct object', is a paradigmatic case which illustrates how prototypes and grammaticalization are mutually determined. The innovative object marking is rooted in early Hispano-Romance, it began with human accusatives (ACC), lexically close to datives (DAT), it later affected other ACCs, and now is slowly invading the prototypical inanimate ACCs. The process has its source in an analogical extension of the old use of *a* with DAT-NPs. The change was an extension of meaning by which the original sense of the preposition of direction towards an entity or a place, that is, a locative function, is extended to mark an entity which is in some way reached by the action of the verb, a DAT recipient or goal, and this marking in turn is extended to mark an entity which is affected by the verbal action, the ACC, patient or theme. The result of the process was the creation of an object case-marking in Spanish via the reanalysis of the locative preposition *a* as an object case-marker. The locative preposition *a* became a more polysemous sign which added a new grammatical meaning to its original lexical meaning. Both meanings, locative and case-marking, have coexisted for centuries in the history of Spanish.

This grammaticalization process led to a complex, and well known, synchronic variation. Spanish, in any of its stages, has two devices for marking a direct object: a prepositionless-NP or a NP marked by the preposition *a*. These two alternatives depend in a great measure, among other factors, on the place that the nominal occupies in the DO-category continuum, a place which is directly related to its lexical properties; roughly, human and certain personalized DOs bear the preposition, inanimate DOs lack the preposition. The marking function of the preposition for human-DOs or certain personalized objects is known in traditional grammar as ‘personal *a*’ (Bello 1847:267), a sort of classifier for certain DO nouns.

It is somewhat controversial to take a decision about which is the prototype of a DO. It seems semantically a flexible class that admits a wide range of lexical items, both animate and inanimate, and it might be considered, in consequence, as unmarked as to any semantic feature. Nevertheless, a DO refers very frequently to inanimate beings, things or abstract concepts, fully affected by the action of the verb; a DO usually has neither energy nor volition and it usually undergoes some change of state, provoked by the energy of the agent via the transitivity of the verb. A thing is easier to change than a human being, therefore a non-human entity seems to represent the prototype of a DO better than a human one (Dowty 1991; Newman 1996: Ch. 3; Wilkins and Van Valin 1993; Van Valin 1997: Ch. 3).

As a general rule in Spanish, prototype DOs, i.e. concrete, inanimate nouns, usually lack prepositional marking (1a), whereas the entities placed far from the prototype, such as abstract nouns and animate non-human beings, can take *a*-marking or not (1b), but the entities situated on the border of the category, lexically close to the DAT prototype, that is, individuated human nouns, proper nouns and personal pronouns, obligatorily take the prepositional case-marker (1c). In general terms, the greater the affectedness and the prototypicality of the DO-noun, the lesser the possibility for innovative prepositional marking in Spanish. This language is typologically akin to many other languages in that DO marking is regularly limited to a subset of direct objects characterized by certain features, such as humanness, animacy, pronominality or/and definiteness, properties associated with non-prototype DOs, close to DAT indirect objects, whereas inanimate, indefinite objects do not usually exhibit, or are inconsistent as regards DO case-marking (Moravcsik 1978:270, 276; Comrie 1979; Lyons 1999:204–205).

- (1) (a) *Comió* Ø *peras verdes* *y* *le hicieron* *daño* / **a peras verdes*
 ate-3SG pears unripe and him made-3PL damage
 ‘He ate unripe pears and he got sick.’
- (b) *Los medios de producción* *han rebasado* *a los programas*
 the resources of production have surpassed to all the programs

gubernamentales / Ø los programas

government

'The production resources surpassed all government programs.'

Mató al caballo, estaba muy enfermo / Ø el caballo

killed-3sg (to) the horse, was-3sg very ill

'He killed the horse, it was very ill.'

(c) *Miraba siempre a Juan de reojo / *Juan*

looked-3sg at always to John with a sidelong glance

'Always he looked at John with a sidelong glance.'

*Deja a la pobre niña en paz / *Ø la pobre niña*

leave-2sg to the poor girl in peace

'Leave the poor girl in peace.'

The way that the *a* case-marker spread in the history of Spanish is a strong indication that inanimate entities are better representatives of the prototype of a DO category, and that the prototype is unmarked and relatively more stable diachronically than the entities placed at the margins of the category. Inanimates were, and in some way still are, reluctant to take the new *a* case-marker. Tables 1 and 2 show the progression of the preposition *a* as a DO case-marker in the history of Spanish. The older data are culled from ten texts in prose from between 1250 and 1600 (Calderón 1994; Navarrete 2000). For the purposes of the sample of inanimate DO, the frequencies are made from the first 300 inanimate DOs documented in the corpus. The modern data are taken from newspapers and from everyday spontaneous speech. The corpus is listed below under Sources in chronological order. Quantitative data focus on the innovative casemarking, i.e. presence of *a*, in different semantic subsets of DO-nominals, in order to show the conditions that promote the innovative ACC marking.

Table 1⁴ shows that the new *a* case-marking was extended according to an individuation hierarchy working together with an animacy hierarchy: there are two strong breakdowns as regards the frequency of *a*-marking, one between very individuated human items (the first two lines) and the rest of the DOs, and the other one between human and non-human DOs. The percentages indicate that the new

Table 1. Lexical classes and diachronic DO *a*-marking

	XIII	XIV	XV	XVI	XX
Pers. Pron	100%(53/53)	100%(46/46)	99%(67/68)	99%(182/183)	100%(55/55)
Proper Noun	99%(124/125)	99%(170/172)	96%(129/134)	88%(124/147)	100%(32/32)
Humans	42%(243/574)	35%(224/631)	35%(181/518)	50%(541/1096)	57%(81/141)
Animates	3%(4/155)	3%(2/64)	6%(2/34)	7%(11/168)	—
Inanimates	1%(2/300)	0%(1/300)	3%(8/300)	8%(54/641)	17%(64/373)

DO case-marker initially affected highly individuated nouns: personal pronouns and proper nouns, that is, non-prototype DOs with a borderline category status, that share semantic features with the other object, the indirect object, systematically take the preposition *a* from very early times: almost 100% have *a*-marking from the first century in the corpus.⁵ Table 1 also shows that the new *a* case-marker later advanced to less marginal entities: to other human nominals, especially (singular) human common nouns: an average of 37% in Old Spanish, with an important increase to 50% in the 16th century, and to 57% in the 20th century. Animate beings show a minimum of *a*-marking, with a slight increase in the 15th-16th centuries. Inanimate entities, the prototype of DO, the last line in the table, do not in general accept the new *a* case-marker in medieval Spanish (Folgar 1993: 82), in the 15th century sample, *a*-marking on inanimates comes shyly onto scene (3%), it increases to 8% in the 16th century, although it is still non significant in the whole DO structure, and in the 20th century it shows a notable increase to 17%. Nowadays, the last stage of the grammaticalization is going on; an interesting slow invasion of the *a* case-marker into the prototype inanimate zone is taking place, it is no more a classifier 'personal *a*', it is becoming a true case-marker, generalizing its meaning and syntactic distribution.

If we group, as in Table 2, non-prototype entities on the one hand (humans of every kind: personal pronouns, proper and common human nouns), and on the other hand, prototype entities (the inanimate ones, both abstract and concrete nouns, animals not being considered), we can see a very strong concentration of prepositional marking in the non-prototype zone in all periods, and secondly, we can appreciate that the possibilities of *a*-marking on DOs are notably increased over time, especially in the non-prototype area. Tables 1 and 2 show that prepositional marking moves down the animacy hierarchy, and at the last stages of the grammaticalization the innovative marking invades the low position of the hierarchy, the inanimate area, i.e. the prototype of DO. The general progression of prepositional marking for DOs constitutes the reanalysis: preposition > case-marker. The tables also indicate that the obligatoriness of the innovative DO with *a*-marking increases with grammaticalization, via the loosening of the old restrictions of distribution. In fact, the innovative prepositional marking is taking on the lexical field formerly occupied by the conservative etymological expression of the category with zero marking. We are attending to the renewal of a grammatical category.

Table 2. Concentration of *a*-marking according to (non)prototype zones

	XIII	XIV	XV	XVI	XX
Non-Protot.	56%(420/752)	52%(440/849)	52%(377/720)	60%(847/1416)	74%(168/228)
Prototype	1%(2/300)	0%(1/300)	3%(8/300)	8%(54/641)	17%(64/373)

In present-day Spanish, the beginnings of the last stage of this grammaticalization process seems to be taking place: *a*-marking is slowly invading the prototype area of the DO category. In modern Spanish inanimate objects can take a preposition under certain conditions: *a*-marking is much more frequent with abstract nouns, 79%, (2a), but it is not unfrequent to document *a*-marking with singular concrete nouns, 21%, (2b); body parts are very frequent with *a*-marking (2c), a metaphorical extension from the human possessor is operating, since humans almost obligatorily take *a*-marking. Degrees of transitivity, the aspect class of verbs, presence/absence of the agent and degrees of agentivity are also important factors in allowing *a*-marking on prototype DO-nouns (Cabañas and Navarrete 1997; Company 1997: 159–162).

- (2) (a) *Después de conocer mucho a la vida, ya no me interesa tanto el teatro*
 After knowing very much to the life, already not
 me interest-3SG so much the theater
 ‘After knowing the life, I am not as interested in the theater.’
- Marlboro combate al contrabando* (TV program)
 Marlboro fights to the contraband
 ‘Marlboro fights the contraband.’
- (b) *L.V. no se podía quedar atrás e hizo un reportaje sobre Chiapas. Para ello contrató a un helicóptero* (El Financiero newspaper)
 for it hired-3sg to a helicopter
 ‘L.V. wanted to make an illustrated report about Chiapas. For that purpose, she hired a helicopter.’
- Para que no nos peleemos, puse a la silla en medio* (spontaneous speech)
 For that don’t fight-1PL, put-1SG to the chair
 in the middle
 ‘So we won’t fight, I put the chair in the middle.’
- (c) *Cuando se besaban, sus largas pestañas tocaban a las pestañas del padre*
 when they were kissing each other, her long eyelashes were touching to the eyelashes of the priest
 ‘When they kissed each other, her long eyelashes were touching the priest’s eyelashes.’

Besides the lexical properties of nouns and their place in the category continuum, the use of *a* with DOs also obeys certain syntactic conditions. Ambiguity in the syntactic function is an important factor in promoting prepositional DOs. *A*-marking

is used to disambiguate between subject and human object NPs, especially when both came juxtaposed in the sentence (García Miguel 1991: 34; Laca 1995: 70). That is, from very early times up to now, given the relatively free constituent order of Spanish, the ACCs which resemble NOMs need *a* to set off their status as non-subject clearly. In the examples (3) below, if the preposition does not precede the DO-NP, it would be difficult to make a distinction between the subject and the object of the clause (in bold type).

- (3) *¡Aquel que consigo está tan discorde, aquel en quien*
 that (man) which with-himself is so discordant, that (man) in whom
la voluntad a la razón no obedece? (15th c., *La Celestina* I.91)
 the will to the reason not obey-3SG?
 ‘That man which is so discordant, in him the will does not obey the reason.’

El discurso construye a la realidad (*La Jornada* newspaper)
 the discourse build-3SG to the reality
 ‘The discourse builds the reality.’

The use of ‘*a*’ with ACCs also obeys a complex of semantic and pragmatic conditions, related to the lexical properties of the nouns and the degrees of transitivity. It is used to indicate that the object is less affected by the action of the verb (García 1990; Calderón 1994). The *a* case-marker may be thought of as an index of resistance to transitivity: iconically the preposition puts formal distance between the verb and the object, and in consequence the object appears as less affected by the transitivity of the verb. Less affected DOs or, in other words, DOs more resistant to transitivity, those with ‘*a*’, are those having salient animate-human lexical properties, or playing a prominent role in the situation, or being worthy of attention. At the same time, given the inherent and pragmatic relevance of human-ACCs, the preposition *a* acts as a focusing mechanism, signalling focus-worthy entities (García 1992; García and Van Putte 1995; Melis 1995; Pensado 1985: 131). For instance, in (4), 13th century (Calderón 1994: 34), the same animate DO, *camello* ‘camel’, appears with preposition in the first example (4a), and without it in the second one (4b). In the first case the entity has special relevance in the context, in that it is the rival in a verbal fighting, and in consequence it takes *a*-marking, while in (4b) the entity is degraded, taken as meat, and it lacks the preposition. In (5) the same inanimate DO appears twice in the same context, the first case with *a*-marking, the second one without it. The difference in meaning is related to the different status of both objects and the different degrees of affectedness: in the first mention, the speaker directs the attention to the DO entity marking it with the preposition, in the second mention, as a consequence of the previous event, the DO is completely affected and lacks *a*-marking.

- (4) (a) *¿Non sabes tu que yo he atreguado*
 not know-2SG you that I have given-a-respite
al camello e que le he afiado?
 to the camel?
 ‘Don’t you know I gave the camel a respite?’
- (b) Dixo: “*Comamos Ø este camello que anda entre nos delicioso*”
 said-3SG: eat-1PL this camel which is among us delicious
 ‘We must eat this delicious camel which is among us.’
- (5) *¿No ves que asaltaron*
 not see-2SG that assaulted-3PL
a un buque en Cozumel?, lo dejaron vacío
 to one ship in Cozumel, it left-3PL empty
Ø el pobre buque ;quién sabe cuántos millones se llevaron!
 the poor ship (spontaneous speech)
 ‘Don’t you see that they assaulted one ship in Cozumel? they left the poor ship empty.’

The degrees of transitivity and affectedness are also decisive in the presence/absence of *a*-case marker: the examples (6) below show two human DOs, one with zero marking (6a), the other with *a*-marking (6b), the difference in marking has to do with the different meaning of the verb and the whole meaning of the event. ACCs highly affected and degraded by the verbal process may lack *a*-marking although they are humans (6a), whereas the same human entities take the preposition when involved in an event lower in transitivity, in which the DO is presented as specially important (6b).

- (6) (a) *E tomaron Ø el cavallero muerto e fueron faziendo*
 and took-3PL the knight dead and made-3PL
muy grant duelo (14th c., *Cavallero Zifar*, Calderón 1994:65)
 a very great grief
 ‘They took the dead knight and grieved greatly.’
- (b) *Es forçoso el ombre amar a la muger*
 is unavoidable the man to love to the woman
 (15th c., *La Celestina*, I.118)
 ‘It is unavoidable that men love women.’

4. Conclusions

We have seen there exists a close relation between prototypicality and (a relative) diachronic stability. The progress of grammaticalization is conditioned by the category continuum, and the borderline entities are more active than the prototype ones in language change processes. Grammaticalization advances from the margins towards the focal zone of the category. We have observed the diachronic steps that constitute the renewal of a grammatical category.

We have also seen that the progression of *a*-marking on DOs is a paradigmatic example of demarking, extending from the category margins towards the prototype. DOs have progressively come to take a prepositional marking reserved in the beginnings to locatives and datives. *A*-marking, as is usual in grammaticalization, has undergone semantic and pragmatic decoloration; it is invading the DO-prototype, losing its special marked status and its old semantic restrictions, it is no more only a classifier 'personal *a*', it is becoming a true grammatical case-marker.

Notes

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1. For example, Lakoff (1987) devotes a whole chapter (Ch. 3: "Prototype effects in language") to examine the linguistic consequences of prototype theoretical model, but he does not make any comment about the consequences of prototypes in language change.
2. Ambiguity, as it has been extensively noted (Timberlake 1977, and many others), is a precondition for reanalysis, and this in turn is a condition for grammaticalization. Such a precondition would be potentially always present in the margins of a category.
3. The other changes, that affected both VP and NP, are the following: 1) Grammaticalization of a dative clitic pronoun as DO, a phenomenon known as *léismo*. It began in a non-prototype DO zone: masculine singular nouns, which did not resemble actual patients, rather they resembled datives as regards individuation and activity features (Flores [in press]; Company 1998). 2) Indirect object duplication. An indirect object NP can be doubled with a correferential dative clitic in the same VP. The change began with indirect object having the non-prototype role of recipient, because this thematic role is the more resistant one to indirect object duplication in present-day Spanish (Jeong 1996). 3) Depronominalization of plural dative clitics. In Spanish a plural indirect object NP may be doubled with a singular DAT-clitic. The lack of agreement is much more active with non-human and non-individuated indirect objects, i.e. with non-prototype indirect objects (Huerta 1999; Company 2001). 4) Insertion of the preposition *de* 'of' in the complement clauses of nouns. The change took place in a borderline zone of the noun category, deverbal nouns, when the

subordinate clause had an ambiguous reading between a relative clause and a complement clause (Bogard and Company 1988). 5) The extension of the article. The change spread more actively with nouns having a double reading between a referential interpretation and a predicative interpretation, that is, entities placed in a border area between nouns and adjectives (Company 1991).

4. Locative DOs are left aside, because they offer special problems as regards prepositional marking (Folgar 1993:87–88 and references cited there).
5. The first attestations of prepositional DOs in Old Spanish are very significant. They were the 1st and 2nd personal pronouns: *a mí, a tí* ‘to me, to you’; with these personal pronouns the DAT not only gave its case-marker to the ACC, but also borrowed its morphology: agent-like, nonprototype ACCs lost their etymological ACC ending in *-e, *a me, *a te* < Latin *ad me, ad te*, and they took a dative ending in *-i* < Latin *ad mihi, ad tibi* (Pensado 1985:126).

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Grammaticalization of ‘give’

African and Asian perspectives

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1. Introduction

In 1858, a German missionary in Ghana wrote:

This word is most frequently, extensively and multifariously used and gives the greatest difficulty to Non-Africans. It not only serves as an auxiliary verb like “to let” but also as a “verbal preposition” ... used to express the relation of the Dative-case of other languages or of prepositions like “to,” “for,” “instead of,” “of” etc. or as the language does not like to combine an impersonal and a personal object with one transitive verb, it is used to supply one object with a formal verb ... If it is always kept in view, that the language has no prepositions but instead of them auxiliary verbs ..., the difficulty will be easily overcome.

The word that Zimmermann (1858) was describing, in his grammatical sketch of the Ga language, was the verb *ha*, meaning ‘give,’ among other things.

More than a century after Zimmermann made his observations, there has been a flurry of interest in the various grammaticalizations of the ‘give’ morpheme in many languages. This work includes Newman (1993) for Mandarin and Newman (1996) in general; Migge (1998) for Surinam Creole; Xu (1994) for Mandarin; Cheng et al. (1999) for Taiwanese; Bisang (1996); Iwasaki (1997); Yap and Iwasaki (1998a, b); and Song (1997) and other work in Newman’s edited collection of 1997, among others. The recent investigations of ‘give’ have occurred in the context of increasing recognition of the phenomenon of grammaticalization in language change, as in, for example, Traugott and Heine, eds. (1991), Heine, Claudi and Hünne Meyer (1991), Hopper and Traugott (1993), Lord (1993), and Bybee, Perkins and Pagliuca (1994).

Serial verb constructions provide especially fertile ground for the grammaticalization of verbs. Serial verb typology is rampant in much of West Africa and East and Southeast Asia. Since there is no known historical relationship between the African and Asian languages, and since the intervening oceans and continents have effectively ruled out contact as an influence (that is, prior to air travel and the Internet), any similarities between the African and Asian patterns of grammaticalization are worth examining for possible insights into the nature and course of the phenomenon.

In this context, we are looking at the verb ‘give’ and its grammaticalized forms in a number of languages. The data suggest a few well-traveled paths of grammaticalization, as well as others less well-traveled but nevertheless identifiable. The questions we address here are:

- a. What are the functions of ‘give’ morphemes in serial verb constructions in languages of West Africa and East and Southeast Asia? Can we identify recurring patterns?
- b. How are the various lexical and grammatical functions related?
- c. Does a comparison of functions across languages suggest plausible pathways of diachronic development?

2. Verb and NP function marker

First, a walking tour along some of these paths, illustrated by examples from languages with relatively extensive grammaticalization: from West Africa, the Akan language (Asante Twi) of Ghana, and from Asia, the Thai language.¹ These languages are similar typologically: both have SVO word order, are isolating, are tone languages, and have serial verb constructions. In both languages, a verb ‘give’ takes two objects:

- (1) Akan:

o- ma- a me akutu
 he-give-PAST me orange
 ‘He gave me an orange.’

- (2) Thai:

kháw hây sôm chán
 he give orange I
 ‘He gives me an orange.’

The various functions of ‘give’ can be seen to follow from its prototypical meaning, its core function, as a verb. Newman (1996) has described this in terms of three entities: a Giver, a Thing, and a Recipient. It involves a volitional act of transfer of

a Thing from an animate Giver to an animate Recipient. The action is telic, with a resulting end-state. In this act, there is physical movement of the Thing, and there is transfer of control of the Thing to the Recipient. The Giver is a Causer who causes the Recipient to possess the Thing. As the new possessor/controller, the Recipient benefits from the transfer. Some of these facets may be more central than others to the “giving” scenario; some may be seen as typical associations or inferences. For example, the Recipient may typically derive positive benefit from his new possession, but in some cases the consequences for the Recipient may be negative, a “malefactive” result.

In the Akan and Thai examples above, the Giver is the subject. The Thing and the Recipient both follow the verb, but in Akan (1) the Recipient is closest to the verb, while in Thai (2) the Thing is closest to the verb. In serial verb constructions, the ‘give’ verb can occur as the second verb, in both languages introducing the Recipient (note that a different verb is used in (4) – see below). The Recipient also serves as the Locative Goal for the transfer of the Thing. The Giver is the subject of the preceding verb, and the Thing is its object:

(3) Akan:

me-tɔ-ɔ bɔɔl no ma-a no
 I-throw-PAST ball DEF give-PAST him
 ‘I threw the ball to him.’

(4) Thai:

chán yoon lúukbɔn pay thǎŋ kháw
 I throw ball go reach he
 ‘I throw a ball at him.’

(5) Akan:

me-kyerew krata ma no
 I-write letter give him
 ‘I write a letter to him.’

(6) Thai:

chán khǎn cotmǎay háy kháw
 I write letter give he
 ‘I write a letter to him.’

In Akan (3), as in (1), the ‘give’ morpheme takes the past tense verb suffix, as does the preceding verb ‘throw.’ In (3), the transfer of possession of the Thing is direct, but in (5) and (6) the transfer is not necessarily direct (it could be via the postal service).

2.1 Benefactive marker

Examples (5) and (6) may also have a Benefactive reading, as in (7) and (8).

(7) Akan:

me-kyerew krata ma no
 I-write letter give him
 'I write a letter for him.'

(8) Thai:

chán khǎan cotmāay hây kháw
 I write letter give he
 'I write a letter for him.'

Note that both Akan and Thai use 'give' when both Location and Benefit are involved; however, Thai uses 'reach' (not 'give') when only Location is involved, as in (4). Our written records for Akan do not tell us when 'give' may have begun to be used with Benefactive NPs; however, the use of 'give' with Benefactive objects is attested as early as the 13th century in Thai. In (7) and (8), I write the letter for his benefit; he may benefit because he is the Recipient, or because he has asked me to write the letter to someone else, or is unable to write it himself, and I do it for him. We can call the different scenarios an instance of metonymy, or we can consider the utterance as not specifying the details, the circumstances, by which the Recipient receives benefit.

In (9) and (10), there is a Giver and a Recipient, but the Thing given is not concrete; it is an activity. The subject performs the activity of working, and his brother benefits from the activity as Recipient. Again, the details are not specified: he could be working for his brother as a favor, or for pay, or working for someone else in place of his brother. Whatever the particular circumstances, his brother benefits.

(9) Akan:

ɔ-ye adwuma ma ne nua barima no
 he-do work give his brother
 'He works for his brother.'

(10) Thai:

kháw thamṇaan hây phǐichaay
 he work give older.brother
 'He works for his brother.'

In (11) and (12), the first verb 'cut' has a concrete object, 'hair,' but the hair is not the Thing given. What is "given" is the act of hair-cutting. We can call this utterance a metaphorical extension of the core meaning of 'give,' or we can regard it as highlighting the "benefit" element of the verb's meaning.

- (11) Akan:
me-twa ne tiriwi ma no
 I-cut his hair give him
 'I cut his hair for him.'

- (12) Thai:
chán tàt phǒm háy kháw
 I cut hair give he
 'I cut his hair for him.'

In serial verb sentences, as in (3), the referent of the object of the first verb is the Thing that is given. However, an actual object morpheme with the Thing as a referent need not be present. In fact, the first verb can be intransitive:

- (13) Akan:
o-su ma ne nua barima
 he-weep give his brother
 'He weeps for his brother.'

- (14) Thai:
kháw yím háy chán
 he smile give I
 'He smiles for me.'

Even when the function of 'give' is rather abstract, indicating benefit from some activity, the 'give' morpheme still shows the morphological trappings one would expect of a verb. In (15), for example, both 'repair' and 'give' take the Consecutive prefix *a-*, as is customary for non-initial verbs in serial constructions in the Future or Perfect.

- (15) Akan:
ɛ me-de me kaa no ba aa, wo-be- tumi a- ye
 if I-take my car DEF come PRT you-FUT-be.able CONSEC-repair
a- ma me anaa
 CONSEC-give me Q
 'If I bring my car, can you repair it for me?'

In both Akan and Thai, then, the verb 'give' in serial constructions can be used to introduce Benefactive NPs. In Thai, a different verb is used to introduce human NPs functioning as Locative Goals as in (4), but in Akan 'give' can serve in this context as well, as in (3).

2.2 Perspective/Stance marker

In examples (5)–(15) above, ‘give’ occurs in a serial construction in which the preceding verb specifies an activity or an action from which the object of ‘give’ benefits. However, in Akan, when the preceding verb refers to a state rather than an activity, the object of ‘give’ is not necessarily a beneficiary. In (16), the object of ‘give’ can be understood as benefiting in some sense, but this interpretation is somewhat strained for (17) and (18).

(16) Akan:

ye- a- ma no kaa ne draeva enti eho ye ma no
 they-PERF-give him car and driver so place be.good give him
 ‘They have given him a car and a driver, so the place is good for him.’

(17) Akan:

e-ye den ma me
 it-is difficult give me
 ‘It is difficult for me.’

(18) Akan:

nea o-nim papaye na ɔ- n- ye no e-ye bone ma no
 who he-know doing.good and he-NEG-do it, it-be sin give him
 ‘To him that knows to do good and does it not, to him it is sin.’

In (16), the object of ‘give’ is the person from whose perspective or point of view the place is good. As (17) and (18) illustrate, the “benefit” or effect on the human object may not necessarily be positive; the object again is the individual from whose perspective the preceding state or situation can be asserted. In this context we can consider the ‘give’ morpheme to be functioning as a marker of perspective or stance.

The ‘give’ morpheme is far from its core function as a verb in (19). Yet, it still accepts verb affixes; here, it takes the negative nasal prefix, as is typical for verbs in serial constructions in Akan:

(19) Akan:

edan no mu n- so m- ma wɔn nyinaa
 house the inside NEG-be.large NEG-give them all
 ‘The house is not large enough for all of them.’

The verb ‘give’ does not mark perspective/stance holder in Thai; another morpheme is used, as in (20); compare (17) for Akan.

(19) Thai:

**man yâak hây chán*
 it difficult give I
 'It is difficult for me.'

(20) Thai:

man yâak sǎmràp chán
 it difficult for I
 'It is difficult for me.'

If Akan and Thai were the only two languages in the world, we might hypothesize that the diachronic path of the spread of functions for 'give' proceeded as follows, from (a) verb in a non-serial clause with Recipient object to (b) non-initial serial verb with human Goal/Benefactive object to (c) non-initial serial verb with Perspective/Stance object:

- 'give' + NP → GOAL/BENEFACTIVE → PERSPECTIVE/STANCE

3. Permissive and Causative marker

According to the core meaning of the verb 'give,' the Giver is a Causer, who causes a Recipient to have a Thing; 'give' means 'cause to have,' or 'enable to have.' In (1), 'he gave me an orange,' he gives me a physical object. In (21)–(22), he gives me permission, he enables me to do something; the NP following 'give' benefits by receiving permission. Thus, the presence of the core meaning of benefit is present when 'give' is used to indicate permission (here again, CONSEC labels the Consecutive prefix on non-initial verb in a series):

(21) Akan:

se me-pe se me-hwe ɔ- be- ma me a- hwe
 if I-want that I-look he-FUT-give me CONSEC-look
 'If I want to look, he will let me look.'

(22) Thai:

thâa chán yâak duu khâw kô ca hây chán duu
 if I want look he PRT ASP give I look
 'If I want to look, he will let me look.'

Like the Benefactive function for 'give,' the Permissive function is well-established in Thai, attested in the 13th century.

There are structural differences between the Permissive and the Benefactive use of 'give.' In its Benefactive function, 'give' is preceded by some other verb in a

serial construction, but in its Permissive use ‘give’ is typically the first verb in the clause:

- (23) Akan:
ma no tena ho
 give it(OBJ) stay there
 ‘Let it stay there.’

- (24) Akan:
ma ε-ntra ho
 give it(SUBJ)-stay there
 ‘Let it stay there.’

In (3)–(22), the object of ‘give’ is animate, typically human. However, as (23) illustrates for Akan, in its Permissive function ‘give’ can occur with an inanimate object. This can be viewed as a relaxation of the verb’s object selection restrictions, or as a metaphorical departure from the prototypical Recipient as object. In this context the transfer-of-location component of the meaning of ‘give’ is dimmed, and the enable/cause component of the meaning of ‘give’ is highlighted.

If we consider the grammatical relation of the NP following ‘give’, we note that in Thai there is no distinction in form between subject and object pronouns, as in (22). However, in Akan the subject and object pronouns have different forms, and the NP following ‘give’ is the object pronoun in (23), as is typical in serial verb constructions. However, in a dialectal variant, (24), the NP following ‘give’ is the *subject* pronoun. This represents a major structural difference between the two dialects. The structure in (24) is no longer a serial verb construction; *it has been reanalyzed as a verb plus sentential complement*. This difference between (23) and (24) can be represented as:

- a. SERIAL VERB CONSTRUCTION: SUBJ give OBJ VP
 b. VERB-COMPLEMENT CONSTRUCTION: SUBJ give_s[SUBJ VP]

This rebracketing may have occurred diachronically if speakers and hearers entertained different structural analyses for the same surface string. In Akan, if the NP following ‘give’ is not a pronoun, there is no morphological distinction to signal whether the speaker is encoding it as a subject or an object. Accordingly, a speaker may assign structure (a) to his utterance, but the hearer could assign structure (b) to the same utterance. There would be no observable evidence for this difference until the hearer produced a similar utterance with a *pronoun* following ‘give’, this time using the subject form rather than the object form.

As (21) and (23) illustrate, Akan allows both animate and inanimate NPs after the Permissive ‘give’. In contrast, in Thai, inanimate NPs are only marginally acceptable after ‘give’:

(25) Thai:

hây dèk yùu troŋ nán
give child stay right there
 'Let the child stay there.'

(26) Thai:

[?]hây kâwyîi yùu troŋ nán
give chair stay right there
 'Let the chair stay there.'

The inanimate Causee, 'chair', in (26) is marginally acceptable in some contexts. The core meaning of 'give' as an act with an animate Recipient is being stretched to include inanimates, as has already happened in Akan.

Recall that the core meaning of 'give' involves a volitional act, and the Permissive function of 'give' retains this volitionality in Thai, as in (27):

(27) Thai:

kháw hây tamrùat càp tua kháw
 he give police catch body he
 'He let the police catch him.' (willingly; unintentional reading not possible)

However, in Akan the volitionality of the act is no longer a requirement; an unintended consequence is possible:

(28) Akan:

ɔ- ma polisfo no be-kyee no
 he-give police the FUT-catch him
 'He let the police catch him.' (either willingly or unintentionally)

In Thai (27) the volitional element of 'give' is maintained; in Akan (28), it is not. Thus, the set of referent situations for Permissive 'give' in Akan is less restricted than in Thai.

In Akan, the Permissive 'give' construction also allows a Causative reading:

(29) Akan:

ɔ- ma wo-kum aberantee no
 he-give they-kill man the
 'He let them kill the man/ He made them kill the man/ He had the man killed'

In contrast, in Thai only the permissive reading is possible; to get the coercive causative reading, a stronger verb must be added, as in (31):

(30) Thai:

naylūaŋ hây kháw pahāanchiiwít phūuchaay khon nán
 king give he kill man CLS that
 ‘The king let him kill the man.’

(31) Thai:

naylūaŋ sàŋ hây kháw pahāanchiiwít phūuchaay khon nán
 king order give he kill man CLS that
 ‘The king had him kill the man.’

As noted above, in Thai the object of ‘give’ must be a willing Agent; for an unwilling Causee, ‘give’ alone is not sufficient; an additional verb is required:

(32) Thai:

kháw tham hây dèk rɔɔŋ
 he do give child cry
 ‘He made the child cry.’

However, here again Akan is less restrictive, and an unwilling Causee is possible:

(33) Akan:

ɔ- ma- a akwaada no su- i
 he-give-PAST child the cry-PAST
 ‘He made the child cry.’

Thus, in comparing Akan and Thai constructions for permission and causation, we see that in Thai the ‘give’ morpheme has retained its original preference for animate NPs and its denotation of a volitional act. In contrast, in Akan, both these elements of the verb meaning have faded and are no longer necessarily present in the morpheme’s permissive and causative functions. Also, in the core meaning of ‘give,’ there is transfer of control to the animate object; however, the control element of the core meaning is no longer necessary in its causative function in Akan, as the unwilling Causee in (33) illustrates: the child is not in control of whether he willingly cries or not. Thai appears to have similarly weakened this element, but to a lesser extent, as in (31).

If we assume that both Thai and Akan Permissive/Causative ‘give’ developed diachronically from a verb used in prototypical transfer situations, the Thai and Akan data are consistent with a scenario in which the Permissive function of ‘give’ developed earlier, followed by the Causative function:

- ‘give’ + NP + VP → PERMISSIVE → CAUSATIVE

We can describe the Akan construction as less restrictive or more general, or as leaving more details unspecified.

4. Purpose/Consequence marker

The verb 'give' occurs in yet another construction in both Thai and Akan, in which the clause following 'give' is a consequence of the previous action, and is typically the goal or purpose for which the previous action was carried out:

(34) Akan:

ɔ-bɔɔ no ma ɔ-hwe ase
 he-struck him give he-fall down
 'He struck him so that he fell.'

(35) Thai:

chán ríak hây kháw maa
 I call give he come
 'I called him to come.'

In Thai, the construction is used for permission or enablement but not causation; there is no necessary implication that the post-'give' event actually occurred. However, in Akan, the interpretation is implicative; compare (36) and (37):

(36) Thai:

chán anuyàat hây kháw pay dwây
 I permit give he go too
 'I permitted him to go too.' (but it is possible that he didn't go)

(37) Akan:

esi ma-a kofi kwan ma ɔ-kɔ-e
 Esi give-PAST Kofi way give he-go-PAST
 'Esi permitted Kofi to go.' (and he in fact did go)

(In Akan, 'permit' is *ma kwan*, literally 'give way'.)

Here the sequence of elements is:

- SUBJ VP 'give' S

A plausible structural analysis might be a serial verb construction with 'give' as the second verb, as in

- SUBJ VP_{VP}['give' S]

However, in this structure in Akan, 'give' does not take tense/aspect affixes typical of verbs in series; it lacks the Past suffix in (37) and it does not take the Consecutive prefix in (38):

(38) Akan:

wo- be- tumi a- boa me ma m-a- hwehwe me
 you-FUT-be.able CONSEC-help me give I-CONSEC-repair my
baesekere
 bicycle
 ‘Can you help me fix my bicycle?’

If we want to maintain a serial verb identity for the structure, it would have to be as a “defective” verb. The function of ‘give’ here is comparable to that of the ‘say’ complementizer (see Osam 1998 and Lord 1993 for discussion). Since its function is less verbal and more like a complementizer or consequence marker, a plausible structural analysis is:

- $_s$ [SUBJ VP] ‘give’ [S]

The verb’s prototypical meaning element Cause is present (with implicative force in Akan but not in Thai). The primary function of ‘give’ appears to be indicating Consequence; if the subject of the sentence is human, Purpose is the pragmatic inference:

- ‘give’ + S → PURPOSE/CONSEQUENCE

The original verb’s telicity, its implication of an end-state, is apparent in its Purpose/Consequence function. The original verb’s core meaning element of transfer of control, however, is no longer discernible in its Purpose/Consequence function in Akan.

5. Reason marker

The developments we have described are not limited to Akan and Thai. In this section we illustrate parallel developments in Yoruba, another Niger-Congo language, from Nigeria, and in Malay, a West Austronesian language; for Malay, written texts are available from the 16th century to the present.² In these languages ‘give’ is used as a lexical verb and to introduce Goal, Benefactive, and Perspective/Stance NPs, as in Akan and Thai. In (39)–(46) below, we illustrate this progression for Yoruba and Malay, paralleling the pathway described above for Akan and Thai. However, Yoruba and Malay appear to have allowed the ‘give’ morpheme to extend farther than in Akan and Thai: it has the additional function of marking Purpose NPs. Further, in Yoruba, but not in Malay, there is an additional function of marking Reason NPs. The route is outlined below.

Both Yoruba and Malay have a ‘give’ morpheme used in prototypical verb scenarios:

(39) Yoruba:

ó fún mi l- ówó
 he give me PRT-money
 'He gave me some money.'
 ó f- owó fún mi
 he take-money give me
 'He gave me some money.'

(40) Malay:

aku minta garpu, dia bagi aku sudu
 1SG ask.for fork, 3SG give 1SG spoon
 'I asked for a fork, he gave me a spoon.'

In both languages, 'give' can introduce Goal/Recipients:

(41) Yoruba:

ó tà-á fún mi
 he sell-it give me
 'He sold it to me.'

(42) Malay:

tolong bawa surat 'ni bagi dia
 help bring letter this give 3SG
 'Please take this letter to him/her.'

As in Akan and Thai, Benefactive objects also occur:

(43) Yoruba:

ó tà-á fún mi
 he sell-it give me
 'He sold it for me.'

(44) Malay:

pak long janji nak cari kerja 'kat bandar bagi kita
 Pak Long promise want find work LOC town give 1.PL.inclusive
 'Pak Long promised to find work in the city for us.'

For a situation or state, the person from whose perspective it is experienced, the stanceholder, is introduced by 'give' (compare (16)–(17) for Akan):

(45) Yoruba:

ó *ṣòró* fún wọn
 it be-difficult give them
 'It is difficult for them.'

(46) Malay:

bagi aku, nak terbaik dengan dia memang susah
give 1SG want BER-good with 3SG truly difficult
 ‘For me, to be on good terms with him/her is truly difficult.’

Yoruba and Malay Purpose NPs, which may be nominalizations, are also introduced by ‘give’:

(47) Malay:

alat ini bagi ke- guna-an pejabat
 instrument this give NOML-use-NOML office
 ‘This instrument is for office use.’

(48) Yoruba:

kín l- -ó dára fún
 what FOC-it be.good give
 ‘What is it good for?’

(49) Yoruba:

jíjẹ ni ẹrọn wà fún
 eating FOC meat be give
 ‘Meat is for eating.’ (‘It’s eating that meat is for.’)

(50) Yoruba:

kín l- o lọ fún
 what FOC-you go give
 ‘Why did you go?’ (‘What did you go for?’)

(51) Yoruba:

fún àti bàà rí- i
 give NOML may see-it
 ‘in order to see it’ (‘for the possibility of seeing it’)

In this function, the object of ‘give’ is typically an activity rather than a thing. It appears that ‘give’ as a marker of Purpose NPs has arisen through extension of the telic, goal-oriented and causal elements of the verb’s core meaning.

In (52), the object of ‘give’ is understood as the Reason, not the Purpose:

(52) Yoruba:

ó n kú lọ fún ebi
 he PROG die go give hunger
 ‘He is dying of hunger.’

A diachronic path from Purpose to Reason is plausible. Suppose that ‘give’ marks ‘coconut’ as a Goal/Purpose NP in an utterance like ‘I climb tree give coconut.’³

The coconut is the goal, and reaching it is the purpose of my activity; however, the coconut is also the reason for my climbing the tree. In such a situation, the hearer's pragmatic inferences could result in a Reason NP interpretation. The Reason function for 'give' is found in Yoruba, but not in Malay. Adding Purpose and Reason NPs to the possible course of historical development of functions for 'give' produces:

- 'give' + NP → GOAL/BENEFACTIVE → PURPOSE
REASON

6. Possible historical pathways

If these paths are historically valid, we should be able to find languages that illustrate portions of them. We have looked at a number of languages to see which of these functions for a 'give' morpheme actually occur; a summary of our preliminary findings is given in Table 1 below.⁴ For each language, Y indicates that the function occurs, and * indicates that the function does not occur. A blank cell indicates that we lack information or that our data are inconclusive.

If we begin the historical account with the lexical verb 'give' in column 1 and hypothesize that the diachronic development of NP-marking functions occurred via the successive steps shown in columns 2, 3, 4, and 5, we note that the functions attested (marked with Y in contiguous cells in the table) in the various languages are consistent with just such a sequence.

The 'give' morpheme's functions as clause introducer are shown in columns 6, 7, and 8. Here the pattern of attested functions is less clear in suggesting a historical progression. However, two possible historical pathways could be consistent with the data: one, that Permissive marking develops before Causative, and two, that Purpose/Consequence marking develops before Causative. We need much more data before we can propose historical pathways with confidence; however, we can formulate hypotheses while we gather new data. The picture we have so far is limited by the lack of discourse data. Frequency data could be helpful in understanding the diachronic processes; our historical data for Malay show a shift towards Purpose in terms of frequency over time (see Yap 1999).

Table 1. Functions of the 'give' morpheme in various languages

Language; 'give'	1 Lexical verb	2 Goal/ Ben NP	3 Persp. Stance NP	4 Purpose NP	5 Reason NP	6 Permis- sive S	7 Causative S	8 Purpose/ Conseq. S
Akan <i>ma</i>	Y	Y	Y			Y	Y	Y
Ewe <i>na</i>	Y	Y	Y			Y	Y	Y
Yoruba <i>fun</i>	Y	Y	Y	Y	Y	*	*	*
Ga <i>ha</i>	Y	Y				Y		
Awutu <i>na</i>	Y	Y						
Engenni <i>kye</i>	Y	Y						
Ndyuka <i>gi</i>	Y	Y	Y	Y				Y
Sranan <i>gi</i>	Y	Y						
Saramaccan <i>da</i>	Y	Y						
Malay <i>bagi</i>	Y	Y	Y	Y		Y	Y	Y
Cambodian <i>aoy</i>	Y	Y				Y	Y	
Thai <i>hay</i>	Y	Y	*	*	*	Y	<i>tham hay</i>	Y
Vietnamese <i>cho</i>	Y	Y	*	*	*	Y	<i>lam cho</i>	Y
Mandarin <i>gei</i>	Y	Y	*	*	*	Y	Y	Y
Taiwanese (Hokkien) <i>hoo</i>	Y	Y		*	*	Y	Y	Y
Cantonese <i>bei</i>	Y	Y		*	*	Y	*	Y
Hmong <i>rau</i>	Y	Y				*	*	

Based on our investigations so far, possible diachronic pathways for development of grammaticalized functions for 'give' verbs in serial verb constructions have emerged. These are:

- a. With NP objects (nouns or nominalizations):

Perspective/Stance
 Lexical verb → Goal/Benefactive → Purpose
 Reason

- b. With clausal objects:

Lexical verb → Permissive → Causative
 Purpose/Consequence

7. Conclusion

All the languages discussed here have a morpheme 'give' used in situations where there is a transfer of control or ownership. This morpheme is used in a range of scenarios in which the actual particulars of the situation may vary, but in the "prototypical meaning" a Giver volitionally causes a movement or transfer of control or ownership to a Recipient, resulting in benefit to the Recipient. In certain contexts, one facet of the morpheme's meaning may be more salient, more congruent with the particulars of the situation. In other contexts, that facet may be less relevant, more peripheral. For the hearer and the language learner, who looks for a "fit" between the situation and the talk, the context can make one facet of the morpheme's meaning more salient and another facet less relevant. Depending on various factors, such as what other morphemes or constructions are available and appropriate to the situation, the meaning of the morpheme may simply drift. Or, at some point, its function in a particular scenario may be perceived as different enough that people draw a distinction, keeping, for example, the old verb 'give,' but recognizing a homophonous lexical item with grammatical function.

Comparing a morpheme's functions in different languages may prove helpful in formulating hypotheses for the direction of diachronic changes. To the extent that similar sub-patterns occur across different language families in certain geographical areas, the influence of language contact may be a contributing factor in the distributions we observe. However, the similarities shown here across languages from different families and on different continents indicate that these patterns are not due to coincidence, but develop from common socio-cognitive and pragmatic mechanisms in the context of language use.

Notes

1. We acknowledge the desirability of using language examples from naturally-occurring spoken or written text, and we are working to make this possible. Meanwhile, the language examples cited here are a mix of authentic and elicited utterances, from published sources (dictionaries, grammars, and linguistics publications) and from native speakers of Akan, Thai, and Malay.
2. See Yap (1999).
3. See Lichtenberk (1985:22) and Yap (1999:383).
4. Data sources include Bisang (1996), Byrne (1987), Cheng et al. (1999), Knott (1995), Li and Thompson (1981), Li and Whaley (1999), Lichtenberk (1985), Matthews and Yip (1994), Nedjalkov (1993, 1997), Sebba (1987), Voorhoeve (1975), Xu (1994), and native speakers.

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An invisible hand at the root of causation

The role of lexicalization in the grammaticalization of causatives

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1. Introduction

As the nature of grammaticalization has received increasing attention, comparisons have sometimes been drawn with another process of linguistic evolution, that of lexicalization (Lehmann 1999 and elsewhere). Both processes involve the routinization of recurring linguistic patterns, though they differ in their domains of operation. The two can also interact. Lexicalization can provide a context for grammaticalization and facilitate its operation. As is commonly recognized, processes of grammaticalization operate not on individual words or morphemes in isolation, but rather within the context of recurring patterns of expression, or constructions. In a sense, lexical items constitute the tightest of constructions, linguistic units whose components routinely occur together and which are usually processed as unanalyzed wholes. In what follows, the potential contextual role of lexicalization in grammaticalization will be illustrated with the development of certain causative constructions. Its contribution can be seen in both phases of grammaticalization identified by Kuryłowicz in his oft-cited definition of the process, the advancement of a morpheme ‘from a lexical to a grammatical or from a less grammatical to a more grammatical status’ (1965:52).

Cross-linguistically, causatives are among the most common derivational affixes. The markers themselves are often so old that their origins are difficult to discern, but in some cases lexical sources have been identified. Often the sources are just what we would expect: verbs meaning ‘make’ or ‘cause’. The English causative suffix *-(i)fy* of verbs like *pacify* and *horrify*, for example, borrowed from French *-fier*, has been traced back through the Latin suffix *-ficāre* ultimately to the verb *facēre* ‘make’ (Oxford English Dictionary 1971:1101). Heine and his colleagues

have identified similar verbal antecedents of causative affixes in various African languages. They trace the causative suffix *-is* in Somali, Boni, and Rendille, to the Proto-Cushitic verb **iss-/*ass-* ‘make’ (Heine and Reh 1984:276). We can even see the initial stage of the process in pidgins. Causatives in Chinook Jargon, a pidgin spoken over a wide area along the Northwest Coast of North America during the last century, were routinely formed with the verb *mámuk* ‘make’, as in *mámuk kumtuks* ‘make know’ = ‘tell’. In a number of languages, however, causative affixes have evolved from a different kind of source, a noun meaning ‘hand’. Once the intermediate stages in the grammaticalization process are identified, this development is easy to explain. Like grammaticalization, the evolution did not take place in isolation, but rather within specific, routinely recurring contexts: lexical items. It was the lexicalization of these constructions that facilitated the processes of metaphorical extension and functional reanalysis that resulted in the evolution of the causative morphology.

2. From root to affix

A substantial number of genetically and geographically diverse languages in North America contain sets of affixes that specify the means or manner by which events occur (Mithun 1999). Affixes of this type appear in languages of the Siouan-Catawban family, stretching from the Southeast westward and northward over the Plains; the Algonquian family, spoken from the Northeast southward and westward over the Plains; the Numic branch of the Uto-Aztecan family, covering a large area of the West; the Yuman and Chumashan families in southern California; the Pomoan and Palaihnihan families and the Chimariko, Shasta, Maidu, and Wappo languages in northern California; Washo in western Nevada; Klamath and Takelma in Oregon; languages of the Sahaptian family in Oregon, Idaho, and Washington; Kutenai in Montana and British Columbia; and Haida in British Columbia and Alaska. The effects of the affixes can be seen by comparing the verbs in examples (1)–(3) below. Those in (1) are from Lakhota, a language of the Siouan family spoken on the Northern Plains. Those in (2) are from Tümpisa Shoshone (also known as Panamint), a language of the Numic branch of the Uto-Aztecan family spoken in southeastern California and southwestern Nevada. Those in (3) are from Haida, a language isolate spoken in northern British Columbia and southern Alaska. (The Haida material appears in the practical orthography developed by Jeff Leer at the Alaska Native Language Center.)

- (1) LAKHOTA PREFIXES: Buechel 1970; Stan Redbird, speaker p.c.
ya-bléc^ha ‘crush with the teeth’
yu-bléc^ha ‘crush something brittle by pressing with hands’

- | | |
|--------------------------------|---|
| <u>na</u> -blé ^{zh} a | ‘crush by kicking or stepping on, as a glass’ |
| <u>wa</u> -blé ^{zh} a | ‘break with a knife’ |
| <u>wo</u> -blé ^{zh} a | ‘shoot to pieces’ |
| <u>ya</u> -yápa | ‘bite off’ |
| <u>yu</u> -yápa | ‘strip or pull off, e.g. the skin from an animal’ |
| <u>na</u> -yápa | ‘strip off the skin of anything with the foot, as a horse might do to a man by kicking’ |
| <u>wa</u> -yápa | ‘skin with a knife’ |
| <u>ya</u> -bláza | ‘tear open with the teeth’ |
| <u>na</u> -bláza | ‘kick open’ |
| <u>wa</u> -bláza | ‘cut open, as a watermelon’ |
| <u>wo</u> -bláza | ‘tear open by shooting, as the bowels of an animal’ |
- (2) TŪMPISA SHOSHONE: Dayley 1989a:92–104
- | | |
|-----------------------|--------------------------------|
| <u>ki</u> -kkíppah | ‘break with the teeth’ |
| <u>ma</u> -kíppah | ‘break with the hand’ |
| <u>ta</u> -kkíppah | ‘break with the foot’ |
| <u>wi</u> -kkíppah | ‘break with an instrument’ |
| <u>ku</u> -kkíppah | ‘break from the heat’ |
| <u>si</u> -kkíppah | ‘break from the cold’ |
| <u>ma</u> -kwayah | ‘touch with the hand’ |
| <u>mu</u> -kwayah | ‘touch with the nose’ |
| <u>ta</u> -kkwayah | ‘take off of feet, as shoes’ |
| <u>pi</u> -kkwayah | ‘take off of butt, as skirt’ |
| <u>tsi</u> -kkwayah | ‘touch with something pointed’ |
| <u>ki</u> -sungkwa’ah | ‘taste’ |
| <u>ma</u> -sungkwa’ah | ‘feel with the hand’ |
| <u>mu</u> -sungkwa’ah | ‘feel with the nose’ |
| <u>ta</u> -sungkwa’ah | ‘feel with the foot’ |
| <u>pi</u> -sungkwa’ah | ‘feel with the butt’ |
- (3) HAIDA PREFIXES: Leer in Lawrence 1977:92–93
- | | |
|----------------------|---------------------------------|
| <u>k’a</u> -k’ut’ahl | ‘kill by beating or by stoning’ |
| <u>squ</u> -k’ut’ahl | ‘kill by hitting with fist’ |
| <u>sda</u> -k’ut’ahl | ‘kill by kicking’ |
| <u>ki</u> -k’ut’ahl | ‘kill by poking’ |
| <u>ja</u> -k’ut’ahl | ‘kill by shooting’ |
| <u>da</u> -dáng | ‘spank with hands’ |
| <u>squ</u> -dáng | ‘punch with fists’ |

<u>sda-dáng</u>	‘kick repeatedly’
<u>sgi-dáng</u>	‘strike with stick’
<u>ki-dáng</u>	‘poke’
<u>k’a-dáng</u>	‘pound with compact object’
<u>sda-xadáal</u>	‘kick along small object slowly’
<u>sgi-xadáal</u>	‘nudge along slowly with a tick’

These markers have traditionally been termed ‘instrumental prefixes’. They appear to name the instruments used in actions, adding such meanings as ‘with the teeth’, ‘with the hands’, ‘with the feet’, ‘with a stick’, ‘with a knife’, ‘with heat’, etc. They are not exact equivalents of independent instrumental nouns, however. The languages all contain instrumental nominal constructions as well, and these may cooccur with verbs containing the instrumental prefixes.

- (4) LAKHOTA: Stan Redbird, speaker p.c.

ší u na-gmíya=iye
foot with with.foot-roll=ASSERTION
 ‘He rolled it (a ball) with his foot.’

- (5) TÜMPISA SHOSHONE: Dayley 1989b: 88

Níí ní nampe ma o to-ttsokwenna
 EMPHATIC 1.SG foot with it with.foot-smash-ASPECT
 ‘I’m smashing it with my foot.’

- (6) HAIDA INSTRUMENTS: Horii 1998: 37

stlaang sq’úla=?ad ‘laa hla=ts-sgiidan
my.hand dirty=with him 1.SG.AGENT=with.hand-contact.PAST
 ‘I touched him with my dirty hand.’

The verbal prefixes are not agreement markers. The same prefix cooccurs with a variety of instrumental nominals and vice-versa.

- (7) LAKHOTA INSTRUMENTAL NOMINALS AND PREFIXES:

Stan Redbird, speaker p.c.

- a. napé u yu-gmíye=iye
hand with with.hand.pulling-roll=ASSERTIVE
 ‘He rolled it with his hand (toward himself).’
- b. napé u pa-gmíye=iye
hand with with.hand.pushing-roll=ASSERTIVE
 ‘He rolled it with his hand (sent it rolling by pushing).’
- c. napé u ka-gmíye=iye
hand with with.hand.striking-roll=ASSERTIVE
 ‘He rolled it with his hand (by hitting it).’

Unlike nouns, the prefixes do not establish reference. They qualify the verb, describing the nature of the event or state predicated. They often evoke kinds of instruments, but they may also indicate kinds of motion. The Lakhota prefixes *yu-*, *pa-*, and *ka-* all appear in verbs describing hand action, but *yu-* tends to indicate a pulling motion, *pa-* a pushing, rubbing, or pressing motion, and *ka-* sudden impact, as by slapping, beating, or throwing.

(8) LAKHOTA HAND ACTIONS: Buechel 1970

<u>yu</u> -bláya	‘spread out, unfold, make level’
<u>yu</u> -γá	‘open, e.g. a door’
<u>yu</u> -γá	‘husk, as corn’
<u>yu</u> -γú	‘pull up the roots of something’
<u>yu</u> -ksá	‘break off, a stick with the hand’
<u>yu</u> -ósí	‘tie in a bow knot or loosely’
<u>yu</u> -pí ča	‘pull out a coarse hair from a skin, pull off hair or fur’
<u>yu</u> -skápa	‘crack a whip’
<u>pa</u> -bláya	‘spread out, as dough: to make level; to iron (clothes)’
<u>pa</u> -óna	‘push on or shove on, as a ring on a stick’
<u>pa</u> -hóho	‘loosen by pushing, as a tooth or fencepost’
<u>pa</u> -xá	‘make rough by rubbing’
<u>pa</u> -bláska	‘press out flat’
<u>pa</u> -bú	‘drum on with the fingers’
<u>pa</u> -é ^h éka	‘push aside and make stagger’
<u>pa</u> -é ^h eč ^h a	‘adjust, push into the right place, as a dislocated joint’
<u>ka</u> -bláya	‘make level by beating’
<u>ka</u> -pésto	‘make sharp-pointed with an ax’
<u>ka</u> -hóho	‘strike and knock loose, as a torch or stick set in ground’
<u>ka</u> -xá	‘notch or make rough by striking’
<u>ka</u> -xápa	‘drive along, as a team or cattle, whip, drive by whipping’
<u>ka</u> -xlá	‘make sound by striking, ring a bell’
<u>ka</u> -xlóka	‘knock a hole in’
<u>ka</u> -čápa	‘strike and make dull, as an ax or knife by hitting it on something hard so that the blade turns around’

The Tümpisa Shoshone prefixes *ma-*, *ta*”-, and *tša*”- all appear in verbs involving hand action, but in those with *ma-* the hand is typically open; in those with *ta*”- either the hand is closed into a fist or some other hard rock-like instrument is involved; and in those with *tša*”- the hand is usually grasping. (The prefix *ma-* sometimes appears as *mo-*, and *ta*”- as *to*”-, due to vowel harmony. The symbol ” indicates that a following stop or nasal is geminated.)

(9) TŪMPISA SHOSHONE HAND ACTIONS: Dayley 1989b

<u>ma</u> -kan	‘give, usually food’
<u>ma</u> -k ^h nah	‘put hand on top of’
<u>ma</u> -kwayah	‘touch with the hand’
<u>ma</u> -nuwan	‘push’
<u>ma</u> -ppattaih	‘slap’
<u>ma</u> -asonih	‘fold’
<u>ma</u> -sutuhi	‘rub with the hand’
<u>mo</u> -kotsa”	‘smash with the hand moving vertically’
<u>ta</u> -kkuna”	‘throw’
<u>ta</u> -ngwitain	‘throw away’
<u>ta</u> -ppaih	‘pound, beat, hit, hammer’
<u>ta</u> -ppattsanah	‘fasten, button’
<u>ta</u> -singwe	‘crack (nuts) open’
<u>ta</u> -ttikwan	‘hit or strike with rocklike object’
<u>to</u> -ttsokweh	‘smash by pounding’
<u>to</u> -sone	‘wipe up’
<u>tsa</u> -ikkan	‘hold, grasp’
<u>tsa</u> -innaah	‘carry, hold’
<u>tsa</u> -kka’ah	‘break one piece off, as a branch’
<u>tsa</u> -kkika	‘rip in half’
<u>tsa</u> -kkitah	‘pluck out, pull out’
<u>tsa</u> -kkwayah	‘take off, loosen, skin an animal’
<u>tsa</u> -kkwitunah	‘wring out’
<u>tsa</u> -nnuwan	‘move, lift’

The Haida prefixes *tla-*, *da-*, *dang-*, and *gal-* all appear in verbs involving hand motion, but *tla-* is said to indicate purposeful motion, *da-* sideways, lengthwise, or pushing motion, *dang-* pulling or dragging, and *gal-* squeezing.

(10) HAIDA HAND ACTIONS: Lawrence 1977

<u>tla</u> -kwdáng	‘feel with hands’
<u>tlá</u> -nsguhl	‘put things away’
<u>tla</u> -ts’áa	‘plant seeds’
<u>tla</u> -’úng	‘mash up berries with hands’
<u>tla</u> -wuláa	‘grasp in fist’
<u>tl̩s</u> -skúnaa	‘make clean’
<u>tla</u> -xahldáa	‘polish, as silverware’
<u>tla</u> -d̩í	‘divide up’
<u>da</u> -giisláng	‘wave a piece of cloth, as a flag’

<u>da-gujuuhldáa</u>	‘turn upside down, as a bucket’
<u>da-qadáa</u>	‘push (someone) out’
<u>da-qasláa</u>	‘open a door’
<u>da-qaawnáng</u>	‘roll a dishlike object’
<u>da-k’apsgat</u>	‘slam a door’
<u>da-q’íinaan</u>	‘rub with a round object (rub rock on sealskin)’
<u>da-káa</u>	‘guide with the hand (as with an arm over shoulder)’
<u>dáng-tl’aa</u>	‘tear off’
<u>dáng tl’ast’áa</u>	‘pull out a flat object’
<u>dáng gahláa</u>	‘pull up, as a bag’
<u>dáng k’áat’aa</u>	‘jerk away’
<u>dáng kaa</u>	‘lead by the hand’
<u>dáng dlast’áa</u>	‘pull out bodily’
<u>dáng dlat’as</u>	‘hug someone’
<u>dáng gáyđang</u>	‘jerk around’

The sizes of the affix inventories vary across languages, but the distinctions they express are remarkably similar. Samples of the inventories in Lakhota, Tümpisa Shoshone, and Haida are below.

(11) LAKHOTA MEANS AND MANNER PREFIXES:

Boas and Deloria 1941:45; Buechel 1970

<i>ya-</i>	‘with the mouth, by biting, talking’
<i>yu-</i>	‘by pulling’
<i>pa-</i>	‘by pushing along’
<i>ka-</i>	‘by a sudden impact’
<i>na-</i>	‘with the foot or leg’
<i>wa-</i>	‘by a sawing motion, with a knife’
<i>wo-</i>	‘action from a distance, by shooting, blowing, pounding with the end of a stick’
<i>na-</i>	‘by an inner force, by heat, by cold’
<i>pu-</i>	‘by pressure’ (no longer productive)

(12) TÜMPISA SHOSHONE MEANS AND MANNER PREFIXES:

Dayley 1989a: 92–104

<i>kí”-</i>	‘with the teeth or mouth’
<i>tso-</i>	‘with the head’
<i>mu-</i>	‘with the nose’
<i>ní”-</i>	‘with words; by talking’
<i>ma-</i>	‘with the hand’
<i>to”-</i>	‘with the fist, by violent motion’

<i>tsa</i> ''-	'by grasping in the hand'
<i>ta</i> ''-	'with the foot'
<i>pi</i> ''	'with the butt or behind'
<i>sun</i> -	'with the mind, by feelings or sensing'
<i>ta</i> ''-	'with a hard rock-like instrument'
<i>tsi</i> ''-	'with a sharp or pointed instrument'
<i>wi</i> ''-	'with an (elongated) instrument, generic'
<i>ku</i> ''-	'with heat or fire'
<i>si</i> ''-	'with or from cold'
<i>pa</i> -	'with or pertaining to water'

(13) HAIDA MEANS AND MANNER PREFIXES:

Leer in Lawrence 1977:91–95; Hori 1998

<i>k^wah</i> -	'with head'
<i>k'u</i> -	'with teeth, by biting, chewing'
<i>kyah</i> -	'with eyes, by looking, seeing, staring'
<i>xihl</i> -	'with neck'
<i>tla</i> -	'with the hand, purposefully'
<i>da</i> -	'by hands applied lengthwise, sideways, by pushing'
<i>dáng</i> -	'by pulling, dragging'
<i>gál</i> -	'by squeezing'
<i>stla</i> -	'with fingers'
<i>xi</i> -	'with elbow, by elbowing'
<i>sda</i> -	'with feet applied lengthwise, by kicking'
<i>st'a</i> -, <i>t'a</i> -	'with feet applied endwise, by stepping on, trampling'
<i>n</i> -	'with back'
<i>gu</i> -	'with body weight, by sitting or lying on'
<i>sgi</i> -	'with sticklike object applied lengthwise, by striking with a stick, chopping, clubbing'
<i>ki</i> -	'with sticklike object applied endwise, by poking'
<i>k'a</i> -	'by hitting with compact object'
<i>k'i</i> -	'by cutting'
<i>gíi</i> -	'by floating, drifting'
<i>daal</i> -	'with the tide'
<i>xál</i> -	'by heat, by power boat'
<i>ja</i> -	'by shooting'

In many languages the means and manner affixes are so old that their diachronic origins can no longer be discerned, but in a few languages, the sources of some of the markers can still be traced. They show just the patterns of development we would expect from our understanding of usual processes of grammaticaliza-

tion. They are descended from roots: sometimes noun roots, sometimes verb roots. Their evolution began within the context of lexicalized constructions, compound verbs.

The Siouan means/manner prefixes were already in place in the parent language, and for the most part their origins are now obscure. The modern languages do still exhibit extensive compounding. Compound verbs consist of a verb stem, which is the head of the construction, preceded by either a noun or a verb stem, which functions as a kind of modifier. The noun root ‘firewood’ in ‘firewood-gather’, for example, narrows the meaning of the verb to a specific kind of gathering. The verb root ‘sleep’ in ‘sleepwalk’ specifies a kind of walking.

(14) COMPOUND VERBS IN LAKHOTA: Boas and Deloria 1941:70, 73

NOUN+VERB	<i>č^hq-lé</i>	<i>p^ha-káhȳka</i>
	firewood-gather	head-shake
	‘gather firewood’	‘nod’
VERB+VERB	<i>úâima-màni</i>	<i>wayáza-xpàya</i>
	sleep-walk	be.sick-lie
	‘walk in one’s sleep’	‘lie sick’

The Siouan means/manner prefixes do not generally resemble roots in the modern languages, but one Lakhota form is suggestive. Buechel lists the verb root *pa* ‘push, urge’, which matches the prefix *pa-* ‘by pushing’. The independent verb root can be seen in (15).

(15) LAKHOTA *pa* AS ROOT: Buechel 1970:422

<i>Mayápa</i>	<i>šni kȳ hq,</i>	<i>wašté yelo.</i>
<i>ma-ya-pa</i>	<i>šni kšhȳ</i>	<i>wašté yelo</i>
1.SG.PATIENT-2.SG.AGENT- <u>push</u>	not if	good ASSERTIVE
‘It’s good if you don’t <u>push</u> me.’		

(Analysis and gloss MM)

Probable sources of means/manner affixes can be seen more clearly in the Numic branch of the Uto-Aztecan family. Compounding is productive throughout the family, and both NOUN-VERB and VERB-VERB compounds occur.

(16) COMPOUND VERBS IN TŪMPISA SHOSHONE:

Dayley 1989b:410, 380, 1989a:97, 58

NOUN+VERB	<i>kammu-yukwi</i> ”	<i>kii-kuttih</i>
	rabbit-hunt	elbow-jab
	‘hunt rabbits’	‘jab with the elbow, elbow’

VERB+VERB	<i>watsi-kkuhnakkun</i>	<i>ko'e-pittuh</i>
	be.hidden-start.to.run	return-arrive
	'run and hide'	'come back'

The noun roots in such compounds are not grammatical arguments and do not serve a syntactic role, but, as in (16), the entities they invoke are usually involved either as semantic patients ('rabbit') or semantic instruments ('elbow').

A number of Numic means and manner prefixes have been traced back to Proto-Uto-Aztecan noun and verb roots.

(17) ROOT SOURCES OF TÜMPISA MEANS/MANNER PREFIXES:

		Dayley 1989; Miller 1967, 1987
		Proto-Uto-Aztecan nouns
<i>ma-</i>	'with the hand'	PUA * <i>ma</i> [?] <i>a</i> 'hand'
<i>mu-</i>	'with the nose'	PUA * <i>mupi</i> 'nose'
<i>tso-</i>	'with the head'	PUA * <i>tso</i> 'head'
<i>pɨ-</i>	'with the butt or behind'	PUA * <i>pih</i> 'back'
<i>ku</i> ^{''}	'with heat or fire'	PUA * <i>kuh</i> 'fire'
<i>sɨ</i> ^{''}	'with or from cold'	PUA * <i>sip</i> 'cold'
<i>sun-</i>	'with the mind, by feeling'	PUA * <i>sunna</i> 'heart'
<i>ni-</i>	'with words, talking'	PUA * <i>neni</i> 'tongue'
<i>ta</i> ^{''}	'with the foot'	PUA * <i>tannah</i> 'foot'
<i>pa-</i>	'with water'	PUA * <i>paa</i> 'water'
		Proto-Uto-Aztecan verbs
<i>kɨ</i> ^{''}	'with the teeth or mouth'	PUA * <i>kɨ</i> [?] <i>i</i> 'bite'
<i>ta</i> ^{''}	'with a hard rock-like instrument'	PUA * <i>tak</i> ^w <i>a</i> 'be hard'
<i>tsa</i> ^{''}	'with the hand, by grasping'	PUA * <i>tsa</i> [?] <i>i</i> 'hold'
<i>wɨ</i> ^{''}	'with an elongated instrument'	PUA * <i>wepaa</i> 'hit, whip'

Sources of some means/manner prefixes can be uncovered even more easily in Haida, though it is a language isolate. Many of the prefixes appear to have developed relatively recently. Like the Siouan and Uto-Aztecan languages, modern Haida shows numerous NOUN+VERB and VERB+VERB compounds. The initial roots in many of these compounds function much like the means/manner prefixes of the Siouan and Numic languages.

(18) HAIDA VERBAL COMPOUNDS: Lawrence 1977

<i>gyúu</i>	noun root	'ear'; in compounds 'with ears, by hearing'
<i>gyúudanaa</i>		'to be deaf'
<i>gyúujuu</i>		'to listen for'
<i>gyúusdaa</i>		'to be tired of hearing'

<i>gyúuts'iyaa</i>	'to be disobedient'
<i>gyúu'alaang</i>	'to listen'
<i>kíl</i> noun root	'voice'; in compounds 'with voice, by speaking'
<i>kílsdaang</i>	'to be verbally exhausted'
<i>kílsgudaa</i>	'to make a verbal mistake'
<i>kán</i> noun root	'chest'; in compounds 'with chest, by bumping with chest'
<i>kángang</i>	'to carry on chest in container'
<i>kún</i> noun root	'nose'; in compounds 'with nose, by bumping with vehicle'
<i>kúnsgat</i>	'to bump into'

Verb roots may also appear as the initial member of verbal compounds, contributing similar meanings. The root *xí* 'to saw' adds the meaning 'by sawing' when it appears in compounds; the root *kús* 'stab with a knife' adds the meaning 'by stabbing' in compounds; the root *kyúu* 'tie' adds the meaning 'by tying strongly, with rope'; the root *xwú* 'be cold' adds the meaning 'by/from cold'; the root *káa* 'go' adds the meaning 'by going or coming'; the root *k'ut* 'be hungry' adds the meaning 'by/from hunger'; and the root *kat'úu* 'be thirsty' adds the meaning 'by/from thirst'. Both these NOUN+VERB and VERB+VERB compounds are lexicalized structures that would serve as a perfect point of departure for the grammaticalization of means/manner prefixes.

The relevance of lexical context to grammaticalization is easily seen in Haida. The development of the affixes was not accomplished in a single step, a one-time grammatical innovation. The markers are evolving item by item and context by context. Different prefixes show varying degrees of phonological reduction from their root origins. Some markers of means and manner are still full roots, as in the compounds seen above. Others now function only as prefixes: they do not appear as nouns or verbs on their own. But their sources in roots can still be discerned. The prefix *tla-* 'by hand, purposefully', for example, can be compared to the noun *stlaay* 'hand' (Hori 1998); the prefix *gu-* 'with body weight, by sitting or lying on' can be compared to the noun root *gut* 'buttocks'. The prefix *xihl-* 'with the neck' ([xíl-]) shows a suggestive resemblance to the noun root *xíl* ([xíl]) 'neck'. Other prefixes resemble verb roots in the language, as pointed out by Leer (1977:95). The prefix *k'a-* 'by hitting with compact object' resembles the verb *k'at* 'to hit'. The prefix *gu-* 'by burning' resembles the verb *gudáa* 'to burn'. (There is no independent verb root *dáa*.)

The prefixes also show varying degrees of fusion with their hosts. Some are tightly bound to their host verb roots, like *da-* 'by pushing' in *dakáa* 'guide with the hand' or *xu-* 'by blowing' in *xukáa* 'go by sailboat'; others are still considered

separate words, like *tlúu* ‘by canoe’ as in *tlúu káa* ‘go by canoe’ and *xál* ‘by heat’ as in *xál káa* ‘go by powerboat’.

Individual prefixes even show different degrees of fusion in different lexical items. The marker *dáng* ‘by pulling’ is tightly fused to the root in *dangt’aa* ‘tear off’ and *dangyat* ‘rip once’ but considered a separate word in *dáng t’ast’áa* ‘pull out a flat object’ and *dáng káa* ‘lead by the hand’.

Lexicalization has thus played a significant role in the evolution of noun and verb roots to the means and manner affixes. The point of departure for the process was the context provided by verbal compounds, structurally complex lexical items. As lexical items, the compounds were generally learned and accessed by speakers as units, often with little consciousness of their constituent parts. Their meanings were inferred from the contexts in which they were heard. The components of the lexicalized compounds lost not only their individual semantic identity but also their syntactic categoriality. Morphemes that originated as noun roots meaning ‘foot’ or ‘hand’ contributed much the same information as those that originated as verb roots meaning ‘kick’ or ‘push’.

As the roots evolved into affixes, their meanings continued to change as well. When speakers sought to derive new verbs, they inferred the meanings of recurring morphemes from the common features of complex lexical items they knew that contained them. The affixes often took on connotations from the lexical contexts in which they occurred. The Haida prefix *xu-* for example, which originated in a verb root ‘to blow’, has come to mean not only ‘by blowing’ but also more specifically ‘by sailboat’. Frequently the evolution was toward greater generality of meaning. The Haida prefix *gu-*, which originated in the noun root ‘buttocks’, is now used with the meaning ‘with body weight, by sitting or lying on’. This development is common among languages with means and manner affixes.

3. From less to more grammatical

In each of the languages described here, further grammaticalization has taken place involving certain means/manner prefixes, in which their relatively concrete and specific meanings have evolved into more abstract and general functions. This process, too, was facilitated by the context provided by lexicalization.

Means and manner affixes may be productive and pervasive in the languages in which they occur, but they are always derivational. Not all possible affix-root combinations exist, some because they would make no sense, others because they have simply not been needed so not been coined. Like all lexical items, they are formed for a specific purpose, so their meanings are conventionalized and not necessarily equal to the full ranges of the meanings of their parts.

- (19) LAKHOTA LEXICALIZATION: Buechel 1970:620
ya-xúgnaga
ya-xugnaga
 with.mouth-burn.up
 ‘to speak evil of, destroy one’s character’
- (20) TÜMPISA LEXICALIZATION: Dayley 1989b:71
kuttapinaih
ku”-tape-naih
 with.heat-sun/day-be
 ‘to turn on the lights’
- (21) HAIDA LEXICALIZATION: Leer 1977:113
sgik’údaal
sgi-k’ii-daal
 with.sticklike.object.appliedlengthwise-solid.heavy.object-move
 ‘to paddle a canoe’

In all of the languages containing these constructions, some of the derived verbs containing means and manner affixes include an element of causation. The causation is not necessarily an inherent part of the meanings of the affixes. The (a) examples in (22)–(24) show that the prefixes are not necessarily causative in themselves. But the (b) examples show that the addition of the prefixes can result in causative constructions.

- (22) LAKHOTA OCCASIONAL CAUSATIVE EFFECT: Buechel 1970
- a. *gnáyq* ‘deceive, cheat’
ya-gnáyq ‘tell a falsehood’
- b. *à^hqzéka* ‘be angry’
ya-à^hqzeka ‘make angry by talking to’
- (23) TÜMPISA SHOSHONE OCCASIONAL CAUSATIVE EFFECT: Dayley 1989b
- a. *sungkwa’ah* ‘feel, touch’
ta-sungkwa’ah ‘feel, touch with the foot’
- b. *nuwa”* ‘move (from one position to another)’
ta-nnuwan ‘move something with the foot’
- (24) HAIDA OCCASIONAL CAUSATIVE EFFECT: Leer 1977:91
- a. *dáng* ‘strike’
k’a-dáng ‘pound (with compact object)’
- b. *k’ut’ahl* ‘die’
k’a-k’ut’ahl ‘kill by beating’

It is easy to see how the causative feature could be introduced. Many situations named by constructions containing means and manner affixes invite an inference of causation. If something is moved with a foot, it can be inferred that it was caused to move by the owner of the foot. If someone dies through beating, it can be inferred that he or she was caused to die by the beater. The inference can become part of the meaning of the derived lexical item.

Because words containing means and manner affixes are coined only as needed, the affixes in each language are not represented in equal proportions of verbs. Verbs containing affixes specifying hand action are pervasive, for obvious reasons. Human beings use their hands for accomplishing things more often than other body parts; hands are in a sense the unmarked instrument of action. All of the languages contain large inventories of related verbs in which one is a basic, non-causative root and the other a derived stem with a prefix for hand action and an element of causation. A sample of such pairs can be seen in (25).

(25) LAKHOTA HAND MOTION WITH CAUSATION: Buechel 1970

<i>bláya</i>	‘be level, plain’
<i>yubláya</i>	‘open, spread out, unfold, make level’
<i>č^hok^há</i>	‘be empty’
<i>yuč^hók^ha</i>	‘make empty, to empty’
<i>glogló</i>	‘grunt, as do hogs and buffalo calves’
<i>yuglóglo</i>	‘make grunt, as a buffalo calf by catching it’
<i>xmú</i>	‘buzz, hum, as the stones of a mill or flapping of wings’
<i>yuxmú</i>	‘make whiz, as in throwing a stone from a sling’
<i>iníla</i>	‘be still, silent’
<i>yuíníla</i>	‘caress and make still, put to silence’
<i>kč^há</i>	‘be loose, disentangled, straight’
<i>yukč^há</i>	‘loosen a knot, untie, unwrap, untangle’
<i>aká</i>	‘on, upon’
<i>yuáká</i>	‘to cause to come up, as a fish on a line’
<i>náčĭ</i>	‘stand’ (note the presence of one instrumental prefix already)
<i>yunáčĭ</i>	‘cause to stand, raise or lift up’

Similar pairs of non-causative roots and derived causatives can be seen in Tümpisa Shoshone and Haida.

(25) TÜMPISA SHOSHONE HAND MOTION WITH CAUSATION: Dayley 1989b

<i>kíppah</i>	‘rigid object to break in two’ (intransitive)
<i>makíppah</i>	‘break (rigid object) by hand’
<i>nuwa”</i>	‘move from one place to another’ (intransitive)
<i>manuwan</i>	‘push’

(26) HAIDA HAND MOTION WITH CAUSATION: Lawrence 1977

<i>hlk'án</i>	'be tangled'
<i>tlahlk'án</i>	'tangle'
<i>kagán</i>	'be saved, as from drowning'
<i>tlakagán</i>	'lose after catching, as a fish'

The semantic feature of hand motion supplied by the prefix can be discerned in all of these derived verbs. The use of the Lakhota prefix *yu-* in *yuglóglo* 'make grunt' makes sense once the context is noted, 'as a buffalo calf by catching it'. The use of the prefix in *yuínila* 'make still, put to silence' becomes clear in the context of a mother stroking her child. The use of the Haida prefix *tl-* in *tlakagán* 'lose' makes sense in the context of catching a fish then letting it slip out of one's hands.

Yet in each of the languages, the large numbers of pairs of non-causative roots and derived causative stems has resulted in a reanalysis of the core meaning of the prefixes. The implication of causation has been reinterpreted as the core meaning of the prefix. The prefixes can now be seen in contexts in which hand action cannot be a factor, as in (27).

(27) LAKHOTA CAUSATION WITHOUT HAND ACTION: Buechel 1970: 656

<i>Tokša,</i>	<i>bluwic^hak^hĩ ktelo</i>
<i>tokša</i>	<i>wa-yu-wia^hak^ha=kte=lo</i>
before.long	1.SG.AGENT-CAUSATIVE-be.true=FUTURE=ASSERTIVE
'In time, I will prove it.'	

In fact large numbers of derived verbs in Lakhota include as part of their meanings causation but not hand action, as in (28).

(28) LAKHOTA CAUSATION: Buechel 1970

<i>bléza</i>	'clear, clear-sighted'
<i>yubléza</i>	'make clear'
<i>č^hálwáxtešni</i>	'looking forbidding or morose, displeased, as with a visit'
<i>yuč^hálwaxtešni</i>	'make angry'
<i>č^hátéwašte</i>	'be glad, cheerful, joyful'
<i>yuč^hátewašte</i>	'cheer someone up'
<i>č^házé</i>	'become incensed or angry'
<i>yuč^háze</i>	'make angry, cause to become angry'
<i>č^héya</i>	'cry, weep'
<i>yuč^héya</i>	'make cry'
<i>č^hóza</i>	'warm, comfortable (person, clothing, house)'
<i>yuč^hóza</i>	'make comfortably warm, as a room'
<i>ixá</i>	'laugh, make fun of'

<i>yuíxa</i>	‘make laugh’
<i>íštéč^ha</i>	‘be ashamed, bashful’
<i>yuíšteč^ha</i>	‘make one ashamed’
<i>kakíča</i>	‘suffer, be afflicted’
<i>yukákiča</i>	‘cause to suffer’
<i>ksápa</i>	‘wise, prudent’
<i>yuksápa</i>	‘make wise’
<i>lak^hóta</i>	‘Lakhota’
<i>yulák^hota</i>	‘make things so that they suit a Lakhota, do a thing in the way of a Lakhota, make it Lakhota’
<i>luzáhq</i>	‘be swift, a fast runner’
<i>yulúzahq</i>	‘make swift’
<i>ačaya</i>	‘plainly’
<i>yučàààa</i>	‘explain, make clear, as a doctrine’
<i>axwáyela</i>	‘gently, mildly, patiently, easily’
<i>yuáxwayela</i>	‘cause gently’
<i>akix’q</i>	‘be without food, be hungry, starve’
<i>yuákix’q</i>	‘cause to starve’

Evidence of the shift of the prefix *yu-* from an indicator of means to a general causative can be seen in the fact that in its causative function it is now added to verbs already containing a means/manner prefix. The verb *náči* ‘stand’ in (23) contains the prefix *na-* ‘with the feet’, but this prefix did not prevent the further derivation of the causative verb *yu-náči* ‘cause to stand, raise or lift up’.

As a causative, the prefix *yu-* has expanded its domain of application as well. It has been added to some nouns to derive causative verbs ‘to make someone like, treat like N’.

(29) LAKHOTA CAUSATIVE WITH NOUNS: Boas and Deloria 1941:51

<i>mat^hó</i>	‘bear’
<i>yumat^ho</i>	‘make angry’ (make someone like a bear)
<i>wič^háša</i>	‘man’
<i>yuwíč^haša</i>	‘honor a person’ (make into a man)

The evolution of a means/manner prefix to a general causative has not been restricted to the prefix *yu-*. A similar phenomenon has occurred with other Lakhota prefixes indicating hand action. The prefix *ka-* ‘by hand, sudden impact, striking, throwing, slapping’ indicates forceful hand action in its more concrete meaning, but like *yu-*, the element of hand motion has disappeared in some contexts.

- (30) LAKHOTA *ka-* AS CAUSATIVE: Boas and Deloria 1941:47
- | | |
|------------------------------------|---|
| <i>iští ma</i> | ‘be asleep’ |
| <i>makáíští me</i> | ‘I have allen asleep, he put me to sleep’
(<i>ma-</i> 1.SG.PATIENT) |
| <i>homni</i> | ‘turn on an arc’ |
| <i>makáhomni</i> | ‘he turned me around; I have changed’ |
| <i>č^háté t’í za</i> | ‘be stout-hearted’ |
| <i>č^háté makát’í za</i> | ‘I am stout-hearted; he makes me stouthearted’ |
| <i>č^héya</i> | ‘cry’ |
| <i>makáč^héya</i> | ‘he made me cry by striking; I am crying
(from cold, etc.)’ |

Similar constructions can be seen in the Numic languages. Verbs containing the instrumental prefix *ma-*, descended from the noun root for ‘hand’, can cooccur with independent instrumental nominals that indicate different means.

- (31) TŪMPISA SHOSHONE: Dayley 1989b:99
- Níi kuttsappíh ma má-tukwíihwa.*
1.SG dirt with CAUSATIVE-go.out-COMPLETIVE
‘I put the fire out with dirt.’
 - Paa ma níi u má-tukwíihwa*
water with 1.SG it CAUSATIVE-go.out-COMPLETIVE
‘I put it out with water.’

(The same noun root ‘hand’ has also given rise to the instrumental postposition *ma* ‘with, by means of’, visible in (31).) Comparable use of the instrumental prefix *ma-* as a general causative in Northern Paiute, another Numic language, has been pointed out by Thornes (1996:62). Additional examples of derived causative verbs which do not show the element of hand action are in (32).

- (32) TŪMPISA SHOSHONE CAUSATION: Dayley 1989b
- | | |
|----------------|------------------------------|
| <i>to’eh</i> | ‘emerge, come up, come out’ |
| <i>moto’eh</i> | ‘vomit, throw up’ |
| <i>ía</i> | ‘wound, sore, injury’ (noun) |
| <i>mayía</i> | ‘hurt, injure’ |

The Tümpisa Shoshone prefix *tsa* – ‘with the hand by grasping’ shows the beginnings of a similar development. The verb *tsa’annih* ‘knock over, push over’, for example, is used even when no human grasping is involved.

- (33) TŪMPISA SHOSHONE *tša* – ‘by grasping’: Dayley 1989b: 164, 338
- a. *Lokkopiā tša-’anni-hwa nīetī*
 locust.tree CAUSATIVE-fall.over-COMPLETIVE wind
 ‘The wind pushed over the locust tree.’
- b. *Tangummī nīa tša-hapi-ngkī-ppīhantī*
 man 1.SG.OBJECT CAUSATIVE-sleep-BENEFACTIVE-PAST
kappe pai
 bed on
 ‘The man put me to bed.’

A similar evolution can be seen in Haida, as pointed out by Hori (1998). The prefix *tla-*, descended from the noun root *stlaay* ‘hand’, now appears in verbs that need not involve hand motion.

- (34) HAIDA: Hori 1998: 40
- a. *lā= ’ū tlan’ way tla-inda-kan*
 3AGT=FOCUS milk CAUSATIVE-be.warm-PAST
 ‘He warmed the milk.’
- b. *t’alaang= ’uu ’la tla-xaldanga-gil-gan*
 1.PL.AGENT=FOCUS 3.OBJECT CAUSATIVE-slave-become-PAST
 ‘We enslaved him.’
- c. *hlaa= ’uu gandlay tla-sk’alju-gan*
 1.SG.AGENT=FOCUS the.water CAUSATIVE-boil-PAST
 ‘I boiled the water.’
- d. *hlaa= ’uu dang tla-skinxa-gan*
 1.SG.AGENT=FOCUS 2.SG.OBJECT CAUSATIVE-wake.up-PAST
 ‘I woke you up.’

Other verbs derived with the same prefix also show causative meaning without necessarily involving hand motion.

- (35) HAIDA CAUSATION: Lawrence 1977
- xahlāa* ‘be startled’
tlaxahlāa ‘startle someone’
hīiluu ‘be all gone’
tlahīiluu ‘use up’
 ‘lāa ‘be fine’
tla’lāa ‘make good’
kāa ‘go, walk’
tlakāa ‘make something go, as a boat’

Not all semantic shift toward increasing abstraction is set in motion by hearers. In the normal course of language use, speakers are constantly extending the existing resources of their languages to new situations. One kind of extension is the metaphorical use of originally concrete lexical items in more abstract contexts, often as a way of increasing expressivity. Over time, such usage can become conventionalized, so that originally concrete words are understood to have abstract senses of their own. Speakers of English now think nothing of talking about letting an opportunity 'slip through their fingers', or about 'handling' a thorny problem, even when no physical contact is involved. Similar metaphorical usage can be seen with verbs containing means and manner affixes. The Lakhota verb *ya-gná* literally 'by.biting-fall', is used to mean 'to drop something from the mouth while breaking it, as a horse when eating a cob of corn' (Buechel 1970:619); it is also used to mean 'to lie, tell a falsehood'. As the inventory of derived verbs with abstract uses grows, the stage is set for new, more abstract analyses of their component morphemes. The prefix *ya-* 'with the mouth, by biting', for example, is now also used pervasively to derive new verbs for actions involving talking.

4. Conclusion

The evolution of causative morphology from noun roots like 'hand' and verb roots like 'grab' is easy to understand once the bridge through lexical items containing means and manner affixes is identified. The process began with the lexicalization of verbal compounds in which a noun or verb root served as a modifier to the head verb, indicating a means or manner of action. As part of a lexicalized expression, the non-head root lost its individual semantic and grammatical salience. Noun roots indicating hand action and verb roots indicating handling motions contributed the same kinds of meanings. Roots that occurred particularly often in such constructions, both in frequently-occurring compounds and in substantial numbers of different compounds, gradually eroded into derivational affixes with lives of their own.

Verbs derived with the new means and manner affixes were learned and used by new speakers as lexical items: labels for single concepts. Learners inferred the meanings of the verbs from the contexts in which they occurred, and speakers selected them as ready-made words from their vocabularies rather than deriving them anew. With such learning and use the internal morphological structures of the lexical items became less salient. The loss of compositionality of the derived lexical items, and their metaphorical extension to contexts not obviously involving direct physical contact, set the scene for a reanalysis of their functions. Actions accomplished with body parts frequently include an implication of causation: if an

object is moved with a hand or foot, one can infer that it was caused to move by the owner of the hand or foot. Because human beings so often use their hands to accomplish actions, the inventory of causative verbs containing hand-action prefixes is proportionally quite high. Hands are in a sense the unmarked instruments of human accomplishment; their involvement is less salient than feet or noses, for example. Because of the large inventory of causative verbs containing hand-action prefixes, and the lesser salience of hands as instruments, the implication of causation in these verbs was ultimately reinterpreted as the primary meaning of the prefixes. The reinterpretation could not have taken place without the tight bridging context provided by lexicalization, which allowed speakers to use derived words in more abstract contexts and allowed new learners to interpret the meanings of their parts from the contexts in which they were heard.

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Making sense of nominal classification systems

Noun classifiers and the grammaticalization variable

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1. Introduction

The purpose of this paper is to address a recent challenge to the establishment of a certain type of classifiers – the noun classifiers – and to frame the debate into a grammaticalization perspective.

A brief overview of noun classification systems, and of the place classifier systems hold among them, will be given first while the main arguments that have been proposed for the establishment of the specific type of noun classifiers under discussion here on the basis of MesoAmerican data, will be given second. The third section will then consider the contribution of data from Australian languages originally used to consolidate the establishment of this distinct type of “noun classifiers,” to then recount new arguments being advanced by Wilkins (2000) for not considering some of them as such anymore. The point of this paper is to argue that the cases of these classifying Australian “generics,” now argued not to be real noun classifiers, are interesting for the discussion of a typology of classifiers, for two reasons. First, because they provide insights into the origins and possible path of emergence of noun classifier systems through classifier constructions and, second, because they bring into focus the need to adequately address the semantics and discourse pragmatics of classifiers. The view proposed here is one of classifier systems as essentially intermediate lexico-grammatical systems at mid-way in a grammaticalization continuum of nominal classification systems, with a further continuum of grammaticalization nested within each type of classifier system.

2. A typology of nominal classification systems¹

The need to take all systems of nominal classification into view before dealing specifically with classifiers stems from the sense that much confusion still persists as to their nature. Classifiers, as shown in (1), are to be conceived of as an intermediate type of classification system, mid-way between more lexical and more grammatical systems to be briefly described below:

- (1) Overview of systems on a grammaticalization continuum

<Lexical.....	.....morphosyntactic>
<i>class-terms</i>	<i>noun classes-gender</i>
<i>measure terms</i>	“CLASSIFIERS”

Classifiers are intermediate in being clearly of lexical origin, while functioning in a more or less syntacticized or grammaticalized fashion. A list of criteria which help distinguish between classifier systems and more grammaticalized systems such as gender and noun classes is given in (2).²

- (2) Classifiers vs. more grammaticalized types of classification systems.

NOUN CLASSES	CLASSIFIERS
a. classify all nouns	don't classify all nouns
b. in a small number of classes	in large(r) number
c. closed system	open system
d. fused with other grammatical categories (number, case ...)	not fused
e. can be marked on N	not marked on N itself
f. in concord/agreement pattern	not part of concord systems
g. N assigned to one class	can be assigned to several classes
h. no speaker variation	possible speaker variation
i. no register variation	possible formal vs informal use

On the lexical end, the systems that have sometimes been confused with classifier systems include measure terms and class terms. Measure terms appear in constructions expressing quantities and arrangements and exist in all languages of the world (3a, b). In classifier languages with numeral classifier systems, one distinguishes between two kinds of classifiers: the mensural classifiers, which are equivalent to the measure terms of non-classifier languages and the sortal classifiers, taken to be the true classifiers (3c).

- (3) English measure terms
- a. a glass of water, a pound of sugar, a slice of bread
 - b. a pile of books, a group of children, a line of cars

- | | |
|-----------------------------|-------------------------|
| c. [mensural classifier] | c'. [SORTAL classifier] |
| two[bags of] oranges | two[ROUND] oranges |
| a [stack of] shirts | a[FLAT.FLEXIBLE] shirt |
| three [circles of] children | three[HUMAN] children |

The other lexical system, that of class terms, corresponds to a compounding process which is functionally equivalent to derivational processes. Class term systems are more or less productive and are particularly present in two semantic domains: human occupations and the vegetal world (trees and fruits), illustrated with English examples below:³

- (4) English class terms
- a. strawberry, blueberry, raspberry, boysenberry, gooseberry ...
 - b. apple tree, banana tree, orange tree, cherry tree ...
 - c. mailman, policeman, garbage man ...

On the more morphosyntactic side of the continuum of nominal classification systems, classifiers not only represent systems that are less grammaticalized than gender and noun class systems, but they themselves come in different subtypes. The general areal and language family distribution of all the grammaticalized systems of nominal classification to be considered is sketched out below:

- (5) Areal distribution of different types of grammaticalized nominal classification systems:
- a. gender: *Indo-European (French, German, Russian ...)*
 - b. noun classes: *Bantu, Australian (Dyirbal ...)* *Amazonian*
 - c. noun classifiers: *Meso-American (Jakaltek), Australian (Yidiny)*
 - d. numeral classifiers: *South East Asian (Chinese, Thai, Burmese, ...)*
Meso-American (Tzeltal, Tzotzil ...)
 - e. genitive classifiers: *Micronesian (Ponapean)*
 - f. verbal classifiers: *North American (Cayuga)*
 - g. others?: (demonstrative, article: *Amazonia, Argentina ...*)

Corbett (1991) and Creissels (1999) argue that a. and b. (gender and noun classes) are one major system, although data from Amazonian languages may challenge this position. It is certain that, in many languages of that region, systems of a clear gender type cooccur with more diversified and complex systems which are either multiple overlapping systems of classifiers or yet unestablished systems of noun classes. g. acknowledges that there may be yet other underdocumented systems, such as some systems of lowland South America (see Aikhenvald 1994, 2000; Aikhenvald and Green 1996 for instance).

The typology of classifier systems (5c. to f.) considered here is morphosyntactically driven in that it names the systems on the basis of the locus of the classifier.

This initial approach to typologizing is dictated by the felt need for a working tool to facilitate collecting comparable descriptions of such systems, as an initial step before eventually developing a more sophisticated functionally driven typology, only possible with extensive and intimate knowledge of the languages. In this morphosyntactic typology the various types of systems are named after the syntactic configuration in which they are used:

- (6) A morphosyntactically driven typology of classifier systems:

	[POSS+CL	Numeral+CL	CL+NOUN	Adj(+CL)	Dem(+CL)]//Verb-CL	
<i>genitive</i>	<i>numeral</i>	<i>noun</i>			<i>verbal</i>	
<i>classifier</i>	<i>classifier</i>	<i>classifier</i>			<i>classifier</i>	

Three major types are distinguished within the noun phrase: noun classifiers, with the noun directly; numeral classifiers, in quantitative constructions; genitive classifiers, in possessive constructions. Numeral classifiers can also appear secondarily on adjectives and demonstratives. Another major type of classifier is found inside the verb form – hence its label of verbal classifier – from where it classifies the nominal arguments of the verb on a semantic basis similar to that of the classifier types found within the noun phrase. Examples in (7) illustrate each kind of classifier:

- (7) a. Noun classifiers; JAKALTEK (Craig 1986a: 264)
xil naj xuwan no7 lab'a
 saw CL John CL snake
 '(man) John saw the (animal) snake'
- b. Numeral classifiers; PONAPEAN (Rehg 1981: 130)
pwihk riemen 'two pigs'
 pig 2+CL:animate
tuhke rioapwoat 'two trees'
 tree 2+CL:long
- c. Genitive classifiers; PONAPEAN (Rehg, 1981: 184)
kene-i mwenge 'my(edible) food'
 CL-GEN.1 food
were-i pwoht 'my(transport) boat'
 CL-GEN.1 boat
- d. Verbal Classifiers; CAYUGA (Mithun 1986: 386–388)
ohon'atatke: ak-hon'at-a:k
 it-potato-rotten past.I-CL-eat 'I (potato)ate a rotten potato'
so:wa:s akh-nahskw-ae'
 dog I-CL-have 'I (domestic.animal)have a dog'

Three types of arguments can be considered to support the existence of different types of classifiers:

- (8) i. co-occurrence of systems
- ii. different semantic profiles
- iii. functional difference.⁴

The co-occurrence argument (i) is THE argument par excellence. It can be illustrated in the Kanjobalan branch of the Mayan family by the co-occurrence of numeral and noun classifiers (see Craig 1992 and Zavala 2000), or in Micronesian languages with that of numeral and genitive systems (see 7 b. and c. above).

Behind the statement of different semantic profiles for the different types of classifier systems (ii) is the hypothesis of a semantics-morphosyntax correlation outlined in (9) below:

- (9) a. numeral classifiers = physical categories:
two-ROUND oranges; three-LONG RIGID pencils;
four-FLAT FLEXIBLE blankets
- b. genitive classifiers = functional categories
my-EDIBLE food; his-DRINKABLE potion;
their-TRANSPORT canoe
- c. noun classifiers = material/essence categories
an ANIMAL deer; the ROCK cave; MAN John

This hypothesis held up when tested by Olness (1991) in a pilot study, the overall results being as shown in Table 1 below.⁵

The third line of argumentation (iii), which remains to be fully developed, is to study the functional difference of the different morphosyntactic-semantic types. There is a need for an explanation of the observed correlation between the types of classifier systems established on a morphosyntactic basis and their dominant semantic features. Why, for instance, would noun classifiers come overwhelmingly from generics with semantics of essence or material, while numeral classifiers classify primarily by shape and consistency, and genitive classifiers by functions? And what are the relations between the processes of individuation, quantification,

Table 1. Semantics of classifier systems, from Olness (1991: 12) in Grinevald (2000: 73)

Semantics	Classifier Types		
	NUMERAL	NOUN	GENITIVE
PHYSICAL	63%	0%	2%
MATERIAL	11%	78%	12%
FUNCTIONAL	26%	22%	86%

and localization discussed in the literature on the function of classifiers and the semantic profiles of the different types of classifiers?

Much remains to be done to sharpen the three lines of argumentation just sketched out, but, in addition, any attempt at typologizing classifier systems will have to incorporate a grammaticalization perspective, which can take one of two forms. Grammaticalization can be taken as a descriptive framework, in order to track classifying items in their morphological, syntactic and pragmatic domains, as done for instance by Dixon (1982, 1986) with a list of variables meant to distinguish classifiers from noun classes (see (2) above). Grammaticalization can also mean focusing on dynamic aspects of such systems, sketching evolutionary scenarios, identifying the lexical origins of classifiers and their likely pathways of evolution. The following evolutionary scenarios involving classifiers have, for instance, been proposed in the literature:

- (10) i. N > class term (class noun) ... > classifier
- ii. N > classifiers > noun classes

The evolution outlined in (10i.) is a phenomenon prevalent in some languages of South East Asia (see deLancey (1986) for the Tai family and Bisang (1993) for Hmong). The one outlined in (10ii.) comes from cases from various continents. It is the hypothesized scenario for Bantu noun classes (with no evidence of classifier systems today but reconstructions of numeral classifiers like semantic motivation in Givón 1970 or Denny and Creider 1986, for instance); for Australia, with documented cases of classifiers becoming noun classes (see the comparative study by Sands 1995); for Amazonia as a potential scenario (through repeaters) for some languages, such as Tariana (see Aikhenvald 1994). In addition to the evolutionary scenarios across nominal classification types mentioned above, one also needs to keep in mind the evolution, within a type, from less grammaticalized incipient systems to more established and prototypical systems, as will be demonstrated later in this paper with Australian data.

A grammaticalization perspective brings with it a reconsideration of the various axes of the typologizing endeavor, those of the semantics and morphosyntax of classifiers, as well as that of the functions of the various systems. The “classic” studies on the semantics of classifiers of Denny (1976) and Allan (1977), as well as the more recent one of Croft (1994), do not address the issue of the variety of systems involved, for instance, nor their process of grammaticalization. The existing studies of the morphosyntax of classifiers do include a grammaticalization perspective (see Dixon 1982, 1986; Craig 1986 or Grinevald 2000), but those of the functions of the various systems are fewer although they represent a promising approach (see Craig 1992; Bisang 1993; and Wilkins 2000 which is to be discussed in Section 3 below).

The dynamic aspect of nominal classification systems to be taken into account for typologizing will also by necessity include such additional variables as the ones given below:

- (11) i. Age:
as in old (Chinese) vs. new (Kanjobalan) systems
- ii. productivity:
as in active/open (Thai) vs. frozen (Jakaltek) systems
- iii. life cycle:
as in emerging (Yidiny) vs. decaying (Bantu) systems
- iv. areal spread:
as in borrowing of a process, an idea, as in China or Meso-America.

The construction of a typology of classifier systems is therefore a task complicated by two major aspects of these linguistic systems. One of them is their very nature as intermediate systems between lexicon and grammar which is best captured within a grammaticalization perspective. The other is the inherent dynamics of these lexico-grammatical systems which produces great variation down to the dialect level, as these systems emerged from preexisting constructions can be very open and fluid, and elements are very easily borrowed as well as lost.

This overview aimed first at placing classifier systems among the variety of nominal classification systems, and then at putting into its proper context the particular type of classifiers to be focused on now: the noun classifier type.

3. Noun classifier systems: the evidence from Jakaltek⁶

A number of publications on the Jakaltek system of classifiers over the years have had as a goal to establish the existence of a certain type of classifiers, distinct from the better known numeral classifiers, and labeled “noun classifiers” (Craig 1979, 1986b, 1987, 1990a, 1992).⁷ The arguments presented are of a morphological and syntactic, as well as semantic nature, and they all point to the high degree of grammaticalization of such a system.

From a structural point of view, the Jakaltek classifiers are free forms which occur independent of quantifying or possessive contexts. They stand close to the noun, forming with it the core of a referential noun phrase:

- (12) a. *xil ix malin naj winaj / no' txitam / te' hum*
saw CL Mary CL John / CL pig / CL book
'Mary saw the(MAN)man / the(ANIMAL) pig / the (WOOD) book'
- b. *ka-k'onh hej no' txitam baq'ich tu'*
two-CL pl.CL CL pig fat DEM
'those two(ANIMAL) (pl ANIMAL) fat (ANIMAL) pigs'

- c. *sonlom naj xuwan*
 musician CL John
 '(MAN)John is a musician (lit: marimba player)'
 *c'. *naj sonlom naj xuwan*
 (MAN)John is a (*MAN)marimba player

As shown in (12b.) those noun classifiers are but one of several classification systems of the language mentioned in (6) above. In addition, these classifiers are omnipresent in Jakalteq clauses, to the extent that they function in the grammar both in a determiner like role (as markers of referentiality, as shown in the contrast of (12c and *c') and in an anaphoric role (resembling the personal pronouns of Indo-European languages, as shown in (13a., c.)). They are also found in possessive constructions, combining with ergative markers to express the possessor (in either determiner or pronominal function, as in (13b., c.)):

- (13) a. *xil ix naj/no'te'*
 saw CL CL/CL/CL
 'she(WOMAN) saw him(MAN) / it(ANIMAL) / it(WOOD)'
 b. *xil ix s-mam naj pel /s-yutz no' txitam*
 saw CL E3-father CL Peter / E3-rear end CL pig
 'she(WOMAN)saw (MAN)Peter's father / the (ANIMAL)pig's rear end'
 c. *xil ix s-mam naj /s-yutz no'*
 saw CL E3-father CL / E3-rear end CL
 she(WOMAN) saw his(MAN) father / its(ANIMAL) rear end'

The arguments to support the grammaticalization of the Jakalteq noun classifiers include the fact that morphologically most classifiers are reduced forms of lexical items (*winaj* 'man' vs. *naj* 'classifier'; *noq* 'animal' vs. *no* 'classifier' etc. ...), with broader semantics (*te* 'tree, stick' vs. *te* 'classifier of all plants but corn, and wooden objects'; *ch'en* 'rock' vs. *ch'en* 'classifier for rock, glass and metal objects'). One of the most persuasive features of their grammaticalization is their use in the syntax of the language to track the co-referentiality of arguments, whereby the presence of a classifier in specified contexts specifically notifies non-coreferentiality, while its absence is to be interpreted as marking coreferentiality. This anaphoric process is illustrated below (see Craig 1977 Chapter 5 for ample discussion of this phenomenon, taken up in Craig 1987):

- (14) a. *xil ix s-mam ix*
 CL(i) CL(j)
 'she(WOMAN) (i) saw her(WOMAN)(j) father'

- b. *xil ix s-mam* —
 CL(i) (CL(i))
 ‘she(WOMAN)(i) saw her(WOMAN)own(i) father’

From a semantic point of view, the closed set of classifiers is striking for the way it appears to carve out a culturally bound world view, which has been frozen in time (as argued in Craig 1979, and particularly 1986b). The total inventory of Jakalteq noun classifiers counts two dozen classifiers, which can be organized into two subsystems on the basis of their different categorization principles:

- (15) a. deity M, deity F, respected person, kin-adult-male, non-kin adult male, kin-adult-female, non-kin adult female, non-kin young male, kin-adult-female, non-kin young female, child
 b. animal, DOG, plant, CORN, THREAD, TWINE, CLOTH, soil/dirt, rock, SALT, water, fire.⁸

The list of the dozen classifiers of the first subsystem given in (15a.) corresponds to classifiers of social interaction (following Denny 1976). Limited dynamics of cross-classification producing insult or compliment effects are allowed within that subsystem. The dozen classifiers of the second subsystem organize the physical world with which the speakers primarily interacted:⁹ The semantic motivation for this second sub-system was transparent, the classification operating primarily on the basis of inherent qualities of the objects, and secondarily of their function (for the justification of this analysis see Craig 1987b). This semantic motivation is illustrated in (16) with a sample of the classifiers and nouns they classify:

- (16) a. nature/essence
 plant trees, fruits, furniture, house, coffee drink, book;
 animal animals (except dog), parts of animal, leather or wool
 artifact (sandals, woolen blanket or poncho), milk;
 water water, river, lake, rain;
 b. (nature)-function
 thread hairbands (a young woman’s weaving);
 cloth traditional woven pieces of clothing (married women’s
 weaving);
 twine rope, bags, nets (men’s trade).

A number of nouns of objects of the world remain unclassified. They correspond either to objects only seen but not felt to the touch (cloud, smoke . . .), or of mixed material (garbage), or of nature or source not known (beer, coca-cola, nylon).

It was on the basis of such morphological, syntactic and semantic arguments that the Jakalteq classifiers were set up as a classifier system distinct from the already known numeral, genitive and verbal classifiers. They could in addition be argued to

represent a classifier system at an advanced stage of grammaticalization, in (i) their functioning as determiner of the nouns and proforms (which ensured their being omnipresent in Jakaltek discourse), (ii) their being a frozen closed system used for referentiality tracking, in addition to (iii) their being morphologically reduced forms of the nouns from which they originated.

Following the description of the Jakaltek system, partly similar systems were described for the Meso-American region. In the Mayan family, and within Guatemala, all the languages of the same Kanjobalan branch seem to have developed similar systems, each with its own specific inventory but large overlap (and maybe similar usage, although that information is not as readily available, see Zavala 2000). In the neighboring Mamean branch of the same family, languages like Mam have developed a smaller system, limited to animates and anaphoric pronoun use (see England 1983). Within the same contact area, languages of Mexico, but of the Mixtec family, were also described as having such systems (see deLeón 1988). Beyond Meso-America, the only other area of the world where apparently similar systems have been reported is Australia, such as the Yidiny system described by Dixon (1977, 1982).

4. The challenge from the Australian “generics”¹⁰

The phenomenon of nominal classification seems to be a fairly widespread feature of the languages of the Australian continent, with various types of systems at work, predominantly noun classifier and noun class types, of the Yidiny and the Dyirbal type, respectively (see Dixon 1972, 1977, 1982). The type of classifying system that has been considered as akin to the noun classifier systems of Meso-America is exemplified by the kind of data shown below:

(17) Yidiny (Dixon 1982:186)

- a. *bamaal yaburuNgu minya gangu:l wawaal*
 person-ERG girl-ERG animal-ABS wallaby-ABS see-PAST
 ‘lit: the person girl saw the animal wallaby’
- b. *minya ganguul jana-ng jugi-il gabuma-la*
 animal-ABS wallaby-ABS stand-PRES tree-LOC black pine-LOC
 ‘lit: The animal wallaby is standing by the tree black pine’

(17) illustrates the use of 3 out of 19 such classifiers inventoried in the language, all three classifiers (person, animal, tree) reminiscent of some of the Jakaltek ones. Therefore, on morphosyntactic and semantic grounds the Jakaltek and the Yidiny systems appear similar, although less so at a discourse level. While Craig (1987)

argues that the Jakaltek classifiers are syntacticized, Dixon (1982) describes the use of the Yidiny classifiers as being a matter of “stylistics.”

In the literature on Australian languages, the traditional label for such morphemes has been that of “generics.” It is a fact that all Australian languages have generic nouns, that most of them have constructions of generic+specific nouns, and that a few appear to have grammaticalized these constructions into noun classifier systems. Out of the 250 languages of the continent Sands (1995) counts 20 languages as having noun classifier systems (and 42 noun class systems). The main criteria she uses for identifying the instances that could qualify as real noun classifier systems is the frequency of use of a generic with a specific noun, and she notes that “it is difficult to determine the difference between languages that have a true system of noun classifiers and those in which generic nouns may precede a more specific noun” (1995:270). Following the identification of noun classifier like generics in Yidiny (Dixon 1982), other Australian languages have been described as having noun classifier systems too, such as the other Northeastern Australian languages Kugu Nganhcara (Johnson 1988) and Yir-Yoront (Alpher 1991).

What follows is a reconsideration of the situation of the Arrernte language of Central Australia originally considered as having a noun classifier system (Wilkins 1989) but now being argued not to (Wilkins 2000). At first view, the similarity between the Arrernte and the Jakaltek system appear strong, on formal and semantic grounds. The morphosyntactic similarity is one of a classifying free morpheme standing next to a bare noun, independent of a quantifying context:

(18) Arrernte (Wilkins 2000:172)

the imarte arratye kere aherre-Ø arlkwe-tye.lhe-me-le.
 1ERG then truly game/meat kangaroo-ACC eat-GO&DO-npp-ss
 ‘when I got there I ate some kangaroo meat’

The other reason to compare the Arrernte generics to noun classifiers of the Meso-American type is that their semantics seem close and that they all have a clear nominal origin. The 19 generics first identified and organized by Wilkins (2000:152–154) are said to fall into the subsets of physical, functional and social interactions established for the semantics of classifiers by Denny (1976):

- (19) a. inherent nature: flying creatures, ants, plants, grasses, seeds,
 fire, water, rock
 b. function/use: meat creatures, edible plants, sweet foods
 and drinks, edible grubs, tobacco, medicine,
 artifacts
 c. social status generics: initiated man, woman, child, place

The generics listed in (19) seem indeed to provide a selective view of the surrounding world of their speakers reminiscent of the one provided by the Jakaltek system for its own speakers, shown in (15) and (16) above.

However, Wilkin's most recent claim is that Arrernte does not have noun classifiers, although it can be said to have classifier constructions. This new position is derived from an extensive study of the discourse function of these generics through their deployment in narrative texts showing that, unlike Jakaltek classifiers, the Arrernte generics neither function as markers of referentiality nor as anaphoric pronouns. The three possible instantiations of noun phrases in Arrernte are illustrated in (20):

- (20) a. Generic-Specific Constructions (Wilkins 2000: 172)

the imarte arratye kere aherre-Ø
 1ERG then truly game/meat kangaroo-ACC
arkwe-tye.lhe-me-le.
 eat-GO&DO-npp-ss
 'when I got there I ate some kangaroo meat'

- b. Generic nouns as simple head of NP (Wilkins 2000: 172):

Kenhe nhakwe-Ø akenhe unthe-rlane-rlenge anye-ng-ikwe
 BUT that(dist)-NOM BUT hunt.for-CONT-DS father-ABL
arlke atye-ng-ikwe arlke, unthe-rlane-me-le
 3POSS g.father-ABL-3POSS TOO hunt.for-CONT-npp-ss
kere-ke,
 game/meat-DAT
 'That other one (the boy), on the other hand, went hunting with his father and his mother's father, looking for game, ...'

- c. Specific nouns as simple head of NP (Wilkins 2000: 173):

... *anwerne ingke anteme alhe-ke Ayampewerne-atheke.*
 ... 1plNOM foot now go-PC Yambah-ALL-wards
Iwerre-ke anwerne aherre aruntheØ areke.
 way/path-DAT 1plERG kangaroo many-ACC see-PC
 'Then we (sadly) set out on foot towards Yambah Station. On the way we saw kangaroos'

The quantitative text study focused on the distributions of the particular set of generic and specific noun illustrated above and dealing with the ubiquitous kangaroo: (a) the generic noun *kere* 'game animal/meat', (b) the "classifier construction" *kere aherre* 'red kangaroo (as game)' and (c) the specific noun *aherre* 'red kangaroo' alone.¹¹

The study revealed indeed a major difference in the discourse deployment of the classifying elements between Arrernte and Jakaltek, in that the distribution of generics and specifics in Arrernte follows a pattern of complementary attribution of semantic and syntactic roles and of association with specific predicates which is unparalleled in Jakaltek. For instance, all 39 instances of generics (the 22 of generics alone and the 17 of generics+specific nouns) involve patient-like roles case marked ACC-DAT where the kangaroo is a game animal being tracked, hunted and killed, and later cooked and eaten. Meanwhile 7 of the 11 instances of specific nouns alone are case marked ERG or NOM and either deal with inherent properties of the animal (such as living in plains or being herbivore), or take the kangaroo as a human (or demonic) protagonist in traditional stories. The only counterexample to this complementary distribution turns out to demonstrate it further: it is the case of the verb ‘to see’ with which the use of the generic depends on the intention attributed to the act of seeing, i.e. whether seeing is part of a hunting search (hence the use of the generic for game) or a neutral perception activity (hence the specific noun alone). The use of the generic *kere* is therefore limited to signal that the referent is to be specifically thought of as a hunted game animal, in all the stages of a culturally defined frame of hunting. Such observation on the use of the Australian generics in discourse points indeed to the limitations of a strictly morphosyntactic approach to a typology of classifiers (Craig 1992 and Grinevald 2000). Meanwhile, it would seem to provide an interesting point of observation on the process of the emergence of noun classifier systems.

It is further interesting to connect the limited discourse anaphoric use of the Arrernte system of generics to a specific typological characteristic of the language. While the anaphoric function of the Jakaltek noun classifiers has fully developed in the context of a language which lacked third person independent pronouns, like all Mayan languages do, it is indeed noteworthy that Arrernte does not attribute such function to generics, but that this happens in the context of the language already possessing an independent set of third person pronouns.

It would seem that the Australian generics data in general is a mine for observing the process of the emergence of noun classifier systems. Sands (1995) and Wilkins (in press) concur in recognizing that the languages of Australia which use generic+specific noun constructions can be placed along a continuum from a least grammaticalized discourse phenomenon – that of “classifier constructions” without “noun classifiers” per se (Wilkins 2000) – to most grammaticalized systems akin to the Jakaltek type of noun classifier. In this continuum shown in Table 2 below, (i) Arrernte would represent a potentially incipient system, while (ii) the Yidiny system would already function as an emergent noun classifier system, although not as established as (iii) the more clearly grammaticalized systems of Kugu Nganhcara and Yir-Yoront. Wilkins illustrates those three stages of grammatical-

Table 2. Australian generics continuum of grammaticalization

		GENERIC	CONTEXT of USE
(i)	Arrernte	<i>yerre</i> hunted game	-discourse determined -general hunting frame
(ii)	Yidiny	<i>minya</i> edible animal	-independent of role in event -inherent property of referent (old/big enough to be hunted)
(iii)	Kugu Nganhcara	<i>minha</i> (edible)animal	-one of small set of classifiers -very frequent use (including pro-forms)
	Yir-Yoront	<i>minh</i> wild animal	-classifies nouns more than referents -reduces to m- in fast speech

ization by considering how the generic which can accompany the specific noun for kangaroo functions semantically.¹²

There is indeed a major difference between the use of generics in languages like Arrernte (i) and in the other ones (ii, iii) in that, in the latter, the use and distribution of the generic+specific construction is identical to the use and distribution of specific nouns, except for stylistic differences not specified. The frequency of use appealed to by Sands in order to distinguish true noun classifiers can therefore be seen as a reflection of the various levels of discourse constraint on the generics and their corresponding levels of semantic specificity shown in Table 2.

While the study of the Australian generics by Wilkins was meant to present a challenge to their being considered as noun classifiers of the same type as the Jakalteke noun classifiers, the position taken here is that the study stands as a reminder of the inherently mixed nature of classifier systems, as intermediate lexicogrammatical systems, and of the importance of always considering the grammaticalization axis in any comprehensive study of the phenomenon of classifiers. For the noun classifier type, the Jakalteke system may end up representing the most developed and syntacticized case of the type documented to date, while the Australian continent shows a continuum of more or less grammaticalized noun classifier systems, with a majority still in a potential or incipient stage. The Arrernte use of generics is therefore valuable as a demonstration of what an incipient system of noun classifiers (i.e. not yet grammaticalized one) may be, revealing in fact a possible origin of such systems of classifiers. It does so by showing the existence of intermediate classifier constructions, discourse driven associations of generics+specific nouns, providing evidence for a likely source construction for noun classifiers.¹³

Notes

1. All of the information summarized in this section was originally presented in Craig (1994) and is more fully developed in Grinevald (1999 and 2000).
2. The list is based largely on the criteria developed by Dixon (1968, 1982, 1986), where every point is illustrated with specific examples not repeated here.
3. The phenomenon of class terms is very widespread both in languages of South East Asia and of Amazonia where it is often confused with that of classifiers.
4. These arguments are presented in more detail in Craig (1992) and Grinevald (2000).
5. The study involved 15 systems of classifiers, five of each major type, in 12 languages, some having more than one classifier system.
6. While the language has been renamed by its speakers in recent years and is now known as POPTI, the main foreign linguist for the language has also changed her name, from Craig to Grinevald.
7. The label of noun classifier may actually need to be rediscussed; it has been suggested to relabel the system “nominal classifiers” with an adjectival form parallel to “numeral” and “verbal” classifiers (Zavala p.c.).
8. CAPs mark unique or very specific classifiers, in contrast to the classifiers which come from superordinate nouns, or “generics” which define larger classes.
9. This second sub-system (15b.) is more set than the first. In the Jacaltenango dialect, it was a frozen system, in that it did not accommodate modern imported materials like plastic or nylon, until recently, unlike the neighboring dialects.
10. This whole section is based on a discussion started in Wilkins (2000). All data on and insights into the Australian languages mentioned in this section are directly taken from this reference, whether specifically indicated at each step of the presentation or not.
11. The counts were done on 26 texts with 12 speakers.
12. The cognate nature of the generics considered for languages in (ii) and (iii) underline the language specificity of the degree of development of the classifier systems.
13. See Craig (1990a) for an attempt at determining the source constructions of Jakaltekan noun classifiers, as vocative and epithet constructions of a widespread nature in the Mayan family at large.

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Phono-syntactic conspiracy and beyond*

Grammaticalization in spoken Beijing Mandarin

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1. Introduction

With everyday use, our language is constantly changing. New patterns emerge, which may lead to language variations and, ultimately, to grammaticalization of the patterns (e.g., Hopper 1998). Frequency of the elements being used may be one reason that triggers the change (e.g., Bybee and Scheibman 1999; Haiman 1994; Hopper 1987). The de-classifier practice in spoken Beijing Mandarin reflects such a process.

The Chinese classifier is considered obligatory following a number or a demonstrative before a noun (Li and Thompson 1981:104). Such a practice is explained by the reason that the language does not mark plurality in nouns (Greenberg 1974), and that nouns in Chinese are indeterminate (Bisang 1998). To Bisang, a Chinese noun expresses a mere concept of an object that, with the help of the classifier, can be further specified for the status of the referent it denotes (e.g., plurality, specificity or referentiality). These explanations assume that although a language may present its nominal referents as an indeterminate concept, there is a need to code such referents as concrete entities as well. The classifier system is used to compensate such a need in Chinese. Such an explanation captures the general observation on human cognition towards the presentation of nominal referents. However, it has neglected the fact that the classifier system may not be the only solution. This study intends to demonstrate that the Chinese classifier system may be changing with a new coding system emerging, and that such changes are not led by any cognitive reasons but only by sound erosion out of everyday language use. The study also indicates that such changes still adhere to the general observation of human cognition on nominal presentation.

Based on data recorded from naturally occurring conversations, this study proposes a synchronic phono-syntactic conspiracy, which describes the impact of sound erosion from everyday language use: a ‘frozen tone’ and a syntactic ‘de-classifier’ practice in certain noun phrases of spoken Beijing Mandarin. The study proposes that:

- (1) a. The conspiracy is conditioned by frequency of word combinations in natural discourse.
- b. The change has the following results:
 1. a noun phrase without the classifier
 2. a Mandarin tone that does not follow the tone sandhi rules (hence frozen)
 3. a new function of the ‘frozen’ tone from the lexical tone to the syntactic tone.

The end product of the conspiracy is grammaticalization of Mandarin noun phrases with a numeral ‘one’ but without a classifier, and a grammaticalized frozen tone, which, when needed, may function as an indicator of the grammatical function of its following word. Since Mandarin tones are generally used to differentiate lexical meanings, this last function of the frozen tone adds a syntactic function to the Mandarin tone system.

Grammaticalization has been used to describe the processes by which a grammatical morpheme evolves from an autonomous word (Meillet 1948, cited in Hopper 1994:31). In this study, the term refers to the reanalysis of discourse patterns as grammatical patterns (Heine, Claudi and Hünemeyer 1991; Hopper 1982, 1987). The process of grammaticalization is seen as a constant movement to routinize new constructions from old constructions (Bybee 1999) by frequent usage in conversations (e.g., Bybee 1999; Hopper 1994, 1999). What this study tries to show is how, through sound erosion in conversations, a new noun phrase emerges in spoken Beijing Mandarin. The new noun phrase, *yi35 (one)+Noun*, has a fixed tone on the numeral one (*yi35*) but without a classifier; thus breaking from the old grammatical requirement of the obligatory use of the classifier in Mandarin noun phrase formation.

Section 2 introduces phono-syntactic conspiracy as a theoretical frame. Section 3 supplies a brief grammatical sketch of Mandarin tone sandhi rules and its classifier system. Section 4 discusses the frequency effect as a cause of such changes in spoken Beijing Mandarin. Section 5 discusses the data regarding the conspiracy, and Section 6 concludes the study by pointing out a possible new grammatical function of the numeral ‘one’ in Mandarin Chinese.

2. Phono-syntactic conspiracy

The phono-syntactic conspiracy describes sound erosion from everyday language use. The term conspiracy has been used to describe how a series of sound changes ‘conspire’ to bring about a general modification of a phonological pattern (Hock 1986: 159). In this study, the conspiracy describes a set of phonological changes that do not rest on the modification of a phonological pattern. Rather, the result of the changes leads to the modification of the Mandarin classifier system. The conspiracy starts as a phonological change within a highly frequently used chunk of words, the numeral ‘*yi55*: one,’ and the generic classifier ‘*ge51*’ plus a noun. The final product is a new syntactic pattern, a noun phrase without the use of the classifier. There are four steps in the change, illustrated in Example (2).

(2) Phono-syntactic conspiracy

1. Tone-sandhi rule application: *yi55* → *yi35_ge51* + Noun
2. Vowel reduction: ‘*ge*’ adopts a neutral tone. The vowel is reduced to a shwa /ə/: *yi35ge51* → *yi35gə* + Noun
3. Intervocalic consonant deletion: *yi35gə* → *yi35ə* + Noun
4. Vowel cluster simplification: *yi35ə* → *yi35* + Noun

It is clear that steps 2–4 are caused by sound erosion. The result of Step 4, the word one (*yi35*) with the high-rising tone, no longer follows the Mandarin tone sandhi rules because it may still be conditioned by the tone of its following classifier *ge51*, which by now has been completely dropped. The noun phrase ‘*yi35ge+Noun*’ thus becomes ‘*yi35+Noun*’ without the classifier. For instance, a discount store in Mandarin should be *yi35ge pian35yi shang55dian51*, yet in the data, the noun phrase is produced as: *yi35 pian35yi shang55dian51*.

There is a need to clarify the difference between the notions of phonologization and phonogenesis on the one hand, and the term phono-syntactic conspiracy on the other. Phonologization describes how automatic or random fluctuations of sounds are ‘emancipated’ to be coded uniformly and distinctively (e.g., Haiman 1994: 15). Phonogenesis describes the creation of syntagmatic phonological segments out of earlier morphemes (Hopper 1994: 31). Both are results from sound erosion through everyday language use. Phono-syntactic conspiracy, on the other hand, describes changes of both sound erosion and syntactic change as a result of phonological changes. Therefore, in this study, although *yi35* (one) with a fixed high-rising tone can be considered phonologized, and the new syntactic function of the tone may be a new syntagmatic phonological segment, the final syntactic change in the noun phrases (the complete dropping of the classifier) is a syntactic change. Thus by phono-syntactic conspiracy the theory intends to capture the essence of the changes: starting from sound erosion and ending in syntactic change.

To illustrate what impact such a tonal change has on a native speaker, let's first observe an example. It is from a video-recorded conversation.¹ When asked if one could say: *Da21 *yi51 che55*: to take a taxi, an eleven year old native Beijing Mandarin speaker says:

- | | | | | |
|-----|----|------------------------------|-------------------------|----------------|
| (3) | M: | <i>Da21 yi51 (0.5)</i> | <i>Da21 yi35 che55.</i> | |
| | | Take one | take one taxi | |
| | | Take a (pause), take a taxi. | | (Beijing 1998) |

In this example, the girl made a pause after the word *yi51* because the falling tone does not match the expected tone for the intended meaning. She paused, then changed the tone of the word from *yi51* to *yi35*, a rising tone, to produce the entire utterance. In this example, the noun phrase without a classifier, and the word *yi35* with the rising tone exhibit the end product of the conspiracy proposed in this study.

The conspiracy is discussed in detail in Section 5 after a brief discussion of the tone system and noun phrases in Mandarin grammar, and the frequency effect as the cause of such a language change.

3. Background and data

The current report is based on data collected from a corpus of over 5 hours of video and audio-taped naturally occurring Mandarin Chinese conversations (Beijing dialect) over a decade (1987–1998). The speakers range from 11 to 86 years old. Before proceeding with the discussion of our findings, it is necessary to provide a brief sketch of Mandarin tones and tone sandhi rules, as well as the system of Chinese classifiers.

Chinese lexical units are made up of one syllable, in the patterns CV(C+nasal). Words are formed with one up to seven syllables, with the majority being 2 syllables in contemporary Chinese (Liu and Peng 1997). There are four basic tones in Mandarin associated with every stressed syllable to differentiate lexical meaning. Using numbers 1–5 to represent the pitch value, 5 is the highest and 1 is the lowest pitch (Li and Thompson 1981:8; see also Chao 1968):

- | | | | |
|-----|---------|-----|------------------------|
| (4) | First: | 55 | High level |
| | Second: | 35 | High rising |
| | Third: | 214 | Dipping/falling-rising |
| | Fourth: | 51 | High falling |

The high level tone is when the pitch register of the syllable remains at level 5 throughout. The high-rising tone is when the pitch register of the syllable starts low, then it rises high to level 5. The dipping or falling-rising tone is when the

pitch register of the syllable begins at a relatively low level 2. It goes even lower to level 1, then rises to level 4. With the high falling tone, the pitch register of the syllable starts up high at level 5, then it falls sharply down to level 1. In addition, there is a 5th tone, a neutral tone, which is the elimination of any pitch register on an unstressed syllable.

In natural, connected speech, however, the four tones are not produced in these typical patterns. The pitch contour becomes relatively flat (although the pitch value is still contrastive to a native speaker's ear), and there is a set of tone sandhi rules that Mandarin speakers follow (Li and Thompson 1981:8–9; Chao 1968:36):

- (5) a. When a third tone syllable is followed by a syllable with any tone other than the third tone, the third tone changes into a low tone syllable with the pitch contour 21.
e.g., *hao214*: good *hao21 ren35*: good person
- b. When a third tone syllable follows another third tone syllable, the first one changes into a second tone.
e.g., *hao214*: good *hao35 ma214*: good horse
- c. When a second tone is preceded by either a first or a second tone syllable, and followed by a syllable with any of the four tones, it changes into the first tone.
e.g., *lai35*: come *Shei35 lai55 chi55?* Who is coming to eat?

In addition to the tone sandhi rules, there are two words in Mandarin that change tones based on the tone of their following syllables. One of the words is the focus of this study, the word *yi55*: one. In connected speech, *yi55* has three tone variations:

- (6) a. *yi55*: one as the numeral one in counting;
b. *yi35*: one before a syllable with a high-falling tone
e.g., *yi35 ge51 ren35*: one classifier person: a person
c. *yi51*: one before a syllable with one of the other three tones.
e.g., *yi51 che55 xi55gua*: one carload of watermelon
yi51 chuan35 ren35: a boatload of people;
yi51 zhang55 zhi214: a piece of paper

In natural speech, tone sandhi rules are very strictly followed. A wrong tone may disrupt the flow of intonation; thus if a wrong tone is produced, speakers would pause and repeat the syllable to get the correct tone (See Tao et al. 1999, for a detailed discussion of tone repair). If we re-examine example (3), we can see that the 'right tone' that the little girl uses on *yi55* violates the tone sandhi rule as specified in (6c). Instead of using the high-falling tone *yi51* before a high-level tone *che55*,

she uses a high-rising tone *yi35*. She even pauses and repeats the utterance to get the rising tone. This instance of repair indicates that the tone must be crucial for this expression.

3.1 Classifiers and noun phrase formation

Mandarin grammar requires the obligatory use of classifiers when a numeral or a demonstrative precedes a noun (Chao 1968; Li and Thompson 1981). Though not transparent now, a classifier is associated with a group of nouns that share semantic similarities. Further, a classifier can stand alone following a number or a demonstrative to represent the noun it is associated with. The word *ge51* is a general classifier that may be associated with the most varieties of nouns. For example, in the noun phrase '*yi35 ge51 ren35*' (a person) the word *ge51* serves as the classifier; in the noun phrase '*yi51 zhang55 zhi214*' (a piece of paper) the word *zhang55* serves as the classifier (classifying objects with a flat surface).

4. The frequency effect and chunking

It has been well documented that frequency and chunking play a decisive role in synchronic language change (e.g., Bybee and Scheibman 1999; Haiman 1994; Hopper 1998). The more often two elements are produced together in naturally occurring discourse, the more likely they are produced as a chunk. Thus the more likely they will be fused or bonded phonologically. This process describes exactly how the phono-syntactic conspiracy takes place in spoken Beijing Mandarin.

According to Chinese word frequency studies, the numeral *yi55* (one) and the classifier *ge51* are both high frequency words (ranked #8 and #12 among the 4000 high frequency words in daily conversations, Beijing Language Institute 1986). Although there is no frequency study on the combination of the two words, the data from this study indicates that the combination of *yi35ge51* (one + classifier) far exceeds the occurrence of *yi55* in combination with any other expression.

In the data of over 5 hours of naturally occurring Mandarin conversations (Beijing dialect), there are about 195 tokens of *yi35ge51* (in different phonological forms), and a total of 241 tokens of *yi55* occurring with 126 other words in three different grammatical types. Table 1 presents a summary of the occurrence of *yi55* in combination with different words.

Table 1 exhibits two types of noun phrases involving the use of *yi35ge51*, and *yi55* in combination with other classifiers, adverbs and verbs. There are different variations of the form of *yi35ge+Noun*, as shown in the second row. These variations are discussed in the next section. We can see from the Table that the occur-

Table 1. *yi35ge51* versus *yi55+other elements* by type and token

Yi Phrases	Chunk type	%	Tokens	%	Ave. token/type	%
Yi35ge51 +0	1	1%	37	9%	37	18%
Yi35gə/Yi35ə/Yi35+N	1	1%	158	36%	158	78%
Yi55+Other Classifiers	71	55%	128	29%	1.81	1%
Yi55+Quant.	18	14%	61	14%	3.39	2%
Yi55+verb	37	29%	52	12%	1.4	1%
Total	128	100%	436	100%	201.6	100%

Source: 5 hours of natural conversations (not counting filler *yi35ge* or repaired repetitions)

rence frequency of the chunk *yi35ge+N*, as indicated by the average token of use per type (78%), is significantly higher than the rest of the element combinations.

Each of the different types of the chunking combinations from Table 1 is illustrated below.

The first item in the table, *Yi35ge51+0*, denotes the use of the two elements alone to stand for a previously mentioned referent that is already accessible to both the speaker and hearer. Following is an example where the referents 'daughter and son' are coded with *yi35ge* after they are introduced in (7).

- (7) *M: ... liang214ge nü214er yi35ge er35zi. yi35ge shi51 zai51 yi35ge*
 two:CL daughter one:CL son one:CL be at one:CL
zai51 li214tou yi35ge zai51 wai51tou hai35 you214 yi35ge shi51
 at inside One:CL at outside still have one:CL be
gao214 Ying55yü214 de.
 work English Part.

M: ... two daughters and a son. One is at, one is in the country, one is outside the country, there's another one who works on English as a profession. (Beijing 1997)

The second item in Table 1, *Yi35gə/Yi35ə/Yi35+N/Nom* is the focus of this study. Detailed discussions on this pattern are done in the next section. The third item, *Yi55+other classifiers*, refers to all the other classifiers that the word 'one (*yi55*)' occurs with in the data. These include both full noun phrases and other expressions where *yi55* is used only with a classifier (e.g., *yi51zhong214 yao51*: one type of medicine; *yi51wan35shui214*: one bowl of water; *yi35 da51 guo55*: one big pot (of ...)).

The fourth item, *Yi55+Quant.*, covers the use of *yi55* in words that often quantify verbal activities. These are fixed adverbial expressions including, for example, *yi51zhi35* (one straight): always, *yi35kuar51* (one block): together, and so forth.

The last item, *Yi55+verb*, includes all the uses of *yi55* with verbs to express momentary, spontaneous actions or events. For instance, *yi35jin51men35* (once enter door) implies ‘as soon as (someone) enters;’ and the utterance: *y51 ran35shao55 yi51 peng35zhang51* (once ignite once expand) indicates ‘as soon as (the gunpowder) is ignited and started to expand (then...).’

All the different combinations of *yi55* with other elements make the word occur frequently in conversational discourse. Of these combinations, *yi35ge* stands out to have the highest frequency of use in the data. With high frequency comes chunking. When two elements often occur together, they tend to be stored in the mind as a chunk (Anderson 1993). Once they are stored and produced as a chunk, the internal phonological structure may change. The phono-syntactic conspiracy reported in this study is due to such change.

5. Phono-syntactic conspiracy and grammaticalization

5.1 The conspiracy

We now turn to look at the phono-syntactic conspiracy involving the word *yi55* (one) and the general classifier *ge51*. Due to occurrence frequency, the phrase *yi35ge* often occurs as a phonological chunk. The conspiracy describes its internal change in four steps, repeated below.

1. Tone-sandhi rule application: *yi55* → *yi35_ge51* + Noun
2. Vowel reduction: ‘*ge*’ adopts a neutral tone. The vowel is reduced to a shwa /ə/:
yi35ge51 → *yi35gə* + Noun
3. Intervocalic consonant deletion: *yi35gə* → *yi35ə* + Noun
4. Vowel cluster simplification: *yi35ə* → *yi35* + Noun

The default tone for the classifier *ge51* is the high-falling tone. Step 1 of the conspiracy describes how the high-level tone on *yi55* turns into a high-rising tone *yi35* when it precedes a high-falling tone in *ge51*. This practice follows the Mandarin tone sandhi rules. However, in a noun phrase, *ge51* is often unstressed, losing its contrastive, relative pitch. This is considered a neutral tone in Chinese. In spoken Beijing Chinese, the unstressed vowel in the classifier *ge* turns into a shwa /ə/, as illustrated in Step 2. Steps 3 and 4 illustrate synchronic phonological changes in the noun phrase. Step 3 involves a re-analysis of the syllable structure in which the intervocalic consonant ‘*g*’ is ‘fused’ phonologically. It turns into a glide, then it is completely dropped. Step 4 is the final product of the conspiracy, completely eliminating the classifier *ge51* while leaving the word *yi35* with a high-rising tone. Conditioned by the high-falling tone in *ge51*, which has been completely dropped by now, the high-rising tone in *yi35* is frozen in that it no longer follows Man-

Table 2. Occurrence frequency of the variations of *yi35ge51+noun*

Type	#'s of Occurrence	%
Yi35gə+Noun	96	61%
Yi35ə+Noun	25	16%
Yi35+Noun	37	23%
Total	158	100%

darin tone sandhi rules (cf., Example (6c)). Thus this ‘frozen’ tone is ‘emancipated’ (Haiman 1994) from the tone sandhi rules. Example (3) illustrates how such tonal variations trigger a native speaker to re-do the tones. The emancipated frozen tone now serves a new syntactic function – an indicator of a ‘bare’ NP without the classifier in spoken Beijing Mandarin.

The 4-step conspiracy illustrates synchronic variations of the syllable structures in Mandarin noun phrases involving *yi35ge51* (one + classifier). Currently, all steps of the conspiracy exist in spoken Beijing Mandarin. Table 2 illustrates the occurrence frequency of the variations of the phrase *yi35ge+noun* in the data.

From Table 2 one can see that the full noun phrase *yi35ge + Noun* still prevails in the data. The instances of the phonological fusion as illustrated in steps 3 and 4 of the conspiracy are used less frequently. While the difference may be mainly the result of speaker variations, the fact may also be due to pragmatically conditioned communicative needs. Recall that in general, Mandarin presents nouns as mere concepts, and it is only when there is a need to specify the concrete object that the classifier gets used (e.g., Bisang 1998). The phrase *Yi35ge51+Noun* (one+classifier+noun) is used to code a noun that is indefinite yet often referential. In the data, the choice of the full NP with the classifier (*yi35ge+Noun*) seems to come out of three basic reasons: the need to emphasize the uniqueness of the single object, the need to compare and contrast a noun referent, and age-related preferences.

In most instances, the emphasis of a unique nominal phenomenon is done with a full NP and its classifier, so is the contrastive emphasis of a noun, as illustrated in the following examples.

- (8) a. B: ... yi35ge tuir214 ta55 dao51 tour35 sheng55 lia35 jiao214 a.²
 ... one:CL leg it till end grow two feet Int.
 B: ... at the end of one single leg it grows out two feet! (Beijing 1997)
- b. M: ... yi35ge ren35 yi51wan214 shui214 ...
 ... one:CL person one:CL water
 M: ... everyone person (gets) one bowl of water ... (Beijing 1997)

In the two examples, (8a) describes a unique phenomenon: two feet growing out of a single leg, and (8b) indicates ‘each and every person’. Both show an emphatic function of the phrase *yi35ge*.

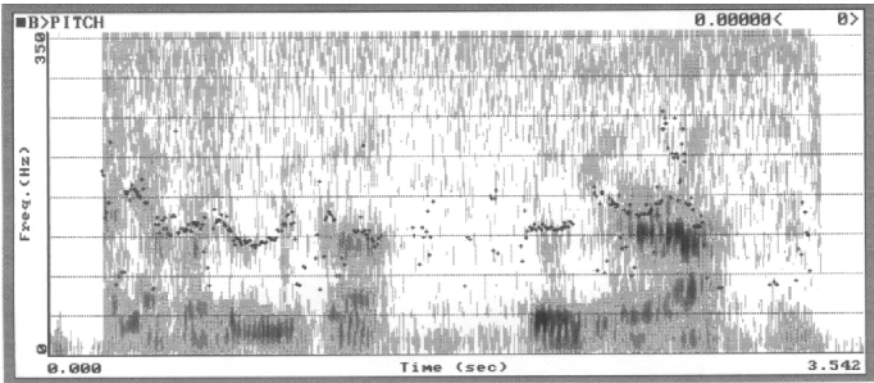
In addition to the pragmatic needs, there seems to be an age difference in choosing between the forms. The two older speakers in the data did not use many of the phonologically reduced forms. One did not use the reduced forms of the phrase *yi35ə* at all (female, in her early 70s). The other (male, in the mid-80s) used the reduced phonological form *yi35ə+Noun* mostly, with only one exception where he used *yi35+Noun* (e.g., *nei51 yi35 Mei214guo35 ren35*: that (was) an American). In the data of over 5 hours recorded conversations, at least three and a half hours’ conversations came from these two people. The fact indicates that the phono-syntactic conspiracy has been a recent change among younger speakers of Beijing dialect. Contrary to these two speakers, the other speakers (aging from mid 40 and younger) all used the phonologically reduced form in their speech. In addition, there seems to be a pragmatic condition that speakers follow when using the reduced form. The following two examples may illustrate the choice of the two reduced forms of *yi35ge+Noun*.

- (9) B: *Nei51huir214 you21 yi35 ge51 (0.5) you21 yi35ə rer35 a*
 that-time there-be one-classifier there-be a person Int.
 At that time there was a, there was this guy. (Beijing 1987)

Example (9) illustrates steps 1 and 3 in the proposed conspiracy. If pronounced in isolation, the noun phrase “a person” should be “*Yi35 ge51 ren35*” in Mandarin. In this example, the speaker first produced *yi35ge51* with stress on both syllables. After a short pause, the speaker said, “there was this guy.” Such practice is considered ‘repair’ in natural speech. In spontaneous natural conversations, speakers often ‘repair’ their utterance by repeating or restructuring the previous utterance. This is often done after the part being repaired is produced, followed by a short pause. There are different reasons for a repair to happen (for a detailed discussion of repair, see Tao 1995; Tao et al. 1999). In this example, it seems the speaker is searching for the right description to introduce the person. Once the description is determined, the repairing utterance is produced in a different manner. The noun phrase is fused phonologically and the classifier is reduced to a shwa /ə/. The referent ‘this guy’ is highly referential in that it refers to a specific person that the speaker is going to talk about.

Figure 1 illustrates a computer analysis of this utterance with a spectrogram documenting the phonemes and pitch registration of this expression. The spectrogram is produced by the Computerized Speech Lab program (CSL, by Kay Elements Corp). We can see from the spectrogram that the first noun phrase ‘*yi35ge51*’ is produced with their full tones, and in the repairing part, the whole noun phrase turns into a phonologically reduced chunk after the pause.

You21 yi35ge51, you21 yi35θrer35: there was a, there was this guy

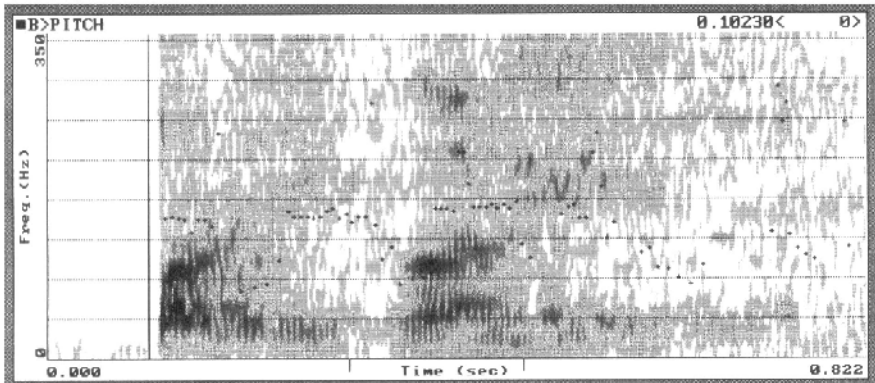


you21 yi35 ge51

you21 yi35 θ rer35

Figure 1.

Yi35 zhuan55li51: a patent



yi35

zhuan55

li51

Figure 2.

The next example illustrates the end product of the conspiracy in step 4, which eliminates the classifier *ge51* entirely.

(10) a. E: *Wo21 (0.3) wo214m bao51 le yi35 zhuan55li51.*

w- we apply-Asp one patent

E: W(e), we applied for a patent.

(Beijing 1987)

- b. T: *Chi55 yi35 taor35 ba.*
 Eat one peach Int.

T: Have a peach (pointing to a plate of peaches). (Beijing 1997)

In example (10), the noun phrases do not code a trace of a classifier. The word *yi35* (one) has retained the high-rising tone before a high-level tone (10a) and a high-rising tone (10b) irrespective of the tone sandhi rules. The high-rising tone in *yi35* is obligatory to form the ‘bare’ NP without the classifier. The noun ‘patent’ in example (10a) codes a highly referential object that is first introduced in the conversation, and the word ‘peach’ in (10b) refers to any one of the fruit on a plate in front of the speaker and hearer.

Figure 2 is the spectrogram of the example (10a). One can see from the spectrogram that there is no vowel between *yi35* and *zhuan55li51* (patent) in the noun phrase. The pitch contour indicates that *yi35* carries a rising tone.

Both examples (9) and (10) demonstrate the synchronic variations of the phrase *yi35ge51* in spoken Beijing Mandarin. They also illustrate that the objects being referred to are referential in nature.

At this point, it is too early to tell if the choice of the phonologically reduced form (step 4 of the conspiracy) is grammatically conditioned, but it is likely that the form is used to introduce or to denote objects that are referential in nature. There is an age-related factor as well, and the phenomenon is taking place among speakers younger than 70 years in Beijing.

5.2 Grammaticalization

In naturally-occurring connected speech, the word *yi35* with the frozen tone assumes some additional syntactic functions that can be considered grammaticalization in Beijing Mandarin Chinese. These functions of *yi35* are summarized in (11).

(11) New functions of *yi35*

- a. To form generalized ‘bare’ NPs without the classifier, or even without the noun
- b. To bring a new syntactic tone into the language

The first function in (11a) specifies that *yi35* now has assumed a more general role: It can go with nouns whose default classifiers may or may not be the general classifier ‘*ge51*’ to form noun phrases without the classifiers. In addition, the word *yi35* may be used before a nominal expression without an overt noun. The functions are illustrated in examples (10) and (12) with data from the conversations. Example (12) illustrates that *yi35* can now form a ‘bare’ NP irrespective of the default classifier that the noun is paired with.

(12) Generalization cross classifiers

- a. E: *Wo*₃₅ *gao*₂₁₄*le* *yi*₃₅ *ma*₃₅*zui*₅₁ *qiang*₅₅.
 1sg design:Asp one anesthesia gun
 E: I designed an anesthesia gun (for my graduation project).
 (Beijing 1987)
- b. E: ... *Ran*₃₅*'ou* *jiu*₅, *gao*₂₁₄*le* *yi*₅₁ *ba*₂₁₄ *qiang*₅₅
 Afterward then design:Asp one Classifier gun
 E: Then I designed a gun. (Beijing 1987)

The two utterances in (12) are both produced by the same speaker. The noun referents in the two expressions are both *qiang*₅₅ (gun), whose default classifier is *ba*₂₁₄, not the general classifier *ge*₅₁. In example (12a), *yi*₃₅ with the frozen tone can precede the word *qiang*₅₅ (gun) to form a 'bare' NP; but in (12b), when the default classifier is used with a low dipping tone, the tone in *yi*₅₅ changes to *yi*₅₁ following the tone sandhi rule.

Next are instances of the use of *yi*₃₅ with nouns and other nominal expressions from the data.

(13) Elements that may follow *yi*₃₅ with the frozen tone:

Noun	<u><i>yi</i></u> ₃₅ <i>pian</i> ₃₅ <i>yi</i> <i>shang</i> ₅₅ <i>dian</i> ₅₁	an inexpensive/discount store
	<u><i>yi</i></u> ₃₅ <i>sei</i> ₅₅ <i>pi</i> ₅₁ <i>yu</i> ₅₅	a CPU (computer)
Nominal	<u><i>yi</i></u> ₃₅ <i>bai</i> ₃₅ <i>de</i>	a white (object)
	<u><i>yi</i></u> ₃₅ <i>nei</i> ₅₁ <i>ge</i>	one/a that (some specific object)

Example (13) presents a list of nouns and nominals that may follow *yi*₃₅. The most interesting cases are instances of elliptical nominal expressions in this example. The noun phrases *yi*₃₅ *bai*₃₅*de* (a white (object)) and *yi*₃₅ *nei*₅₁*ge* (one of that (specific object)) both have their nouns dropped, yet the hearers can track the referents of these expressions with the right context. As we can see, *yi*₃₅ may be used before a nominal expression, not just before an overt noun.

The second new function proposed in (11b) specifies that the frozen tone in the word *yi*₃₅ functions as an indicator of the part of speech of its following word; thus functioning as a syntactic tone. Let us look at some examples where *yi*₃₅ is the sole indicator contrasting a 'bare' NP and a classifier.

(14) Lexical tone versus syntactic tone

<u><i>yi</i></u> ₃₅ <i>che</i> ₅₅ :	a vehicle (car/taxi)	<u><i>yi</i></u> ₅₁ <i>che</i> ₅₅ :	a car-load of ...
<u><i>yi</i></u> ₃₅ <i>chuan</i> ₃₅ :	a boat	<u><i>yi</i></u> ₅₁ <i>chuan</i> ₃₅ :	a boat-load of ...
<u><i>yi</i></u> ₃₅ <i>her</i> ₃₅ :	a box	<u><i>yi</i></u> ₅₁ <i>her</i> ₃₅ :	a box of ...
<u><i>yi</i></u> ₃₅ <i>qiang</i> ₅₅ :	a gun/rifle	<u><i>yi</i></u> ₅₁ <i>qiang</i> ₅₅ :	one gunshot

Some Chinese words can function as either a noun or a classifier to indicate quantity (as a measure word). The list in example (14) indicates that when *yi55* takes the frozen tone, it signals that the following word is a noun and the expression is a 'bare' NP. Yet when *yi55* changes its tone according to tone sandhi rules, then the word following it is a classifier. Recall that in example (3), the little girl makes a repair because only the high-rising frozen tone can indicate the intended meaning of an NP. The example demonstrates native speaker's mental representation of such a contrast.

With this new function of the frozen tone, *yi35* marks the beginning of a modification in the function of Mandarin tones from pure lexical to syntactic tones. Tao (2000) has conducted some experiments testing the native speakers perception of the two types of tones. The study confirms that indeed native speakers of Beijing Mandarin rely on the syntactic tone in *yi35* for word interpretation.

6. Conclusions

The examples from the data illustrate an emerging change of the Mandarin classifier system in noun phrases, an instance of grammaticalization in spoken Beijing Mandarin. The change is caused by sound erosion out of frequently used elements that are chunked together. Therefore, in this case grammaticalization is the result of speech variations from everyday conversation.

Regarding the frozen tone, it may not remain 'frozen' for long because there is another set of tone sandhi rules that are specified for the high-rising tone (see (5)). The syntactic function of the frozen tone in *yi35* cannot be documented in writing, so it would be very interesting to see how this function develops in the spoken language.

Because Chinese has a logographic writing system, phonemes are not recorded in writing, and each syllable is coded in a character. Hence, no emerging sound changes can be recorded in the logographic characters, nor can the written language document any gradual phonological or tonal changes. The written language can only document the new pattern of 'bare' NPs as a syntactic change when the classifier is dropped in its entirety. Because sound erosion and gradual phonological changes as illustrated in this study cannot be re-constructed with written records, it is highly important for contemporary linguists to document such emerging changes by examining synchronic language variations through the analysis of naturally-occurring spoken language.

Finally, although too early to tell, the numeral *yi35* (one) with its specific tone could be an emerging indefinite article of some sort in Mandarin Chinese. However, the modification in the presentation of noun referents in Mandarin still ad-

heres to the basic cognitive needs in coding a nominal referent: as a mere concept (a noun used alone), or as a concrete, specific referent, now with a numeral 'one' but without the classifier.

Notes

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1. This example comes from an experiment testing the impact of the 'frozen' tone. It is not part of the data used for this study.
2. The numeral *lia214* (two) is the only other numeral that allows the de-classifier practice. The word also has to undergo a phonological change from *liang214* (two) to *lia214*.

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Retention of abstract meaning

The essive case and grammaticalization of polyphony in Finnish

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1. Introduction

Grammatical categories typically reflect nuances of their earlier lexical meaning in certain contexts. This principle is called *retention* or *persistence*. I will show that not only lexical but also more abstract meanings, such as the meaning of a grammatical case marker, can be reflected in the usage of a (newly arisen) grammatical category.

This paper looks at the so-called quasi-construction, a verbal form in Finnish that denotes different types of polyphony. The quasi-construction has a complex morphological structure. It consists of an auxiliary *olla* ‘to be’ and a main verb that is in the first participle form. In standard Finnish the main verb also has a plural marker and a possessive suffix (for further discussion, see Salminen 1998):

olla *ole-vi-na-an*
be-INF be-PARTCP+PL-ESS-POSS
‘to pretend/imagine to be something’

In this paper I will concentrate on the essive case and the polyphonic character of the quasi-construction. I will show that the functions and meanings of the quasi-construction in present-day Finnish can be traced back to the morphological form of the construction and especially the essive case and its semantic properties.

The evolution of the quasi-construction can be regarded as an instance of grammaticalization. Grammaticalization is generally defined as a process in which lexical items become grammatical or less grammatical items become more grammatical. However, languages may present evolutionary processes that are not as easily defined in these terms, even though the resulting form is clearly grammatical.

From the viewpoint of the quasi-construction, I suggest that grammaticalization could be defined in terms of *expansion* (see Lehmann 1995: 141–143). This means an increase in the range of a morpheme or a construction type that functions as the source form for the new grammatical category. In Finnish, grammaticalization often involves derivational categories becoming more inflectional-like. This process could also be called *productivization* as it is the differences in productivity that often determine whether a morphological category is considered to be derivational (it is only partially productive) or inflectional (it is fully productive).

2. Morphological structure and persistence

From the viewpoint of modern descriptive grammars, the verbal ending *-vinAAn* of the quasi-construction is understood as an undividable whole, a morpheme cluster. Synchronically, it is thus not useful to look at the morphemes one by one. From the diachronic point of view, however, the situation is different. When the evolution of complex verbal forms such as the quasi-construction is explained, the morphological and semantic motivation of the individual building blocks, the grammatical morphemes, proves to be important. Even if the morphemes in the quasi-construction are clustered together and their meaning is petrified, they also have productive uses in both standard language and the vernacular. On the basis of this productive usage, it is possible to make a hypothesis about the evolution of complex verbal constructions.

In studies of complex verbal constructions in Finnish, it has generally been assumed that grammaticalization can be studied by comparing the productive and frozen uses of grammatical morphemes (Maamies 1990; Salmela 1996; Salminen 2000). This idea is based on the concept of *persistence* or *retention* (see Bybee, Perkins and Pagliuca 1994: 15–17; Hopper 1991), which means that some features or nuances of meaning from the source form can remain in the grammaticalized form. This is a seminal feature of the grammaticalization process, and for example Hopper defines it in the following way:

When a form undergoes grammaticalization from a lexical to a grammatical function, so long as it is grammatically viable some traces of its original lexical meaning tend to adhere to it, and details of its lexical history may be reflected in constraints on its grammatical distribution. (Hopper 1991: 22.)

Thus, according to the principle of persistence, some nuances of the original lexical meaning are retained in the grammaticalized form in certain contexts. Hopper's definition stresses the fact that grammaticalization often involves lexical items that become grammatical. But not only lexical but also more abstract meanings can persist in the grammaticalization process. For example, Herlin (1997: 81–83) has

shown that the temporal and explanatory uses of the Finnish conjunction *koska* ‘while’ have traces of the original interrogative meaning of the conjunction. As another example, Bybee et al. (1994:17) show that perfective prefixes in Slavic were originally locative notions which made the verb telic (cf. English *eat up, go through*).

Studies on Finnish complex verbal constructions have implicitly assumed that the principle of persistence or retention also applies on the morphemic level. In other words, it is assumed that the often fairly abstract meaning of grammatical morphemes, e.g. case markers, is retained in the grammaticalization process. This in turn makes it possible that the evolution of complex verbal constructions can be studied by looking at the individual morphemes.

Next, I will look at the meanings of the quasi-construction from the viewpoint of polyphony. After that I will look at the essive case and show that the present meanings and functions of the quasi-construction can be seen to originate in the morphological structure of the construction. Leaning on this observation, I will look at the evolution of the quasi-construction within the framework of grammaticalization.

3. Polyphony grammaticalized

3.1 The concept of polyphony

With quasi-construction, the situation can simultaneously be viewed from several perspectives or viewpoints. I will describe this feature as a type of polyphony, which can be manifest in several ways.

Most concretely, polyphony is linked with reporting, i.e., when the quasi-construction is used in contexts of verbal report, two or more ‘voices’ are explicitly coded. The presence of two or more ‘voices’ in the quasi-construction can also be a more abstract property. Using the quasi-construction, the speaker can, for example, describe her or his earlier intentions or plans. In this case, two or more temporally distant worlds – the world of the intentions and the actual speech act – must be taken into consideration. Similarly, a multilevel or ‘polyphonic’ situation arises when a speaker, using the quasi-construction, describes earlier customs and traditions from the viewpoint of the present-day world.

My usage of the term *polyphony* in connection with the quasi-construction originates in Bakhtin’s ideas of *others’ words*. Bakhtin makes a distinction between speakers’ own words and others’ words. Some words belong to the speaker in that they tell directly about the speaker’s intention. In addition, there are words that the speaker only shows, words that belong to others. These may be words that are known from the mass media, they may have appeared in other texts, or they may

be general ideas, opinions or slogans of a certain epoch. Our speech is in constant interaction with the speech of others; in our own speech we can always hear an echo of other speech situations. (Bakhtin 1986 [1953]:60–100.)

As a grammatical form the quasi-construction is vastly polysemous, its meanings and functions varying according to the surrounding context. Still, in all the cases, the quasi-construction simultaneously refers to two different situations or ‘worlds’, i.e., a situation alternative to the present speech situation is always echoed in the usage of the construction. What is echoed can be somebody’s word or utterance, an idea or opinion, a world view, trend or tradition, or even the speaker’s own subconscious thought that was never verbalised. Thus, despite of its etymology in music, polyphony need not be regarded as something audible or even purely linguistic. More generally, polyphonic utterances could be defined as utterances that are able to produce an echo of another situation, linguistic or non-linguistic.

3.2 The polyphonic nature of the quasi-construction

The basic uses of the quasi-construction are demonstrated in the following examples. To point to the polyphonic nature of the construction, the echoed situations are underlined in the English translations.

Due to its polyphonic nature, the speaker can distance herself or himself from her or his own utterance by using the quasi-construction. This detachment can be *temporal* as when the speaker describes her or his childhood from an adult point of view (1a) or when (s)he describes her or his earlier intentions or plans (1b).

- (1) a. *Ullakko oli silloin lapsena olevinaan*
 Attic be-3rd SG.PAST then child-ESS be-PARTCP+PL-ESS-POSS
jännittävä paikka.
 exciting place
 ‘As a child I used to think that the attic was an exciting place.’
- b. *Olin jo laittavinani sen*
 Be-1st SG-PAST already put-PARTCP+PL-ESS-POSS it-ACC
kellon aikaan.
 clock-ACC time-ILLAT
 ‘I thought I already adjusted the clock.’

The speaker can also detach herself or himself *intellectually* or *emotionally* as when (s)he reports other persons’ utterances or ideas (2) or when her or his utterance is interpreted affectively as ironic or sarcastic (3a), or unexpected and surprising (3b).

- (2) *Orimattilakin on olevinaan oikea kaupunki.*
 Orimattila be-1st.SG-PRES be-PARTCP+PL-ESS-POSS real city
 ‘They claim that Orimattila, too, is a real city.’
- (3) a. *Se on kai sitä vapaata kasvatusta olevinaan.*
 It be-1st.SG.PRES supposedly it-PART free-PART upbringing-PART be-PARTCP+PL-ESS-POSS
 ‘It is so-called “permissive upbringing”.’
- b. *Mitä? Oliko se kärpänen? Olin jotain muuta hyönteistä lyövinäni.*
 What Be-3rd.SG.PAST-INTERR it fly be-1st.SG-PAST something-PART else-PART insect-PART hit-1st.SG.PARTCP+PL-ESS-POSS
 ‘What? Was it a fly? I was going to hit/I thought I hit some other insect.’

In fact, irony and verbal report are closely related: ironic utterances echo other utterances or ideas in a similar way as verbal report echoes other speech situations. For example, the phrase *permissive upbringing* in example (3a) echoes general arguments on upbringing and education. The same applies to expressions of surprise: the speaker has some kind of expectation or assumption that turns out to be untrue or otherwise illusory.

In fiction, the quasi-construction has a special use in *free indirect style*. There it can imply the presence of an internal focalizer, i.e., a focalizer who is different from the narrator and from whose individual viewpoint the situation is regarded. This feature is also made possible by the polyphonic character of the quasi-construction.

I will illustrate the usage in free indirect style with the following example. The text extract is from a detective story. Harjunpää is a detective who is investigating the murder of an unidentified man. In the example, the crime scene is examined by Harjunpää. The text shows how his eyes follow the tape that separates the crime scene.

- (4) *Nauha oli sidottu katoksen tolppaan, vedetty lähimmän koivun luo ja*
 Tape tie-PASS.PLUPERF shelter-GEN post-ILLAT stretch-PASS.PLUPERF closest-GEN birch-GEN to and

kietäistu sen ympärille, sitä seuraavalle ja
 bind-PASS.PLUPERF it-GEN around-ALLAT it-PART next-ALLAT and
taas seuraavalle – se luikersi rinnettä alas ja
 again next-ALLAT it wind-3rd.SG.PAST slope-PART down and
katosi jonnekin rantaan. Harjunpää
 disappear-3rd.SG.PAST somewhere shore-ILLAT Harjunpää
tarttui siihen pujahtaakseen sen alitse
 grab-3rd.SG.PAST it-ILLAT slip-1st.INF.TRANSL.POSS it-GEN under
ja toiselle puolelle, muistikin
 and other-ALLAT side-ALLAT remember-3rd.SG.PAST-PARTCL
äkkiä kuinka tarkka Kandolin oli, niin komisariona
 suddenly how strict Kandolin be-3rd.SG.PAST so inspector-ESS
kuin muutoinkin. Hän hellitti ja
 like otherwise-PARTCL He let go-3rd.SG.PAST and
varvisti, oli näkevinään
 rise on tiptoe-3rd.SG.PAST be-3rd.SG.PAST see-1st.PARTCP+PL-ESS-POSS
alhaalla kaislikon reunassa Thurmanin ja
 down-ADESS rushes-GEN fringe-INESS Thurman-ACC and
mahdollisesti Jehkosen, vielä jonkun joka
 possibly Jehkonen-ACC still somebody-ACC who
oli kyykylään maassa.
 be-3rd.SG.PAST crouch-ADESS-POSS ground-INESS
 ‘The tape was tied to the post of the shelter, stretched to the closest birch
 and bound around it, and to the next one, and then next – it wound down
 the slope and disappeared somewhere on the shore. Harjunpää grabbed
 the tape to slip under it to the other side, suddenly remembering how
 strict Kandolin was, as an inspector and otherwise. He let go and rose on
 tiptoe, and down at the rushes he thought he saw Thurman and possibly
 Jehkonen, and still someone who was crouching on the ground.’

The text above shows how Harjunpää gazes from the post to a birch, from a birch to another, down the slope to the lake shore, and up until the tape disappears. The scene is revealed the way Harjunpää sees it: he does not, for example, know who the third man on the shore is and where the tape finally ends. Harjunpää is a protagonist who belongs to the narrated world, and whose knowledge therefore is limited. Unlike him, the narrator of the text would of course know all these missing facts.

All the examples (1–3) above demonstrate the dialogic nature of the quasi-construction. It is used as a reaction to another person’s utterance, idea or activity, some general idea or practice, or a vaguer expectation a speaker (or in fiction an

internal focalizer) herself or himself might have. The polyphonic nature of the construction is thus an abstract property and can be manifest in several ways. This can be seen in the English translations that use phrases like *they claim, so-called, I/he or she thought, I was going to*.

The speaker's detachment or alienation also gives rise to pragmatic implications of counter- or non-factuality (see Salminen 1998). The quasi-construction often implies that the speaker herself or himself somehow does not hold the sentence to be true. For example, in sentence (1a) the speaker does not consider the attic an especially exciting place any more, in example (1b) the clock does not work well anyway, and in (3b) the object of hitting turned out not to be another insect but a harmless fly. To be able to tie together the present uses of the quasi-construction and its morphological structure, I will next look at the essive case and its uses in present-day Finnish.

4. The essive case and its uses in present-day Finnish

The essive in Finnish, marked by an ending *-nA*, is an old locative case that has lost most of its spatial meaning. In present-day Finnish, the essive typically denotes a state or position that is temporary or inclined to change. It is used, for example, when talking about occupations or jobs that are not permanent, as opposed to the nominative that implies a more permanent state or quality:

- (5) a. *Hän on pappi.*
 (S)he be-3rd.SG.PRES minister
 '(S)he is a minister [by profession, a permanent state or quality]'.
 b. *Hän on pappina Helsingissä.*
 (S)he be-3rd.SG.PRES minister-ESS Helsinki-INESS
 '(S)he works as a minister in Helsinki; (S)he holds the office of a minister in Helsinki [at the moment; it may not be permanent]'.

The essive can also implicate the presence of several alternative states:

- (6) *Ostin helmen aitona.*
 Buy-1st.SG.PAST pearl genuine-ESS
 'I bought the pearl as genuine = I bought the pearl thinking it was genuine [but later found out that it was not]'.

The genuineness of the pearl in itself cannot change. Therefore, the sentence (6) must be interpreted to mean that the genuineness was only imagined at the moment of buying, and illusions, of course, can change (Vänttinen 1992). It is also possible to think that the essive itself creates two individual and differing 'worlds',

one in which the pearl is genuine – the moment of buying – and one in which it is not – the present moment or the moment of speech.

Furthermore, the essive is often used along with the verb *nähdä* ‘see or regard as something’:

- (7) a. *Me emme näe tauteja vain Jumalan*
 We not-1st.PL see disease-PL-PART only God-GEN
rangaistuksina.
 punishment-PL-ESS
 ‘We do not see/regard diseases only as God’s punishments’.
- b. *Kairamo ei näe Euroopan yhdentymistä*
 Kairamo not-3rd.SG see Europe-GEN integration-PART
yksinomaan uhkatekijänä vaan myös positiivisena
 merely threat-ESS but also positive-ESS
mahdollisuutena.
 opportunity-ESS
 ‘Kairamo does not see/regard European integration as a mere threat but also as a positive opportunity’.
- c. *Kartik Singh näkee itsensä paitsi*
 Kartik Singh see-3rd.SG.PRES himself not only
rikshanvetäjänä, myös ylpeänä miehenä, perheenisänä
 rickshaw driver-ESS also proud-ESS man-ESS family man-ESS
ja hyvänä aviomiehenä.
 and good-ESS husband-ESS
 ‘Kartik Singh sees/regards himself not only as a rickshaw driver but also as a proud man, a family man, and a good husband’.

In sentences like (7a–c), the context often has explicit markers such as adverbs *vain*, *yksinomaan*, *pelkästään* ‘only, merely’ that imply the presence of several alternative states. One of the states is then taken as the starting point or the object of observation. For example, the European Union is not only a threat but also a positive prospect. The possibility to create several alternative states also applies to essives that are used as appositions: in the next example, the phrases in the essive are the different roles that Arvo Ylppö can take when looked at from different viewpoints.

- (8) *Monien lääkäripolvien opettajana, kampanjoiden*
 Many-GEN generation of doctors-GEN teacher-ESS campaign-PL-GEN
käynnistäjänä ja äitiys- ja neuvolajärjestelmän
 initiator-ESS and system of maternity and child welfare clinic-GEN

kehittäjänä Arvo Ylpöstä on tullut yksi vuosisadan
 creator-ESS Arvo Ylppö-ELAT become-3rd.SG-PERF one century-GEN
keskeisimmistä vaikuttajista.
 central-PL-ELAT influential person-PL-ELAT
 'As a teacher for many generations of doctors, as an initiator of several
 campaigns, and as a creator of maternity and child welfare clinics, Arvo
 Ylppö has become one of the most influential persons of the century.'

In the next section, I will look at how the *essive* functions as an essential factor in the grammaticalization of the quasi-construction. Before that, however, I will point to some problems that the definitions of grammaticalization can create when grammatical changes are studied in a morphologically rich language like Finnish.

5. The grammaticalization of the quasi-construction

5.1 What is or is not grammaticalization?

The evolution of the quasi-construction can be studied within the framework of grammaticalization. However, the stages through which the construction evolved fundamentally differ from what has most typically been considered as instances of grammaticalization.

Most typically, grammaticalization is understood to involve a lexical item that becomes grammatical or a less grammatical item that becomes more grammatical (for definitions of the term, see e.g. Bybee et al. 1994:4–5; Heine et al. 1991:2; Hopper and Traugott 1994:2; Lehmann 1995:11). For example, when an independent verb with a full paradigm grammaticalizes into an auxiliary verb, its own lexical meaning tends to be bleached, which results in its usage and functions becoming narrower. At the same time, the verb comes to lose its verbal characteristics, e.g. its ability to conjugate in person, time and number. This process, called *de-categorialization*, has often been regarded as a design feature of grammaticalization (see e.g. Hopper 1991:30–31; Hopper and Traugott 1993:103–105).

In view of *de-categorialization*, the quasi-construction has evolved in almost the opposite direction. As shown in a previous paper (Salminen 1998), the quasi-construction has formerly been an adverbial construction that consisted of a copula and its adverbial complement. This construction was unproductive, i.e., it could only be formed from a few lexical stems. During the grammaticalization process, the adverbial construction went through morphological and syntactical reanalysis. Finally, the morphological form of the former adverbial became productive, and the whole construction shifted from the category of adverbs to the category of

verbs. The former copula came to be understood as the auxiliary and the adverbial complement as the main verb:

copula	+	adverbial	→
[<i>ei ole</i>]		[<i>kuulev(a)-inaan</i>]	
be-3.SG.PRES.NEG		hear+adverbial marker	
“(s)he is (temporarily) not in the state of hearing”			
auxiliary	+	main verb	
[<i>ei ole</i>]		<i>kuulevinaan</i>]	
be-3.SG.PRES.NEG		hear+verbal ending	
“(s)he pretends not to hear”			

As shown above, the construction *ei ole kuulevinaan* was first analyzed to consist of a copula and its adverbial complement. Morphologically the adverbial complement consisted of the first participle form (*kuuleva-*) and an adverbial marker (*-inaan*).¹ The adverbial marker itself consists of the plural marker (*-i*), the essive case marker (*-na*) and a possessive suffix (*-an*). From these the possessive suffix and the plural marker are typical adverb markers in Finnish. After morpho-syntactic reanalysis, the form *kuulevinaan* was analyzed to consist of a verbal stem (*kuule-*) and a verbal ending (*-vinaan*). The shift from the adverbial category to the verbal category is demonstrated by the verbal features that the new form received, most importantly its ability to agree in person and number with the subject person.² Thus, the evolution of the quasi-construction could be defined as “*categorialization*,” rather than de-categorialization. (For more detailed morphological analysis, see Salminen 1998: 366–369.)

While the source forms of the quasi-construction were adverbial constructions that used to have only a few individual lexemes as their adverbial complement, the target form – the quasi-construction in present-day Finnish – is a fully productive verb form, i.e., it can be formed from any verb. Therefore, what seems to happen in the evolution of the quasi-construction is that a piece of grammar changes into another piece of grammar.

It is not a new idea that a whole construction, and not only a single lexical item, undergoes grammaticalization. As presented by Bybee, Perkins and Pagliuca (1994: 11), constructions involving movement verbs, for example, may often function as sources for the future, past or progressive. The role of constructions in grammaticalization is also discussed by Bisang (1998) who notes that constructions may either operate as a specific framework or context in which some of its elements are grammaticalized, or constructions as such may be subject to grammaticalization. The evolution of the quasi-construction can be seen as an example of the latter case. As shown above, the source construction went through morpho-

syntactic reanalysis. At the same time, the meaning of the construction became more abstract, grammatical-like.

The quasi-construction and other complex constructions of the same type are thus examples of verbal categories that have as their origin a certain construction type or formula that becomes productive. Apart from them, Finnish has a whole set of simple inflectional forms that have a less productive, derivational origin. Lehtinen (1997:91–92) has listed these to include such basic categories as the conditional mood, all the participles, the present tense, the third person forms of verbs and the passive. In fact, as Lehtinen (*ibid.*) notes, in Finnish it is rather rare to have inflectional morphemes stemming from individual lexemes through fusion. Rather, the path from derivational to inflectional seems to be much more common, and less productive derivational elements seem to form a rich spring from whence more productive inflectional categories may arise. This phenomenon, of course, is not restricted to Finnish but has been reported in other languages, too (see e.g. Kuryłowicz 1965:69; for further references, see Lehtinen 1997:92).

The focal difference between derivational forms and inflectional forms is often considered to lie in productivity. The derivational endings typically have lexical restrictions on their applicability while inflectional forms are fully productive (see e.g. Bybee 1985:84). Thus, in addition to the evolution of complex verbal forms, grammaticalization in Finnish on the whole often seems to involve items becoming more productive. However, these processes cannot be defined in terms of the proposed cline from lexical to grammatical. Derivational endings, however, can be regarded as less grammatical than inflectional forms. They are less productive and more restricted in their range of use. Furthermore, they typically have a more clearly definable meaning whereas inflectional endings, being much wider in their application, have a rather abstract meaning. If productivization or expansion, i.e. the increase in the range of a morpheme or a construction type, is regarded as a general feature of grammaticalization, both those grammatical categories that have a derivational source and those that have as their source a whole construction (as complex verbal constructions) can be subsumed under grammaticalization.

As in the evolution of the quasi-construction, grammaticalization typically involves reanalysis and analogy. Furthermore, during the grammaticalization process, the form often goes through phonological changes, especially phonological reduction. While grammaticalization processes can usually be broken down into more general types of linguistic changes, it is nevertheless practical and illuminating to use the term grammaticalization when these changes clearly result in the rise of a new grammatical category, whatever its source form.

5.2 The essive case and the grammaticalization of the quasi-construction

Historically, it is possible that the meanings and uses of the essive, as introduced in Section 3 above – temporality or contingency, inclination to change and implications of several alternative states – may have motivated the evolution of the quasi-construction.

The grammaticalization has started in certain lexical contexts, especially negative mental verbs (see Salminen 1998). What is important in these verbs is that they implicate permanent states or states that are outside human control, e.g. *kuulla* ‘to hear’ or *tietää* ‘to know/care’. In the quasi-construction, the temporality implicated by the essive and the permanence implicated by the first participle of the mental verb came into conflict with each other. This is most clearly shown in the following examples in Karelian, a language closely related to Finnish. These examples have an adjective-like first participle and the essive:

- (9) a. *ei ole kuulovaisenah* (Karelian, Vuokkiniemi dialect)
not-3rd.SG be hearing one-ESS
lit. ‘is not as a hearing one’ > ‘pretends not to hear’
- b. *ei ole tietäväisenäh* (Karelian, Kivijärvi dialect)
not-3rd.SG be knowing one-ESS
lit. ‘is not as a noticing/recognising one’ > ‘pretends not to notice/recognise’

Normally, hearing, knowing and recognising somebody are automatic and expected because they are states that are outside human control. For example, if all the preconditions for hearing are fulfilled (e.g. the addressee is not deaf and the voice/sound is loud enough), the addressee usually hears something. If the addressee does not hear, the situation is unexpected, and the sentence obtains pragmatic implications, e.g. the addressee hears but pretends not to hear.

As stressed above, the essive case is often used to denote states that are temporary, contingent, not controlled, and not innate. Therefore, in examples like (9a–b) above, the mental verb and the essive case are incompatible: if all the prerequisites for hearing are fulfilled, it is not possible for the addressee to hear only temporarily. That is, the addressee can not choose when to hear and when not, as the essive together with the negative form of the mental verb would suggest. This incompatibility again gives rise to implications of performance or pretence. It is through implications of this kind that the grammaticalization into a full verbal category probably started in the first place.

6. Conclusions

This paper has illustrated how the meanings and uses of the quasi-construction can partly be traced back to the semantic properties of the essive case. These properties include temporality and inclination to change, which in turn carry an implication of several alternative states. The grammaticalization process started in specific lexical contexts where the essive came into conflict with both the first participle and the semantics of the main verb. This incompatibility carried pragmatic implications, e.g. implications of counterfactuality and pretence.

In addition to the essive and the first participle, the quasi-construction also has a plural marker and a possessive suffix. These are optional elements and are lacking in some dialects. The plural marker and the possessive suffix also reveal something about the grammaticalization process. They refer to the adverbial stage that preceded grammaticalization. Thus, by leaning on the concept of persistence or retention the grammaticalization process of synchronically opaque complex forms can be explained.

Furthermore, the question of defining what is or is not grammaticalization was discussed. It was argued that from the viewpoint of Finnish, the most typical definitions of grammaticalization are too narrow. In Finnish, grammaticalization often involves increase in the range of a morpheme or a construction type. It is often noted that some type of expansion generally accompanies grammaticalization. Therefore, all the cases that result in the rise of a new grammatical category and involve changes in the productivity of the source form, irrespective of its grammatical status, could be subsumed under grammaticalization.

Abbreviations

ACC	accusative
ALLAT	allative
ELAT	elative
ESS	essive
GEN	genitive
ILLAT	illative
INESS	inessive
INF	infinitive
INTERR	interrogative
NOM	nominative
PART	partitive
PARTCP	participle
PARTCL	pragmatic particle

PASS	passive
PAST	past tense
PERF	perfect tense
PL	plural
PLUPERF	pluperfect tense
POSS	possessive
PRES	present tense
SG	singular
TRANSL	translative

Notes

1. The quasi-construction in Finnish belongs to a small group of verbal forms that consist of an auxiliary and a main verb that itself has a morphologically complex structure. These forms all seem to have as their source form a construction that consists of a copula and its adverbial complement. What is special about this adverbial is that it has an infinite verb (participle or infinitive) as its stem.
2. At the adverbial stage, the form is most often in the third person, which is a common property in Finnish adverbs.

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The grammaticalization of honorific particles in Korean

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1. Introduction¹

Studies of grammaticalization phenomena have revealed that grammatical morphemes such as adpositions or case inflections emerge from lexical sources (cf. Heine et al. 1991; Hopper and Traugott 1993). While numerous examples across unrelated languages provide supporting evidence for such a claim, there has been very little research on the grammaticalization process of honorifics. This is partly due to the limited availability of data; only a few languages, among them Japanese and Korean, have a morphological device (e.g., case particles and speech levels) for marking honorifics. Honorifics, however, provide an excellent domain to explore the dynamic forces of the grammaticalization process since they reflect not only morpho-syntactic and semantic motivation, but also discourse-sensitive variables for language changes. This paper attempts to explore various factors for the grammaticalization of honorific case particles in Korean from both diachronic and synchronic perspectives.

Korean exhibits honorifics that are highly systematic, in that sentences can hardly be uttered without the speaker's approximate knowledge of his social relationship with his addressee and/or referents in any of the following categories: age, social status, kinship, and/or ingroupness and outgroupness (H. Sohn 1999). This paper deals with the evolution and development of one type of honorific device in Korean – dative and subject case particles.

In modern Korean, there are two honorific case particles, *-kkey* (dative) and *-kkeyse* (subject), as illustrated in example (1).

- (1) a. *halapeci-kkeyse na-eykey chayk-ul cwu-si-ess-ta.*
grandfather-HON SUB I-DAT book-ACC give-SH -PAST-DEC
'My grandfather gave me a book.'

- b. *nay-ka halapeci-kkey chayk-ul tuli-ess-ta.*
 I-NOM grandfather-HON DAT book-ACC give-PAST-DEC
 'I gave a book to my grandfather.'

Particles in Korean, as in other SOV languages, are always postpositional. Note in (1a) that the honorific subject particle *-kkeyse* is used to indicate deference toward the subject *halapeci* 'grandfather'. The occurrence of the honorific subject marker is in agreement with the honorific verbal suffix *-si* as shown in the predicate, *cwu* ('to give')-*si* (honorific subject suffix)-*ess* (past tense)-*ta*, which means '(a senior) gave to a junior'. The honorific verbal suffix *-si* indicates that the subject of a sentence is an adult equal or senior. The use of the honorific subject case particle in (1a) stands in contrast with the plain nominative *-ka* in (1b).² Similarly, the honorific dative marker *-kkey* is used in (1b) to pay respect to the honored recipient 'grandfather'. In contrast, the plain dative *-eykey* is used in (1a) to refer either to a junior or any neutral individual. Plain and honorific forms exist not only for dative and subject particles, but also for a number of commonly used verbs such as 'eat', 'sleep', and 'stay'. For example, two forms of the 'give' verb are used in (1a) and (1b) – the plain *cwu-ta* 'give to a junior' and the honorific counterpart *tuli-ta* 'give to a senior'. The honorific verb *tuli-ta* is in agreement with the honorific dative *-kkey* in (1b).

In spite of the widespread usage of the two honorific particles *-kkey* and *-kkeyse* in modern Korean and the semantic contrast between the two, no explicit research has been conducted to date on the morpho-syntactic correlation of the two forms from a grammaticalization perspective. The goal of this paper is two-fold: first, to show how discourse-sensitive grammatical categories such as honorific case particles emerge in historical texts and second, to explore the morpho-syntactic correlation of the honorific dative (*-kkey*) and subject particle (*-kkeyse*) in Korean. This paper attempts to demonstrate that the honorific subject *-kkeyse* emerges from two different sources – an existential verb and a locational noun. The latter also serves as the source of honorific dative. By citing evidence for syntactic reanalysis and semantic motivation, I will illustrate how the two distinct trajectories converge into one target form.

2. The emergence of honorific subject particle *-kkeyse*

There are two possible sources of the honorific subject particle in Korean – the honorific verb *kyesi-ta/kyeyesi-ta* 'to be; to exist' and a genitive construction, '*-s* (genitive) + *kuey* 'there' + *-se* 'to exist'. I will first discuss the verbal origin and point out problems with this analysis.

2.1 Verbal origin (honorific verb *kyesi-e* ‘to stay’ > *-kkeyse* ‘honorific subject marker’)

The claim that the honorific subject particle in modern Korean derives from the honorific verb *kyesi-ta* ‘to exist; to stay’ has been made by a number of linguists including Rhee (1996) and Yi (1988). For instance, Rhee argues that the subject particle *-kkeyse* has derived from the infinitival form (*keys-i-e*) of the honorific verb *kyesi-ta*. Consider example (2) and (3) below.

- (2) [adapted from Rhee (1996: 150)]

[sekposangcel 1449]

ku pskuy hAn pwutye-i kyesi-a-tAy ilhwun-i Pisa-i-lesini
 that time one Buddha-NOM exist-INF-CT name-NOM Pisa-be-and
 ‘At that time there was a Buddha and his name was Pisa, and ...’

- (3) [adapted from Yi (1988: 49)]

ku pskuy seycon-I tolichen-ey kyesy-a [welinsekpo in 1459]
 that time Buddha-NOM *tolichen-at* stay-INF

han salam wihAya nelpi selpephA-sya kAcang yuik-khey hA-si-ko
 one person for widely preach most benefit-CAUSE-SH-and
 ‘At that time, Buddha was at *Tolichen* and preached widely to the people ...’

Note in the above example that the honorific verb *kyesya* signals the existence of the honored subject, Buddha. It is important to note here that unlike modern Korean the honored subjects such as Buddha are not marked with the honorific subject particle, but with the plain form nominative *-i* instead in Middle Korean texts, as illustrated in (2) and (3). The absence of the honorific subject particle indicates that the honorific subject particle *-kkeyse* which is commonly used in Modern Korean was not yet grammaticalized in the 15th C.

Rhee (1996) argues that the honorific verb *kyesi-e* has grammaticalized into the subject particle due to a topic presenting function of the source verb *keys-i-ta* ‘to be; to exist’. According to Rhee, existence verbs in Korean such as *isi-e/si-e* ‘be at’ and *kyesi-e* ‘stay-and’ function as topic introducers. For instance, consider Middle Korean example (4) adapted from Rhee (1996: 150).

- (4) *Tonglay kyeysi-e nilu-si-m-un* [chephaysine 1676]

Tonglay exist-INF speak-SH-NML-TOP

- a. ‘Tonglay existed and he spoke that ...’
 b. ‘What Tonglay spoke was ...’

Sentence (4) is ambiguous between a verbal interpretation of [*Tonglay* existed and he spoke that ...] and a nominal function of [what *Tonglay* spoke was ...]. The am-

biguity marked with the *kyesi-e* form suggests that the existential verb *kyesi-e* loses its original syntactic status as a verb and acquires a new grammatical function as a subject case particle. In the process, the morpho-syntactic boundary between the verb stem *kyesi-* and the infinitival suffix *-e/a* disappears. In the following examples (5) and (6), the *kyesy-* form is already grammaticalized into the subject case particle.

- (5) [chengkwuyengen 1728]
nim-kyesy- *poo-si-n* *hwuey* *nokaci-n-tul* *eil*
 lover-HON SUB see-SH-MOD after melt-MOD-even if how about
 ‘What’s wrong with melting under my lover’s gaze?’
- (6) *Tonglay-kyesy-* *to* *nyemnyehA-si-ko* [chephaysine 1676]
Tonglay-HON SUB -also worry-SH-and
 ‘*Tonglay* was also worried and ...’

Note in the above examples that the *kyesy-* form is used to indicate deference toward the subject of a sentence, *nim* ‘lover’ and *Tonglay* (a person’s name). The grammatical function of the honorific subject particle marked with the *kyesy-* form is supported by the particle’s co-occurrence relationship with the honorific subject suffix *-si* in the predicate. As discussed earlier, the verbal suffix *-si* is required to establish the subject of a sentence as an adult equal or senior.

2.1.1 Problems with the verbal origin theory

Even though a strong semantic/pragmatic correlation between the source and the target forms seems to support the analysis of the honorific subject in terms of the erstwhile honorific verb, the view also poses some problems. First, this analysis does not explain why the initial consonant /k/ of the source verb *kyesi-ta* ‘to stay’ has changed to its tensed counterpart /kk/. The phonological change from a plain to tensed consonant is highly unnatural, particularly in view of the fact that the source verb *kyesita* still remains with the plain consonant in modern Korean. More seriously, however, the claim that *-kkeyse* derives from the existential verb *kyesi-ta* does not explain the apparent morpho-syntactic correlation of the two honorific particles, subject particle *-kkeyse* and dative *-kkey*. Historical documents indicate that the honorific dative evolves from a source completely different from that of the honorific subject particle. Specifically, previous research on Middle Korean data has shown that the dative *-kkey* derives from the locational noun *kuey* ‘there’, preceded by an honored person in the genitive form (cf. Huh 1975:298; Lee 1979:151; You 1964. This point will be elaborated in the next section.). Why, then, do the two honorific particles which have such a clear morphological and semantic correlation evolve from completely different lexical sources – an existential verb and a locational noun? In the following sections, I will argue that the two honorific par-

ticles, in fact, originate from the same source, i.e., the locational noun *kuey*. While the dative *-kkey* derives directly from the locational noun *kuey* through syntactic reanalysis, the subject particle *-kkeyse* emerges via multiple paths of grammaticalization. More specifically, I will show that the *-kkeyse* form derives originally from the coalescence of the bi-morpheme, *-kkey* and *-se*, and later converges into the infinitival form of the honorific verb *kyesi-e*. The formal and functional similarity of the two sources (i.e., *-kkey-se* and *kyesi-e*) play a relevant role in this convergence.

2.1.2 The emergence of honorific dative marker

Supporting evidence for the common origin of the two honorific particles (*-kkey* and *-kkeyse*) is observed in the development of the locational noun *kuey* ‘there’. Middle Korean data illustrate that the locational noun *kuey* ‘there’ was used as a distal demonstrative pronoun as in (7) and (8) below.³

- (7) [welinsekpo 1459]
stah-i hwueha-ko tyohAn koc-i ha-kenul
 land-NOM wide open-and good flower-NOM be plenty-CT
kuey-sye sa-ni
 there-LOC live-and
 ‘Since the land was wide open and there were a lot of nice flowers, they lived there.’

- (8) [welinsekpo 1459]
selu tAtho-a ssaho-myen nalah-i nAm-ey kuey
 each other argue-and fight-if country-NOM other-GEN there
ka-li-ta
 go-PROS-DEC
 a. ‘If you fight each other, the country will be given to other’s place.’
 b. ‘If you fight each other, the country will be given to others.’

Note in the above example that the locational noun *kuey* in (7) refers to a definite referential place ‘there’. The interpretation of *kuey* in (8), however, is ambiguous between the physical location ‘(other’s) place’ and a more abstract meaning of dative. The development of the locational noun into the dative is exemplified in discourse contexts where the locational noun *kuey* occurs with a human referent as shown in (8). Note further that nouns marked by *kuey* show a semantic expansion from allative to dative, as illustrated in (9) and (10) below.

- (9) *wang-s kuey ka-li-la* [welinchenkangcikok 1449]
 king-GEN there go-PROS-DEC
 ‘He will go to the King.’

- (10) *seycon-s kuey sAlpa* [welinchenkangcikok 1449]
 Buddha-DAT ask-REF HON-and
 'He asked Buddha and ...'

When preceded by the genitive *-s* which was typically suffixed to an honored referent in Middle Korean, the *kuey* form triggers an interpretation of the honorific allative or dative, as in (9) and (10). As discussed in Heine et al. (1991: 150F), grammaticalization from allative to dative is well-known crosslinguistically. In (10) the sequence of the genitive (*-s*) and the locational noun *kuey* 'there' gives rise to a dative case relation. Interestingly, the Middle Korean text exhibits a variation for the writing of the genitive *-s*. For example, in (9) and (10) above, the genitive *-s* is interposed between the preceding referent (e.g., 'king' and 'mother') and the locational noun *kuey*, while the genitive *-s* is prefixed to the following locational noun in (11) below.

- (11) *seycon-skuy chenghA-cAo-tey* [welinsekpo 1459]
 Buddha-DAT ask-DEF-and
 'He asked Buddha and ...'

The change in the writing style indicates that the genitive *-s* was undergoing a morphological shift from a suffix to a prefix, which then brought about the coalescence process of *-s # kuey > -skuy*.⁴ As the genitive *-s* became reanalyzed as an initial consonant of the originally locational noun *kuey*, it triggered a tensification of the consonant /k/ into /kk/, a common phonological process in modern Korean. The grammaticalization process of the honorific dative is shown below in (12).

- (12) Development of the honorific dative *-kkey*

Stage I: The honorific dative was expressed by the locational noun *kuey* 'there', which was preceded by an honored person in the genitive. The genitive *-s* was suffixed to an honored person. E.g.

wang-s kuey
 king-GEN there 'to the king'

Stage II: The genitive *-s* came to be reanalyzed as an initial consonant of the locational noun *kuey*. E.g.

wang-skuey
 king there 'to the king'

Stage III: The original lexical meaning of *kuey* was bleached and a new grammatical morpheme *-kkey* was formed. E.g.

wang-s # kuey > wang-skuey > wang-kkey 'to the king'

The emergence of *-kkey* out of the erstwhile locational noun is viewed as a case of metonymy, whereby the place associated with a respected person is exploited to encode an honorific dative relation. The development of *-kkey* from a spacial origin is

also consistent with the evolution of other particles in Korean in that postpositional particles quite commonly derive from locational nouns in Korean (e.g., *-eykey* ‘dative (plain form)’, *-hanthey* ‘dative (colloquial style)’, *-kkaci* ‘all the way up to’, etc.). For instance, the plain dative *-eykey* is a historical reflection of the genitive *-uy* plus the locational noun *kuey* ‘there’ as illustrated in (13) and (14).⁵

(13) [welinsekpo 1459]

kyecip-uy-kuey puthu-n telepun isul-i epsu-mye
 women-GEN-there stick-MOD dirty dew-NOM not exist-and
 ‘There was no dirty dew attached to women.’

(14) [twusienhaychokan 1481]

yong tha-n salam-uy-key kaskaptota.
 dragon ride-MOD person-GEN-there be close
 ‘It is close to the person who is riding a dragon.’

Middle Korean has two types of genitive forms, the honorific *-s* and the plain form *-uy*. Both have developed into dative forms when followed by the locational noun *kuey*: the honorific *-kkey* form and the plain *-eykey* form. The developments of the two dative forms exhibit the following parallel paths:

(15) Development of plain and honorific dative markers

- a. Plain dative: *-uy* (genitive) + *kuey* ‘there’ > *-eykey* (dative)
- b. Honorific dative: *-s* (genitive) + *kuey* ‘there’ > *-kkey* (dative)

The two dative forms have in common that both evolve from the erstwhile locational noun preceded by the genitive suffix. The emergence of dative from the spatial entity illustrates both unidirectionality and metonymy. Metonymy is a major factor behind the development of dative forms. Further, the development of dative in Korean supports the localist hypothesis (cf. Anderson 1971; Lyons 1977; Heine et al. 1991). As discussed in Heine et al. (1991: 159), because spatial concepts are more basic than many other concepts, they serve as a template for understanding temporal and other non-spatial concepts. In Korean, the definite locational noun which refers to a spatial domain pertaining to a human participant has been exploited to express a dative relation for both plain and honorific forms.

2.2 Development of *-kkeyse* (<*-skuey-sye*) as honorific subject marker

The historically attested process of grammaticalization for the dative sheds light on the analysis of the evolution of the honorific subject particle *-kkeyse*. Noteworthy here is the fact that while the honorific dative frequently appears in 15th C. texts – the earliest documents written in Korean – the honorific subject is not observed until 17th C. records. The discrepancy in the diachronic development of

the two honorific particles clearly indicates that the honorific subject developed only after the dative *-kkey* was fossilized as a grammatical morpheme out of the locational noun. The observation further enables us to analyze the *-kkeyse* form as a bi-morpheme word, *-kkey* and *-se*. In the following analysis, I will show that the *-kkeyse* form results from multiple paths of grammaticalization – an independent process of the development of *-kkey* and *-se* morpheme. The bi-morpheme analysis of the honorific subject is based on both the historical development of the locational noun *kuey*, and the semantic function of the *-se* morpheme whose core meaning signals ‘existence’.

The honorific subject particle emerges in syntactic contexts where the locational noun *kuey* is followed by the particle *-sye*. Consider the following examples (16)–(18).

- (16) *sinsa-skuy-sye* *kwuthayye malli-nAn kolo* [chephaysine 1618]
 messenger-HON SUB daringly dissuade-because
 ‘Since the messenger persuaded (them) not to do that ...’
- (17) *cungco-skuy-sye* *na-si-myen* [kalyeyenhay 1632]
 great-grandfather-HON SUB appear-SH-if
 ‘If the great-grandfather shows up ...’
- (18) *sasin-skuy-sye-to* *choychokhA-sye* [chephaysine 1618]
 messenger-HON SUB-also urge-and
 ‘The messenger also urged and ...’

Note that the honored subjects such as ‘grandfather’ and ‘messenger’ are marked with the honorific subject particle *-skuey-sye*, which can be further analyzed into ‘-s (honorific genitive) + *kuey* ‘there’ + *sye*’. The semantic function of the morpheme *-sye*, which is originally the infinitival form of the existence verb (*i*)*si-ta* ‘be at’, seems to trigger the subject function. In the next section, I will delineate the cognitive and semantic functions of the *-sye* form and role of the *-sye* form in the grammaticalization process of the honorific subject case particle.

2.3 The cognitive function of *-se/-sye*⁶

Previous research on Middle Korean indicates that the particle *-sye* has been historically derived from the infinitival form of the verb *si-/isi-ta* whose core meaning signals existence. The morpheme *-se* is suffixed to a wide range of grammatical structures in Korean, including particles *-ey-se* (locative), *-lo-se* (direction), *-eykey-se* (source), temporal conjunctive (*-myen-se*) and sequential conjunctive *-ko-se* ‘and then’ (cf. Song 1986; Yi 1988; Strauss 1997; Sohn and Strauss 1998). The affixation of the *-se* form is illustrated below.

(19) The affixation of *-se*

<i>-kkey</i> (honorific dative)	<i>-kkey-se</i> (honorific subject)
<i>-mye</i> (temporal)	<i>-myen-se</i> (temporal/concessive 'while')
<i>-eykey</i> 'to' (human)	<i>-eykey-se</i> 'from' (human)
<i>-ey</i> 'to' 'at' (inanimate)	<i>-ey-se</i> 'from' 'at' (inanimate)
<i>-lo</i> 'toward' (direction)	<i>-lo-se</i> 'as' (status)
<i>-e/-a</i> (infinitival suffix)	<i>-e-se/-a-se</i> 'and (then)'

Strauss (1997) and Sohn and Strauss (1998) point out that the predominant cognitive function of *-se* is that of a realis marker, which also has the effect of linking certain grammatical entities to each other (Sohn and Strauss 1998). For instance, consider examples (20a) and (20b) below.

(20) a. [from Sohn and Strauss (1998)]

Seoul-ey-se cip-ul sa-ss-ta.
 Seoul-LOC-SE house-ACC buy-PAST-DEC
 'In Seoul, he bought a house.'

b. *Seoul-ey cip-ul sa-ss-ta.*
 Seoul-LOC house-ACC buy-PAST-DEC
 'He bought a house in Seoul.'

The morpheme *-se* in (20a) denotes that the subject was physically present in Seoul at the time the house, which was also in Seoul, was purchased. Thus, the grammatical entities, such as the subject 'he', the object 'house', and the location 'Seoul' are linked together. In sharp contrast, example (20b) describes a situation in which the subject may not necessarily have been physically present in Seoul at the time of the purchase. Sohn and Strauss (1998) have argued that the semantic contrast between (20a) and (20b) reflects a diachronic syntax. That is, (20a) is a historical reflection of a bi-clausal sentence of [[he was in Seoul] [and he bought a house there]].

Now let us compare the semantic function of the honorific dative and subjective particle in terms of the spatio-temporal linkage encoded in *-se*.

- (21) a. *halapeci-kkeyse chayk-ul tuli-ess-ta.*
 grandfather-HON SUB book-ACC give-PAST-DEC
 'My grandfather gave a book to someone (an honored person).'
- b. *halapeci-kkey chayk-ul tuli-ess-ta.*
 grandfather-HON DAT book-ACC give-PAST-DEC
 'He/she/they gave a book to my grandfather.'

In (21a) the subject 'my grandfather' is linked to the activity of giving a book; the sentence thus gives rise to subject interpretation. Conversely, the absence of *-se* in (b) represents the absence of such a link. In addition, (21a) reveals a diachronic

syntax of bi-clausal construction, i.e., [[my grandfather was there] [and he gave a book to someone there.]].

The honorific subject illustrates the following paths of development:

- (22) Development of the honorific subject particle *-kkey-se*
 [honored person]-s (genitive) + *kuey* 'there' + *si-e* 'be and' > *-skuey-sye* >
-kkey-se > *-kkeyse*

2.4 Semantic shift: Locative > Source > Subject marker

Interestingly, the 15th C. Korean data show that the *-skuyse/-skueysye* form was used as a source marker 'from', and not as a subject particle. Yi (1988:55) points out that in Middle Korean (15th C.) *-skuyse* had the same function as *-eykeyse* 'from' in modern Korean. It gradually lost the ablative function and became a subject marker from around the 17th C. The semantic shift encoded in the *-skuyse* around the 17th C. accounts for the late development of the honorific subject particle compared to the earlier occurrence of the honorific dative.

As discussed earlier, the honorific subject marker appears only around the 17th C. even though the honorific dative is frequently found in 15th C. Korean texts. Consider the following example.

- (23) [welinsekpo 1459]

pwuthye-s kuy-sye sipi kyeng-i na-si-ko
 Buddha from twelve scripture-NOM come into existence-SH-and
 'From Buddha, the twelve scriptures came into existence and ...'

- (24) [kyungminpyen 1656]

hyeng aa-kwa masnwuuy aanwuuy-nan
 older and younger brother-and older sister younger sister-TOP
nal-kwa han kacilo pwumo-s kuy-sye na-si-ni
 I-with together parents from be born-SH-and
 'Just like myself, my older brothers, younger brothers, older sisters, and younger sisters were born from the same parents.'

The above examples clearly indicate that the earlier form of the honorific subject particle was used to express source function, rather than subject. The semantic shift from the source to subject function is found in late 17th C. What triggers this semantic shift? The semantic change is highly plausible when the following conceptual transfer is considered:

(25) Semantic shift of the subject honorific particle (*-kkeyse*)

Stage	Conceptual schema	Function
Stage I	X exists at Y's place	Locative
Stage II	X is from Y's place	Source
Stage III	Y instigates X	Subject

In Stage I, the syntactic sequence of locational noun *kuey* 'there' and particle *-se* expresses LOCATION (i.e., X exists at Y's place). In Stage II, the sequence extends to cover SOURCE (i.e., X is from Y's place). In Stage III, the SOURCE meaning is lost and a new grammatical function of SUBJECT has developed through a syntactic re-analysis and phonological reduction. At least two factors seem to be involved in the semantic change described above. First, the cognitive/semantic domain of *-se* plays a key role in triggering the subject function. As discussed in Sohn and Strauss (1998), the existential verb *si-ta/isi-ta* 'be at' has evolved into the particle *-sye* and has fused to the preceding locational noun *kuey* 'there', resulting in the disappearance of its morpho-syntactic boundary. The syntactic contiguity of the locational noun and the *-sye* form is also ascribed to the coalescence. Second, the honorific verb *kyesi-* 'to stay' contributes to the semantic shift. Recall that the honorific verb *kyesi-e* functions as a subject marker when preceded by an honored referent as shown in examples (4), (5), and (6). It is worthwhile to note that both the honorific verb and the genitive construction begin to undertake the honorific subject function around 17th C.

An independent source of evidence for the semantic changes proposed in (25) is found in the semantic function of the locative particle *-eyse* in Korean. In the next section, I will discuss a structural parallel of the honorific subject particle *-kkeyse* and the locative-source particle *-eyse*.

2.5 Structural parallel of *-kkey-se* (honorific subject) and *-ey-se* (locative-source)

The morpho-syntactic behavior associated with *-kkeyse* is parallel to that of the locative-source marker *-eyse* in modern Korean, not only in terms of an affixation process, but also in terms of grammatical functions. The particle *-eyse* is used to express a location, a source, or in certain contexts, a subject. These uses are demonstrated in (26a)–(26d) below.

- (26) a. *Seoul-eyse cip-ul sa-ss-ta.* [locative]
 Seoul-in house-ACC buy-PAST-DEC
 'I bought a house in Seoul.'

- b. *Seoul-eyse wa-ss-ta.* [source]
 Seoul-from come-PAST-DEC
 ‘I came from Seoul.’
 [locative-source]
- c. *yeki-ka Seoul-eyse ce-yil yumyenghan siktang-i-ta.*
 here-NOM Seoul-in most famous restaurant at-be-DEC
 ‘This place is the most famous restaurant in Seoul.’
- d. *wuli hakkyo-eyse iki-ess-ta.* [subject]
 our school-SUB win-PAST-DEC
 ‘Our school won.’

We can note that in the above examples, the particle *-eyse* functions as locative in (26a) and as a source in (26b). We can further observe that the same form *-eyse* is used to indicate locative-source in (26c), and the subject of the sentence in (26d). The grammatical morpheme *-eyse* is analyzed as a bi-morpheme, *-ey* (locative/goal) plus *-se* which has been derived from the existential verb *si-e* ‘be at and.’⁷ The various functions associated with *-eyse* as in (26a)–(26d) originate from the semantic function of the second morpheme *-se*. As discussed earlier, the morpheme *-se* serves to link grammatical entities to each other. The bi-morpheme status of *-eyse* is parallel to the honorific subject particle *-kkeyse*, whereby the latter is analyzed as a combination of *-kkey* (dative) plus *-se*. Furthermore, both the locative-source particle *-eyse* and the honorific subject particle *-kkeyse* can function as the subject of a sentence. Unlike a true nominative marker, both the honorific subject marker *-kkeyse* and *-eyse* behave like oblique case particles in that they can occur with delimiters such as *-to* ‘also’, *-man* ‘only’, *-nun* (topic marker) (cf. H. Sohn 1994: 107). For instance, consider examples in (27) below.

- (27) a. *halapeci-kkeyse-to kongwen-ey ka-si-ess-ta.*
 grandfather-HON SUB-also park-to GO-SH-PAST-DEC
 ‘Grandfather also went to the park.’
- b. *halapeci-kkeyse-man kongwen-ey ka-si-ess-ta.*
 grandfather-SUB HON-only park-to GO-SH-PAST-DEC
 ‘Only grandfather went to the park.’

The honorific subject *-kkeyse* is not allowed in the complement structure, in contrast to the nominative *-i/-ka* as in (28) below.

- (28) a. *halapeci-kkeyse chongcang-i toy-si-ess-ta.*
 grandfather-HON SUB president-NOM become-SH-PAST-DEC
 ‘My grandfather became a president.’
- b. **halapeci-ka chongcang-kkyese toy-si-ess-ta.*
 grandfather-NOM president-HON SUB become-SH-PAST-DEC

3. Convergence of two different strategies

Thus far, I have discussed two different sources of the development of the honorific subject particle. While the two origins involve completely different structures, it is striking that both the verbal and genitive structures begin to acquire the subject function around the same time period, i.e., in the late 17th C. The convergence of the verbal and the genitive origins into the same target form *-kkeyse* seems to be triggered at first by the structural and semantic parallel of the two source forms. As discussed earlier (Section 2.1.), the honorific verb *kyesi-* in Middle Korean was used to indicate the existence of an honored person at a certain location. The existential function of *kyesi-*, however, has weakened in contexts where there is no explicit reference for a location of the honored person. As the semantic bleaching of the existential verb becomes widespread, it gives rise to a new grammatical category of an honorific subject marker. Consider examples (29) and (30).

(29) [adapted from Yi (1988: 49)]

apa-nim sewul kyesy-a atal-wa sonca kuli-si-e
 father-HON Seoul exist-INF son-and grandson miss-SH-INF
pyengcung-ey po-kocye ha-si-ni [welinseupo in 1449]
 sickness-during see-intend-SH-and
 ‘Father was in Seoul and he missed his sons and grandsons, wanting to see them in sickness’

(30) [taken from (5)]

[chengkwuyengen in 1728]
nim-kyeysye poo-si-n hwuey nokaci-n-tul eil
 lover-HON SUB see-SH-MOD after melt-MOD-even if how about
 ‘What’s wrong with melting under my lover’s gaze?’
 (Lit. ‘What’s wrong with melting after my lover sees me?’)

While the *kyesy-a* form taken from the 15th C. text functions as an existential verb in (29), *kyeysye* (an allomorphic variation of *kyesi-e*) in 18th C. is interpreted as an honorific subject particle in (30). Supporting evidence for the grammaticalization from the existential verb to the honorific subject marker is shown by the fact that a nominative marker (*-i*) is not allowed after the noun *nim* ‘lover’ in (30). The development of the existential verb into the honorific subject marker is illustrated below in (31).

(31) Development of the existential verb *kyesi-e*
 [honored person] # *kyesi-e* ‘to exist’ > [honored person] *-kyesie* (subject particle)

During the initial stage of grammaticalization, both the verbal *kyesya/kyeosye* and the locational noun (*-s-kkuy-se*) existed side by side (until 18th C.). As the semantic bleaching of the existential verb become more generalized, the two different strategies expressing an honorific subject converge into one single marker *-kkeyse*.

The development of honorific particles discussed in this paper is consistent with other patterns of grammaticalization in Korean, since particles often derive from locational nouns or verbs which express location or socio-physical world. The grammaticalization process is also in line with other instances of case morphologies in a number of languages whereby the abstract grammatical category is conceptualized in terms of a more concrete, physical concept (cf. Heine et al. 1991).

In Middle Korean, a dative case relation was expressed by the definite locational noun/locational demonstrative pronominal, i.e., *kuey* 'there'. As the form became more grammaticalized, the original lexical meaning became bleached and a new grammatical morpheme *-kkey* emerged.

A verb referring to the existence of an honored person evolves into a grammatical marker introducing an honored person, thus evoking the honorific subject particle. The development of *-kkeyse* out of genitive construction illustrates a case of multiple-paths of grammaticalization in that the two grammatical morphemes *-kkey* and *-se* merge together through independent paths of evolution and ultimately result in the loss of morpho-syntactic boundaries.

4. Conclusion

The development of the honorific particles shows properties of a typical grammaticalization process: unidirectionality, gradualness, morpho-syntactic changes, bleaching, phonological reduction, etc. This study has also shown how spatial orientation such as a locational noun whose origin is a distal demonstrative pronoun, is employed to index discourse-sensitive honorifics. The grammaticalization process of Korean honorific case particles supports the localist hypothesis in that space as a source domain gives rise to a wide range of grammatical functions such as the dative and subject case particles. It was further demonstrated that both the honorific dative and subject particles originate in the same source, and evolve from the locational noun in the genitive. The emergence of the subject honorific marker *-kkeyse* is viewed as a convergence of two strategies from different sources (a locational noun plus an existential verb).

What is significant in this study is the role of language external factors for a grammaticalization process. The emergence of the honorific subject case particle is a fairly recent phenomenon, appearing in 17th C. texts. Interestingly enough, during this period the Korean society (*Yi* dynasty) underwent a major transition

toward a hierarchy-oriented society due to the heavy influence of Confucianism (i.e., *Cwucahak*).⁸ As is well known, the Confucianism philosophy emphasizes social hierarchies, formalism, filial duty, and respect for others. The honorific vs. plain distinction in subject case particles seems to have risen inevitably from such a social pressure to denote deference. The Korean language expresses new concepts such as the relevance of social hierarchy by making use of the linguistic structures at hand. More than one strategy (i.e., a locational noun and an existential verb) was used at the beginning and eventually the two strategies converged into one single marker (*-kkeyse*). Thus, not only language internal factors, such as morpho-syntactic structures, but also external factors contribute to the emergence of a new grammatical structure. The role of external factors in grammaticalization has been recognized only very recently. The evolution of the Korean honorific case particles demonstrates that external factors can play a crucial role in syntactic and semantic changes.

Abbreviations

ACC:	accusative
CT:	connective
DAT:	dative
DEC:	declarative
DEF:	deferential
GEN:	genitive
HON:	honorific
INF:	infinitive
LOC:	locative
MOD:	modal
NML:	nominalizer
NOM:	nominative
PROS:	prospective mood
RET:	retrospective mood
SH:	subject honorific suffix
SUB:	subject
TOP:	topic

Notes

1. I would like to thank Prof. Ho-min Sohn for his comments on an earlier version of this paper.
2. The plain subject case particle *-ka* is used after a vowel and *-i* is used after a consonant.
3. The locational noun *kuey* can be further analyzed as the distal demonstrative *ku* ‘that’ and the locative particle *-ey*.
4. The symbol # indicates a word boundary, whereas the sign ‘-’ marks a morpheme boundary.
5. Example (14) has been adapted from You (1964:218).
6. The *-sye* form has changed to *-se* in modern Korean.
7. See S. Sohn and Strauss (1998) for the grammaticalization process of the particle *-se*.
8. I am very grateful to Prof. Sey-Kwon Yim for his comments on this issue.

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From logophoric pronoun to discourse particle

A case study of Finnish and Saami

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1. Introduction

Finnish and Saami (Lappish) have a third person pronoun whose use is essentially logophoric in most dialects. It appears in reported speech or thought and is coreferential with the subject of the speech act or mental verb used to introduce it. In addition, this pronoun was the source of an enclitic discourse particle in both languages. My paper is an attempt to trace this development.

The data presented here come from Finnish and Inari Saami, an indigenous language in Northern Finland, spoken by 350 people today, but the phenomena discussed can be found in other Saami and in most Finnic languages as well.¹ The 3rd person pronouns under discussion, Finnish *hän* and Saami *sun* (or *son*) are of common Finno-Ugric origin.² That this form was the source of the discourse particle has been assumed in Finnish linguistics for a hundred years (Lönnbohm 1879:65; Setälä 1883:92; L. Hakulinen 1979:192), and the same hypothesis has been made concerning the Saami particle (Itkonen 1960:168). Furthermore, it has been suggested that Saami acquired it due to contact with Finnish (L. Hakulinen *ibid.*; Larsson 1998). However, it seems to me that a parallel development was equally possible. The development may be of a relatively recent origin, possibly less than three or four hundred years in both languages.

What I am going to argue is that the grammaticalization started in interrogatives that express a speaker's speculation on a situation. The reanalysis of the pronoun as a discourse particle was possible due to subjectless clauses in narratives. When the logophoricity of the pronoun was no longer transparent, an inanimate referent became possible. The pronoun lost its referentiality, and the sentence could have a new subject.

2. The clitics *hAn* and *sun*

The enclitic discourse particles *hAn* and *sun* in question clauses are illustrated in example 1 from Finnish and example 2 from Inari Saami. In WH-questions (1a, 2a), the clitic is attached to the question word, elsewhere (1b, 2b) it follows the obligatory interrogative clitic, Finnish *-kO*, Inari Saami *-uv*.

- | | | | |
|--------|--|----|---|
| (1) a. | <i>Kukahān tuo tyttö on?</i>
who-HÄN that girl is | b. | <i>Näkiköhän äiti sen?</i>
see-Q-HÄN mother it.ACC |
| (2) a. | <i>Kii-sun tot niejdâ lii?</i>
who-SUN that girl is
'Who is that girl, I wonder' | b. | <i>Ooinij-uvsun enni tom?</i>
see-Q-SUN mother it.ACC
'Did mother see it, I wonder' |

The meaning of the clitics *hAn* and *sun* is not easy to characterize in general terms, but in interrogatives the English translation "I wonder" gives a rough idea. Interrogatives of this type are not information-seeking; rather, using *sun* or *hAn*, the speaker poses the question to herself.

In Finnish, the clitic *hAn* is used in other sentence types as well. In declaratives, it has the effect of marking the information as something already known. In (3a), for example, it functions as a reminder of a familiar fact ('the girl is coming, as you know'). It can also indicate that the sentence is a concession or agreement which the speaker can contradict in the sequel ('the girl is coming, indeed – but the boy is not'). Furthermore, it expresses surprise: something happens contrary to expectations ('why, the girl is coming!'). In imperatives (3b) used between equals or by superiors, *hAn* mitigates the request by reminding the addressee of something s/he already knows that s/he is to do. (See A. Hakulinen et al. [forthcoming].)

- | | | | |
|--------|--|----|---|
| (3) a. | <i>Tyttöhän tulee</i>
girl-HÄN comes
'The girl is coming, as you
know/indeed' | b. | <i>Tulehan tänne!</i>
come.IMP-HÄN here
'Would you come here for a
minute' |
|--------|--|----|---|

While Finnish *hAn* occurs in all sentence types, the Saami particle is restricted to questions expressing speculation, reflection, or wonder, as in the English questions "I wonder who/where/what/if." Saami does not use the particle *sun* in non-interrogative clauses. In declaratives the form *han*, a recent loan from Finnish, is used (4a). In imperatives Saami uses the clitic *ba*, also a loan from Finnish (4b).

- | | | | |
|--------|---|----|---|
| (4) a. | <i>Niejdâhän puátá</i>
girl-HÄN comes
'The girl is coming, as you
know/indeed' | b. | <i>Puádibâ teehin!</i>
come.IMP-CL here
'Would you come here, please' |
|--------|---|----|---|

Extract 5 illustrates the usage of various second position clitics in Inari Saami. The enclitic *hAn* occurs in a declarative clause on line 3. On line 2 there is a genuine question, which has an additional optional clitic *k(a)s*. The enclitic *sun* occurs on line 4: as an index of wonder it implies that the answer is not necessary. It may, therefore, sometimes be interpreted as a polite question, and in this example, it does get an answer on line 5. This is a rhetorical question in the classical sense (cf. Herring 1991: 257): ‘she – the speaker – does not know when Irján is coming back’. *Sun* on line 5 is a focused logophoric pronoun, marked with stress and emphatic particles.³ The clitic *sun* is never used in such rhetorical questions.

- (5) 1 *Muádi peeivi maŋa poođij tot Máárjá Čovčjáávran,*
 some.ACC day.ACC after came that Maria Autumn-lake.ILL
 ‘After some days Máárjá came to Autumn-Lake
- 2 *koiĵádâl: Kost-ks Irjánâš lii?*
 asks where-Q Irjan.DIM is
 (and) asked: Where is Irján_i?
- 3 *Enni iätä et: tothän kal moonâi miácän*
 mother says that: s/he-HAN AFF went forest.ILL
muorâid čuoppâđ.
 wood.PL.ACC cut.INF
 Mother_j says that he_i went to the woods to cut wood, of course.
- 4 *Na kuhe-uvsun tot lappoo?*
 well long-Q-SUN s/he stays
 Well, how long will he_i stay there, I wonder.
- 5 *Na mast tot kal sun tiätä, na tassaaš kuittig ko*
 well where CL AFF LOG knows, well until anyway when
siävŋánâš.
 darkens
 Well, how can she_j know, (he does not come) anyway until it gets dark.’

The common area of the clitics *hän* and *sun* seems to be the core of the pronoun-to-clitic development. According to my hypothesis, based on the distribution of the clitic *sun* in Saami languages, the pronoun *sun* or *hän* first started to cliticize in questions.

Additional support for this hypothesis comes from old literary Finnish. The first attested examples of the particle *hAn* in 18th century Finnish were defined as enclitic particles with a special connection with interrogativity and affirmativity (Ganander 1997 [1787]: 92, 112). The vast majority of *hAn*-clitics in the 18th century do indeed occur in ‘I wonder’ interrogatives, as in the following examples:

- (6) a. *jokohän päivä koittaa?*
 already-Q-HÄN day dawns
 ‘Is the day dawning already, I wonder’
- b. *Ejkohän hewonen jaxa*
 NEG.3.-Q-HÄN horse manage
 ‘I wonder if the horse can keep going/The horse can keep going,
 I guess’

The connection between the particle and the logophoric pronoun is not obvious in these examples. Next, I will look more closely at the essential properties of the pronouns *sun* and *hän* as the possible source of the clitics *hAn* and *sun*.

3. The pronominal sources

The data from both Finnish and Saami show that there are five properties characteristic of the pronominal source of the enclitic particles *hAn* and *sun*. It must have been (1) the 3rd p. singular pronoun (*hän* or *sun*), (2) a subject, (3) in the second position, (4) unstressed, and (5) logophoric. Next, I will look at each of these properties in turn.

In Saami, the clitic *sun* is phonetically equivalent to the unstressed pronoun. Even today it is sometimes impossible in the spoken language to know if the form should be interpreted as a pronoun or a particle. The same holds for Finnish, except for the vowel harmony of the clitic (*han* or *hän*). As for the written language, the particle *hAn* first appeared in literary Finnish in the 18th century. In example 7a, it occurs in the same clause as the pronoun *hän*. As example 7b shows, the clitic did not yet follow the conventional rules of vowel harmony. The particle was often written as a separate word, as in examples 7a and 7b. The same holds true for religious Inari Saami texts from the turn of the 20th century (8a), sometimes even for new texts written by native speakers (8b).

- (7) a. *ejpä hän hän tullutkaan*
 NEG.3-CL HÄN s/he came-CL
 ‘Well, he did not come at all’
- b. *kuka hän sijnä ilmaasa ilkenisi olla*
 who HÄN that.ESS weather.INE could.CON be.INF
 ‘Who could cope in such a weather?’
- (8) a. *Ijuv sun tot leh Krüstus?*
 NEG.3.-Q SUN he be Christ
 ‘He is Christ, isn’t he?’

- b. *Kuus sun Ilmarân šoodâi nuuvt huáppu?*
 Where SUN Ilmar.ILL became so hurry
 ‘Where did Ilmar go in such a hurry?’

The syntactic status of a subject can be concluded from the fact that the clitic is identical with the nominative case in the singular form of both pronouns. In the Finnish and Saami languages, the nominative is the unmarked case of subjects, especially of the personal pronouns.⁴ By contrast, the etymologically equivalent pronoun has not developed into a clitic in the southern Finnic languages, Estonian, Livonian and Votic, where it is reflexive and used only in some oblique cases.

Because the pronoun has been in subject position, the clause must have had some other constituent as its first element. Clause-initial double subjects, proposed in Finnish linguistics (L. Hakulinen 1979:192), seem to be an implausible starting point for the cliticization. Finnish texts from the 16th and 17th centuries, in fact, have examples such as 9 where *hän* is cliticized on subjects. These were, however, only a temporary phenomenon, shown to have originated in translations from Swedish. They do not occur elsewhere. (Kiuru 1990:297.)

- (9) *Marcus hän sano, että hän oli corvesa*
 Marcus he says that he was wilds.INE

In order for the cliticization to occur, the preconditions of second position and lack of stress are typically met, for example, in “WH”-interrogatives, where the constituent questioned normally appears first, followed by the subject. As seen in all the examples above, the enclitic particles *hän* and *sun* are attached to the first constituent of the clause. When two or more second-position clitics combine, *hän/sun*, the most recent one, takes the last position in the word.

The fifth property of the pronominal source, i.e. the logophoricity of Finnish and Saami pronouns in spoken varieties, will be illustrated in the next section.

4. The logophoricity of the pronominal source

Although the term *logophoric* has not been used for the Finnish and Saami 3rd person pronouns, the system is well described in literature. (In Finnish, see Setälä 1883:85; Laitinen 1997:117; in North Saami, see Nickel 1996:119, Sammallahti 1998:117, and in Inari Saami, see Itkonen 1989:188.) The personal pronouns of spoken Finnish and Saami are presented in figure (10), which shows that gender is not distinguished in the pronoun system. The main difference between the two languages is that Saami has dual pronouns.

(10) a.	Finnish dialects		b. Spoken Inari Saami		
	Singular	Plural	Singular	Dual	Plural
	1. <i>minä</i>	<i>me</i>	1. <i>mun</i>	<i>muoi</i>	<i>mij</i>
	2. <i>sinä</i>	<i>te</i>	2. <i>tun</i>	<i>tuoi</i>	<i>tij</i>
	3. <i>hän</i>	<i>he</i>	3. <i>sun</i>	<i>suoi</i>	<i>sij</i> (+LOG)
		<i>se ne</i>		<i>tot</i>	<i>toh</i> (-LOG)

It can also be seen that there are two kinds of third person pronouns in Finnish and Saami vernaculars: the logophoric (*hän, he; sun, suoi, sij*) and the non-logophoric ones (*se, ne; tot, toh*). In standard varieties of Finnish and Saami, the third person pronouns behave in another way. The first set (*hän, he; sun, suoi, sij*) is always and exclusively used for human referents. The pronouns *se, ne* and *tot, toh* are reserved for non-humans.

In Finnish, the present day standard system can partly be explained by the history of written texts. Early literary Finnish was based on the southwestern dialects where humans are usually referred to by *hän*. Furthermore, the first written texts in Finnish from the 16th and 17th centuries were religious and legal texts mainly translated from Swedish, a language with exclusively human third person pronouns. Both in these texts and in the southwestern dialects, the clitic particle *hAn* is missing. Correspondingly, in the first religious texts in Inari Saami, translated from Finnish a hundred years ago, the pronoun *sun* was always used to refer to human beings. At this time, the particle *sun* was already conventionalized to be used in interrogative clauses (cf. 8a).

Nevertheless, in the spoken, non-standard varieties of Saami (10b), as well as in most dialects of Finnish (10a), the pronoun *sun* or *hän* is clearly logophoric.⁵ In the Finnish example (11) (from Setälä 1883:85), the logophoric pronoun *hän* is coreferential with the subject of the reporting clause ‘s/he said’. Otherwise, human beings are referred to by the pronoun *se*. The corresponding example translated into Inari Saami is seen in (12). The logophoric pronoun is *sun*; in other contexts, the pronoun for humans is *tot*.

(11) *Se sano, että kyllä hän tiätää, mitä se tekee*
 S/he said that AFF LOG knows what.PAR s/he does

(12) *Tot eedäi et kal sun tiätä, maid tot parga*
 S/he said that AFF LOG knows what.PAR s/he does
 ‘S/he_i said that surely s/he_i knows what s/he_j (another person) is doing’

The referent of a logophoric pronoun need not be human. The perceptual and mental states and processes of animals are also reported using these pronouns both in Finnish and Saami:

- (13) *En tiet tiennöökö tuo sitte itekkääm mihinkä häv vei se.*
 NEG.SG.1 know knows-POT-CL it then self-CL where LOG took it.ACC
 ‘I don’t know if it_i (= the magpie) knows even herself_i where it_i took it
 (= the spoon).

Mut koera jos ottaa ni se tietää että mihinkä hän viep
 but dog if takes so it knows that where LOG takes
 But if the dog_j takes (something), it_j knows where s/he_j takes (it)’

This is not a case of secondary personification but a natural part of the personal system including logophoric pronouns. The referent of the logophoric pronoun *sun*, or *hän*, can be any being whose behaviour the speaker is able to understand: for example a child whose behavior she is interpreting. In the Finnish extract (14), the pronoun refers to a state (Russia).

- (14) *No mitäs hää pelkäis!*
 Well what.PAR-CL LOG be-afraid.3.SG.CON
 ‘Well, what would s/he be afraid of!’
Eihä hää mitä pelänt.
 NEG.3-HÄN LOG anything be-afraid.PTC
 S/he wasn’t afraid of anything.’

The question on the first line in (14) is a rhetorical one, and the pronoun is stressed. It resembles the question quoted as “direct” speech in a dialogue in example (5) on line 5, repeated here as (15).

- (15) *Na mast tot kal sun tiätä, na tassaaš kuittig ko siävñánáš.*
 well where CL AFF LOG knows, well until anyway when darkens
 ‘Well, how can she_j know, (he does not come) anyway until it gets dark.’

These two examples show that the logophoric pronoun does not always belong to indirect discourse or to subordinate clauses alone. It can be used in main clauses, especially with mental verbs, to indicate the viewpoint of the referent. Indicating the point of view, subjectivity, or consciousness is regarded as the common function of logophoric pronouns, as well as of non-clause-bound reflexive pronouns used logophorically in some languages (Koster and Reuland 1991; Zribi-Herz 1989 i.a.). It is assumed that logophoric pronouns typically occur in indirect discourse and logophoric reflexives in so-called free indirect discourse (Brinton 1995; Fludernik 1995:134–136). However, these terms, developed to characterize literary texts, are not appropriate for describing quoting and reporting contexts of the logophoric pronouns in spoken languages (cf. Hagège 1974:292–293).

As mentioned above, both the Finnic and Saami languages have ambiguous contexts where *sun* or *hän* can be read either as a pronoun or as an enclitic particle. Furthermore, in some constructions, the pronouns *hän* and *sun* can refer to inani-

mate and abstract entities. I will first turn to the ambiguous contexts with animate subjects.

5. Ambiguous contexts with missing subjects

My assumption is that in Finnish and Saami the possibility of interpreting some clauses as subjectless was important in the contexts where the evolutionary process from a logophoric pronoun to a discourse particle started. Even today, it is easy to find potentially ambiguous examples where the third-person pronoun can be reanalysed as a non-referential particle in interrogatives that have a potential interpretation with a “null” subject.

The non-overt subject of a third person singular verb has two potential readings in the Finnic and Saami languages: it is either anaphoric (‘s/he’) or generic. The “generic” covert subject is translated into English as *you* or *one*. Semantically, it is human and non-specific, open for anyone to identify with, primarily the speech act participants.⁶ The anaphoric null subject in narrative contexts is more common across languages. First, the main character of the story is referred to by his proper name or a common noun; after that, the coreferential 3rd person subjects can be dropped. In Finnish and Saami narratives, this is possible even in subordinate clauses. In the next example, the null subjects on lines 1 and 3 can be replaced with the anaphoric third person pronoun *tot* ‘s/he’; on line 4 the null subject is used instead of the logophoric *sun*.

- (16) a.1 *Jáák-Irján ko moonâi tohon, ooinij et*
 Jakob Irjan when went there, saw that
 ‘When Jakob Irján_i went there, (he_i) saw that
- 2 *maht toh soorvâh láá purrâm suu suoinijd,*
 how those reindeer bulls have eaten LOG.GEN hay.PL.ACC
 the reindeer bulls had eaten his_i hay,
- 3 *te smietâi tom et*
 so thought it.ACC that
 so (he_i)was thinking of
- 4 *maht kolgâččij taid kodded.*
 how should.CON them kill.INF
 how to kill them’

The missing *sun* on line 4 can be interpreted either as anaphoric (‘how he should kill them’) or as non-specific (‘how one should kill them’). However, if the clitic *sun* (16b), or in Finnish *hAn* (16c), is added to such a logophoric null context, the reading is always non-specific:

- (16) b.(3)*te smietâi tom et* (4) *maht-sun kolgâččij taid koddeđ.*
 so thought it that how-SUN should.CON them kill.INF
 ‘So (he) wondered how one should kill them’
- c.(3)*niin mietti sitä että* (4) *mitenkähän ne pitäisi tappaa*
 so thought it that how-HÄN them should.CON kill.INF

Instead, the reading of the clitic *sun* or *hAn* as an anaphoric pronoun works perfectly in such examples as 17a and 18a. The question clauses can be rewritten as b-versions without any difference in meaning:

- (17) a. *Sitte se poika vei ne päät mihinkähän liäv viäny*
 then that boy brought the heads where-HÄN has.POT brought
 ‘Then the boy; took the heads’
- b. *mihinkä hän liäv viäny*
 where LOG has.POT brought
 (I don’t know) where (he) took them’
- (18) a. *en tiijä mitenkä nyt liem männyt sen papin*
 I don’t know how now has.POT gone that.GEN priest.GEN
tytön kansa,
 girl.GEN with
 ‘I don’t know how (it) went with this girl; of the priest,
liekköhän tiennä ommaisistaan
 has.POT-HÄN known relatives.ELA.PX
 (I wonder) if (she;) knew anything about her relatives’
- b. *liekkö hän tiennä ommaisistaan*
 has.POT LOG known relatives.ELA.PX
 (I wonder) if she; knew anything about her relatives’

These constructions differ from the one in 16a (line 4) in some essential respects. First, the pronoun *hän* (or *sun*, respectively) is, by definition, not strictly logophoric. Rather, it refers anaphorically to the main character of the story. This use of the logophoric pronouns, an extension of their viewpoint marking function, is frequent especially in old fairy tales. But again, it is only in question clauses where *hän* is used without exception. For instance, in extract 19, the person discussed is referred to anaphorically by three different means: *se*, *hän* and an anaphoric null subject. The anaphoric pronoun *se* is replaced by *hän* in the question clause:

- (19) a. *ja sittä se_i sej jälestä montako vuotta hăl_i lie elännä*
 and then s/he it.GEN after many-Q year.PAR s/he has.POT lived
 ‘And then after that, s/he_i – (I don’t know) how many years s/he_i lived
kun kuoli.
 when died
 before (s/he_i) died’

Secondly, in these examples it is not the protagonist of the story who is pondering over his own situation. Instead, the question clause expresses ignorance of the narrator; the construction with *hän* (or *sun*) is conventionalized into this epistemic function. Furthermore, the clause is not subordinated to the previous one but rather adds an indefinite – unclear, forgotten, and often irrelevant – detail to it.

6. From logophoric marking to index of speaker’s ignorance

The pronoun *hän* is very common in all Finnish dialects in interrogative clauses expressing that something about the identity, location, properties or activities of the referent is unknown to the narrator. In example 20 the question with *hän* is used as an answer. This is not a rhetorical question like examples 14 and 15. The speaker does not know the exact answer; the pronoun is unstressed and could be interpreted as a particle.

- (20) *Miten se rahoja soap?*
 how s/he money.PAR gets
 ‘How does s/he get money?’
Millä laella hän soanoo?
 what.ADE way.ADE LOG gets.POT
 – Well, (who knows) how s/he gets it?’

Frequently, the speaker’s attitude is also explicitly expressed in these contexts, as in the Inari Saami example 21.

- (21) *Jiem tiedē, lâš-uv sun kuáassin kiävttám tieid*
 NEG.1SG know has.POT-Q LOG ever used those.ACC
 ‘I don’t know if he ever used those
sälttilemnuid, mutâ pyereest puávttám kale jurdâččid.
 salt.cartridge.PL.ACC but well can.1SG indeed think.INF
 cartridges but, yes, I can imagine (that he did)’

The use of the pronouns *hän* and *sun* in questions expressing a speaker’s ignorance is not a recent development. Besides the logophoric function, *hän* was used in this way in the isolated Vermland dialect spoken by the descendants of people who

moved to Sweden from eastern Finland in the 17th century (22). The clitic *hAn* was rare in this dialect, but there are some attested examples (23).

- (22) *Minkälaisia konstiloita hän_i lienöö tehny,*
 what-kind.PL.PAR mean.PL.PAR LOG has.POT done
 ‘I wonder what kind of means s/he used
jotta se_i sae miehen tappamaan ihteensä.
 that s/he got man.ACC kill.INF self.PAR.PX
 to make the man kill himself’

- (23) *Mitenkääv vielä!*
 how-HÄN again
 ‘What else, I wonder! (= I don’t believe a word)’

Because of the phonological reduction (*hän* > *äv*), the clitic *hän* in example 23 is distinguished from the pronoun. As mentioned before, the pronoun and the clitic are not always homophonic in Finnish dialects. They can be used side by side in similar functions:

- (24) *se poeka oli vielä, helepponem*
 that boy was still small
mikähäl lie olluv vasta,
 what-HÄN has.POT been only
 ‘(I don’t know) how old (he) was,
yhentoestako vae kahdentoesta vanaha heäl lie ollut
 eleven-Q or twelve old LOG has.POT been
 maybe he was only eleven or twelve years old, I guess’

The use of the pronouns *hän* and *sun* in these questions can be seen as an intermediate stage in development from a referential-indexical meaning of logophoricity to a purely indexical discourse function expressing epistemic attitudes of the speaker (cf. Silverstein 1976, 1993). The semantic link with logophoricity lies in the function of viewpoint marking by *hän* or *sun*. The choice of this pronoun implies that its referent, the original speaker, has access to, or first-hand knowledge of how things really were. In interrogatives indicating that something is unknown to the speaker (cf. Sadock and Zwicky 1985: 185), the logophoric pronoun marks that the lacking information could be given by its referent. The interrogative construction with a logophoric pronoun is frequently used as the last, indefinite member in such lists as in example (25):

- (25) *ja, nevi vei siältä vähä leipää ja juustoo ja voita*
 and they took there little bread.PAR and cheese.PAR and butter.PAR
 ‘And they took a little bread and cheese and butter there,

ja mitä he; saivat et oli.
 and what they-LOG got.3PL.PRT that was
 and what(ever) they-LOG got there'

In any case, the implication to the consciousness of the referent of the logophoric pronoun is no longer necessary in such evidential question constructions. There are even examples where the pronoun *hän* or *sun* refers to inanimate entities in interrogative clauses. These are considered more closely in the next section.

7. From inanimate referents to non-referentiality

The question construction with *hän* referring to inanimate entities is not used in standard Finnish but it is very frequent in Finnish dialects. Similarly to the logophoric *hän*, the pronoun is used in all syntactic functions, but I will focus on subject positions.

- (26) *Em minä sittet tiä*
 NEG.1SG I then know
 'I don't know
oliko hän kirjoss ollus siähen aikaan
 was-Q HÄN book.PL.LINE been that.ILL time.ILL
 if it (the fairy tale) was printed in books at that time'
- (27) *Oliko hän tänäpä kaks viikkoo*
 was-Q HÄN today two week.PAR
 'It was maybe two weeks ago
kun minä olin siällä.
 when I was.1SG there
 when I was there'

Such ambiguous clauses with inanimate referents are the crucial contexts where the pronouns *hän* and *sun* could most easily take a step toward non-referentiality. Compare extract 28, where *hän* is a referential pronoun, with 29, where it is a particle.

- (28) *niin se oli, jottaa, tämälläenem mitä hāl lie ollup*
 so it was something this.GEN-kind what.PAR HÄN was.POT been
 'So, it_i (the salmon) was roughly like this, whatever size of it_i may have been
pittuuvesta se oli melekonen
 length.ELA it was considerable
 – it_i was very big'

- (29) *syksyä ol mitähäl lie ollu lokakuuta kun –*
 autumn.PAR was what.PAR-HÄN is.POT been october.PAR when
 ‘Autumn (it_i) was – whatever (time it_i) may have been – October, when –’

Saami has many similar examples (cf. 8b above), even though in Saami *sun* is mostly written as an affixed clitic (30). Obviously, this writing convention results from the tradition of orthography adopted from standard Finnish where the pronoun *hän* referring to inanimate entities is totally excluded.⁷

- (30) *Ijhân lah toho kukke*
 NEG3-HAN be there far
 ‘(It) is not far away
läi-uvsun nuuvt tego vittlov meetterid
 was-Q-SUN so as fifty metre.PAR
 – it was maybe fifty metres, I guess’

Example 30 is comparable with the Finnish example 31, where *hän* is identified as a pronoun. There would be no difference in meaning if it were written as an enclitic particle (*oeskohan*).

- (31) *aena ei kymmentäkkääm metrrii*
 always NEG3 ten.PAR-CL metre.PAR
 ‘It was not always even ten metres long,
oesko hiän olluk se vatanuotam pittuus
 was.CON-Q HÄN been that seine.GEN length
 was it, that length of the seine’

As a matter of fact, 31 is an example of a right dislocation construction. The development toward non-referentiality was probably easiest in constructions where another referential subject was added as an “afterthought.” In non-interrogative contexts, the right dislocations with the pronouns *se* and *tot* (corresponding *hän* and *sun* in these question clauses) are widely used in both spoken Finnish and Saami. (Cf. Vilkkuna 1989: 139–148.) Examples 32 and 33 are from the turn of the 20th century:

- (32) *Mut ko Máárjá ooinij suu, suorganiij sun suu saava tiet*
 but when Maria saw him got frightened she his words for
 ‘When Maria saw him, she got frightened by his words
ja jurdačij, mabdem sun lei tot tiervättäs.
 and thought what-kind SUN was that greeting
 and wondered what kind of a greeting that should be’

- (33) *Mon kienjäl-sun lii táát kurrâ?*
 what.GEN deep-SUN is this gully
 ‘How deep is this gully, I wonder’

In 33, as well in examples 34 and 35 below, *sun* is as usual attached to the whole phrase instead of its interrogative determiner. This could be seen as evidence of its earlier subject status.

- (34) *Jiem tiättám ete mii tot sparkká lii, jurdáččim,*
 NEG.1 know that what that sparkka is, thought.1SG
 ‘I didn’t know what *sparkka* is,
mabdem fiävrusun totkis lii.
 what-kind vehicle-SUN that-CL is
 I wondered what kind of a vehicle that should be’
- (35) *Toho ain kiäččá, ko puátá te ain kiäččá*
 there always looks when comes then always looks
 ‘(The bear) looks again and again there when (it) comes,
et kalle ááldusun val láá kidda.
 that how-many female-reindeer-SUN still are tied
 how many female reindeers still are tied’

Similar examples can also be found in Finnish dialects (36), whereas in standard Finnish *hAn* is automatically posited after the first item in the NP (‘how-HÄN many’). The position in the middle of a phrase would be an extremely odd place for a subject. Correspondingly, in examples 37 and 38 from Finnish dialects, *hän* is put after the compound adjective *minkälainen* (‘of what kind’); in standard Finnish, it is always attached to the first part of this compound (*minkähänlainen*).

- (36) *kuinkas montahan sill oli allaikäist lasta?*
 how-CL many-HÄN s/he.ADE had underage.PAR child.PAR
 ‘How many underage children did s/he have, I wonder’
- (37) *Minkälainen hál lie ollus sitte jalaka*
 what.GEN-kind HÄN was.POT been then leg
 ‘I wonder what kind of a leg it was
em minä kysyny
 NEG1 I asked
 – I didn’t ask’
- (38) *Minkälaineha hevel tuost pojast tulloo?*
 what.GEN-kind-HÄN gentleman that.ELA boy.ELA becomes
 ‘I wonder what kind of a gentleman that boy will be?’

The reanalysis of the pronoun *hän* and *sun* as a non-referential clitic was strengthened in question constructions when a new coreferential subject was added. The process was completed when the particle could also occur with 1st and 2nd person subjects.

- (39) *Tun-uv sun puáđáččih mii kunagassan?* (in 1906)
 you-Q SUN become.CON2.SG our king.ESS
 ‘Would you really become our king, I wonder’
- (40) *Mitähän minä siellä teen?* (in 1787)
 what-HÄN I there do.1SG
 ‘What would I do there, I wonder’

In Finnish, the process went on in affirmative clauses where the extension to other clause types most probably happened. The last examples represent early instances of the clitic *hAn* in non-interrogative clauses from the 18th century: they expressed surprise or concession, began with an affirmative particle (*jo*, *jopa* or *kyllä* ‘already; indeed, surely’) and could have inanimate subjects (41a). At this stage, Saami borrowed the clitic *hAn* from Finnish and *sun* was limited to interrogative constructions.

- (41) a. *jopa han on juoma wäähä waljahtanut*
 already HÄN is drink a little stale
 ‘Why, the drink is already (indeed) a little stale’
- b. *johän minä sanoin*
 already-HÄN I said
 ‘I did say it already’

8. Conclusions

Many typical processes observed in grammaticalization chains seem to be involved in the development into enclitic particles of the third person logophoric pronouns *hän* in Finnish and *sun* in Saami: reanalysis, greater cohesion, phonological assimilation and reduction, generalization of the pronoun through the animacy hierarchy of NPs, a gradual loss of referentiality, and in Finnish, generalization of the clitic into all clause types. In this paper, I have tried to find in my data ambiguous contexts where the pronoun and the particle overlap and reanalysis could possibly take place.

On the basis of the nominative-like shape and the second position of these clitics, and of the distribution of the Saami enclitic *sun*, I put forward the hypothesis that the process started in the very local contexts of interrogative clauses containing

a logophoric pronoun subject. The widely used possibility in Finnish and Saami of subjectless clauses in narratives turned out to be the most probable syntactic precondition for the ambiguity needed. Even today, it sometimes enables the hearer to interpret the logophoric subject as an enclitic particle in these non-assertive constructions.

When representing another person's words or consciousness with a logophoric pronoun in interrogatives, the speaker might express her/his ignorance or speculation of some aspect in the situation narrated. In such contexts of indefiniteness the use of the pronoun was extended to inanimates and the pronoun lost its logophoricity, and finally even its referentiality. It switched from referential-indexical functions to purely indexical discourse functions, which convey the attitude of the speaker to what s/he said. Belonging to the indexical end of the cline of reference, the logophoric pronouns are inherently metapragmatic, self-referential forms. I suggest that therefore they have been able to acquire the non-referential reflexive functions of enclitic discourse particles.

Abbreviations

ABE	abessive	INF	infinitive
ACC	accusative	LOG	logophoric
ADE	adessive	NEG	negation verb
AFF	affirmative particle	Q	question clitic
CL	unspecified clitic	PAR	partitive
CON	conditional mood	PL	plural
DIM	diminutive	POT	potential mood
ELA	elative	PRS	present
ESS	essive	PRT	preterite
ILL	illative	PTC	participle
IMP	imperative	PX	possessive suffix
INE	inessive	SG	singular

Notes

1. My data are based on a large corpus of Finnish and Inari Saami speech, recorded on tape in the 1970s, as well as on old texts written at the end of the 19th century.
2. The Finnic and the Saami languages form the two branches of the so-called Finno-Saami protolanguage, which dates back to 3200 BC and was divided by 1000 BC. Among the ten Saami languages, Inari Saami belongs to the eastern group. See e.g. Sammallahti (1998).

3. The function of the second position semiclititic *tot* in Saami and *se* in Finnish is focusing (cf. Vilkuna 1989:145), and the discourse particle *kal* in Saami (*kyllä* in Finnish) has the meanings ‘indeed; of course’.
4. Finnish also has subject-like arguments in partitive and genitive cases but this is not relevant here. See e.g. Helasvuo (1997), Laitinen (1997).
5. In the urban vernacular of Finnish, based mainly on the spoken language in the bilingual (Finnish and Swedish speaking) Helsinki district, the “demonstrative” pronouns *se* and *ne* are used to refer to human beings in all contexts. Thus, the pronoun *hän* may be disappearing in colloquial Finnish.
6. More about generic null subjects in Finnish, see A. Hakulinen (1987) and Laitinen (1996).
7. Most probably, the first scholars who recorded the Inari Saami oral tradition did not know the use of *hän* for inanimates in Finnish dialects.

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On the development of final *though*

A case of grammaticalization?

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1. Introduction

Our paper is an attempt to evaluate a set of empirical data on the use of the adverbial (or conjunct) *though* in present-day spoken English.¹ We are interested in what this data might suggest about the development of *though* as a marker of concession, but also – and more recently – as a so-called discourse marker. We will see that the trends observable with present-day English *though* exhibit a number of interesting parallels to grammaticalization processes. This raises the question whether the development of *though* is indeed to be classified as such a case.

Our paper is divided into three parts. First, we begin by presenting an abstract model of Concession² in everyday spoken discourse. This model has been extracted from an empirical study of a moderately large corpus of English conversation (Couper-Kuhlen/Thompson 2000). The model makes it possible to identify a number of distinct patterns used in carrying out Concession, one of which regularly involves the conjunct *though*. We will show how *though* is particularly suited as a lexical device for marking Concession in this pattern. Next, we present the results of a more quantitatively oriented investigation of the use of *though* in present-day English spoken discourse. These point to a number of trends which can be interpreted as a sign of ongoing change in the use of *though*. Finally, we deal with the issue of whether these trends allow the development of *though* to qualify as a case of grammaticalization.

2. *Though* as a marker of Concession in present-day spoken English

The Concessive relation in discourse is one which holds prototypically between two turns at talk. It is present when a first speaker makes a point or claim in one turn and a second speaker acknowledges the validity of this point in the next turn but goes on to state that a potentially incompatible point also holds. Schematically the prototypical Concessive relation can be represented as follows:

Cardinal Concessive pattern:

A: X (claim)

B: X' (acknowledgement of claim)

Y (counterclaim)

where X and Y are understood by participants to be potentially incompatible

We call this pattern the Cardinal Concessive (cf. Couper-Kuhlen/Thompson 1999, 2000).

Fragment (1) is an attested example of this pattern. It is taken from an American radio phone-in program recorded in Berkeley during the 1991 Gulf War. Teresa has called in to talk about the bombing. She feels that although the sanctions were working it was necessary to prove to Saddam Hussein that the U.S. was not weak. (Leo is the moderator.)

(1) *Gulf War 15: Militarily (DAT: 46:51)*³

- 1 T: .hh i mean the PROblem was;
 X hE: (.) felt wE were WEAK.
 X hE feels that we are a DEMocratic WEAK COUNtry;h
 X and that wE would nOt MOVE=
 5 L: [is the Only way
 X T: [and that BUSH did not have the suppOrt
 X [to move for anything.
 L: [yeah
 X' i i i i THINK that may be TRUE;
 10 Y but i wOnDer is the Only way to shOW our strength
 Y to dO so militArily.
 T: .hh uhm-
 L: sOmetimes it's STRONGer: to:: -
 T: i i think i [think it mAY be
 15 L: [hold ON;
 T: it mAY be in the last reSORT;=
 i don't KNOW;=

Teresa's point in line 2 of this excerpt is that Saddam Hussein believed the U.S. was weak and would not move for anything (line 7). This is X, the first part of the pat-

tern. Leo now agrees that this may be true (line 9). This is X' , the conceding move. But starting in line 10 Leo goes on to make a counter-claim (phrased as a rhetorical question), namely that to move militarily is not the only way to show strength. This is Y , as indicated in the margin of lines 10 and 11. Schematically the pattern could be represented, with slight simplification, as in (1a):

- (1a) Schematic representation of the Cardinal Concessive in (1)
- T: X Saddam felt that Bush did not have the support to move
(implied: Bush had to move to show strength)
- L: X' that may be true
- Y to move militarily is not the only way to show strength
(implied: showing strength does not need to be done militarily)

The potential incompatibility which is being invoked here is between X , the implied 'Bush had to move to show strength' and Y , the implied 'showing strength does not need to be done militarily'. It appeals to the everyday understanding that if one must show strength in such a situation, one does it militarily. Yet here Leo is claiming that X is valid, i.e. Bush needed to show strength, but that Y (the negation of the usual expectation) is also valid, i.e. showing strength does not need to be done militarily.

As this example makes clear, the conceding move X' is regularly less important than the counter-move Y in the Cardinal pattern. It often takes the form of a (weak) agreement to a prior point by one's interlocutor which prefaces an upcoming disagreement. The advantage of the pattern is that it allows a speaker to claim that two otherwise incompatible points both hold at the same time: what one's interlocutor has said is true, but one's own (potentially incompatible) point is also true. Notice that the incompatibility invoked is not necessarily based on semantic contrast but may involve expectations of compatibility or co-occurrence based on one's experience of the world.

In addition to the Cardinal Concessive illustrated above, there are several variations on this pattern in discourse (Couper-Kuhlen/Thompson 1999, 2000). In one of these, the conceding move X' follows the counter-move Y rather than preceding it.

Variation on the Cardinal Concessive pattern:

A: X (claim)

B: Y (counterclaim)

X' (acknowledgement of claim)

where X and Y are understood by participants to be potentially incompatible

(2) is an example of this Concessive variation from our corpus. It comes from the same radio phone-in as example (1). Sean has called about the violent protests

against the bombing. He expresses repugnance at the military action and says it is for 'ill' but now returns to the subject of the violent anti-war protests:

- (2) GulfWar 15: Heard (DAT: 49:14)
- 1 S: but uh bAck to these uh prOtesters.
 L: yeah.
- X S: thEY do no GOOD,
 X thEY won't change a DAMN (.) thIng; (.)
- 5 exCUSE the lAnge,=
 Y X' L: it's their right to be HEARD though; Isn't it,
 S: it's their right to be hEArD but nOt (.) quite that wAY;
 L: yeah i'm I'm afraid the vIOlence has rEAlly gotten out of
 [hAnd.
- 10 S: [yeah the VIOlence is outta hAnd.

In this variation on the Concessive pattern, Sean claims in lines 3–4 that the protesters *do no good* and that *they won't change a damn thing*. This is X, the first move. In the next turn (line 6) Leo now states that *it's their right to be heard*. This is a claim which evokes an incompatibility: normally if protesters cannot change anything, they do not protest. But Leo seems to be claiming that those against the war should protest because they have a right to be heard. His line 6 is therefore Y. Up to this point the structure is one of pure contrast: Leo appears to be contradicting Sean. Yet notice that he appends the particle *though*.

What is the effect of the particle *though* in such a pattern? We shall argue that it has the effect of conceding that Sean's X holds after all. In other words it seems to be saying 'though what you said is true'. In interpreting *though* this way we are following Pomerantz (1984), who says with respect to a comparable example in her work on agreeing and disagreeing with assessments that final *though* refers back to what the prior speaker has said and claims to agree with it. We are also in line with Quirk et al. (1985), who state that the final conjunct *though* in English is comparable in function to an abbreviated subordinate clause of concession. In the example at hand it would thus be equivalent to 'though they do no good' or 'though they won't change a damn thing'. We propose to represent this pattern schematically as in (2a):

- (2a) Schematic representation of the Concessive variation in (2)
- S: X the protesters do no good, they won't change a damn thing
 L: Y it's their right to be heard
 X' though (=though they do no good and won't change a damn thing)

Final *though* here concedes a prior point but it does not make this point explicit. It is loosely anaphoric to the X of prior discourse. Often it seems to be paraphrasable as 'though what you just said is true'.

What does final *though* contribute to such Concessive patterns? Why would speakers choose to carry out a conceding move this way? The first observation to make is that X' could be realized more explicitly. In fact, other lexico-syntactic forms are amply documented in our corpus of spoken American and British English (cf. Barth 2000; Barth-Weingarten [in press]). For instance, X' can be realized as a clause. This can be seen from the paraphrase used in (2a). What is significant about an X' which is realized clausally is that the conceding move is more explicit than with the simple conjunct *though*. Moreover, when X' is produced in a position following Y, the principle of end-weight (cf. Quirk et al. 1985) tends to lend it greater prominence than the prior Y. Taken together, greater explicitness and end-weight prominence conspire to make X' (the concession) seem more important than Y (the counter-move).

By contrast, with a shorter and more implicit realization of X' as in (2), speakers can counteract the natural prominence of X' in end position. X' realized with a final conjunct *though* has minimal weight and can be played down prosodically. In fact, in all of our examples final *though* is prosodically unobtrusive, lacking pitch prominence itself and forming a single intonation contour with the prior Y. The prosodic and lexico-syntactic downplaying which final *though* allows works against the natural prominence and weight that it would otherwise have.

We can thus establish a number of characteristics of the conjunct *though* when used in Concessive patterns. The conjunct *though* allows X' to remain inexplicit, X' can be prosodically downplayed, X' can have little weight despite its acknowledging X (cf. Table 1).

Table 1. Characteristics of conjunct *though*

conjunct <i>though</i>
– X' is inexplicit
– X' is prosodically downplayed
– X' has little weight, despite acknowledging X

3. Ongoing development of *though* in present-day English

In the second part of this paper it will be shown that these characteristics are crucial with respect to another use of *though* in present-day English, namely that of a topic shifter. We will first illustrate this use, next describe it in terms of language change and then relate it to the use of *though* as a Concessive conjunct. Finally, we will deal with the question of whether the development of *though* into a topic shifter is a case of grammaticalization.

3.1 Examples for the use of *though* in present-day English3.1.1 *Concessive-textual use*

In example (2) we observed the purely concessive use of a construction with final *though*. There are, however, other examples where applying the cardinal pattern is more difficult because the functional range of the construction with final *though* seems to have widened to include topical development. With some of these, the Concessive function is still easily detectable, with others it is less obvious. Example (3) illustrates the first case. It is part of an American English radio phone-in on lesbians. Jim, the caller, has had lesbian neighbors for some time and praises them for looking after his child when he was a single parent. Freddy Merts, the moderator, asks him whether he felt sexually attracted to his neighbors.

- (3) Freddy Merts 09: Borrow a child (DAT: 24:10–24:25)
- 1 X J: i was too bUsy for women bUt,
FM: yeah RIGHT,
J: yeah i WAS.
FM: [what an exCUSE,
- 5 X J: [(you know if you are) takin CARE of a kId and stuff
[(it'll keep you) BUsy,=
X' FM: [that's TRUE yEAh,
Y X' but the kId can be a great PROP though.
i know a lot of single FATHERs who bring their
- 10 kids to the pArk,
(.)
like a MAGnet,
J: oh(h)(h) ye(h)ah(h) [(h), tha/
FM: [or a MAGgot.
- 15 J: thAt's kind of sIck somehow though don't you thInk?
[((laughs)) (h) (h) (h)
FM: [we:ll
J: Using your kid to dAte-

In lines 1, 5 and 7 Jim claims that he was too busy for women because he was taking care of his child. This can be considered as X. Having first joked about this (lines 2, 4), Freddy Merts in line 6 then explicitly agrees with *that's true yeah*, which expresses the X'. *But the kid can be a great prop* in line 8 can be thought of as the counterclaim Y: it establishes a contrast between the disadvantages of having a child, who requires time-consuming care, and the advantages – having a child helps to find a partner. But note that Merts also appends the conjunct *though*, a second expression of the reference to X', what is being conceded.

In addition to the Concessive use of *though* here, we can detect another function: *though* seems to herald a shift of topic (what it is that is being talked about), namely from whether single fathers have time to date to what strategies single fathers use in order to date. On these grounds we would like to argue that the *though* following Y in line 8 is ambivalent: on the one hand *though* still recalls the preceding X' (the Concessive use); on the other hand, its anaphoric force is employed to achieve cohesion between two chunks of discourse which contrast in terms of topic (discourse marker use).⁴

3.1.2 Textual use

This discourse marker function is even more clearly visible with constructions where there is no explicit X' acknowledging the immediately preceding X at all, as in (4). This example is taken from an American English radio talk show with Carla Perez on how to advise young men about whether to enlist for service in the Gulf War. Her guest, Sharon, describes the situation in her house, where one of her two sons wants to leave but the other does not. She herself is a pacifist.

(4) Carla Perez 23: Listen (DAT: 50:15–50:48)

1 C: death has no other TRACK.

S: that's RIGHT;
me- children make mistakes,
and a part of RAISING them,

5 is to-
ACCEPT their mistakes,
and help them CORRECT their mistakes,
and LEARN from their mistakes.
but if THIS kid makes a mistake ON THIS one,
10 he may not have a CHANCE to correct it.

C: .hh uh LISTen,
another factor though YOU brought up,=
uh because uh uh (.) you SAID that what YOU know of the-
the PEOPLE who did NOT go in the vietnam war,
15 that THEY suffered scars of NOT going in,
just b'cause their peers DID go in.
so that y- y- you're DAMNED if you do
DAMNED if you don't.
S: you're DAMNED if you do an' DAMNED if you don't in a LOT
20 of ways.

Having talked for quite some time about the dilemma Sharon finds herself in, Carla Perez now shifts the topic in lines 11–12 to the situation the young men them-

selves experience. This is done rather explicitly with an in-breath, the filler *uh*, the attention-getter *listen* and the phrase *another factor*, which is followed by *though*. Here too we can observe an incompatibility. This time, however, it is no longer construable at the propositional level between two clause-sized units, X and Y, but it is rather a contrast on the textual level between two topics or subtopics. Instead of trying to assign X and Y to the relevant lines, we have indicated this by shading the material of the new subtopic grey.

In this example, *though* has lost its concessive function altogether and instead functions exclusively as a marker of topic organization, signalling the connection between and thereby linking two chunks of discourse. In contrast to the Concessive conjunct *though*, which was used in the schema to mean something like

Y holds, while acknowledging that X also holds,

the textual function can be broadly paraphrased as:

let us now move on to *this* topic, while acknowledging what has been said on *that* topic.

As a discourse marker, *though* no longer refers to a clause-sized proposition, but instead to a diffuse X – some abstract state of conversation, which is acknowledged as being the current state of the exchange and can be seen as a base for the new direction now being proposed.

As the use of the term *discourse marker* is not yet fully established (but cf. Lenk 1998; Jucker/Ziv 1998; Brinton 1996 and others), a brief comment on the application of this notion to *though* is in order.

3.2 *Though* as discourse marker

The term *discourse marker* offers itself here because we observe parallels between this kind of *though* and other lexical items which have been categorized similarly, for instance *now*, *anyway* and *well*. Among them is the function of indicating the relationship between an utterance and surrounding discourse (Levinson 1983:87–88; Schiffrin 1987; Fraser 1988, 1990). In the case of *though*, the marker indicates a contrast between two topics. It instructs the recipient as to how to process the following stretch of discourse with respect to what has preceded (Blakemore 1987; Brinton 1996). Other features which are characteristic for discourse markers and which can also be found with *though* are frequency in oral discourse (Östmann 1982; Brinton 1996), being a lexical adjunct to, and independent of, the utterance in the sense that it can be removed without rendering the utterance non-understandable (Fraser 1988), resistance to truth-conditional treatment (Levinson 1983:87–88; Traugott 1999:181) and syntactic mobility (cf. Fraser 1988) (cf. clause-final *though* in example (3) vs. *though* in second position in example (4)).

3.3 *Though* – a case of language change?

3.3.1 *Evidence for language change*

A first indication that the kind of use observed in examples (3) and (4) is not idiosyncratic is the fact that the discourse marker characteristics of *though* are frequent in our corpus.⁵

Figure 1 illustrates the proportion of concessive and textual functions for all cases of the conjunct *though* in all patterns, uniquely in unprepared speech. It shows that the textual, i.e. the topic shifter, function is fairly common. It amounts to 77% of the examples when we combine the clear and the fuzzy cases in the third and second columns respectively. Interestingly, the fuzzy cases in the second column, i.e. those where as in example (3) the function of *though* is ambivalent, amount to a rather large category. In fact, it is even larger than the two clear-cut categories together.

We would like to argue that these in-between cases are one of a number of phenomena observable with present-day English *though* which seem to indicate that we are observing a process of language change: there is a use of *though* which is shifting from the category of Concessive conjunct to that of discourse marker (cf. also Hopper/Traugott 1993; Lichtenberk 1991; Lehmann 1985: 310).

Recalling what we said about the uses of *though* in the three categories (cf. Figure 1), we can easily find more evidence for the hypothesis that present-day English *though* is developing into a discourse marker. For instance, the change manifests itself on the semantic-pragmatic level, where we can observe *bleaching* of the Concessive element (cf. Lehmann 1985). In fact, we can arrange the examples on a scale of ‘decreasing concessivity’: what is acknowledged is not the validity of some proposition X, but rather some abstract state of discourse. This results in an *increase in abstractness* (Pagliuca 1994: ix, cited in Traugott 1995a: 17): instead of two potentially incompatible propositions X and Y there are two topically distinct chunks of discourse. At the same time we can observe *pragmatic strengthening*

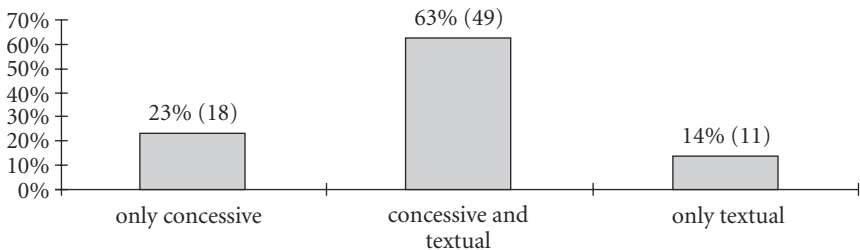


Figure 1. Proportion of concessive and textual functions of *though* (all patterns, all positions except initial, unprepared speech)

(cf. Traugott 1995a, 1995b, 1996, 1997, 1999) in the sense of an *increase in textual meaning* (cf. tendency II in Traugott 1989; Traugott/König 1991).

Connected with the semantic-pragmatic changes are changes on the syntactic level, such as an *increase in scope* (Traugott 1995a; Tabor/Traugott 1998) in that instead of connecting two syntagms, *though* connects larger chunks of text. Furthermore, on the lexical level we find evidence for *layering* with older 'topic shift' expressions such as *but* (cf. Hopper 1991). Finally, we can observe *persistence* of the Concessive use of *though* (Hopper 1991; Schiffrin 1987) and *redundancy* (cf. Traugott 1997:6), as in example (4) where *though* accompanies other signals of topic-shifting such as the filler *uh*, the attention-getter *listen* and the additive phrase *another factor*.

Many of these phenomena have also been identified in the development of other discourse markers in English, such as *indeed* (Traugott 1995a, 1996), *anyway* (Lenk 1998; Traugott 1996; Tabor/Traugott 1998) and *after all* (Traugott 1997). In addition, they have been found in the development of German discourse markers: *weil* 'because', for instance, can be used to introduce a narrative stretch of discourse (Gohl/Günthner 1999) and *obwohl* 'although' can be used to restrict or even annul the previous proposition (Günthner 1998, 2000). Onodera (1995) describes a similar development for Japanese *demo* and *dakedo* (cf. also Matsumoto 1988).

Hence, judging from our data, present-day English *though* lends itself readily to being classified as a lexical item developing into a discourse marker. In fact, the factors which we claim are motivating the development of present-day English *though* also seem to be rather typical for language-change processes.

3.3.2 *Motivation for the development of present-day English though*

3.3.2.1 *Metonymy and metaphor.* The development of the conjunct *though* into a discourse marker can be seen as motivated on the one hand by a kind of metaphorical extension (cf. Bybee/Pagliuca 1985:73) or transfer (cf. Heine/Claudi/Hünemeyer 1991:48) from the more concrete use of the conjunct to the more abstract use of the discourse marker as is illustrated in Figure 2. The transfer is based on perceived similarity between a relation of Concession mediating between two potentially incompatible propositions and the connection of two contrasting (sub)topics on the textual level.

At the same time there may also be a metonymic motivation in the development of *though*, deriving from the fact that in the Concessive pattern, Y typically represents not only the main point, but also a new and different point. Since the incompatibility relation between X and Y can be very loose indeed, the new material in Y can easily lead to the inference that speaker B is not only presenting Y for its contrastive value with X but indeed wishes to use Y to steer the conversation in this (new) direction. In her perceptive analysis of agreeing and disagreeing with assessments, Pomerantz describes conversational *though* as "a shift in ... param-

proposition X'		(sub)topic 1
but proposition Y		but (sub)topic 2
X is acknowledged to hold	Metaphorical	T1 is acknowledged (thereby signalling that T1 is complete)
	⇒	
a (contrasting) Y is claimed to hold as well	Extension	a (different/contrasting) T2 is now introduced

Figure 2. Metaphorical extension of conjunct *though* to discourse marker *though* (T – (sub)topic)

eters” on which something is being assessed (1984:63). Since shifted parameters are often associated with new subtopics, it is not difficult to see how a particle like *though* might come to be interpreted – quasi conventionally – as signalling a topic shift. The observation of both metaphorical and metonymic principles at work in the development of *though* shows that the two may be involved at once in the same process of language change (Heine/Claudi/Hünemeyer 1991:74).

3.3.2.2 Characteristics of *though*, *although* and *even though* relevant for language change. There is a second factor promoting the development of present-day English *though* into a discourse marker which is familiar from other language-change processes: the characteristics of *though* as a marker of Concession constrain its discourse-marking functions. *Though* would be wholly unsuitable as a marker of, say, similarity (cf. *like*) because its conjunct use crucially involves contrast.

As mentioned earlier, in its role as X' *though* can remain inexplicit; it can be prosodically downplayed and it has little weight, despite the acknowledgement of X. If we compare this with *although* and *even though*, both these markers provide exactly the opposite picture. With these markers X' must be spelled out as a clause. Moreover, because it is a clause, X' is likely to carry an accent and to have more weight (cf. Table 2). Similarly, when *although* and *even though* are compared to

Table 2. Characteristics of *though*, *although* and *even though* relevant for language change

conjunct <i>though</i>	conjunctions <i>although</i> , <i>even though</i>
X' is inexplicit	X' must be spelled out
X' is prosodically downplayed	X' has primary accent
X' has little weight, despite acknowledging X	X' has more weight, as X is acknowledged in clause-size unit
<i>though</i> is syntactically mobile	<i>although/even though</i> are syntactically fixed

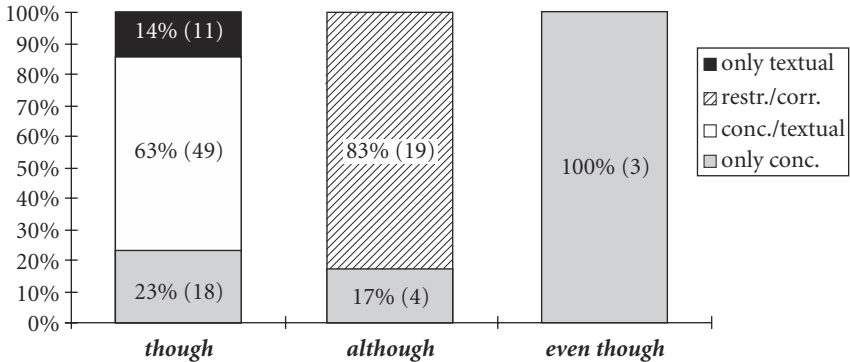


Figure 3. Proportion of concessive and textual functions of *though*, *although* and *even though* (all patterns, all positions, unprepared speech)

though with respect to word order, which according to Fraser (1988) is also relevant in the development of discourse markers, it can be seen that the conjunctions are syntactically fixed, whereas the conjunct is syntactically mobile.

These differences, we believe, can explain why, among the three markers of Concession, the acquisition of a textual function is specific to *though*, as is illustrated in Figure 3.

This figure again shows that *though* can operate in all three categories: concessive, concessive-textual and textual. In contrast, *even though* does not take on textual function at all. With *although* we do find a textual function. This, however, differs from the textual function of *though* in that *although* most often marks a restriction or correction with respect to a chunk of prior discourse (cf. Barth 2000; also Günthner 1998, 2000 for German *obwohl* 'although'). This difference is indicated by hatching in the relevant column.

3.4 *Though* – a case of grammaticalization?

The question which these observations inevitably raise is whether – if the development of *though* is a case of language development – it can also be called a case of grammaticalization. In contrast to the majority of the research literature (cf., for instance, Brinton 1996; Onodera 1995; Traugott 1995a), we believe that it is necessary to clearly separate these two claims: whereas it cannot be denied that the item in question is undergoing change, the question whether this is in fact grammaticalization is more difficult. It leads into the borderline discussion reported by Giacalone Ramat/Hopper (1998). Most of the phenomena observable in the development of *though*, as well as in the development of other discourse markers, clearly clash with Lehmann's (1985) criteria: there is an increase in scope rather than condensation;

independence from the utterance instead of coalescence; there is no obligatorification and only rarely phonological attrition; and *though* can be moved into most syntactic positions rather than exhibiting syntactic fixation. This suggests that the development of *though* cannot be categorized as a case of grammaticalization.

A relevant alternative category might be, for instance, pragmaticalization. This term has been used to denote the development of lexical items into text-structuring devices (cf., for instance, Erman/Kotsinas 1993: 79–80). The discourse marker *though*, however, emerges from a grammatical marker and thus diverges from the default case. Aijmer's (1997) description of pragmaticalization as "... involv[ing] the speaker's attitude towards the hearer" (1997: 2) is similarly unhelpful: the Concessive conjunct *though* meets this criterion as much (or as little) as the discourse marker *though*. In addition, there are numerous similarities between the concepts of grammaticalization and pragmaticalization (cf. Erman/Kotsinas 1993; Aijmer 1997) so that the latter seems to be a subtype of grammaticalization rather than a separate, independently definable process (cf. Wischer 2000).⁶

On the other hand, several authors, among them Traugott (1995a) and Hopper (1991), have pointed out that Lehmann's grammaticalization criteria may not be the ultimate basis of decision. In the early stages of grammaticalization they are applicable only with difficulty or not at all (cf. also Gohl/Günthner 1999). Therefore, a relaxation of Lehmann's criteria might appear to be desirable. However, the danger inherent in this solution is that the term grammaticalization may itself bleach and ultimately no longer be meaningful in linguistic description.

We would like to suggest that there may be a more attractive solution, namely treating the notion of grammaticalization as a (further) instance of prototypicality. In doing so we are taking advantage of the fact that this concept is applicable not only to referential items but also to categories for the description of language (cf., for instance, Taylor 1989: 175). The development of discourse markers could then be considered as related to more prototypical cases of grammaticalization in terms of family resemblance (cf. Taylor 1989: 108–121). This would explain why in some cases only a rather limited number of Lehmann's grammaticalization criteria are met. And it would release us from the necessity of making a binary decision as to whether a particular case is to be included in the category of grammaticalization or not. This would allow us to focus on the similarities with prototypical grammaticalization rather than on the differences (cf. Traugott 1995a: 20) and we could incorporate interesting borderline cases, such as the discourse marker *though*, into the discussion. Gohl/Günthner (1999), Hopper (1998) and Wischer (2000) allude to similar solutions.

4. Summary

This paper has presented the results of an empirical analysis of the use of *though* in a set of present-day English spoken data. On the basis of an abstract model of Concession in everyday spoken discourse, it was shown that the conjunct *though* has characteristics which promote its use as an element in one of the variations of the Cardinal Concessive pattern: it allows X' to remain inexplicit, X' can be downplayed prosodically and it retains little weight despite acknowledging X. On the basis of this Concessive use, there is a use of *though* which is undergoing change, in that it is acquiring textual function. This change seems to be motivated by both metaphorical and metonymic processes. The function of *though* as a discourse marker is constrained by its use in the Concessive pattern. Thus, the phenomena observable with the development of *though* have much in common with those exhibited in the evolution of other discourse markers. As a contribution to the current debate on whether the development of discourse markers can be categorized as grammaticalization, it has been suggested that these phenomena are related in terms of family resemblance. Incorporating language change processes which resemble prototypical grammaticalization in some ways but differ in others into research on grammaticalization is a desirable solution as it can also shed light on the process of grammaticalization itself.

Appendix: Transcription conventions

ACcent	primary accent	=	latching
Accent	secondary accent	:	lengthening
		.hh	in-breath
.	final intonation falling to low	(h)	laugh particle
;	final intonation falling to mid	(.)	pause
?	final intonation rising to high	/	break-off
,	final intonation rising to mid	()	suggested transcription
-	final level intonation	(())	meta-comment
		[	overlap
		■	(sub)topic 2

one line ≈ one intonation unit

Notes

1. This study grew out of work in the project “Adverbial Clause Relations: Variation and change in the English and German lexicon” in the Sonderforschungsbereich “Variation and

Evolution in the Lexicon” at the University of Konstanz, Germany. We would like to thank Sandra A. Thompson, Susanne Günthner and Christine Gohl for their valuable comments on earlier versions of this paper.

2. We use capitals here in order to distinguish the discourse relation from the everyday notion of conceding.
3. Transcription conventions can be found in the Appendix.
4. *Though* in line 15, by contrast, is again purely concessive in the sense described for example (2).
5. Our corpus consists of approximately thirty-five hours of unprepared spoken American and British English taken from private conversations, radio phone-ins, TV discussions and radio talk shows.
6. Traugott (1995a) also dismisses the concept of pragmaticalization, arguing that it lacks justification since also clearly grammatical forms, such as tense, can have pragmatic function. Similarly, even the discourse marker *though* retains the semantic notion of Contrast (cf. Barth-Weingarten [in press]).

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Grammaticalization, subjectification and the origin of phatic markers

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1. Introducing the problem

In the last few years, language change phenomena of quite different kinds have been studied under the heading “grammaticalization.” One of them, the path leading to conjunctions, is particularly interesting because it has been considered to exemplify simultaneously the phenomenon called “subjectification.” Traugott and König (1991: 199–201) illustrate paradigmatically this overlapping of processes by the change of the Old English adverbial phrase *þa hwile þe* (‘at the time that’) into the concessive conjunction *while*.¹ But granted that grammaticalization and subjectification are present in such cases, one is still justified in asking whether one should speak of grammaticalization and/or subjectification when the evolving form goes beyond the stage of a conjunction into, e.g., that of a discourse marker.² Can it not be that grammaticalization and subjectification go separate ways in cases like these?

I intend to deal with this question by observing the change of Port. *pois*, which – having begun life in European Portuguese as a preposition, adverb and conjunction – has gone beyond the conjunction stage into that of a discourse marker, being used in present day Portuguese as an affirmation marker (as a holophrastic answer to yes-no questions) and as a phatic marker. By a “phatic marker” I mean an expression by which a speaker signals attention to the partner’s utterance, especially when this utterance constitutes a long stretch of discourse, causing the speaker to utter the phatic marker at intervals. I mean, then, something close to a “back channel” expression, in the sense of Yngve (1970).³ In what follows, I will describe the evolution of *pois* (Sections 1 to 5), and I will then address the questions of grammaticalization and subjectification, linking them to considerations about the origin of phatic markers (Section 6).

2. *Pois* as a temporal preposition, adverb and conjunction

The Portuguese word *pois* very probably has its roots in Latin *post* and it is generally assumed that the change has been *post* > *pos* > *pois*. In the 13th century, the word – written *pos*, *pois* or *poys* – conveys the temporal meaning of ‘after’ and can be observed to occur either as a temporal preposition (example 1) or as a temporal adverb (example 2) or as a temporal conjunction, in which case it is followed by *que* (‘that’) (example 3):

- (1) *Mando o meu salteyro grande a Jo(han) Ean(e)s, suclareyro,*
 I bequeath my large psaltery to Jo(han) Ean(e)s, sub-cellarer,
q(ue) o aia elle en sua uida
 that it shall have he in his life
 & *poys sua mort(e) que fique ao m(o)est(e)i(r)o*
 and *poys* /=after/ his death that (it) be given to the monastery
 & *neúún no~ seia podroso de o en tirar.*
 and that nobody be mighty enough to take it from there.⁴
 (1281; CIPM/Maia, *História do Galego-Português*, 055)
- (2) *o preyto en que el testemonhou por dizer el que*
 the lawsuit in which he testified – by (his) saying that
é falso o testimonhyo nõ deue seer desfeyto,
 his testimony is false – shall not be undone,
foras se podesse poys seer prouado per boas
 except if it could *poys* /=afterwards/ be proven by good
testimonhas ou per boo scripto.
 witnesses or by good writing.
 (1280?; CIPM/Afonso X, *Foro Real*, 94r)
- (3) *Firmente deffendemos que nenhuus nõ seyã ousados de casar*
 Firmly (we) forbid that anybody be daring to marry
contra mandame~to da Sancta Eygreya
 against the commandment of the Holy Church
poys que lhis for deffendodo.
poys /=after/ that it them has been forbidden.
 (1280?; CIPM/Afonso X, *Foro Real*, 104r)

From observing these and other coeval documents it is impossible to establish, for the change of *pois*, a hierarchy of precedence that would have run – from what we know about similar cases (Traugott 1982, 1989; Traugott/König 1991) – along the chain from the preposition to the adverb and to the conjunction. Nevertheless, this seems to be validated for this word by the fact that the first element of the chain

(*pois* as a preposition) was the first (and so far the only one) to disappear from the language, and by the fact that the posterior evolution of *pois* into a discourse marker took up from the last element of the chain (*pois* as a conjunction), as we will see.

3. From temporal adverb/conjunction to causal adverb/conjunction

Gradually, the use of *pois* as a preposition became less and less frequent, but in its adverbial and conjunctive functions the word acquired a causal reading. For instance, the sentence above illustrates a possible ambiguity between a temporal and a causal reading of the subordinate clause, although the temporal one is the more plausible. This higher plausibility of the temporal reading is due, not only to the contents of the propositions expressed, but also to the fact that the verb of the subordinate clause is in the subjunctive mood (*for*), while the indicative mood would be expected if the subordinate clause were to express a factual cause for the state of affairs expressed in the subordinating clause. The same ambiguity between time and cause can be observed in the following sentence, but now the causal reading is the more plausible one and, predictably, the verb of the subordinate clause is in the indicative mood (*he*):

- (4) *aq(ue)l q(ue) o be~ rreçebe assi como deue*
 he who it well receives, thus as (he) should,
fica lauado eno corpo ((e)) en na alma
 is washed in (his) body and in (his) soul
\$ca poys que agua he sagrada co~ as santas palauras
 because poys that the water is made holy with the holy words
q(ue) lhy dize~ tolhe as mazelas da alma
 that (they) say it checks the wounds of the soul
 (1350ca; CIPM/Afonso X, *Primeyra Partida*, 14c)

The change of *pois* from temporal to causal conjunction follows the well known pattern by which, given two conjoined facts, A and B, if A is presented as having taken place after B, then A is interpreted as having been caused by B (see Traugott/König 1991: 194–199, on inferred causation). We can alternatively say that, after a certain moment, speakers uttering *A pois B* not only expressed that B was anterior to A, but conversationally implicated that it was the cause of A. This implicature – by force of frequent occurrence – became conventional in Grice's sense (Grice 1975), so that the idea of causality became a part of the semantics of *pois*.

4. From causal conjunction to discourse marker

To explain how *pois* came to be used as a discourse marker, it is important to focus on the use of *pois* as a causal conjunction in directive contexts, i.e., contexts where the clause introduced by *pois* is subordinated to a clause that expresses an injunction or that states an urgency for a certain course of action. In these cases, the subordinate *pois*-clause is causal in the sense of presenting the reason for the injunction expressed in the subordinating clause. Therefore, in (5), the subordinating clause – “Likewise he asked that (...) that he should be forced to give up his inheritance”⁵ – expresses a request by the verbal form *pediu* (“asked”), while the embedded subordinated clause – “*pois* the said squire would not pay the said tribute to the said Monastery” – expresses the reason for the request.

- (5) *Outrossi pediu q(ue) pois o d(i)to scudeiro no~ pagaua*
 Likewise (he) asked that *pois* the said squire would not pay
o d(i)to trebuto ao d(i)to Mon(steiro)
 the said tribute to the said Monastery

q(ue) lhj abrisse ma~o das ssas herdades
 that he should be forced to give up his inheritance
 (1339; CIPM/Martins, *Clíticos na História do Português*, 087)

It is important to note what positions the *pois*-clause may occupy in the sentence. One of them is after the subordinating clause, as in (3). But the *pois*-clause could also occur before the subordinating clause, certainly because the reason it expressed was often a fact *known* to the hearer (following the idea that known facts are more apt to convince than unknown ones, and according to the functional principle that old information tends to occur before new). Sometimes the *pois*-clause does not appear at the very beginning of the sentence, but allows an expression before it: e.g., in (5) the verbal form expressing the directive force (“asked”) comes before the *pois*-clause, but the propositional content of the request comes after it. Basically two constructions are possible. One is *C1, pois C2* and the other is *pois C2, C1* (where *C1* = subordinating directive clause; *C2* = subordinated causal clause expressing the reason for the direction). An important variant of this last structure consisted in having *C1* embedded in the subordinated clause, the result being *pois [C1] C2*. Sentence (6) illustrates this possibility: *C1* is the injunction “(...) what are you doing(...)?”, and *pois C2* is the justification for this injunction, i.e. “*Pois* (...) that you won’t begin your fight.”

- (6) – *Pois que fazees – disse o comde –*
 – *Pois* what are you doing – said the count –
que na~o começaaís vosso combate?
 that (you) won't begin your fight?

(15th ct.; CIPM/Zurara, *Crónica de D. Pedro de Meneses*, 465)

As soon as the *pois*-clause came to express the justification for a proposed course of action, it frequently happened that this justification was some fact that had been previously referred to in discourse, either by the speaker himself or by the partner. In such situations *pois* tended to be followed by an anaphoric expression referring to that fact. In (7), e.g., the causal clause *Pois que assy he* makes use of the anaphora *assy* (“so”), which picks up the whole previous sentence of the dialogue partner. Another frequently used anaphoric *pois*-clause was *pois então* (“*pois* then/*pois* in that case”), where *então* is the anaphoric term.

- (7) *Nossos filhos e filhas casaremos*
 Our sons and daughters (we) will marry (them)
daquy fora (...)
 away from here (...)
porque, se porventura nos aqui falleçermos,
 because, if by any chance we'll die here,
que elles tenham jaa onde vivam.
 that they have already a place where (they) may live.
 – *Pois que assy he – disse aquella mouro amtigo –*
 – *Pois* that it is so – said that ancient moor –
eu me quero hiir pera Allçaçar Ceguer
 I want to go to Allçaçar Ceguer

(15th ct.; CIPM/Zurara, *Crónica de D. Pedro de Meneses*, 254)

As was to be expected, the anaphoric causal clause underwent a shortening process: *pois que assim é*, or *pois então*, was reduced to *pois*. This form thus acquired the function of signalling that a previous stretch of discourse was to be interpreted as giving the reason for the injunction expressed by the proposition following *pois*. This way of functioning is exemplified in the following dialogue:

- (8) *Ines Pereyra. Marido nam digo isso,*
 Ines Pereyra. Husband, I don't say (=mean) that,
Pe. Pois q~ dizeis vos molher
 Pe. *Pois* what are you saying woman

Ines. Yr folgar onde eu quiser

Ines. To go have fun where I please

(16th ct.; BVAP/Gil Vicente, *Inês Pereira*, ll. 1002–1004)

The woman (Ines) says to her husband that “she hadn’t said that,” meaning that she hadn’t meant by her previous words what her husband had supposed she had meant. The husband wants to know what she had meant after all, and asks her *Pois q~ dizeis vos molher* (“*Pois* what are you saying, woman”). In this sentence the word *pois* serves to carry the speaker’s implication that the justification for his present question is to be found in some fact relative to the foregoing discourse (this fact being, in the present instance, his wife having said that he had not grasped what she had meant): by the use of *pois*, the speaker conveys the implication that he may not have understood his wife, which is of course a relevant reason for his question “what are you saying, woman.” If we try to make explicit the implicature by “restoring” the subordinate clause, we may suppose the husband’s utterance to have run something like “*Pois that is not what you’re saying*, what are you saying, woman.” The utterance of this clause was, however, no longer felt to be obligatory at this point in the history of *pois*. The word had thus by then already acquired the distributional and semantic properties of a discourse marker.

Attention should also be drawn to the process of *subjectification*, along the path described by Traugott (1982, 1989, 1995a, 1995b; Traugott/König 1991), that led the word to the category of a discourse marker.

Semantically, it evolved from a conjunction in constructions like *C1 pois C2*, or *pois C2, C1*, where it conveyed the implicature that *C2* stated an objective cause of *C1*. Later on, in contexts where *C1* had a directive nature, *pois* came to be used to imply that *C2* was the subjective reason for the injunction expressed by *C1*. Later on still, *C2* was no longer verbalized and *pois* was used immediately before the directive sentence – mostly in constructions like *Pois C!* (injunctions) and *Pois C?* (questions), but also in statements with directive import of the form *Pois C*. It then conveyed the implicature that the reason for the direction expressed by *C* was to be found in something said before during the talk exchange. At this stage, *pois* no longer connects two sentences, but establishes a link between the sentence following it and some element of the previous discourse. It is thus no longer a conjunction, and a recategorization as a discourse marker is called for.⁶

Once *pois* reached sentence-initial position and could be used before a single sentence, it entered a path of semantic-pragmatic change that was an almost predictable generalization from the implicature we have observed so far. This implicature became less and less bound to any particular propositions expressed in previous discourse. In the end, only one idea was retained: that the justification for uttering the sentence following *pois*, and thereby expressing a certain proposition and performing a certain speech act, was *somehow* to be found in what had been

said before.⁷ *Pois* called to mind that previous discourse should be looked upon as a good ground for the injunction, question or statement uttered after it. The following fragment illustrates this:

- (9) *a terra assesseg(a)da estaa, & o que ho Magriço*
 the country calm is, & what the Lean One
diz he pera crer,
 says is to be believed

porque na~o ho pode nenhu~ melhor saber que elle, que o
 because nobody can it better know than he, as (he) it
vyo pello olho.
 saw with (his) eye.

 – *Ora pois – disse dom*
 – Now *pois* – said dom
D(ua)rte – vamos com D(eu)s & e~ o seu nome faremos
 Duarte – let us go with God and in his name we shall do

oge m(ui)to de nossa homrra.
 today much for our honour.
 (15th ct.; CIPM/Zurara, *Crónica de D. Pedro de Meneses*, 701)

Dom Duarte incites his men to go and fight the moors, by uttering a sentence beginning with (*Ora*) *pois*, thereby implying that his incitement finds its justification in the previous statement, according to which the country was calm (i.e., the enemy was not on the alert).

Although directive contexts played a most important role in the change of *pois* from conjunction to discourse marker, some examples of its use in non-directive contexts can also be found in the 15th century. In non-directive contexts, *pois* could not – by definition – signal that the speaker looked upon previous discourse as supplying a valid ground for an injunction, and so it came to implicate related ideas, such as that the speaker *assented to*, or simply that he *had considered* or *taken into account* the previous discourse. These uses of *pois* may be called “consecutive” in a broad sense, as the particle signals that the sentence which follows it is uttered as a consequence of what has been said before.

Once the stage was attained when the only restriction set by *pois* on previous discourse was that it should be looked upon as being involved in the considerations that have led the speaker to utter *pois* +S, the way was open for new extensions. For instance, adversative uses of *pois* began to emerge in contexts where the contents of the sentence following *pois* were somehow unexpected in the light of previous discourse, although the utterance of *pois* by the speaker implicates that he

had taken into consideration this discourse. Examples can already be found in the 16th century:

- (10) *Assí Pompílio, ouvindo que a possança*
 So Pompilius, learning that the power
/Dos inimigos a terra lhe corria,
 Of the enemies his land was overrunning,
/A quem lhe a dura nova estava dando,
 To those who him the bad news were giving,
/"Pois eu (responde) estou sacrificando."
 "Pois I (he replies) am sacrificing"
 (16th ct.; BVAP/Camões, *Os Lusíadas*, C. VIII, e. 31)

We thus get to a point where *pois* as a discourse marker may fulfill two functions – the consecutive and the adversative. These roles have been kept until today. Here are some examples of the 19th century:

- (11) *Viajar?...qual viajar! até à Cova da Piedade, quando muito,(...).*
 To travel?...what! till Cova da Piedade, at best,(...).
Pois/consec/ficareis alfacinhas para sempre, cuidando que
Pois/consec/you'll remain lisboners forever, thinking that
todos os cafés [são] como o do Marrare.
 every café [is] like Marrare's.
Pois/advers/ não são, não:
Pois/advers/(they) aren't at all:
e o do Cartaxo menos que nenhum.
 and the one at Cartaxo less so than any other.
 (19th ct.; BVAP/Garrett, *Viagens*, Cap. VII, par. 5–7)

5. From discourse marker to affirmation marker

A further development has led to the use of *pois* in present day Portuguese as an affirmative answer to yes-no questions:

- (12) A: *O Carlos era pobre?*
 Carlos was poor?
 B: *Pois.*

Plausibly, *pois* as an affirmation marker derived from its use as a discourse marker, but the steps in this change are difficult to trace because here we are dealing with

oral discourse, so that written evidence is hard to come by. However, a reconstruction is possible on the basis of some attested facts about the distribution of *pois*. The first thing to bear in mind is the occurrence of the consecutive *pois* in utterances expressing assent to a previous suggested course of action, as in:

- (13) A: *Se não queremos ser assaltados, devemos partir já.*
 If (we) don't want to be robbed, (we) must start at once.
 B: *Pois partamos.*
Pois let us start.

Assent to an injunction is commonly expressed in Portuguese by repetition of the verb (*partamos*), but it may also be given by *sim* ("yes"). Affirmative answers to injunctions might thus take either the form *Pois+Verb* or *Pois sim*. Gradually, these forms shortened to simple *Pois*. Now, it is plausible to assume that affirmative answers to yes-no questions underwent a similar change, because the standard ways of construing these answers in Portuguese are also either by repetition of the verb or by the utterance of *sim*. Therefore an affirmative answer to a question like the one in (12) would normally be either *Era* ("(He) was") or *Sim*. However, two other answer forms were (and are) also possible, which result from placing *pois* before the verb or before *sim*, yielding *Pois era* or *Pois sim*. These variants must have entered the language due to the analogy with the answers to injunctions (notice that a question is a kind of injunction). Later on, the answer forms *Pois+Verb* and *Pois sim* were in turn shortened to *Pois*, which from then on could function as an affirmation marker.

6. From affirmation marker to phatic marker

Once the role of affirmation marker is reached, it is no longer astonishing to find *pois* take on the functions of a phatic marker. Indeed, in other languages affirmation markers function as phatic markers, as is the case with English *yes*. In the particular case of *pois* the way into the phatic function was facilitated by the fact that, as a discourse marker, *pois* did not have to signal assent to any previous propositional content, but simply that previous discourse had been *considered* by the speaker. This way, *pois* came to be used to signal, not necessarily that the speaker *agreed* with what was being said, but simply that he *understood* what is being said:

- (14) A: *As taxas de juro vão continuar a baixar, de modo que*
 Interest rates will keep on falling, so that it
não vai ser difícil para si pagar o empréstimo.
 won't be difficult for you to pay the loan.

B: *Pois, mas não acredito que as taxas vão baixar*
Pois, but (I) don't believe the rates will keep on falling
indefinidamente.
 indefinitely.

At its furthest stage, then, *pois* comes to be used as a phatic marker to punctuate long utterances of the conversation partner, thereby signalling attention to the partner's utterance:

(15) X: [...] *porque assim fogões, frigoríficos, isso fica-me*
 [...] because things like stoves, refrigerators, out of those
um ali e o resto ponho tudo em exposição,
 one will go there and the others I'll put all on display,

A: *Claro.*
 Sure.

X: *tenho mesmo um estrado já, manda (...), mandei fazer um estrado,*
 I even have a platform already, I had (...), I had a platform made,
tenho tudo para uma sala, a cá de baixo,
 I have everything for a display room, the one down here,
quer dizer, poder levar ali as pessoas para escolherem
 I mean, to be able to take people there for them to choose
as coisas,
 things,

A: *Pois/phatic m./.*

X: *coisas grandes.*
 large things.

A: *Pois/phatic m./.* *E portanto ficas com a parte de baixo e a parte de cima.*
Pois/phatic m./. And so you'll have the lower floor and the upper floor.

X: *Pois,/affirm. m./, a parte de baixo é mais*
Pois,/affirm. m./, the lower floor is more appropriate
para exposição,
 for the display,

A: *Pois/phatic m./.*

X: *percebes, e a parte de cima é para arrumação*
 you get me, and the upper floor is for storage

A: (...) *Pois/phatic m./.*
 (ca. 1980; CRPC/*Corpus oral*)

7. On grammaticalization, subjectification and the origin of phatic markers

What conclusions may we draw from the history of *pois* in respect to grammaticalization and subjectification? We may say that it is a case of grammaticalization if we follow Traugott's approach to the concept and her suggestion that the development of discourse markers ought to be included in a theory of grammaticalization (Traugott 1995a: 2), although our conception of grammaticalization itself ought to be somehow revised, to encompass a new view of grammar, i.e., a view according to which grammar "structures communicative (including cognitive) aspects of language. It encompasses not only phonology, morphosyntax and semantics but also inferences that arise out of linguistic form (...)" (Traugott 1995a: 7).

Indeed, the development of *pois* features some of the criteria associated with the grammaticalization of discourse markers that Traugott calls "unidirectional shifts": let us then look at how *pois* fares with the criteria posited by Traugott (1995a: 19–20):

i. *Decategorialization*. Not standardly present. But if we admit that grammaticalization typically involves something like the passage from a major category to a minor one (Hopper/Traugott 1993: 103–105), we might consider that there is something close to this shift in the case of *pois*, as the word starts as a preposition and ends up as a discourse marker: i.e., it would go from a more central category to one which is not obviously central (note, e.g., that prepositions can determine case, but not so with discourse markers; also, that prepositions take part in sentence formation at a more constitutive level than discourse markers, etc.).⁸

ii. *Bonding*. This criterion cannot be applied to *pois*, as the starting point of the process is not a phrase but a single word. However, bonding is not a necessary condition for grammaticalization, as many examples in the literature show: e.g., the path from Old English *sibþan* to *since* (Traugott/König 1991: 194–196).

iii. *Phonological reduction*. It may be said to be present because, in present day Portuguese, the word, as an affirmation marker or a phatic marker, may occur monophthongized as *pos* in informal speech.

iv. *Generalization of meaning*. From the stage of causal conjunction on, there is an obvious generalization of meaning: at first, *pois* implicates that one of the propositions it connects expresses cause; later, in the first stages as a discourse marker, it implicates that something in the previous discourse is to be seen as the reason for the speech act expressed by the sentence following *pois*; still later on, it may implicate next to any propositional content inferable from the context or previous discourse.

If we take "generalization of meaning" from another perspective, namely as a semantic development which correlates with an ever wider range of contexts in which the form can be used (see Bybee/Perkins/Pagliuca 1994:5–6), and therefore with more polysemy, then *pois* can be seen to have generalized, insofar as it has kept

some of its older functions (namely, as causal adverb and conjunction) and more recent ones have been added (discourse marker, affirmation marker and phatic marker).⁹

v. *Increase in pragmatic function.* This shift is present inasmuch as *pois* moves from concrete meanings (temporal) to less concrete (causal) and then to abstract (interpersonal). There is a movement away from the referenced event towards the speech event.

vi. *Subjectification.* The way from more objective to more subjective meanings is instanced by this change along the cline: intra-sentential function > inter-clausal function > context-relative function > metacommunicative function. We may distinguish four moments along a scale of subjectification:

- as a *temporal conjunction*: the speaker implicates a temporal relationship between the events expressed by the clauses connected by *pois*;
- as a *causal conjunction*: the speaker implicates a relationship of a state-of-affairs to its cause or reason;
- as a *discourse marker*: the speaker implicates an attitude towards a feature or features of the previous discourse, and
- as a *phatic marker*: the speaker implicates an attitude towards the communication act itself.

These results, if we follow Traugott, are more in favour of grammaticalization than against it. However, we still have to face the criteria of *syntactic scope* and *disjunction* (Traugott 1995a: 19). As far as these are concerned, the behaviour of *pois* is not very different from that of the discourse markers Traugott analysed in her paper, and the answers forwarded there also apply to *pois*. As for syntactic scope, we observe that it increases in the case of *pois*: at first, along the chain preposition > adverb > conjunction;¹⁰ then, in its way to discourse marker; and, finally, along the path to affirmative and phatic marker. It is questionable however whether we should still speak of “syntactic scope” from the discourse marker stage onwards, because the form gradually leaves the realm of the sentence to assume textual and metatextual functions. But if we want to keep an extended notion of syntactic scope, we must say that *pois* has increased its scope. Now this runs against the view that hypothesizes a correlation between grammaticalization and decrease in syntactic scope (Lehmann 1995: 143). However, as Traugott (1995a: 20) points out, this view should be revised, as many counter-examples (i.e., of increase in scope coupled with apparent grammaticalization) have been pointed out in the literature: the fact that the syntactic scope of a form does not decrease along the time line does not therefore seem to be incompatible with grammaticalization (see also Tabor/Traugott 1998). As for disjunction, again there is a problem of classification, because *pois* does not clearly fit the properties of a disjunct (e.g., it does not fill up an independent breath unit with special intonation and stress), but it may nevertheless be counted into the

category, on the grounds that it occurs on the left periphery of the sentence.¹¹ If it is a disjunct, we face the problem of a word which moves from syntax (as a conjunction, it is inter-clausal) to discourse (as a discourse marker, it signals a relation to previous discourse), apparently running counter to the path of grammaticalization posited by Givón: discourse > syntax > morphology > morphophonemics > zero. However, if we follow Traugott, this change of *pois* should not so much be interpreted as a move into discourse, but as one from syntax, via pragmatic strengthening in discourse, to syntax with different function (Traugott 1995a: 22). And indeed it must be acknowledged that, as a discourse marker, *pois* is subject to strict syntactic rules. In short, the criterion of disjunction shouldn't be definitive against seeing the change of *pois* as an instance of grammaticalization.

The evolution of *pois* from a preposition to a phatic marker leads one to think about the origin of such markers. Little work has been done on this problem, so that the first important task is to raise interesting questions. One of these is this: if, as seems to be the case, phatic markers are units with regular phonological structure (with the possible exception of *hm* and similar forms), can it not be that they have inherited their structure from more complex units by processes of grammaticalization and subjectification? We have seen this to be so in the case of *pois*, but other words that may have a very close use to that of phatic markers, like Portuguese *certo* ("right") and Am. English *sure*, can also be looked upon as being the output of a change whose input were adverbs, adjectives, or more complex structures which include these categories. Besides these, another category that might be at the origin of phatic markers is that of pronouns. In Portuguese, the demonstrative *isso* ("that") can already be used as an affirmation marker in certain contexts, mainly those where the speaker emphatically wants to subscribe to the truth or accuracy of what the partner has said.¹² It is therefore plausible to admit that *isso* may fulfil a phatic function in the future. In Finnish, there is an interesting development of *niin* (studied in Sorjonen 1997), a form which started as a demonstrative pronoun ("that"), moved to the conjunction stage, and can be used today as a response particle with several functions, among which we can count the phatic one.¹³

These facts lead me to formulate a tentative hypothesis on the origin of phatic markers. Under the semantic-pragmatic point of view, strong candidates to become phatic markers are: (i) those forms by which the speaker expresses *approval*, be it by either endorsing the partner's statement as true or correct, or by signalling support to a course of action presented by the partner (here Port. *pois*, *certo*, Am. Eng. *sure*, It. *bene* are to be included); (ii) any forms – like pronouns – that can anaphorically pick up the partner's previous proposition, or some aspect of it (here we find Port. *isso*, Fin. *niin*). This hypothesis gains plausibility when we consider that approval is often minimally expressed by sentences like

- (16) *That's true/sure/certain/(al)right/well.*

Phatic markers might then be investigated as being the result of a process of erosion by which only the subject or only the predicate of these matrix propositions would be retained.

Notes

1. For another paradigmatic example of this kind of development in a Romance language – namely, the evolution of the phrase *em boa hora* (“in good hour”) of medieval Portuguese into the modern concessive conjunction *embora* (“although”) – see Lima (1997).
2. There is as yet no established standard definition of “discourse markers.” This is due to several circumstances: interest in this category is relatively recent in linguistics, each candidate for membership seems to diverge distributionally and functionally from the next one in peculiar ways, which are hard to pin down. There is also terminological instability: besides “discourse markers” other labels are used to designate groups of forms whose extensions overlap to a great extent, but whose boundaries are difficult to define: “discourse particles,” “pragmatic particles,” “pragmatic markers,” etc. As a guideline to our use of “discourse markers” we may adopt Brinton’s lists of features and functions of what she prefers to call “pragmatic markers” (Brinton 1996: 32–38).
3. We assume that affirmative markers and phatic markers should be taken as subclasses of discourse markers, albeit not central ones. As it will become clear along the text, the behaviour of these forms doesn’t go against the “guideline” for discourse markers mentioned in note 2.
4. The transcription of the examples follows closely the conventions of the consulted corpora. So, the tilde may appear after a vowel to indicate that it is a nasal, while the original text has the tilde placed over the vowel.
5. The complementizer “that” (*que*) occurs repeatedly because of the embedding, after its first occurrence, of the subordinated clause.
6. Syntactically, the process of change from conjunction to discourse marker involves rebracketing. The steps might be represented thus:
 $[pois + C2], [C1] > [pois + anaphoric\ C2], [C1] > [pois + \emptyset], [C1] > [pois + C]$
7. It is an important feature of the subjectification of *pois* into a discourse marker that the implicature it carries relates, not only to the proposition but – increasingly – to the *speech act* performed through the sentence following it. This shift of the implicature from the propositional level to the speech situation level has repeatedly been referred to by Traugott and others as a clear mark of subjectification.
8. We assume that the distinction between major and minor categories is gradual, as Lehmann points out (1995: 133–134).
9. These are the main categories under which *pois* can be subsumed. The word, however, is suited to multiple uses, either alone or as a part of fixed constructions (*pois então, pois sim, pois não*, etc.). For an overview of the uses of *pois*, see Lopes (1991).

10. As we have seen in Section 1, although *pois* occurs simultaneously in these three categories in Old Portuguese, there are good reasons to maintain that the chain preposition>adverb>conjunction also applies to *pois*, even if in a particular way.
11. On disjuncts, see Traugott (1995a:9).
12. In such contexts the complex form *isso mesmo* (“that exactly”; “that’s just it”) can also be used.
13. Personal communication of Marja-Leena Sorjonen.

Data bases

- CIPM – *Corpus Informatizado do Português Medieval*, Universidade Nova de Lisboa.
- CRPM – *Corpus de Referência do Português Contemporâneo*, Centro de Linguística da Universidade de Lisboa.
- BVAP – *Biblioteca Virtual dos Autores Portugueses*, 1998, scientific coordination by Ivo Castro et al., Lisboa: Biblioteca Nacional (CD-ROM).

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The evolution of the German modal particle *denn**

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1. Indications for the grammaticalization of *denn* as a modal particle

In this paper it will be argued that the evolution of the German modal particle *denn*, one of the most frequent in German, can be considered as a genuine grammaticalization process, although the notion of grammaticalization seems to be suitable only in part for modal particles which are considered optional.

The following section will deal with examples proving that grammaticalization processes as semantic bleaching, decrease in syntagmatic variability and phonological attrition do indeed occur with this modal particle.

1.1 Phonological attrition

As opposed to its heterosemes,¹ the monosyllabic modal particle *denn* can be cliticised, whereas for its corresponding homonymic adverb or conjunction this reduction is not possible:

- (1) a. MP: *Was hat er'n gesagt?* *Was hast'n dann gesagt?*
 'What did he say?' 'What did you say then?'
b. Conj.: , *denn/*'n er hat nichts gesagt.*
 , for he said nothing'
c. Adv.:² *und denn/*und'n hat er nichts mehr gesagt.*
 'and then he said nothing else.'

In addition, the reduction of the vowel has led to the formation of two phonetically distinguishable variations of the original lexeme, *denn* reduces the monophthong to schwa. Here, the modal particle is so clearly distinguishable from its heteroseme that it is not possible to confuse the two:

- (2) a. MP: *Was hast du denn gesAgt?*
'What did you say?'
b. Adv.:³ *Und was hast du dEnn gesagt?*
'And what did you say then?'

The accentuation of the lexeme retrieves the original, literal meaning ('then') and, as a result, causes it to function as an adverb. A comparable restriction does not exist for any other part of speech. According to Weydt (1986:396f), modal particles are "der einzige Fall in der deutschen Sprache, in der man geneigt sein könnte, dem Satzakzent zeichenunterscheidende Funktion zuzuschreiben." ("the only case in the German language for which one could be tempted to ascribe sign-differentiating functions to sentential stress.") Some researchers (e.g. Thurmair 1989) apply the phonological criterion of unstressability which precedes cliticization, and in any case represents a form of reduction. Other researchers, particularly Meibauer (1994), acknowledge stressed forms as being modal particles. This question is of special interest with regard to *denn* which appears in an unstressed and in a stressed form (see 2.5).

1.2 Semantic bleaching

Semantic bleaching is a characteristic feature of modal particles, and at the same time one of the basic characteristics of grammaticalization. It is common ground in the description of modal particles that they have retained only mere fragments of their original meanings, while these meanings have been retained in their heterosemes. According to Helbig (1988:14), modal particles have "nur eine geringe oder gar keine denotative Bedeutung" ("only a slight or absolutely no denotative meaning"). Thurmair (1989:2) questions whether modal particles have meaning at all and points to the fact that they can basically be omitted, "ohne daß ein erkennbarer Informationsverlust eintritt" ("without a recognizable loss of information"). Example (2) justifies the doubts concerning the existence of independent meanings of modal particles since as a MP, *denn* has a text connecting and epistemic function which I will deal with later, whereas as an adverb it has a clear temporal meaning: 'dann, danach' ('then').

1.3 Decrease in syntagmatic variability

As opposed to their heterosemes, modal particles have very limited syntagmatic variability. While the former may occur in the prefield⁴ and in the middle field, modal particles can only occur in the middle field, they are strictly excluded from the prefield:

- (3) a. Adv.: *Denn wolln wir gehen.*
 ‘Then we want to go.’
 b. Conj.: *Denn wie sagte Peter neulich?*
 ‘For what did Peter say recently?’
 c. MP: **Denn wie heißt du?*
 ‘MP what’s your name?’

This restriction to the middle field is even, following Meibauer (1994:38), the essential syntagmatic criterion for the differentiation of modal particles from all types of adverbs.

The combination of several modal particles underlies strict word order rules, as opposed to the combination of adverbs:

- (4) a. Adv.: *Wo bist du dann eigentlich/eigentlich dann hingegangen?*
 ‘Where did you then in fact/in fact then go?’
 b. MP: *Wo bist du denn eigentlich/*eigentlich denn hingegangen?*
 ‘Where did you in fact go?’
 (5) a. Adv.: *Wo bist du nur dann/dann nur hingegangen?*
 ‘Where did you only then/then only go?’
 b. MP: *Wo bist du denn nur/*nur denn hingegangen?*
 ‘Where on earth did you go?’

Moreover, modal particles cannot be elicited in a question, stranded, negated or contrasted, i.e., they can be neither focused nor coordinated.

Negating:

- (6) a. MP: **Bist du nicht denn gegangen?*
 Are you not MP gone?
 vs. b. Adv.: *Er ist nicht erst dann, sondern schon früher gegangen.*
 ‘He did not go only then but earlier.’

Furthermore, modal particles are bound to certain types of sentences: *denn* can only appear in interrogatives, others only in declaratives, while others appear exclusively in requests. A comparable restriction does not exist for any other word class. As a modal particle, *denn* is evidently restricted to interrogatives, while *ja* is restricted to declaratives:

- (7) a. *Wo warst du denn so lange?*
 ‘Where have you been all the time?’
 b. **Ich war denn so lange im Garten.*
 ‘I was in the garden all the time.’

- (8) a. *Der hat ja kein Geld.*
'He hasn't any money.'
b. **Hat der ja kein Geld?*
'Hasn't he any money?'

Due to their position in the middle field only adverbs are possible precursors for modal particles. A comparison of *denn* with its homonymous adverb demonstrates that this modal particle fulfills the criteria mentioned above. It has completely undergone the process of grammaticalization, i.e. it has passed through the processes of semantic, syntagmatic and phonological reduction characteristic of grammaticalization. Semantically, *denn* is considerably bleached, its syntagmatic variability is decreased in that it cannot be positioned freely and can only appear in a certain sentence type. It has undergone phonological attrition in such a way that the reduction to a clitic is quite advanced.

As a result of these processes, *denn*, which as an adverb has only loosely participated in an open word class, is now part of a significantly smaller paradigm of approximately 15 to 20 members.⁵ On the other hand, its distribution has greatly expanded – nearly each interrogative allows the particle *denn*. For the restrictions see below.

1.4 Pragmatic strengthening

In numerous analyses MP-research has shown that even though these lexemes have no or little referential meaning, they do have an illocutionary function and metacommunicative strength, and that their structural scope is not smaller, but rather larger than that of adverbs. Traugott (1988) points out that grammaticalization leads not only to reduction, but also simultaneously to an increase in illocutionary and epistemic functions (pragmatic strengthening). Hence, a fourth factor is predictable in the grammaticalization process: Increase in pragmatic/illocutionary/metacommunicational functions.

Traugott (1988:409) points out that *after* has developed from a temporal connective to a “marker of textual relations”; in German the equivalents would be *also* and *folglich*. Grammaticalization, viewed as subjectivization, may lead on the one hand to markers of textual relations, i.e. for text coherence, and on the other hand to epistemic markers, signaling the speaker's attitude. In the case of modal particles, and especially in the case of *denn*, both areas seem to be involved. In MP-research, these two functions are not usually viewed as independent of each other, but rather as one feature of modal particles. The text-connecting function, for which Thurmair (1989) applies the characteristic <Konnex>, holds a central position. According to König (1997:65), the three basic functions of modal particles are “metapragmatic instructions” with the following functions:

- a. identification of inconsistencies,
- b. indication of strength (degree of evidence with assertives, degree of insistence with direct speech acts),
- c. selection of context.

If the speaker indicates the degree of evidence in a declarative and the degree of insistence in a request, it may well be assumed that he denotes degree and nature of urgency in an interrogative.

MP-research (Meibauer 1994: 11 and references thereto) largely agrees on the assumption that modal particles signal the speaker's attitude about the utterance made and thus have an epistemic function. Subsequently, modal particles do not contribute to the truth value of a proposition, therefore being non-propositional. Incidentally or indirectly, they express the "speaker's attitude" about the proposition or the utterance. In this respect they are to be distinguished from epistemic sentential adverbs, such as *vermutlich*, *wahrscheinlich*, *unbedingt*, *bestimmt* ('presumably, probably, absolutely, certainly'). At the same time, they are also to be distinguished from adverbs and cohesive particles such as *deswegen*, *folglich*, *also*, *da*, *dann* ('therefore, consequently, thus, there, then').

2. The grammaticalization of *denn*

The origins of some modal particles can be traced back to the Germanic ages. It is Hentschel's (1986) merit to have shown that *ja* and *doch* were formed from deictics. I would now like to reconstruct the path taken by *denn*.

2.1 From locative to temporal and to causal function

The origins of *denn* are found in the Indogermanic root **to-*, which had deictic meaning in Germanic. The lexemes formed with this root belonged to the domain of *Der-Deixis*, which is in opposition to *Ich-Deixis*. The Germanic demonstrative pronouns (from which the contemporary articles evolved) developed from this stem, and locative (and later temporal) adverbs were formed out of their ablative: *danne/dann* = 'von da an', 'daher' ('from there'). The first stage of grammaticalization is represented by the shift in meaning from locative *dann* = 'daher' ('from there') to temporal *dann* ('then'). Diachronic linguists have documented this shift for many languages. Furthermore, the development from a deictic, i.e. a situational, to an anaphoric relationship can be stated: "*dann kam er*" ('then he came') no longer refers to a point in time of the speaker's future, but rather back to a point in time previously mentioned and may thus serve as a textual reference, as a cohesive element.

The next step is the development of a causal adverb, *denn* evolved out of the Old High German local *thanne* ('daher', 'from there') and acquired causal meaning 'daher, deswegen' ('therefore'), see Dal (1966:208). The diachronic development of *denn* can be summarized as follows:

- diachronic: Idg root *to, *Der-Deixis* > demonstrative pronoun
 > locative adverb *Got. thar*; ('there'), with Abl. *thanne* ('from there')
 > temporal adverb OHG *than*; MHG, NHG *dann, denn* ('then')
 > causal adverb OHG *thanne*, MHG, NHG *denn* ('therefore'), compare Lat. *posteaquam* > Fr. *puisque*, Span. *pues*, Engl. *since, therefore, consequently*

The transition from a local and temporal to a causal adverb is a phenomenon of subjectivization and implication. Whether or not an event B locally or chronologically follows an event A can be objectively determined; it can be tested and verified. Whether B logically follows A, whether A is therefore causal for B or not, can, on the other hand, be a question of subjective judgment. The logical-causal succession is more subjective – and more difficult – to determine than the local and temporal.

2.2 *Denn* in declaratives: adverb or modal particle?

Denn is used as an adverb with the temporal meaning 'dann, schließlich' ('then, finally'). It can also have the meaning of 'also, infolgedessen, somit' ('thus, accordingly, consequently') in a causative interpretation of the temporal order. In this function it is often replaced by *dann*, especially in southern Germany. At least for speakers of southern German, *denn* in declaratives has the impact of stylistic refinement. Usually it appears in literary texts:

- (9) *Und so blieb er denn zeit seines Lebens ein Deutscher.*
 'And so then he remained a German his whole life long.'
 (P. Wapnewski about H. Heine, Dec 13, 1997)

In this situation, one would normally use *nun* ('henceforth') or *also* ('thus') instead of *denn* in colloquial language. This example elucidates the ambiguity between temporal and causal meaning through the double paraphraseability of *denn* with *nun* and/or *also*: it refers on the one hand to previous events and can therefore be substituted by *nun* ('now'), on the other hand it creates a logical connection with the context and is replaceable in this function by *also* ('thus').

The reference to the original temporal meaning, which can be logically-causally interpreted, thus enables an interpretation of the function of *denn* in declarative sentences where it is uncertain whether *denn* functions as a modal particle or not (Thurmair 1989:222; Meibauer 1994:221ff):

- (10) *Die Leistungen waren denn auch entsprechend.*
 ‘The results were then/thus corresponding.’
- (11) *Das ist denn doch die Höhe.*
 ‘That is then the limit.’

Denn often – but not always – appears in declaratives alongside a further modal particle, either *auch* or *doch*. It cannot be cliticised in either case. In these examples, too, *denn* displays traces of its original temporal and/or causative meaning and can be substituted by *nun*, *dann* (‘then’) or *folglich*, *also* (‘consequently’).

The question is, whether in these examples, which are restricted to literary texts and/or to Northern German varieties, *denn* has an epistemic function or rather that of an adverb, i.e. to temporally or logically incorporate the proposition into the context. According to Thurmair (1989: 232), *denn*’s function in declaratives is only “den Bezug zum vorangegangenen Beitrag zu verdeutlichen, es trägt also nur das Merkmal ‘KONNEX’” (‘to clarify the reference to the previous contribution, therefore carrying only the feature ‘KONNEX’”). *Denn* has to be regarded as a temporal adverb, if the information given in the proposition can be classified temporally at the propositional level, and can hence be substituted with *nun* or *dann*. If the information given in the proposition is to be classified as logical-causal at the propositional level and if *denn* can thus be substituted by *also* or *folglich*, *denn* has to be regarded as a causal adverb. But in contrast to these adverbs, *denn* cannot appear in the prefield. Thus, it can be considered a modal particle for formal and semantic reasons. Since it relates the utterance to the previous context, it reaches the pragmatic level, making a textual reference and becoming a discourse-organizing particle.

2.3 *Denn* in interrogatives

According to Paul (1992: 168), it was possible to use the temporal *denn* in interrogatives up into the 18th century. One example is given by the following lines from Hans Sachs (1551):

- (12) *Ach ist denn solchs die Freundschaft dein/
 Die du mir oft versprochen hast?* (Fastnachtsspiele)
 ‘Is this then your friendship/
 Which you so often promised me?’

This adverb, scintillating between temporal and causal meaning, is to be viewed as the lexeme which preceded the modal particle (compare Paul, *ibid.*): “Was ‘nun’, ‘schließlich’ und ‘somit’ Gegenstand einer Frage ist, mag später als Hinweis auf deren Veranlassung durch die jeweilige Situation verstanden worden sein, daher der Gebrauch schon des ahd. *thanne* als Modalpartikel” (‘What ‘hence, finally,

consequently' is the subject-matter of a question, may later be understood as an indication of its motive through the respective situation, thus the usage of OHG *thanne* as a modal particle"). Behaghel (1928:114) refers to examples extracted from Isidor und Tatian, like *Huuer ist dhanne dher druhtin?* (Isid. 9,5) (*Who is MP the Lord?*), probably the oldest examples we have. As shown in 1.3, *denn* is, in standard colloquial German, restricted to interrogatives, see the following typical examples:

Yes-no question:

- (13) a. A: *Karl kommt heute nicht.*
 'Carl isn't coming today.'
 b. B: *War er denn eingeladen?*
 'Was he invited?'

WH-question:

- (14) a. A: *Peter war sehr wütend.*
 'Peter was very angry.'
 b. B: *Was hast du denn zu ihm gesagt?*
 'What did you say to him?'

The speaker uses *denn* to indicate that there is reason for his question and that he is therefore justified in asking this question. This is the case, for example, when the preceding utterance of a conversation partner has revealed an information gap for the speaker. The difference between the temporal adverb and the modal particle, and the corresponding transition from the propositional to the illocutionary level, can be shown by comparing the following two dialogs. (As the adverbial *denn* is only found in northern Germany or in literary texts, the more common form *dann* will be used for the adverb, so demonstrating the difference between both.)

D1:

- (15) a. A: *Erst hab ich ein Buch gekauft.*
 'First I bought a book.'
 b. B: *Und was hast du dann gekauft?*
 'And what did you buy then?'

D2:

- (16) a. A: *Ich hab kein Geld mehr.*
 'I haven't any more money.'
 b. B: *Was hast du denn gekauft?*
 'What did you buy?'

The adverb *dann* in (15b) refers to an event which took place at t+1, relative to a previous purchase at t, thus placing two events in relation to each other on the factual level. The MP *denn* in (16b) does not refer to a subsequent event on the

propositional level – only one purchase took place – , but shows that the interrogative speech act is a consequence of B having an information gap resulting from A's admission of being broke. It therefore places B's question in relation to A's previous (here linguistic) text, at the same time justifying B's question. Thus, *denn* does not operate on the propositional, but on the illocutionary level. The original temporal meaning "E2 follows E1" (E = event) is epistimified to "My utterance follows an utterance U1 (even of a non-linguistic kind) in the context."

2.4 Restrictions for the use of *denn* as a MP

The restrictions on *denn* can be explained by its original temporal meaning, which is still retained in the modal particle and which enables it to function as a cohesive. It is not possible to use *denn* in interrogatives which open a first conversation⁶ or introduce a new topic, and for which, consequently, there is no proper context for the speaker to resume the conversation, such as when someone enters a store, wakes someone up, or abruptly asks for the time. In the second case, see (18b), only the person asked could pose the question, whereby the modal particle can be paraphrased by the expression in parentheses:

Entering a store:

- (17) A: **Haben Sie denn auch Lederwaren?*⁷
'Do you have leather goods, too?'

Waking someone up:

- (18) a. A: **Wie spät ist es denn?*
'What time is it?'
b. B: *Wie spät ist es denn (daß du mich weckst)?*
'What time is it (that you wake me up)?'

In the middle of a conversation:

- (19) A: *Sag mal, wie spät ist es eigentlich/*denn?*
'Say, what time is it?'

In the case of a speaker-initiated change of topic, the speaker does not wish to maintain the context. The incoherence of a question which opens a conversation or introduces a new topic does not only exclude *denn*, but demands a different modal particle, namely *eigentlich* ('actually').

The impossibility of *denn* in the examples (17) to (19) exhibits a clear case of retention of the original temporal meaning which is still present in the cohesive particle.

According to König (1977:122), *denn* is restricted to real questions indicating that the speaker expects an answer. This would explain why indirect requests formulated as questions do not allow *denn*, such as:

- (20) **Kannst du denn bitte das Fenster schließen?*
 ‘Can you close the window please?’

However, it is, in my opinion, the original temporal meaning of *denn* which prohibits its usage in interrogatives that function as requests, since such requests are not reactive but initiative. It is therefore impossible to use *denn* as a cohesive in this situation. If a context exists, however, it is possible to form interrogatives functioning as requests with the modal particle:

- (21) *Warum machst du denn nicht das Fenster zu?*
 ‘Why don’t you close the window?’
- (22) *Wie wärs denn, wenn du das Fenster zumachtest?*
 ‘How about if you close the window?’

Further restrictions (Thurmair 1991) can also be explained by the function of indicating the sequence, which stems from the original meaning of *denn*. It is not possible to use *denn* in a string of questions about the same topic:

- (23) a. *Wo liegt denn die Wohnung?*
 ‘Where is the apartment located?’
- b. *Und wie groß ist die Wohnung (*denn)?*
 ‘And how big is the apartment?’
- c. *Und wie teuer ist sie (*denn)?*
 ‘And how much does it cost?’

In this case, text coherence is established by means of a common topic and the connector *und* (‘and’). The modal particle *denn* is possible, however, in the first of a string of questions, as to be expected. It is just as impossible to use *denn* in echo questions and return inquiries, even if the speaker expects an answer to his question, and is not only expressing his indignation concerning the given information:

- (24) a. A: *Ich hab einen Mercedes gekauft.*
 ‘I bought a Mercedes.’
- b. B: *Du hast WAS (*denn) gekauft?*
 ‘You bought WHAT?’
- c. B: *WAS hast du (*denn) gekauft?*
 ‘WHAT did you buy?’

The first example could be explained syntactically, i.e. with reference to the declarative sentence type of the question. But the last example illustrates that the restriction can not be explained syntactically. It is rather the word-for-word reconstruction of the linguistic material from the preceding utterance, which makes coherence and thus the reason for the question is so evident, that a further indication with the particle is not acceptable.

Following my analysis, the meaning of *denn* is more specific and closer to the source lexeme, the temporal adverb, than assumed in papers which view *denn* minimalistically as merely an “interrogative indicator” (Thurmair 1989:167). In this view, the modal particle would only have the function of marking the uttered interrogative as a “standard question” (Thurmair 1991:379) or as a real question, differentiating it from questions that function as requests (König 1977:122; Doherty 1985:76). In suitable contexts, however, the modal particle is also possible in requests, as shown in the examples above. According to my analysis, the presence of *denn* in rhetorical questions does not pose a problem although it can be assumed that the speaker here does not expect a reply:

- (25) *Kannst du denn nicht aufpassen?*
 ‘Can’t you be careful?’

Rhetorical yes-no questions, which can often be interpreted as reproaches, relate to preceding events, usually a certain behavior displayed by the listener. The modal particle points to the fact that the speaker is coherent in referring to this behavior. A rhetorical wh-question implies an answer, for which the implicature is either negative or referential specific (cf. Meibauer 1991:234):

- (26) a. *Wer glaubt denn sowas? (Niemand)*
 ‘Who believes that? (Nobody)’
 b. *Wer hat’s denn schon immer gewußt? (Ich)*
 ‘Who knew it all the time? (Me)’
 c. *Was ist denn schon dabei? (Nichts)*
 ‘What’s wrong with it after all? (Nothing)’

Although an explicit reply is not expected in this situation, the speaker employs a rhetorical question instead of a declaration corresponding to the content because he wants the listener to conclude who or what is meant, and to react appropriately. In this situation, *denn* has the same function as in interrogatives which ask for information, namely to mark the question as a consequence of a previous utterance (which can also be metalinguistic), thus allowing it to appear motivated.

2.5 Stressed *denn*

Denn can also appear in stressed form, as in:

- (27) A: (*Wenn du nicht Peter heißt*) *Wie heißt du DENN?*
 ‘(If your name is not Peter) What is it?’

According to the popular opinion in MP-research that modal particles are unstressed and even unstressable, *DENN* would not be considered a modal particle. Weydt (1986) and Meibauer (1994) plead for *DENN* to be acknowledged as a modal particle in cases where a negative proposition is relevant in the context (Meibauer 1994:224). This *DENN*, carrying a contrast accent, is syntagmatically even more restricted than the unstressed one – it can only be used in *wh*-questions. The accentuation as well as the syntagmatic restriction can be explained pragmatically. *DENN* is accentuated when the interrogative is a repeated question, meaning that the speaker has already posed a yes-no question pertaining to the same information and has received a negative answer. If a negative reply follows the initial yes-no question, the speaker may continue with further yes-no questions:

- (28) a. A: *Heißt du Peter?*
 ‘Is your name Peter?’
 B: *Nein.* (No.)
 b. A: *Heißt du dann FRAnz?*
 ‘Is your name then FRAnz?’

By using the temporal adverb *dann* in (28b), the speaker points out that this is already the second question and, moreover, emphasizes the focused element, in this situation the name, with a contrast accent. The temporal adverb cannot be stressed in this case, as the accent is carried by the name. *DANN/DENN* can therefore not occur in yes-no questions. The speaker, however, can also curtail this process by directly eliciting the answer – in this case the name – with a *wh*-question:

- (29) a. A: *Heißt du Peter?*
 ‘Is your name Peter?’
 B: *Nein.* (No.)
 b. A: *Wie heißt du DENN?*
 ‘So, what is your name?’

In this case (see 29b), the speaker is using *DENN* to refer to the fact that he is already asking this question for the second time. Hence, the lexeme contains a temporal component. But as the *wh*-question – in contrast to the yes-no question – does not contain any other stressed element, the lexeme itself can be stressed, indicating through the contrast accent that the question refers to an oppositive con-

text. Its function is therefore primarily cohesive exploiting the original temporal meaning.

The question is, whether the criterion of phonological attrition is a necessary prerequisite or not for the status of modal particle. A further question is whether, in the semantic-pragmatic respect, *DENN* is to be viewed as an epistemic sign or rather as a cohesive or even as a temporal adverb. The temporal element is still existent in *DENN*, in so far as the example above can be paraphrased with:

“*Nachdem du auf meine Frage, ob du Peter heißt, mit “nein” geantwortet hast, was antwortest du dann darauf (= ‘nun’, ‘jetzt’), wenn ich dich frage ...*”
 (“After answering ‘no’ to my question, whether or not your name is Peter, what is your reply then/now, when I ask you ...”)

In this case, the temporal component is transferred from the content level to the text level, as shown by the paraphrase. Thurmair (1991:377, fn. 1) rejects *DENN* as a modal particle because the stressed variant can be combined with the unstressed one. It seems not acceptable to reduplicate modal particles, and one can indeed not assume that a speaker would give the same epistemic reference to his attitude twice. In fact they function in different ways:

- (30) a. A: *Du hast ihm also den Namen gesagt.*
 ‘So you told him the name.’
 B: *Nein.* (No.)
 b. A: *Was haste’n DENN zu ihm gesagt?*
 ‘So, WHAT did you tell him?’

In this example, ‘*n* (= *denn*) refers to the fact that the interrogative is motivated by the situation. *DENN*, on the other hand, refers to the fact that this is already the second question, since the first one had a negative reply. The contrast accent shows that it refers to a negative proposition in the context.

Here, in contrast to the example in 1.1, the meaning of the stressed *DENN* does not topple, with the consequence that the lexeme resumes its behavior as a temporal adverb. This can be elucidated by a comparison of the following two dialogs:

- D1: (31) a. A: *Du hast also ein Buch gekauft?*
 ‘So, you bought a book?’
 B: *Ja.* (Yes.)
 b. A: *Und was hast du dann gekauft?*
 ‘And what did you buy then?’
 D3: (32) a. A: *Du hast also ein Buch gekauft?*
 ‘So, you bought a book?’
 B: *Nein.* (No.)

- b. A: *Was hast du DENN gekauft?*
 ‘So, WHAT did you buy?’

Only in D1 two purchases are mentioned. In D3 with the stressed *DENN* as well as in example (16) of D2 containing the unstressed *denn*, there is but one purchase. The use of an explicit temporal adverb such as *darauf*, *danach* (‘thereupon, after that’) instead of *dann* would only be possible in the first case. In D3 the lexeme has developed, as a consequence of the contrast accent pointing to an opposite context, an adversative meaning ‘stattdessen’⁸ (‘instead’), thus referring to the content level. Similar to causal *denn* in examples (9)–(11), it has changed from temporal to logical semantics, but in another direction. However, in contrast to unstressed *denn*, it can occur in the prefield:

- D4: (33) a. A: *Heißt du Peter?*
 ‘Is your name Peter?’
 B: *Nein.* (No.)
 b. A: *DENN heißt du Franz!*
 ‘Then your name is Franz!’

Therefore, the lexeme does not operate exclusively on the illocutinary level and can consequently not be classified as a modal particle. Stressed *DENN* has to be considered as an adverb.⁹

3. Conclusion

If we concentrate on the occurrences of *denn* in standard colloquial German where it is restricted to interrogatives and can not be stressed, we can say that the evolution of this lexeme reveals a genuine process of grammaticalization, exhibiting semantic bleaching, decrease in syntagmatic variability and phonological attrition. The lexemes which function as modal particles, as is especially obvious with *denn*, have undergone several steps of grammaticalization and have thus passed through several semantic domains. They have reached the end of the grammaticalization chain elaborated by Abraham (1991: 373):

LOCALISTIC > TEMPORAL > LOGICAL > ILLOCUTIVE/DISCOURSE
 FUNCTIONAL

This consideration is of eminent significance for language acquisition. It can not be assumed that children acquire modal particles as they were described in the beginnings of MP-research, namely as several differentiated lexemes that are different from the source lexeme. On the contrary, it may be possible for children to apply the principle of conceptual shifting to the lexemes, which are primarily perceived

as adverbs in the input in order to derive the epistemic meaning through conversational implicature. The capabilities of conceptual shifting and of conversational implicature are probably inherent in our language learning capacity and belong to our innate cognitive equipment. Here, language acquisition research is required to offer answers to these open questions.

Notes

* I would like to thank Melody-Ann Lacy for the translation.

1. In contrast to polysemic words, the meaning of heterosemes is considered as being related, see Meibauer (1994).
2. The adverb is used almost exclusively in Northern German varieties.
3. See note 2.
4. The prefield (front field) or initial field (Abraham 1991:341) is the preverbal position in German declaratives; the middle field or inner field is the position between the finite verb and the non-finite verb or other separable parts of a complex verb, i.e. the right brace of the German brace construction.
5. The number of modal particles assumed for German is not defined exactly, as opinions whether to include a) stressed forms and b) lexemes such as *einfach*, *immerhin*, *überhaupt* and *wohl* vary. If one is limited to lexemes which express the speaker's opinion and cannot be focused, the class of modal particles contains the following lexemes: *aber*, *auch*, *bloß*, *denn*, *doch*, *eben*, *eh*, *eigentlich*, *einfach*, *etwa*, *halt*, *ja*, *mal*, *nur*, *ruhig*, *schon*, *vielleicht* and *wohl* (s. also Helbig 1988:36f).
6. The fact that a seller may ask "*Was hätten Sie denn gern?*" ('What do you want MP?') is not a counter example – here the MP links the question to the situation and creates a familiar atmosphere. I can ask my neighbor "*Wie geht's Ihnen denn?*" ('How are you MP?'), but not a new neighbor I never saw before!
7. Example taken from Thurmair (1991:378).
8. My thanks to G. Diewald for this remark!
9. Against Meibauer (1994) and Wegener (1998).

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Putting grammaticalization in its place

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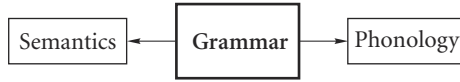
1. Introduction

I have always found the notion of grammar a little puzzling. I should say immediately that I am not raising the question of *emergent grammar* as discussed by Paul Hopper: the question of whether grammar is, to quote him, “constantly under construction, and structured only by emergent patterns that come and go” (Hopper 1998: 172). Although that question is certainly an interesting one, I have been concerned with a different question: what exactly is grammar made of? Are the elements of grammar wholly abstract, or can we relate them to phenomena that are concrete? The term *grammaticalization* evidently refers to ways in which grammar is created, and it is surely impossible to understand what grammar is unless we see it in the context of language change. But just what is it that changes, and what is the end result? In an attempt to deal with these questions I need to begin by broadening the picture to include more than grammaticalization itself.

2. Thoughts and sounds

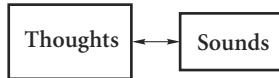
The view of language shown in (1) has been prevalent within much of linguistics. That is, there is something labeled grammar that lies at the heart of language, and semantics and phonology are in the nature of appendages to it. This view has been fundamental to the whole generative enterprise since it took shape in the 1950s and 1960s, but it was also basic to the structuralist linguistics that preceded generative grammar. It is interesting to notice that when people think of describing a language, what they think of above all is its grammar. In order to describe a language one writes a grammar of it. In that sense one might say that a grammar is what a language is.

(1) A common view of language



Why should there be any problem here? What has bothered me is that I have always seen language in terms of what is shown in (2). Language, according to this view, is a complex way of associating thoughts with sounds. As one is talking, one is simultaneously thinking certain things and at the same time making certain sounds that pass through the air and strike the ears of others. As a result one hopes that listeners are having thoughts that are similar to one's own, although of course they can never be exactly the same.

(2) The basic nature of language



In a very general sort of way perhaps many would agree that language associates thoughts with sounds, but what that entails tends to be ignored. For example, it has been popular to sneer at the so-called Whorf hypothesis, which says that different languages organize thoughts differently. But no one would find a problem with saying that different languages organize *sounds* differently; why, then, should they not organize *thoughts* differently as well? The problem has been that there seem to be at least some linguistic elements that are realized in sounds but are not directly associated with thoughts. One may conclude that such elements belong to a more abstract grammar, but what does that mean in terms of (2)? That is the question I am raising here. I believe the answer lies in grammaticalization and its results, but it is necessary to be clearer about just what grammaticalization produces, and how it modifies the picture shown in (2).

Linguistics has always been hampered by the fact that there is a basic asymmetry in (2) with respect to how observable the phenomena in the two boxes are. Sounds are publicly observable, and objective researchers can record and measure them. But thoughts are private; the only person who knows what they are is the person who is having them. How, then, can we know about thoughts at all? From one point of view that question is a trivial one. All of us are having thoughts all the time, as long as we are conscious. We know we are having them, we can examine introspectively what they are like, and we should be able to reach at least some minimal agreement about their general nature. I suggest that thoughts, to the extent that we are conscious of their nature, are manifested in at least three different ways:

- (3) Conscious manifestations of thought
 - a. Inner language
 - b. Imagery
 - c. Evaluations

First, there is inner language: talking internally to ourselves. Second, there is mental imagery: degraded perceptual experiences, especially sights and sounds. Third, there are emotions and attitudes, which it is useful to combine under the term *evaluations*. At least these three manifestations of thought are easily accessible to consciousness. There are other aspects that are not so accessible, and I will return to them below.

If there is an asymmetry between thoughts and sounds in terms of their public observability, there are other asymmetries too. When speakers of a language hear it spoken, what they are conscious of is the flow of thoughts, not the sounds. Furthermore, those thoughts are the driving force of language. Language flows through time, and it is the flow of thoughts, not of sounds, that gives language its movement and direction. Sounds simply follow along as thoughts keep changing. It is worth noting, too, that the universe of thoughts is vast, compared with the relatively limited universe of sounds. That is why in (2) I have shown thoughts in the larger of the two boxes.

It is important to notice that language and imagery can vary while thoughts remain more constant. We need not always experience the same inner language and imagery in association with what might be regarded as the same *ideas*, as I have called them (Chafe 1994). Ideas, in this technical sense, are of several types, reflecting the universal properties of human experience that are summarized in (4). There are ideas of *events* (things that happen), of *states* (the way things are), and of the people and objects and abstractions that participate in events and states, which can be called *referents*.

- (4) Types of *ideas*
 - a. Events and states
 - b. Participants in events and states (referents)

Various kinds of evidence suggest that ideas are more stable than their manifestations in language, but it is especially useful in this regard to examine retellings of the same experience by the same person on different occasions (e.g., Chafe 1998). Observations of repeated tellings go back at least to the British psychologist Frederic Bartlett, who asked people to read an American Indian folktale and later write what they remembered, using what he called “The Method of Repeated Reproduction” to elicit repeated versions (Bartlett 1932:63–94). He worked only with written language, adequate sound recording devices not being available at the time. A group of us in Berkeley in the 1970s tried to do something similar, but this time by

asking people to view a film in the so-called *Pear Stories* project (Chafe 1980). We then tape-recorded their recountings of what happened in the film, observing what people said in ten different languages. In Chafe (1991) I discussed cases in which the same speaker talked about this film on three different occasions: fifteen minutes after seeing it, again after six weeks, and again after a year. One of these people was impressed with the sound of a bicycle. Shortly after seeing the film she said:

- (5) a. .. *a=nd then you start hearing this other .. intensified noise,*
 b. *which turns out to be a bicycle.*

Six weeks later she had more to say on the same topic:

- (6) a. .. *a=nd then you hear this creaking=,*
 b. .. *of .. of a bicycle,*
 c. ... *in the distance.*
 ...
 d. ... *like you hear this .. this bicycle off,*
 e. .. *you know,*
 f. *half a mile away,*
 g. .. *creaking loudly,*
 h. ... *and .. that was weird.*

And a year later her language was different still:

- (7) a. .. *I remember something strikingly funny was that,*
 b. ... *in the film,*
 c. ... *the bike was making so much noise.*
 d. .. *I mean it seemed .. loud.*
 e. ... *It seemed very squeaky.*

The point here is that the ideas of the bicycle, the sound it was making, and the loudness of the sound remained more stable than the quite different language used to express those ideas on the three different occasions.

Not only are ideas more stable than language in repeated tellings, they are also more stable across languages. Translations provide one kind of evidence, but it is especially interesting to find people talking about the same experience in different languages. Investigating differences of that sort was a main purpose of the project just mentioned, and we can look here at excerpts from two of the German *Pear Stories* recorded in West Berlin in 1978. Two of the German speakers were also impressed by the sound of the bicycle. One of them said:

- (8) a. ... *'n Junge kommt mit einem Fahrrad angefahren,*
 b. ... *vorher ... es wird angekündigt ... durch ... Fahrradgeräusche,*
 c. *überhaupt es sind die Geräusche sehr intensiv in dem Film,*

Another said:

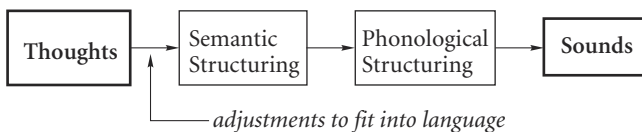
- (9) a. ... *das ... Geräusch des Fahrradfahrens wird ... sehr lautstark ... äh abge-
spielt,*

With these examples I hope to have provided evidence that there is something more basic to thought than whatever language happens to be used to express it. Language lets people manipulate and communicate thoughts, but it is less stable than the thoughts themselves.

3. Adjusting thoughts to language

Equating language with grammar as suggested in (1) may have obscured a fundamental fact about (2): the nature of thoughts, as thoughts, makes it impossible for them to be expressed by sounds directly. Thoughts must first be adjusted in ways that make them compatible with the nature of sounds. Several kinds of adjustment are necessary, and they can be discussed with reference to the extension of (2) that is shown in (10). *Semantic structuring* includes a variety of ways in which thoughts are adjusted to conform to language. I have added also a box called *phonological structuring* to include ways in which sounds, too, are organized by language, but phonology will not be our concern here. It is important to realize that the semantic structuring box still contains thoughts, but a filtered and structured version of them, adjusted so they can be expressed by sounds.

- (10) An intermediate model of language



Among these adjustments it is possible to identify five broad types, as listed in (11). Each of them is necessary because of a specific way in which thoughts fail to conform to the requirements of language.

- (11) *Ways in which thoughts must be adjusted to fit into language*
- a. Selection
 - b. Categorization
 - c. Orientation
 - d. Combination
 - e. Linearization

I will discuss each of these adjustments with reference to ways in which a specific idea might be expressed in each of several languages. Imagine an experience in which I visited a car dealer, picked out a car, negotiated a price, and finally drove off with my new car. Suppose that when I am later talking with a friend, thoughts of this experience become active in my consciousness, and I decide to communicate ideas of it to my friend. There are many ways I could do that, but to keep things simple let us suppose that I say nothing more than:

(12) *I bòught a càr.*

(The accent marks show secondary and primary accents on *bought* and *car* respectively, and the period shows a falling pitch at the end.)

The first kind of adjustment listed in (11) is *selection*. The point here is that thoughts are richer, more extensive, and more complicated than anything that can be expressed in language. Language is simply too limited to accommodate everything we may be thinking, and so it is always necessary to be selective. In (12) I narrowed down all the things I experienced at the car dealership to a kind of summary. There were many things I did and saw and heard, but in (12) I chose only the idea of an event, the buying, along with the ideas of two of the major participants in that event, the car and me. I left out, for example, ideas of the salesman, what I paid for the car, the locale, and so on. Of course I might go on to select some of those later, guided by my friend's interests and mine.

The second adjustment listed in (11) is *categorization*. Another property of thoughts, beyond their richness, is the fact that they usually focus on ideas that are particular. Everything we experience in life is something we never experienced before and will never experience again. The number of particular ideas is open-ended, and it would obviously be impossible for language to associate each of them with a unique sound. Franz Boas noticed this fact almost a hundred years ago:

(13) "Since the total range of personal experience which language serves to express is infinitely varied, and its whole scope must be expressed by a limited number of phonetic groups, it is obvious that an extended classification of experiences must underlie all articulate speech" (Boas 1911:22).

Particular ideas, then, must be interpreted as instances of categories. This categorization process accomplishes two things. First, it leads to expectations about the properties of unique experiences by associating them with other, similar experiences, so that we can know what to expect of them and what we might do about them. But categorization also provides *language* that can be used in talking about the experience. Some experiences lend themselves well to categorization; they are "highly codable" (Brown 1958:235–241). In such cases, they are likely to be categorized in the same way in different verbalizations. In (5), (6), and (7) there was a referent that was interpreted consistently as an instance of the *bicycle* (or *bike*)

category. There were other ideas that fit less consistently into an available category. The sound made by the bicycle was categorized in (5) as an *intensified noise*, in (6) as *creaking loudly*, and in (7) as *very squeaky*. The whole experience was evaluated in (6) as *weird* and in (7) as *strikingly funny*. Thoughts, then, need to be adjusted to language through categorization, which may or may not vary from one verbalization to the next.

The third type of adjustment listed in (11) is *orientation*. Ideas are located within our thoughts in a variety of ways: in space, in time, epistemologically, in the context of other ideas, and with relation to the ongoing interaction. It is often observed that language is a social phenomenon, that our ideas are not verbalized in a vacuum but to a large extent in order to communicate them to others. One result is that it is necessary to locate our ideas so a listener will know where to place them within his or her own store of knowledge. But within the realm of thought the possible orientations are too many and too diverse to be verbalized fully, and each language facilitates the choice of certain orientations as opposed to others. Each language, in its own way, provides ways of locating ideas in space, time, and so on. The meanings expressed by inflections and particles, by affixes and function words, perform this orienting function. Marking *tense* locates an event for the listener in time. *Demonstratives* locate both events and referents in space. The literature on *evidentiality* shows a variety of ways in which different languages orient events epistemologically (e.g., Chafe and Nichols 1986). Markers of so-called *definiteness* orient referents according to whether they are identifiable or nonidentifiable by the listener. *Discourse* particles orient events with respect to the ongoing discourse, but also with respect to the ongoing interaction. *Prosody* plays a role in orienting ideas with relation to the listener's current consciousness with the *given* versus *new* distinction, and adds *evaluative* orientations as well. In short, adjusting thoughts to language calls for orienting ideas in a variety of ways that differ from one language to another.

In (12) the event was oriented in time as *past*, and from that came the expression of *buy* and *past* together as *bought*. The car was oriented as *nonidentifiable* to the listener, and from that came the use of the indefinite article in *a car*. The first person referent was oriented as *given* (as an idea assumed to be already active in the listener's consciousness), and so the pronoun *I* received a weak accent. The car-buying was oriented as *new* (assumed to be activated in the listener's consciousness for the first time in this conversation), and from that came the accents on *bought* and *car*.

The fourth kind of adjustment listed in (11) is *combination*. The ideas and orientations selected from the pool of thoughts obviously cannot stand in isolation, but must be combined in various ways. Again, the thoughts themselves fail to determine a unique way of combining them, and again different languages favor different possibilities. Languages provide patterns and constructions for this pur-

pose. In (12) the English pattern by which one referent was chosen as a *starting point* for the rest of what is said is realized by making it what grammarians call a *subject*: putting it in the subjective case and at the beginning of the clause. The idea of the car, characterized in Mithun and Chafe (1999) as the most immediately involved participant in the event, was treated as what grammarians call an *object*. The whole event was treated in the flow of discourse as a complete thought, as having closure, and that led to the falling pitch at the end.

A fifth and final way in which thoughts must be adjusted to language has to do with the linearity of sound, the fact that by their very nature sounds are produced sequentially through time. Of course thoughts have a sequential aspect as well. They consist, for example, of a succession of foci of consciousness, and those foci are organized into larger *topics* that also succeed one another in time. But this temporal organization is not present *within* a focus of consciousness. In thought we usually focus on an event as a whole: the event together with its participants. Polysynthetic languages do verbalize events in that way, including the event and its participants within a single word as I will illustrate below. Other languages, however, separate them, expressing events and their participants in some kind of sequence, but again different languages prefer different sequences. In (12) the sequential organization was dictated by the roles of subject and object, with *I* placed before the verb and *a car* after.

I have stressed that different languages adjust thoughts to language in different ways, and a few illustrations of such differences are in order. Suppose, for example, I were a speaker of Japanese who expressed the same thought, or at least something close to it, as:

(14) *Jidóosha o katta.*

Of special interest here is the selection process. In passing from thoughts to their semantic structuring, the Japanese speaker omitted the agent of the buying. Japanese is a language in which there is a strong tendency not to verbalize participants in events when the speaker thinks the listener can derive them from the context. This way of adjusting thoughts to language recognizes that imposing thoughts on others is indeed an imposition, so that one should minimize the thoughts that are verbalized. Aside from that, the Japanese adjustments were similar to those made in English. The idea of the event was interpreted as an instance of a Japanese category similar to the *buy* category in English, and it was oriented as *past*, the idea and its orientation expressed together as *katta*. The one participant in this event that was verbalized was interpreted as an instance of the *jidoosha* category. As in English, it was interpreted as the most immediately involved participant in the event, as expressed by the clitic *o*, but it was placed before the *katta*, not after as in English. The newness of the car-buying was expressed with an accent on *jidoosha*, and the closure of this thought was again expressed with a falling pitch at the end.

Very different from either English or Japanese is the way the Seneca language adjusts its thoughts to language. If I wanted to express a similar idea about car-buying in Seneca, I might say:

(15) *Oʔgéʔsehdá:ni:nqʔ*

Everything was expressed in a single word. Unlike English, which selected separately an event and two participants in it, and unlike Japanese, which selected separately an event and one participant in it, Seneca selected the event as a whole. It categorized the event as an instance of *car-buying*, a lexicalized category in which the idea of the car was compounded with the idea of the buying to form a unitary idea. This car-buying idea was oriented very differently from the orientations made available by English and Japanese. For one thing, instead of being oriented temporally as *past* it was oriented epistemologically as *factual*, in contrast to an event that might have been predicted or hypothesized. It was oriented aspectually as *perfective*, viewed in its entirety without a specified internal structure. And it was oriented as an event with a first person *agent*, not a first person starting point. All these elements were combined and linearized in accordance with a morphological pattern that was realized as shown in (16):

(16)	<i>Oʔ-</i>	<i>gé-</i>	<i>-ʔsehdá:ni:nq-</i>	<i>-ʔ</i>
	factual	first person agent	car-buy	perfective

What I hope to have shown with these examples from English, Japanese, and Seneca is that what I described in (10) as *semantic* structuring could just as well be called *grammatical* structuring. It has all the elements traditionally regarded as belonging to grammar: nouns, verbs, their inflections, particles, constructions, and ordering. The only way it differs from grammar as grammar is usually conceived is in the fact that all these elements and the ways of combining them are directly related to some aspect of thought. These illustrations show three different ways of adjusting thoughts to language so that they can then proceed to be expressed with sounds.

It is true that (16) shows a rigid way of combining and linearizing the semantic elements it contains, perhaps already forcing an admission that not all of grammar (in this case morphology) is directly related to meaning. Even so, it is worth noting that the linear ordering of these elements does have a functional basis. The car-buying compound includes two parts – *car* and *buy* – adjacent to each other, and the first person participant in the car-buying directly precedes it. Thus, the interior portion of the word captures the entire event idea, including its participants, while the epistemic and aspectual orientations of that idea appear in the periphery. To a large extent Seneca morphology can be seen as functionally motivated in the spirit of Bybee (1985).

But now we need to face the question of how grammar as we know it, with elements apparently divorced from any direct relation to thought, differs from the semantically transparent kind of grammar illustrated so far. Imagine a German speaker who had the same car-buying experience. Suppose that person said:

(17) *Ich kàufté einen Wágen.*

In most ways the semantic structuring here resembles that of the English *I bought a car*. The role of the car as the most immediately involved participant of the buying is signaled, not just by the word order, but also by the accusative case. We saw something similar in the Japanese clitic *o*. But the masculine gender of *Wágen*, reflected in the word *einen*, presents a problem if we can assume that this speaker had no thought of the car being male. The representation of gender in (17) may be the first item encountered so far that fails to express an element of the speaker's thoughts.

But suppose the German speaker had said instead:

(18) *Ich habe einen Wágen gekàuft.*

Not only is there the masculine gender of the car, but the orientation of the event as *past* is expressed with the verb *haben* plus the past participle inflection in *gekàuft*, a very indirect way of expressing pastness. How can this indirectness be explained? The answer, of course, lies in grammaticalization, or more generally in the fact that languages change, and especially that changes on the thought side can be independent of changes on the sound side and vice versa.

4. Idiomaticization

It is useful at this point to look at idioms. During the 1960s some linguists saw a problem in accommodating idioms within the then popular model described in Chomsky's *Aspects of the Theory of Syntax* (Chomsky 1965). In Chafe (1968, 1970) I suggested that idiomaticization, the historical process of idiom creation, was the real reason for distinguishing "deep" from "surface" structure. The English idiom *spill the beans* can serve as an example. It has a unitary meaning that cannot be predicted from the meanings of its parts, but it is at the same time defective with respect to "transformations," as they were viewed at the time. For example, many idioms that look superficially as if they contain transitive verbs did not submit easily to the passive transformation or the formation of so-called WH questions. Whereas the idiomatic meaning is present in (19a), it is not as evident in (19b) or (19c), unless one is playing with the language.

- (19) An idiom and some “transformations”
- a. *Mary spilled the beans.* (literally or idiomatically)
 - b. *The beans were spilled by Mary.* (literally only)
 - c. *What did Mary spill?* (literally only)

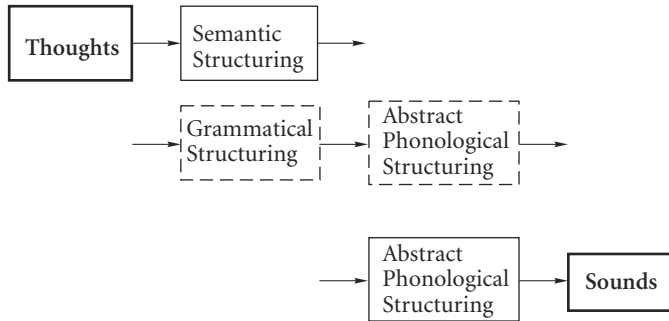
It seemed that these limitations could be naturally explained if one saw the idiom as semantically unitary. Passivization or WH-questioning was impossible because semantically there was no transitive event of the spilling to be passivized and there was no object of the spilling to be questioned. Semantically there was just the unitary idiomatic meaning. Idioms, I suggested, were obvious cases where semantics was driving syntax, not vice versa.

At the end of Chafe (1968) I mentioned that the same explanation could apply to what I called *non-lexical* idioms as well; for example, those involved in the progressive and perfect aspects in English. They too have unitary meanings that came to be expressed indirectly because of language change. In these cases, however, the meanings are not ideas of events or states or referents; they are orientations. We can say now that these orienting meanings are expressed as they are because of grammaticalization, a concept that was not popular as a way of explaining grammar in the 1960s.

The results of independent change in semantics and phonology are shown in (20), which supplements (10) by adding boxes labeled *grammatical structuring* and *abstract phonological structuring*. I have used broken lines for these two boxes, not because they are unimportant, but because neither of them is directly related to observable phenomena, as semantics is related to thoughts and surface phonology is related to sounds.

Returning for a moment to the example of a lexical idiom, we can note that at some point in the history of English a similarity must have been seen between spilling beans and prematurely disclosing a secret. The beans were at first hidden in a container, where they belonged, as a secret is hidden where *it* belongs. Someone then spilled the beans from the container, contrary to what was intended, just as someone might disclose a secret contrary to others' intentions. (It is interesting that English has another idiom, *let the cat out of the bag*, with an almost identical meaning, and that it too involves a container and something that was expected to be kept inside.) And so the idea of prematurely disclosing a secret came to be expressed, not directly in sound, but indirectly by way of the idea of spilling beans.

(20) The results of language change



A useful way to conceptualize this situation is to view the idiomatic meaning as not expressed directly by phonology, but first by means of other *meaning-like* elements, or what might be called *quasi-meanings*, before the latter go on to be expressed phonologically. The two possibilities are summarized in (21), where (21a) is the direct, nonidiomatic case and (21b) the idiomatic case.

(21) Two types of semantic elements

- a. Semantics Grammar
 a thought → meanings —————→ sounds
 b thought → meanings → quasi-meanings —→ sounds

In (21b) it is the meanings directly related to thought, the idiomatic meanings, that people are directly conscious of. But it is worth asking whether the quasi-meanings associated with idioms can also enter consciousness. Recent work on idioms has suggested that people are at least partially aware of the literal meanings of at least some idioms (e.g., Gibbs 1994). I have used the term *shadow meanings* for those that are not in the forefront of our awareness, but that are nevertheless lurking in the background of our consciousness.

In this connection there are two things that can be said about spilling the beans. First, as George Lakoff once remarked (Lakoff 1980), one may have at least a vague mental image of beans being spilled even when one is thinking primarily of a secret being disclosed. The image might include what kind of beans they were, the container they were spilled from, the direction of the spill, or whatever. The other point worth noticing is that some part of the literal meaning may have a direct relation to some part of the idiomatic meaning. Despite the unitary nature of the idiomatic meaning, it may retain a limited degree of compositionality. In this case the idea of spilling something bears an analogical relation to the idea of disclosing something. In short, when an idea is expressed indirectly by means of other, quasi-semantic elements, the meanings of those elements may still play a shadowy role in

how one thinks about the idea. It is as if the grammar box in (20) leaks back into the thoughts in a weakened form.

Whenever it is possible for quasi-semantic elements to double as fully semantic elements, so that (21b) alternates with (21a), a user of the language will find it possible to shift attention back and forth between the two possibilities. When one hears *she spilled the beans* it is likely to be the idiomatic meaning that first comes to mind, but in the right context it could be the literal one. The title of this chapter is ambiguous in just that way. English has an idiom *to put something in its place* that means, roughly, to reduce something from an improperly assumed higher rank to its proper lower rank. If my title is interpreted in that way, it may seem tendentious. But if one interprets it literally, expressing the idea that this chapter will locate grammaticalization within a broader context, this evaluative connotation vanishes. Of course I chose the title just because of this ambiguity.

5. Grammaticalization

How, then, is grammaticalization like idiomaticization and how is it different? Like idiomaticization, grammaticalization leads to the intermediate expression of a directly thought-related meaning by a combination of one or more quasi-meanings. The principal difference is that grammaticalization involves meanings that are not ideas, but orientations. The meaning is not the idea of an event or state or a participant in an event or state, but an orientation of such an idea. Grammaticalization can be characterized as idiomaticization applied to an orientation.

There are several consequences. For one thing, people are not usually conscious of orientations as they are conscious of ideas. But they are even less likely to be conscious of shadow meanings associated with grammaticalized orientations. If I say *I'm going to eat*, using *be going to* as a way of expressing a future orientation on my eating, I do not experience a shadow meaning of going somewhere.

I happen to remember what may have been the first time I heard the idiom *spill the beans*. When I was nine years old, my father was about to be offered a new job in another city. The offer was supposed to be kept secret from him until it was made official, but some woman in the new city told my father about it *sub rosa*. My mother commented that the woman had spilled the beans. Although the idiom was new to me, the context made clear what my mother meant. Perhaps it is uncommon for people to remember their first experience with an idiom, but it may be quite impossible for anyone to remember their first encounter with *be going to* as a way of expressing the future.

Besides the failure of grammaticalized quasi-meanings to enter consciousness, there is another important difference between ideas and orientations. Ideas

are activated according to the topic of a discourse; they depend on what is being talked about. It follows that any particular idea is likely to occur infrequently. Talk about someone spilling the beans can be expected to be relatively rare across the broad range of English conversations. But orientations are ubiquitous. A particular orientation is likely to be used again and again, no matter what is being talked about.

We can look in more detail at *be going to*, an example of grammaticalization that has been cited often. In Hopper and Traugott (1993), for example, it is discussed in three different places for a total of about ten pages. Hopper and Traugott emphasize that what was grammaticalized was not just the word *go*, but the entire expression. They describe how a purposive meaning of, say, *I'm going to eat* (that is, *I'm going for the purpose of eating*) could be converted into what I am calling the orientational meaning of futurity.

How would this example be treated within the picture of language shown in (20)? Before grammaticalization took place, the sounds *I'm going to eat* would have expressed the ideas of two separate events: a going event and an eating event. In (22) I have listed some factors that contributed to combining those two ideas into a future orientation:

- (22) *I'm going to eat.*
- a. the going involves motion away from the present in both space and time
 - b. the going has eating as its purpose
 - c. the going will end with the eating
 - d. the going is given
 - e. the language already has a pattern of auxiliaries

The going event involved motion away from the present location, not only in space but also in time. The purpose of the going was the eating. The going was oriented with the progressive aspect (itself grammaticalized), which meant that it extended before and after the moment of speaking, but also that it would come to an end at some point, in this case with the eating. The going must also have been oriented as *given*, assumed to be already present in the listener's consciousness, and so would have been pronounced with weak prosody: *I'm going to eat*, not *I'm going to eat*. Only the idea of the eating would have been new, and thus accented. Finally, grammaticalization must have been fostered by the prior existence of a pattern into which a new auxiliary like this one could fit.

The factors listed in (22) entailed, although none of them expressed directly, that the eating would take place in the future, and the *be going to* combination thus came to be used as a future orientation. Where previously there had been two event ideas, a going and an eating, now there was only the eating, and the language

had acquired a new orientation. It was a semantic change, the creation of a new semantic element, and the going event, along with its progressive orientation and its purposive relation to the eating event, were left as quasi-semantic elements of English grammar.

This example highlights another difference between idiomatization and grammaticalization. The rather rich content of the pre-grammaticalization stage was reduced to nothing more than a future tense orientation. Reduction (or “bleaching”) is by now a familiar property of grammaticalization. It differs from what happens in idiomatization, where it is the *analogic* relation between two event categories – for example, between disclosing a secret and spilling beans – that drives the change. It is true that in both cases there is a reduction of something more complex to a single semantic element, and in that sense both processes involve a change from many to one. But whereas idiomatic change is driven by analogy, what drives grammaticalization is a reduction of richness. Hopper and Traugott (1993: 82–84) described grammaticalization as involving, in one sense of the word, *metonymy*. It is in fact what one would expect if one views grammaticalization as a shift, not from a word or construction to a *grammatical* element, but from an *idea* to an *orientation*. This distinction between ideas and orientations, and the relative weight of the two in thought, is a useful way of explaining the reductive aspect of grammaticalization.

To recapitulate these differences, both idiomatization and grammaticalization lead to a separation between semantic and quasi-semantic elements. But whereas idiomatization creates a new categorization of an *idea*, grammaticalization creates a new *orientation*. Ideas are conscious, whereas orientations are usually unconscious. Idioms are sporadic and low in text frequency, whereas orientations are ubiquitous. Finally, idiomatization is driven by analogy, grammaticalization by a reduction in complexity, or metonymy.

It seems that there is a drive to reduce the picture in (20) to something more like the picture in (10). That is, the abstract parts of (20), *grammatical structuring* (with its quasi-meanings) as well as *abstract phonological structuring*, because they are not directly related to thoughts or sounds, have a tendency to fade away. The reduction of *going to* to *gonna* reflects this drive toward a more direct expression of thoughts by sounds, bringing the language into closer accord with (10). Awareness of the literal origin of *be going to* has long since vanished, and the erosion of *going to* to *gonna* has left the language with a simpler auxiliary, partially obscuring the need for a separate box in (20).

6. Conclusions

In summary, I began this discussion with the notion that language associates thoughts with sounds. I then suggested that it follows from the nature of thoughts that they cannot be converted into language directly, but must be subjected to the processes listed in (11): selection, categorization, orientation, combination, and linearization. These processes produce a semantic structure that closely resembles what we are accustomed to calling *grammar*. I showed this stage of the organization of language in (10). That would be the whole story if it were not for the fact that languages change, and that they change independently in their semantic structures and their phonological structures. The results of such changes on the semantic side are especially clear with idiomatization, where a combination of meanings coalesces to form a new, unitary meaning. The idiomatic meaning must then be expressed first by a combination of quasi-meanings before it proceeds to be expressed by sound. Grammaticalization is similar, but instead of creating new *categorizations* of ideas it creates new *orientations*. These two processes, idiomatization and grammaticalization, both produce quasi-meanings that are either partially or wholly divorced from thought. Grammar as we know it is equatable with semantic structuring, complicated by the fact that some elements must pass through a stage of quasi-meanings before they are expressed by sounds. Languages tend to mitigate these effects of language change by reducing the picture in (20) to something closer to the picture in (10).

There are two kinds of linguists. One kind finds something in language that has no apparent reason for being there and says, "Hurrah! I've found something that's unmotivated. Language must be innately wired into the human brain, because otherwise there is no reason for this thing." The other kind finds something in language that *is* motivated, either cognitively or socially or (important here) historically, and this person says, "Hurrah! Here is something that has a reason." I obviously belong to this second type, believing that everything *does* have a reason, even everything in grammar. If it is not a cognitive or social reason, it is likely to be a historical one. Linguists of the first type are fond of what has been called autonomous syntax. But perhaps the true study of syntax should be the study of semantic elements and ways they are combined, making allowance for quasi-semantic elements that result from idiomatization and grammaticalization. To think of semantics as an *interpretation* of syntax is a blatant example of putting the cart before the horse. People who study syntax should first and foremost be students of meaning and of language history.

This way of viewing things may help answer the question raised by Benjamin Lee Whorf (1956). Viewed in this way, semantic structures obviously differ a great deal from language to language. The only important and unresolved question is the extent to which these differences feed back into thoughts that are *not* organized

by language. Dan Slobin (1996) has nicely made the point that at least “thinking for speaking” does differ considerably across languages. To the extent that thoughts are converted into language, they are converted in different ways. But what about thoughts that are not converted into language? How much are they influenced by language differences as well? There can be no simple answer. For now I will just mention that converting thoughts into language is an extremely pervasive part of human experience, not only when we are communicating with others but also when we are thinking to ourselves. Whether and to what extent thought can be separated from language is an open question. It may well have different answers for different people.

Ultimately we would like to know how something like (20) is represented in the brain. Language must depend on neural networks that are responsible for our experiences of both thoughts and sounds, and that mediate between the two. One recent book on this subject, Lamb (1998), would evidently see no problem with quasi-semantic representations. They would be activated in intermediate portions of a neural network, portions with no direct relation to either conscious experiences or sounds. Perhaps neural networks are like that, but I believe one must recognize two factors at play here. First, if such intermediate parts of the network exist, they are there because at an earlier stage of the language they related thoughts to sounds more directly. They are the brain’s adaptation to the results of language change. Second, over time the brain works toward a simplification of such a network by creating more direct connections, as we see in the reduction of *going to* to *gonna*. It is easy to incorporate into neural network models the complexities created by grammaticalization, but we should also recognize that the brain keeps trying to make things easier for itself.

The question often arises whether humans are the only creatures to have language. We talk loosely about the language of bees and so on, and people have trained other primates to use symbols in ways that mimic human language to some degree. But it may be that the way human language differs most from other animal communication systems is precisely in the ability to express elements of meaning indirectly, through the mediation of quasi-meanings. This ability may well be something that developed only with the remarkable evolution of the human cerebral cortex. It would be surprising indeed to discover that chimpanzees or gorillas are capable of idiomatization or grammaticalization. Their brains, I suspect, are limited to what is shown in (10). The picture in (20) must be uniquely human.

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Grammaticalization as an analogue of hypothetico-deductive thinking

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1. General remarks

In this paper I shall accept the ‘received’ view according to which grammaticalization, or morphosyntactic change more generally, is a two-stage process consisting of *reanalysis* and *extension* (cf. Hopper and Traugott 1993; Harris and Campbell 1995). Reanalysis is in turn identified as (a subtype of) *abduction*. The purpose of this paper is to scrutinize the notions of reanalysis and extension.

2. Induction, deduction, abduction

The basic types of inference employed in natural science are induction, deduction, and abduction. The first two are unproblematical. Induction is an inference from the data to an (observational) law which contains the same concepts as the data (cf. ‘All ravens are black’). Deduction is an inference from a law (plus antecedent conditions) to the data, where the law may be either observational or theoretical (i.e. such as to contain non-observational concepts).

By contrast, abduction has proved to be problematical. The reason is that, unlike induction and deduction, abduction is a *composite* process. It means finding a (tentative) explanation for some data; but (in this context) explanation is a *deductive* relationship; therefore abduction means a) *inferring* a (typically theoretical) law such that b) the data may be *deduced* from it (plus antecedent conditions). “What Peirce was later to call ‘abduction’ or ‘retroduction’ consists essentially in finding some general hypothesis which entails the known facts” (Laudan 1981: 164).

Thus, the relationships between induction, deduction, and abduction may be summarized as in Figure 1 (with the proviso that in induction ‘data’ has two parts – roughly: ‘cause’ and ‘effect’ – whereas in deduction and abduction ‘data’ is just ‘effect’).

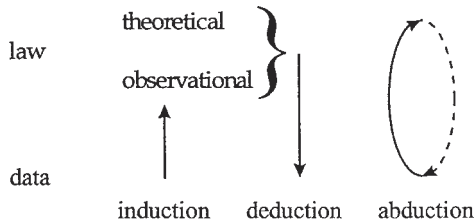


Figure 1.

It follows that Andersen’s (1973) view of abduction (=‘inferring the case/ cause from the result/effect and the law’) is mistaken, both as an interpretation of Peirce and, more importantly, as an explication of how abduction is understood within today’s philosophy of science.

3. The ambiguity of abduction

This is not yet the end of the story. Taken in itself, abduction is an instance of *circular* thinking. The law which has been abduced has, as yet, no genuine support. To acquire such support, it must allow the deduction of *new* predictions about other (types of) data. Only if such predictions are made, and only if in addition they turn out to be *true*, has the law been (tentatively) confirmed. This is the essence of the *hypothetico-deductive method* (cf. Laudan 1981:126–135). The different components of this method may be summarized as in Figure 2.

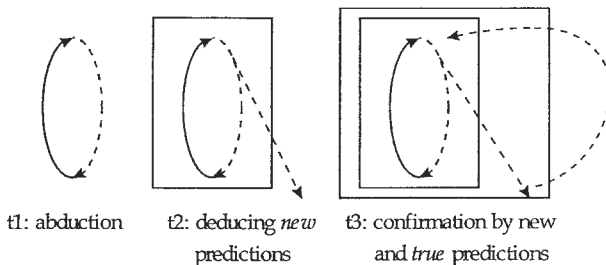


Figure 2.

This brings out the inherent *ambivalence* of abduction. As the first, necessary part of the hypothetico-deductive method, it is 'good'. But if it is not followed by the deduction of new true predictions, then it turns out to be just another instance of circular thinking and, as such, it is 'bad'. This ambivalence, or the need to take the *temporal* dimension (not just t1, but also t2 and t3) into account, has hampered an adequate understanding of abduction.

4. The hypothetico-deductive method

The hypothetico-deductive method may also be summarized as a sequence of two inferences, where (unlike in formal-logical inferences) the temporal order in which the premises are accepted is crucial. ('T' and 'O' stand for 'theory' and 'observational statement', respectively.) The first inference represents abduction while the second represents successful confirmation (see Figs 3 and 4).

t1	O1	
t2	T ⊢ O1	
t3	T	

abduction of theory T
 (=T is abducted because
 it entails 'O1', i.e.
 explains O1)

Figure 3.

t4	T ⊢ O2	(new prediction)
t5	O2	(true prediction)
t6	T	

confirmation of theory T
 (= T is confirmed because it produces
 the new true prediction 'O2')

Figure 4.

5. The analogy between the hypothetico-deductive method and the analysis of grammaticalization

The relevance of the preceding discussion to the concept of grammaticalization should be obvious. Reanalysis and extension correspond to the two stages of the hypothetico-deductive method which have been illustrated by means of the two inferences above. There is, however, one important qualification to be made. The hypothetico-deductive method applies to events that occur in the outside world. Reanalysis and extension applies to language which is a *normative practice*; that is, extension as an analogue of deducing *new* predictions is not about new events to be observed, but about new *actions* to be performed by the speaker him-/herself. Moreover, the analogue of deducing (new) *true* predictions consists in performing (new) actions that will be *accepted* by the linguistic community. New predictions are *discovered* to be *true* but new actions are *accepted* to be *correct*. Some amount of reflection is needed to grasp this distinction fully.

Establishing linguistic analogues to deducing *new* and *true* predictions neatly captures the *psychological* and *social* aspects of linguistic change. At the same time, it validates the old distinction between innovation and acceptance in linguistic change: new predictions = (psychological) innovation; true predictions = (social) acceptance/adoption. (More precisely, the abductive phase too is part of innovation.)

Rather than saying that reanalysis & extension instantiates the hypothetico-deductive method, it should be said that the two equally instantiate some superordinate concept, and thus are structurally similar or *analogous* to each other. This analogy may be spelled out as in Figure 5.

There are two qualifications to be made concerning the analogy between abduction and reanalysis. First, it is generally thought that abduction is triggered by some new and *surprising* fact. As far as reanalysis is concerned, however, this characterization applies only to the language-learning child and to the adult encountering data from a foreign language. Insofar as adult speakers abduce new structures for their language, by contrast, the data which triggers this process is thoroughly old and familiar. (At least the literature on grammaticalization does not mention

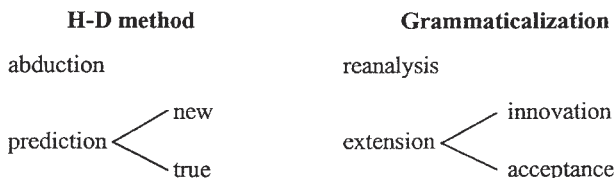


Figure 5.

any cases that might contradict this assumption.) The speakers just feel the need to reanalyze the data in a new way (cf. below).

Second, in the natural sciences it seems uncontroversial to say that the result of abduction is a *law* under which the data (with its antecedent conditions) may be subsumed (cf. above). In linguistic reanalysis, by contrast, it is more appropriate to say that the result of abduction is a *structure* which is exemplified by the data.

6. An example

It is good to illustrate the claims made above. Consider the well-known case of the emergence of the active perfect tense in Romance languages. To begin with, a Latin sentence like *habet lectum librum* was analyzed as [*habet* [*lectum librum*]] (=‘he has a/the read book’), which means that it was taken to exemplify the structure [*V*[*A+N*]]. Then it was reanalyzed as [[*habet lectum*] *librum*] (=‘he has-read a/the book’), which means that it was taken to exemplify the structure [[*AUX+V*]*N*]. Thus, *habere* acquired the status of an auxiliary verb. The analogy to the natural-science abduction should be evident at once: in both cases, a phenomenon which has so far been subsumed under some general principle X is now subsumed under a new principle Y and ‘explained’ as an instance of Y (cf. Fig. 1). Next, a new form *habet lectum libros*, analyzed as [[*habet lectum*] *libros*] (=‘he has-read (the) books’), was produced by extension or, equivalently, the new action of uttering this new form was ‘predicted’. This process is based on solving an *analogical* equation of the kind presented in Figure 6.

Finally, this new form was accepted by the linguistic community. It is the origin of the Italian, Spanish, and French constructions *ha letto i libri*, *ha leído los libros*, and *il a lu les livres*. Again, the analogy to the natural-science prediction should be fully transparent: in both cases, a new ‘prediction’ is first made and then confirmed (cf. Fig. 2).

$$\frac{[[\text{legit}] \text{librum}]}{[[\text{legit}] \text{libros}]} = \frac{[[\text{habet} \text{lectum}] \text{librum}]}{X}$$

$$X = [[\text{habet} \text{lectum}] \text{libros}]$$

Figure 6.

7. Reanalysis and extension as exemplifications of analogy

Notice, however, that up to now I have explained the emergence of the proto-Romance active perfect tense only in the sense of showing *how* it happened. I have not yet tried to answer the ulterior question as to *why* it happened; and some people doubt that this kind of question can ever be answered.

I suggest that insofar as the WHY?-question can be answered at all in connection with reanalysis, it can only happen by seeking a *model* for this process. For instance, what was the model for reanalyzing *habet lectum librum* as [[*habet lectum*] *librum*]? As far as I can see, it was the construction with the auxiliary verb *esse* ('to be'), as in [*liber [est lectus]*] ('the book was read'). This process was based on solving an analogical equation of the kind presented in Figure 7.

$$\frac{\text{liber est lectus}}{[\text{liber [est lectus]}}] = \frac{\text{habet lectum librum}}{X}$$

$$X = [[\text{habet lectum}] \text{librum}]$$

Figure 7.

Maybe this is the right answer, maybe not. The main thing is, however, that if no model can be found, then the WHY?-aspect of reanalysis remains unexplainable. This claim might be countered by referring to the (probable) existence of universal and therefore explanatory 'pathways' of reanalysis. This is no genuine counterargument, however, because universal capacities tend to be exemplified in one way or another at any particular time; and 'exemplifying a universal capacity for reanalysis' equals 'making use of an (analogical) model for a particular reanalysis'. Why? – because reanalysis is, as a matter of fact, based on one model or another.

It is generally recognized that extension is an analogical process. (The same applies to the deduction of new predictions although the term 'analogy' is not used in this context.) In fact, Hopper and Traugott's (1993) term for extension is 'analogy'. It is less often recognized that – as shown above – analogy plays a role in reanalysis as well. A *significant generalization* is achieved by showing that both components of grammaticalization, i.e. reanalysis and extension, involve the superordinate notion of analogy.

There is one more question to be asked and answered: *Why* are (analogical) models used in reanalysis? The answer has to do with the kind of uniformity that analogy imposes upon the data, and thus with economy: it is *rational* to practice reanalysis (cf. below). But then there are still deeper questions which are likely to remain unanswered: *Why this* model and not some other? Ultimately, one simply has to accept the 'brute fact' of free will and/or chance.

8. Invisible-hand explanations

Keller (1994:90–95) claims that the psychological-*cum*-social nature of linguistic change can be accounted for only by an invisible-hand explanation which regards a given change as an unintended collective result of several individual actions. The above-mentioned ‘(psychological) innovation vs. (social) acceptance’ distinction, well-known in diachronic linguistics, shows that this claim is false. Moreover, the invisible-hand account is itself uninformative. Adam Smith’s ‘invisible hand’ (just like Hegel’s ‘List der Vernunft’) was meant to capture the idea that in social life dissimilar, often antagonistic intentions/actions produce collective results which are *surprising*, or different from what anybody intended: X intends A, Y intends B, etc., but the result is some O intended by nobody. Keller, however, has to admit that linguistic change is a collective result of *consensual* intentions/actions: when every speaker does A, the linguistic community as a whole does A (although this was intended by no speaker); but this is uninformative. The contrast in question may be pictured more graphically as in Figure 8.

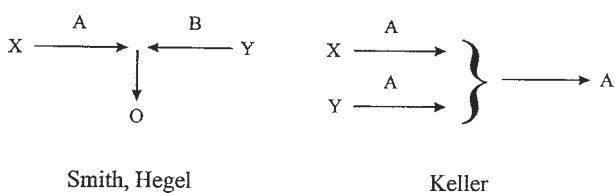


Figure 8.

It may be added that, in reference to Schelling (1978), the desirability of invisible-hand explanations was anticipated and rejected in Itkonen (1984:205).

9. No change without a model

Lass (1997:318–320) distinguishes what he calls ‘exaptations’ from ‘analogical processes’ and ‘abductions’, on the grounds that they are genuine innovations: “In exaptation the ‘model’ itself is what’s new.” His example is the emergence of the progressive *be V-ing* construction in English. It is quite clear, however, that the model for this construction was provided by the ordinary copula sentences. Harris and Campbell (1995:72–75) are explicit on this point: ‘exploratory expressions’ are produced by the *existing* grammar (and if they catch on, they may become the basis for reanalysis). Thus, neither reanalysis of existing forms nor production of new forms arises out of nothing. Rather, in both cases some sort of pre-existent model is needed.

10. Novelty in sentence-production and in linguistic or scientific change

Just like Lass (1997) now claims that there can be completely novel linguistic changes, i.e. changes with no model, Chomsky used to claim that people are able to produce and understand *completely novel sentences* (which, if taken literally, means that people are able to produce and understand sentences that have nothing in common with sentences previously produced or understood). Although influential, this was a very misleading formulation because it redefined ‘A is completely novel vis-à-vis B’ as ‘A is not completely identical with B’. In reality, all new sentences are in one way or another *analogous* to those produced or understood previously (cf. Itkonen and Haukioja 1997).

There is an interesting analogy [sic] between language (viz. linguistic change and the production/understanding of new sentences) and scientific discovery. The Popperian tradition claims that new scientific theories are “free creations of the human mind,” which in fact makes scientific creativity wholly unexplainable or mysterious. On reflection, however, it is nearly self-evident that although scientific creativity can be neither formalized nor predicted, it *can* be explained (to some extent), namely by showing that the abducing of new theories is not an entirely unconstrained process, but rather depends – more or less – on some pre-existent models or thought patterns (see e.g. Koestler 1964; Pera 1981; Holyoak and Thagard 1995). One recurring thought pattern consists in showing that two *prima facie* dissimilar types of phenomena exemplify the same superordinate concept (and are thus *analogous* in the technical sense). In what precedes, I have applied this thought pattern to the following pairs of concepts: reanalysis~extension, grammaticalization~hypothetico-deductive thinking, novel changes~novel sentences.

11. Rational explanation of linguistic change

According to Peirce, “the leading consideration in Abduction [is] the question of Economy – the Economy of money, time, thought, and energy” (Hookway 1985:226). This reveals the incontrovertibly *rational* character of reanalysis: it establishes a ‘one meaning – one form’ uniformity between the model and the modelled. In making the data conform to the result of reanalysis, extension too is ‘economical’ and therefore rational. It follows that grammaticalization, and linguistic change more generally, is amenable to ‘rational explanation’ (which happens to be the central notion of Itkonen 1983). A congenial view of linguistic change as creative problem-solving activity is expressed in Heine et al. (1991:29). If this view is taken literally (as it should), it rules out any biological or evolutionary account

of linguistic change, because purely biological entities can perform neither abductive inferences nor analogical generalizations: “no evolutionary change of any kind came about through the application of intelligence and knowledge to a solution of a problem” (Cohen 1986: 125). Thus, the basic distinction between human science and natural science, argued in Itkonen (1978) and (1983), remains valid in the domain of grammaticalization too.

Some practitioners of diachronic linguistics are put off by the term ‘rationality’. They should realize, however, that the modern cognitive science is in its entirety based on the concept of unconscious rationality, because it is committed to the view that human beings have permanently unconscious goals and permanently unconscious beliefs about (supposedly) adequate means to achieve those goals. This is all that rationality is (as argued in Itkonen 1983).

12. Hermann Paul and grammaticalization

The psychological and social processes involved in grammaticalization are extremely general in character. Therefore grammaticalization acquires its self-identity because of the particular subject matter to which such processes apply. What is, then, the subject matter of grammaticalization? On a wide interpretation, it concerns the emergence of different ways to express grammatical (as opposed to lexical) meanings, which include e.g. word order and phonetically-conditioned internal change (\sim *Ablaut*). On a narrower interpretation, grammaticalization is identical with what Hermann Paul called *Komposition*, or the tendency of lexical units to lose their autonomy on the scale ‘compounding > derivation > affixation’. According to Paul (1975 [1880]: 325) *Komposition* is “just the normal way that anything formal emerges in language” (*die eigentliche normale Entstehungsweise aller Formellen in der Sprache*). So we see that Meillet (1912) was quite mistaken in thinking that the phenomenon of ‘grammaticalization’ singled out by him was something that the Neogrammarians in general and Hermann Paul in particular had neglected.

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Appendix

For various reasons not all papers presented at the International Symposium “New Reflections on Grammaticalization,” Potsdam, June 17th to June 19th 1999, could be included in this volume. Those contributions to the symposium that have been published elsewhere are in the following list of references:

- Di Meola, C. (2001). “Synchronic variation as a result of grammaticalization: concessive subordinations in German and Italian.” *Linguistics*, 39, 133–149.
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