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Theory and method in grammaticalization

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Abstract

This paper reviews a couple of theoretical and methodological issues in grammaticalization research, including in particular the relationship of grammaticalization to the synchrony/diachrony contrast, unidirectionality and degrammaticalization, lexicalization, analogy, reanalysis and lateral conversion. There are misunderstandings, both in the grammaticalization and in the anti-grammaticalization literature, of each of these issues. Grammaticalization, if construed appropriately, comprises a homogeneous set of phenomena and therefore remains a unified field of research and a worthy object of a linguistic theory.[1]

1 Introduction

From the time that grammaticalization research became firmly established in linguistics, roughly from the mid-eighties of the past century, it has been intensely attacked, reinterpreted and ignored by generative grammar. Recently grammaticalization research was deemed worthy of a broadside by a group of scholars of different persuasions, including generative grammar. Their articles were published in *Language Sciences* 23/2, 2001. Although this collection is essentially critical of grammaticalization research, it has some merit by reviewing a substantial portion of the relevant recent literature on grammaticalization. The authors point out the enormous diversity of opinion, numerous contradictions and weak points in the literature on grammaticalization. Among other things, Campbell & Janda 2001, section 2, offer a list of definitions of grammaticalization. Probably the first lesson to be drawn from this list is how sloppy many of these definitions are. One cannot but agree with the authors of the collective volume that much of grammaticalization research evinces a low theoretical level.[2] Therefore, there is no question that the challenge deserves being taken up.

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[1] Thanks are due to Alex Burri, Sonia Cristofaro, Gerd Jendraschek, Anna and Paolo Ramat and Davide Ricca for helpful discussion.

[2] Just as much of research intended to belittle grammaticalization. Here is the definition of 'downgrade' offered in lieu of 'grammaticalize' in Newmeyer 2001:204: "grammatical elements may 'downgrade' (i.e. increase in degree of grammatical content morphosyntactically)".

2 Some elements of theory and methodology

2.1 Synchrony and diachrony

From the set of definitions just mentioned, it becomes clear that most authors (including Campbell 2001:154f) view grammaticalization as a diachronic phenomenon or even as a historical phenomenon (Newmeyer 2001:188f *et pass.*). The latter may be true of individual cases; but to call grammaticalization in the generic sense a historical phenomenon is simply a reflex of the widespread confusion of diachrony with history. Calling it a (purely) diachronic phenomenon, however, is theoretically mistaken, too. Synchrony and diachrony are two perspectives on the same thing. There are no purely synchronic and no purely diachronic phenomena; there is only a synchronic and a diachronic side to a linguistic phenomenon.[3] In modern English, *have* 'possess' bears a synchronic relation to *have* AUX, whose diachronic counterpart is the evolution of *have* AUX out of *have* 'possess'. The principle that variation is the synchronic manifestation of (diachronic) change applies to grammaticalization as it applies to analogy, assimilation or just any linguistic process. Grammaticalization could never be a kind of diachronic change if it were not a kind of synchronic variation, too.

This has methodological implications, too. In – internal or comparative – linguistic reconstruction, we compare forms with each other which are either synchronic or whose chronological relation is regarded as equivalent to synchronic. The linguistic relationship between them is then dynamicized, typically by analyzing one form as more archaic than the other. Their relationship is interpreted as a diachronic relationship, one emerging from the other or both emerging from a third, more primitive form. Whenever this change is interpreted as a token of grammaticalization, this hinges crucially on our ability to recognize a grammaticalization relationship even in synchronic situations (or situations taken as synchronic).

From this it follows that the methodological situation of the researcher differs essentially according to whether he looks at data from one and the same stage of a language or at data belonging to two different historical stages. If there is variation in the latter situation, then this has an intrinsic direction in the sense that grammaticalization necessarily leads from the earlier to the later variant. If there is variation in the former situation, this does not exhibit an intrinsic direction. Therefore, dynamicization of such a variation relies on an analogy with the model of historically attested changes. In this sense, a hypothesis of grammaticalization based on historical change is easier and safer than a hypothesis of grammaticalization based on synchronic variation. At the same time, this difference abides in the realm of methodology and does not concern the theoretical status of grammaticalization.

This issue is seriously misconstrued in Campbell & Janda 2001:109, question 10. They ask whether claims on grammaticalization are not "viciously circular" because grammaticalization theorists first dynamicize a synchronic relation in terms of diachronic grammaticalization and then take the reconstruction as independent empirical evidence for some general path of grammaticalization. No one doubts that such a procedure is circular and

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[3] For instance, the question raised in the blurb of Fischer et al. (eds.) 2004, "In how far can grammaticalization be considered a universal *diachronic* process or mechanism of change and in how far is it conditioned by *synchronic* factors?" makes no sense since there is no such thing as a (purely) synchronic factor. *A fortiori*, Newmeyer's (2001:191f) claim that "diachronic developments" can only be explained by "synchronic mechanisms" lacks any theoretical foundation.

therefore inadmissible.[4] In order to use some data as empirical evidence for grammaticalization, it must be historical data (see 2.3 for more precision). At the same time, the circularity has nothing in particular to do with grammaticalization research. Any historical linguist, whether he studies sound change, analogical change, lexical semantic change or whatever, may fall into this trap, and many have, including many antigrammaticalizationists (see 4.1). Thus, this is just a prejudiced objection against grammaticalization theory.

2.2   Grammaticalization

The following discussion presupposes the concept of grammaticalization. Although definitions of grammaticalization are not wanting (cf. Campbell & Janda 2001, section 2), most of them are propaedeutic rather than formal. For present purposes, the definition in P1 should suffice:

P1. Grammaticalization of a linguistic sign is a process in which it loses in autonomy by becoming more subject to constraints of the linguistic system.

P1 involves a couple of concepts which have to be defined in their turn. The concepts of 'autonomy' and its loss as well as the concept of a 'constraint of the linguistic system' must be operationalized in such a way that we can tell, for a pair of signs that fulfill some relevant condition of functional similarity,[5] which of them is more grammaticalized than the other. This has been attempted in the literature (e.g. Lehmann 2002[T], ch. 4). The essence of the conception is that the loss of autonomy that defines grammaticalization involves, both on the paradigmatic and syntagmatic axes, loss in weight and variability and gain in cohesion.

It should be noted that this concept of grammaticalization is relatively wide in applying to a linguistic sign no matter whether this is simple or complex. It is, however, relatively narrow in specifying one way in which a sign can lose in autonomy, another way being its integration into a lexical item by lexicalization. It also delimits grammaticalization against a couple of other processes that change the grammatical system or create new grammatical structure and that we will come to in 3. Here it suffices to note that it is unwise to elevate grammaticalization to the status of 'creation of grammar' *per se*. This necessarily renders the concept wide and heterogeneous, with the consequence that it becomes less apt to generate falsifiable empirical generalizations and to be integrated into an articulated theory of language change and language activity.

We can forego the issue of whether the (dynamic) concept of grammaticalization presupposes the (static) concept of grammar. It suffices to see that P1 embodies a conception of grammar in which the latter is essentially a system of constraints (Roman Jakobson's *ars obligatoria*, a concept that he attributes to the schoolmen). Since we do not need dynamic concepts at every turn, we can speak, instead of a more or less grammaticalized item, more simply of a more or less grammatical item.

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[4] Janda (2001:271) and Newmeyer (2001, section 5.1) are among those reminding us of this.

[5] Things are simplified if the two signs are diachronically identical (cf. section 2.3). The comparison may, however, be meaningful even for isofunctional signs (e.g. personal cross-reference paradigms) which are not historically related.

2.3 Empirical proof

Consider now the methodological situation of someone who wants to argue that a certain constellation of data is empirical evidence for grammaticalization. Such evidence must take the following form:

1. There are two historical stages of language L, earlier L1 and later L2.
2. L1 has form F1 and L2 has form F2, such that F2 is diachronically identical with F1.
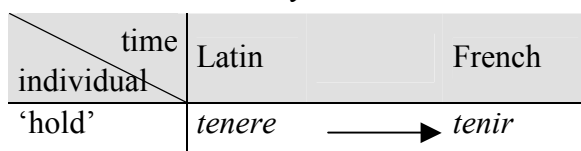3. F2 is more grammatical than F1.

Let us take these requirements up in turn in order to see what they entail.

Ad 1: Such cases of variation where F1 and F2 belong to the same synchronic stage of L do not count as **empirical evidence** for grammaticalization. They may or may not be actual cases of grammaticalization, but they are insufficient to prove it. This is because the notion of grammaticalization involves a direction in the variation. It is conceivable that we sharpen our methodology to pinpoint this direction even in situations of synchronic variation. At the moment, however, our methodology does not afford this. What we do, instead, is interpret cases of synchronic variation in the analogical light of cases where F2 is historically later than F1.

Such cases of diachronic variation where F1 is reconstructed do not count as historical evidence either. The reason is not that we should mistrust reconstructions. It is simply that only historical facts, which ultimately can be related back to historical documents, count as empirical evidence in diachronic linguistics. Responsible reconstruction crucially involves methodological principles that say, in essence: your reconstruction should be compatible with tendencies of diachronic change that emerge as generalizations over attested historical changes. One such tendency is precisely grammaticalization. Consequently, adducing a reconstruct as empirical evidence for grammaticalization would be circular. Thus, grammaticalization plays an important methodological role in reconstruction; but reconstruction can only play an illustrative role in grammaticalization.

Ad 2: The notion of **diachronic identity** (or diachronic continuity) involves the notion of identity, an elementary notion which cannot be defined. The intuition behind diachronic identity is the following: An individual exists over a certain amount of time and remains identical across successive instantiations of itself. This is true although every aspect of the individual may change. As a simple example, consider the following pair of words from Latin and French:

S1. *Diachronic identity*

time / individual	Latin	French
'hold'	*tenere* ——→	*tenir*

Although we recognize both phonological and semantic differences between the two words, we also recognize them to be diachronically identical.

Now assume a stretch of time including phases P_1 and P_2. If the distance between P_1 and P_2 is sufficiently long, the instantiation of our individual at P_2 may be more like another individual that existed at P_1 than its own instantiation at P_1. For an example, consider the relationship between Latin *erat* and French *était,* as visualized in S2:

S2. *Diachronic identity despite difference of significatum*

time individual	Latin	French
'stood'	*stabat*	
'was'	*erat*	*était*

French *était* is not diachronically identical with Latin *erat*. Instead, the latter was replaced, at some point, by what had been Latin *stabat*, while *erat* itself dropped out of use. Now the function or meaning of French *était* is as much similar to the function or meaning of Latin *erat* as is possible in two different linguistic systems. Thus, *erat* is not identical with *était* although the significata are (nearly) identical, while *stabat* is identical with *était* although the significata differ.

S3. *Diachronic identity despite difference of significans*

time individual	Latin	French
/korpus/	'body'	
/kor/	'heart'	'body'

The other side of the coin is visualized in S3. Here Latin /kor/ is not diachronically identical with French /kor/ despite the near identity of the significantia. Instead, the predecessor of French /kor/ is Latin /korpus/, despite the difference between the significantia.

All of this goes to show that diachronic identity of linguistic signs cannot be reduced to some notion of similarity, be it of the significans or of the significatum. Instead, it is simply identity of an individual with itself over time, where 'identity' and 'time' are axiomatic notions of the theory.

Ad 3: Requirement 3, of course, presupposes an operational definition of grammaticalization and of degrees of grammaticality. We will assume that this has been provided by the conjunction of P1 with the relevant literature. Since of the two stages of L concerned, L1 is of necessity not contemporaneous with ourselves, and possibly the same is true for L2, such features of grammaticalization that concern the content side of the linguistic sign are sometimes not easy to control. It is therefore understandable that authors have often relied, for this methodological reason, on purely structural criteria. It must, however, be born in mind that the autonomy of a linguistic sign, and consequently grammaticalization, is a complex notion in which a number of factors correlate. Concentrating on only one of them will not suffice. For instance, the discussion is very often simplified by using coalescence (free > clitic > affixal > fusional) as the sole criterion for grammaticalization. In cases where there is disagreement (such as those taken up below), this will not suffice, since nobody has ever claimed that whenever something coalesces, it is grammaticalized.

Examples that fulfill all three of the above requirements have been found in languages with a long documented history. If an example is wanted: the stock example of grammaticalization, Latin *dē* 'down from' becoming French *de* 'of', has a documented history of roughly 2.500 years in which the chronological order of events can be ascertained with that degree of accuracy and reliability that can be achieved in historical disciplines. Besides the many cases that can be regarded as historical evidence by these standards, there are also

numerous examples around that do not satisfy one or another of the three requirements. In particular, a case that falls short of requirement 1 by only relying on synchronic data, or by appealing to reconstructed data, may be a perfect example of grammaticalization; it just does not count as empirical proof.

2.4 Tendencies and exceptions

A word must be said on the methodological status of exceptions. Grammaticalization is a process in which function and structure go hand in hand. However, function and structure correlate less than a hundred percent in language (otherwise there would be no linguistics); their association is partly arbitrary. For instance, in every language, all signs are distinct in that there is a distinct significans for any given significatum. Nevertheless, there are some exceptions provided by full synonymy, and even more exceptions provided by homonymy. These exceptions do not invalidate the principle. They merely show that language can work even if the principle is only valid as a general tendency. Exceptions to generalizations in grammaticalization research largely have the same methodological status. Grammaticalization research, for instance, has been entertaining a hypothesis on function-structure isomorphism in the sense that semantic bleaching/desemanticization correlates positively with phonological attrition/erosion.[6] One cannot invalidate such a hypothesis by a number of counterexamples, as is attempted in Campbell 2001, section 3.1f. The only thing that one can do if one takes the hypothesis seriously but doesn't believe it is either to challenge grammaticalization theorists to provide statistical proof (which they have so far failed to do) or else to come up with statistical counterproof oneself.

3 Grammaticalization and related processes

3.1 Some basic concepts

Some of the relevant literature – especially from the grammaticalizationist camp – tends to make one believe that grammaticalization is the same as grammatical change. There is also the idea that grammaticalization is the only way for grammatical items to come into existence. One could decree this by definition ("grammaticalization is the genesis of grammar/ grammatical structure/grammatical items"). However, it can be observed that there are different ways for grammatical material to evolve,[7] and there are also well-established concepts and terms for these different ways. It is therefore more reasonable to restrict the concept of grammaticalization in such a way that it can be distinguished, at least, from analogical change, lateral conversion and reanalysis. Moreover, grammaticalization must be distinguished from lexicalization.

Before we turn to the comparison of grammaticalization with each of these related processes, some clarification is necessary concerning the concepts of **gradualness** and **continuity**.[8] For a difference to be gradual means that given more than two elements $E_1, E_2 \ldots E_n$, E_{i-1} is to E_i as E_i is to E_{i+1}. By extension, a certain variation whose variants differ gradually is a gradual variation, and similarly a process or a change whose stages differ

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[6] It takes the form of a "parallel reduction hypothesis" in Bybee & Pagliuca 1985:76.

[7] Campbell (2001:131f) reminds us of this with a list of relevant examples.

[8] Cf. the similar distinction "between persistence and incrementality vs. continuousness and imperceptibility" postulated in Janda 2001:307f.

gradually is gradual. In this sense, the change from an independent pronoun via a clitic pronoun to a pronominal affix is gradual.

Gradualness is distinct from continuity. For some variation to be continuous means whichever two adjacent variants E_i and E_j are selected, there is always a variant E_k such that $E_i > E_k > E_j$ is gradual in the sense defined. There is, for instance, continuous variation between plain and aspirated release of a voiceless stop. In the same sense, a continuous change is the diachronic counterpart to a continuous variation. Thus, some variation may be gradual without being continuous. By the above definition, all continuous variation would seem to be gradual. However, the point is that if differences between adjacent variants become infinitely small, no grades may be discerned any longer.

All of linguistic change is gradual (and maybe continuous) in the sense that it is not perpetrated as an instantaneous revolution in the whole speech community, but spreads through it gradually over space and time. This aspect of linguistic change does not concern us here. In the present context, the notions of gradualness and continuity concern the linguistic system.

The notion of continuity plays an important role in theories of linguistic change which claim that it is subconscious, which is, of course, more plausible if change is continuous. For the comparison of some processes of linguistic change to be executed in the following sections, we may keep in mind that

- not all linguistic change is gradual; for instance, analogical change is not gradual;
- not all linguistic change – and in particular not all sound change – is continuous; for instance, trivially metathesis is not continuous;
- grammaticalization is gradual;
- whether or not or in which sense grammaticalization is a continuous process is an empirical issue and in no way part of the concept itself.

Processes of grammaticalization may be complex, both in terms of sequential composition of a process in time and in terms of the synchronic combination of phenomena. It is quite possible that some ingredient changes are continuous, others are just gradual. Suppose, for instance, that the change from a postposition to a case suffix were toppling rather than gliding. It would no less be a process of grammaticalization.

3.2   Analogy

It is not necessary to introduce the concepts of analogy and of analogical grammatical change here. Consider just one example: The Middle High German noun *hahn* 'rooster' used to belong to the weak declension class (gen. *hahnen*, pl. *hahnen*). In Modern High German, it belongs to the strong declension class (gen. *Hahns*, pl. *Hähne*). This shift from the weak into the strong declension class is based on the analogical model of other members of the latter class. The process involves none of the parameters of grammaticalization. This one example should suffice to show that analogical grammatical change and grammaticalization are distinct and may even be disjunct in particular cases.

However, just as a sound change may cooccur with a meaning change, so different kinds of grammatical processes may cooccur in a particular historical change. By this criterion, there are two kinds of historical changes involving grammaticalization:

1. For many cases of grammaticalization, there is no analogical model that could direct them. Examples include the grammaticalization of the numeral 'one' to an indefinite article

and of a demonstrative to a definite article, both in the Germanic and Romance languages, of a spatial preposition to a marker of the passive agent in Ancient Greek, of personal pronouns to preverbal cross-reference markers in colloquial varieties of Romance. These cases are evidence of **pure grammaticalization** without analogy.

2. In the other class of cases, analogy directs the course of grammaticalization. It can do this in different ways. As a first example, consider the grammaticalization of forms of Latin *habere* 'have' to Romance conjugation suffixes, as in Italian *canterò* 'I will sing', *canterei* 'I would sing'. It presupposes the Proto-Romance constructions *cantare habeo / cantare habui*, thus the order 'non-finite verb – auxiliary' or, more generally, verb-final word order. This was not the dominant word order in Proto-Romance. It does not even appear in the periphrastic perfect Latin *habeo cantatum* > Italian *ho cantato* 'I have sung', coming up at about the same time, let alone with other function verbs such as the causative Latin *facio cantare* > Italian *faccio cantare* 'I make sing', coming up a little later. We may assume that it is the copresence of a vital conjugation system, comprising categories like the imperfect and the subjunctive expressed by – partly agglutinative – verb suffixes, that serves as an analogical model for *canterò* and *canterei*. In other words, grammaticalization of *cantare habeo/habui* instead of coexistent *habeo/habui cantare* was helped by the analogical model of tense/aspect/mood categories expressed in the position after the verb stem. In this case, the analogical model would be needed in order to motivate the particular course of grammaticalization (though not the grammaticalization of a possessive verb to a tense/aspect/mood marker as such).

Another way in which analogy may support grammaticalization may be seen in cases like a coverb joining the class of prepositions in Modern Mandarin or a postposition becoming a case suffix in Modern Turkish. There the process itself would happen in the same way with or without an analogical model – and certainly the first Chinese coverb and the first Altaic case suffix did not have such a model to follow; but the actual presence of a model may be the explanation of the fertility of this grammaticalization path in the language. Such cases show that one of the constitutive factors of grammaticalization, viz. paradigmaticization, is occasionally driven by analogical patterns. In contradistinction to pure grammaticalization, we will call the second kind **analogically-oriented grammaticalization**.

The explanatory status of analogical models is rightly debated. For one thing, the effectiveness of an analogical model in one case is compatible with its inertness in a neighboring case. By the above argument, the analogical model of the Proto-Romance suffixal conjugation would have been active in the case of *canterò* and *canterei*, but would have had no effect in the genesis of *ho cantato*. For another, as we shall see in 4.2, analogy by itself has no orientation and therefore cannot principally orient grammaticalization. Analogical grammatical change is thus a kind of grammatical change that is neatly distinct from grammaticalization but which may cooccur and interact with it in particular historical changes.

For purposes of methodology, we will keep in mind that analogically-oriented grammaticalization is still a kind of grammaticalization, but the *proprium* of grammaticalization comes out only in pure grammaticalization.

3.3   Reanalysis

The reanalysis of a construction is the assignment of a different grammatical structure to it. Expressions instantiating the construction are thereby not changed. The reanalysis is therefore

itself not observable. Its accomplishment can only be diagnosed *ex post* when the construction behaves in ways that presuppose its new structure.

Consider the evolution of the German expanded infinitive with *um ... zu* 'for … to' as an example. In Modern German, this is a non-finite complement clause, whose internal structure is shown in E1.b.

E1.   a.   ging [um Wasser] [zu holen]   lit. 'went for water to fetch'
       b.   ging [um [Wasser zu holen]]   'went (in order) to fetch water'

The remarkable feature of the construction is the discontinuous subordinator *um ... zu*, whose first part introduces the construction, while the second part directly precedes the infinitive form. The diachronic description of this structure is in terms of a reanalysis whose input structure is shown in E1.a. As may be seen, the input construction contains two coconstituents, a purpose adjunct in the form of a prepositional phrase introduced by *um* 'for', and an infinitive complement whose subject position is controlled by the main subject and whose object position is controlled by the nominal in the prepositional phrase. The reanalysis interprets this nominal as the direct object of the infinitive and consequently drops the syntactic border between them. In fact, everything between the initial *um* and the infinitive marker *zu* now belongs to the infinitival complement, so that the main syntactic boundary becomes the one separating the initial complementizer from the rest, as in E1.b. The reanalysis can be diagnosed safely when constructions such as E2 become possible, because there the subconstituent following *um* can never have depended on it.

E2.   ging um heimwärts zu fahren   'went to drive home'

Like every reanalysis, this one, too, raises the question of its motivation. Reanalyses are not creative, but motivated by an analogical model. In this case, the analogical model is provided by the construction in E3, which existed in the language since Proto-Germanic times (at least).

E3.   ging [Wasser (zu) holen]   'went to fetch water'

That is, a non-finite clause in which all the dependents preceded the non-finite verb was a well-established part of Germanic syntax, and the new motion-cum-purpose construction was subsumed under this pattern.

Like many other cases of reanalysis, this one has nothing to do with grammaticalization. The language acquires a new syntactic construction, but none of the parameters of grammaticalization applies. In many other cases, however, reanalysis does interact with grammaticalization. Consider the Germanic and Romance periphrastic perfect. The facts are so well-known that a schematic Old English example may suffice here:

E4.   Ic hæbbe þā bōc āwrittene. 'I have the book written down / written down the book.'

Reanalysis here leads from an input structure where *þā bōc* is the direct object of *hæbbe* and *āwrittene* is its predicate complement, to an output structure where *hæbbe* is an auxiliary to *āwrittene* and *þā bōc* is the direct object to this periphrastic verb form. At the same time, *hæbbe* is recategorized (s. 3.4) from a full verb to an auxiliary, and the construction consisting of this auxiliary and the participle is grammaticalized into a member of the conjugation paradigm.

From this and many similar examples, we may conclude that reanalysis may occur as a component of a grammaticalization process. Some have drawn the conclusion that everything

that needs to be said about the grammatical change in E4 is said in its description as a reanalysis, and therefore the concept of grammaticalization can be eliminated by reduction to reanalysis (cf. several contributions to Abraham (ed.) 1994). Campbell (2001) wants to reduce grammaticalization to reanalysis plus analogical extension.[9] This is insufficient for a number of reasons:[10]

1. The loss of autonomy that defines grammaticalization involves loss in weight and variability and gain in cohesion. Part of these processes may be reconstructed as certain specific kinds of reanalysis and extension; but the latter do not capture the whole concept of grammaticalization. For instance, the fate of the English future auxiliary *be going to* may be described partly as reanalysis plus extension (as done in Campbell 2001:141f). However, the fact that the desemanticization of the expression is accompanied by its phonological reduction to *be gonna* is not covered by either reanalysis or extension (and therefore not mentioned by Campbell). It is one of the tenets of grammaticalization theory that semantic and phonological reduction correlate with each other (reduction in weight) and with the other component processes (loss of autonomy) exactly the way they do in the auxiliarization of *be going to*. The components of grammaticalization are not covered by reanalysis plus extension because these do not imply loss of autonomy, which is, however, definitory for grammaticalization. More generally, reanalysis is not directional, as grammaticalization is. More on this in 4.2.

2. If one wants to "deconstruct" grammaticalization, one may (1) define reanalysis as involving category change, (2) conceive grammaticalization phenomena as instances of category change and (3) consequently reduce grammaticalization to reanalysis.[11] However, (a) there are kinds of category change that have nothing to do with grammaticalization and (b) one needs to extend the notion of category change to subsume under it those typical grammaticalization processes as transition from demonstrative to definite article or from lexical to grammatical preposition. More on this in 3.4.

3. Reanalysis is a categorical process, grammaticalization is a gradual process. Reanalysis consists of exactly two stages. Trying to emulate a gradual process by means of such a concept as reanalysis involves the analysis of a change 'S_1, S_2 … S_n' as a sequence of reanalyses '$S_1 > S_2$', '$S_2 > S_3$' etc. However, as each of these reanalyses is independent, it is a sheer coincidence if S_2 turns out to be to S_3 as S_1 was to S_2. The drift inherent in grammaticalization is not captured by reanalysis.

4. Grammaticalization may lead to structures and categories that had not been in the language. Relevant examples were already mentioned in 3.2 (class 1). While it may be true

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[9] "Grammaticalization is always the result of reanalysis" (Campbell 2001:144).

[10] Some of the differences between grammaticalization and reanalysis mentioned below (#1 and 3) are also adduced in Haspelmath 1998:327. Specifically, Haspelmath opposes schematically:

grammaticalization	reanalysis
loss of autonomy/substance	no loss of autonomy/substance
gradual	abrupt
unidirectional	bidirectional

This is countered thus in Campbell 2001:145: "But none of these assumed characteristics/defining traits is actually true of reanalysis as normally defined (see Harris and Campbell, 1995 for discussion)". This is not a fruitful way of discussing the issues. While it may be correct that none of the criteria of the right-hand column make part of the definition of reanalysis (with doubts remaining about abruptness in the relevant sense), it remains true that the features of the left-hand column are either part of the concept of grammaticalization or are empirically true of it, while their logical opposites (right-hand column) are compatible with the notion of reanalysis.

[11] This is done in Campbell 2001:144f.

that this possibility has not been explicitly excluded in conceptions of reanalysis, it is also true that since the concept was introduced, in the form of 'Gliederungsverschiebung' in Paul 1920, ch. 16 and 19, it has always been assumed that the output of a reanalysis presupposes an analogical model; and this has played an important role in many pertinent analyses. Rightly so, because otherwise the output structure comes out of the blue. It is just the analogical model that motivates the reanalysis. In applying the concept of reanalysis to innovative changes that introduce the output structure for the first time in the language, we would deprive it of its descriptive (or "explanatory") value. It is therefore more expedient to stick to traditional usage (heeding Campbell's [2001:145] advice) and restrict reanalysis to changes which are oriented towards an existent model. To put it yet another way: the above distinction between pure grammaticalization and analogically-oriented grammaticalization has no counterpart in reanalysis, since the would-be 'pure reanalysis' would be vacuous.[12] This means that reanalysis cannot create anything genuinely new. Grammaticalization is capable of exactly this; cf. 5.

3.4   Lateral conversion

Category conversion or lateral conversion (Giacalone Ramat & Hopper 1998:5) involves the transfer of a linguistic item into a different category (s. Vogel 1996). The categories at stake here are essentially syntactic categories, including word classes and their subclasses. Well-known and productive cases include the nominalization of English verbs like *talk* (v.) being used as *talk* (n.). Lateral conversion is often discussed in connection with grammaticalization, e.g. in Haspelmath 1998, Campbell 2001:146f, Ramat 2001. It is true that grammaticalization involves category changes. However, these are of a different nature than lateral conversion proper. Let us consider the two kinds of category change in more detail.

Examples of lateral conversion like Engl. *talk* are instances of word formation. A stem belonging to a source category is used in a context reserved for items of the target category and is therefore recategorized *par force*. Depending on the type of categories involved and the morphological type of the language, the relevant context may be a morphological or a syntactic context. For instance, if the noun stem *butter* is provided with a conjugation suffix, as in *buttered*, it is recategorized as a verb stem; and if the verb *blow* is used after an article, as in *a blow*, it is recategorized as a noun. The essence of lateral conversion is, thus, the transfer of an item of a source category into a context that is part of the distribution of the target category.

This is not at all what happens in the category changes that are part of grammaticalization. Consider the well-studied (Kortmann 1992) case of participles transformed into adpositions, as e.g. German *entsprechend* 'according to' and *betreffend* 'concerning'. They start out in a construction illustrated by E5.

E5.   a.   unseren Plänen entsprechend 'corresponding to our plans'
        b.   Ihren Antrag betreffend 'concerning your proposal'

These are participials. The participle takes its dependents to the left and would be declined if it were used attributively. However, the participial is used as an adverbial. This is a context in

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[12] Campbell appears to concede this when he says (2001:148): "reanalysis can take place only when more than one interpretation becomes available;" since how could the output interpretation "become available" if not on the basis of an existent model?

which a postpositional phrase is possible, too. It differs from the participial only in having a postposition instead of the participle. On this basis, the phrase is reanalyzed as a postpositional phrase, and the participle consequently as a postposition. Note that this category change from participle to postposition involves a reanalysis, but does not involve using the item in question in the context of another category in order to transfer it into that category.

Consider again E4, which illustrates the change from OE 'have' as a full verb to an auxiliary. This is a shift from a more lexical to a more grammatical subclass of one word class, viz. the verb. The full verb becomes an auxiliary by being interpreted as part of a periphrastic form involving the participle that it combines with. Again, this is not a lateral conversion of the same kind as the word formation processes seen above. The full verb 'have' is not forced into a context that is reserved for auxiliaries; Old English did not have an auxiliary that could appear in the context E4 to begin with. Quite on the contrary, the position in which 'have' appears in E4 could only be occupied by a couple of full verbs. Thus, the category change associated with grammaticalization happens, so to speak, *in situ*. The same is true for demonstratives becoming definite articles, the numeral 'one' becoming an indefinite article and so forth.

This kind of category change therefore needs to be kept distinct from lateral conversion or category conversion, if these are the terms we apply to the word formation type. We will call it **recategorization**.[13] The term 'decategorization' has also been applied to this phenomenon, with the reductive character of grammaticalization in mind (Hopper & Traugott 1993:128f). This term, however, seems less fortunate because if something joins a closed class, its categorial status is rigidified rather than loosened or lost, if anything (cf. Ramat 2001:398).

There are more differences between lateral conversion and recategorization. Word classes differ by their function and their distribution. They do not differ by their degree of grammaticality in that some of them are intrinsically lexical while others are intrinsically grammatical (or 'functional', as some would have it). For instance, prepositions are sometimes thought to be a closed class and therefore a class of grammatical items.[14] In many languages, prepositions are actually an open class just like nouns and verbs (see Lehmann & Stolz 1992 for German). Instead of some classes being intrinsically grammatical, most word classes may be subdivided – without a sharp boundary, to be sure – into two subclasses whose members are more or less grammatical (see Lehmann 2002[N]). This is true of adpositions just as of nouns, verbs and adjectives. For instance, in many languages full verbs and auxiliaries form the less and the more grammatical subclass of verbs, respectively.[15]

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[13] Ramat 2001 calls it 'transcategorization'.

[14] For instance, some of the putative examples to "counter" grammaticalization adduced in Janda 2001:299 and Norde 2001:235 rely on the idea that prepositions have something intrinsically grammatical about them so that if a preposition starts being used as an adjective, this process is reverse to grammaticalization. Consider this German example of Janda's: *x macht die Tür zu* 'x shuts the door' – *die Tür ist zu* 'the door is shut' – *eine zue Tür* 'a closed door'. First of all, *zu* in the first expression is not a preposition, but an adverb. Thus, we are faced with a process in which an adverb that (as we are asked to assume, since no historical evidence is offered) starts out as part of a compound verb becomes independent and, in a further step, is converted into an adjective. But what is so particularly grammatical about the initial *zu*? It obviously means 'closed' (or maybe 'contiguous') in this expression; and this is the meaning that it conserves in the secondary uses. And where is the publication that claims grammaticalization status for the reverse process, in which an adjective becomes an adverb and further a constituent of a compound verb (and which should not be hard to document)?
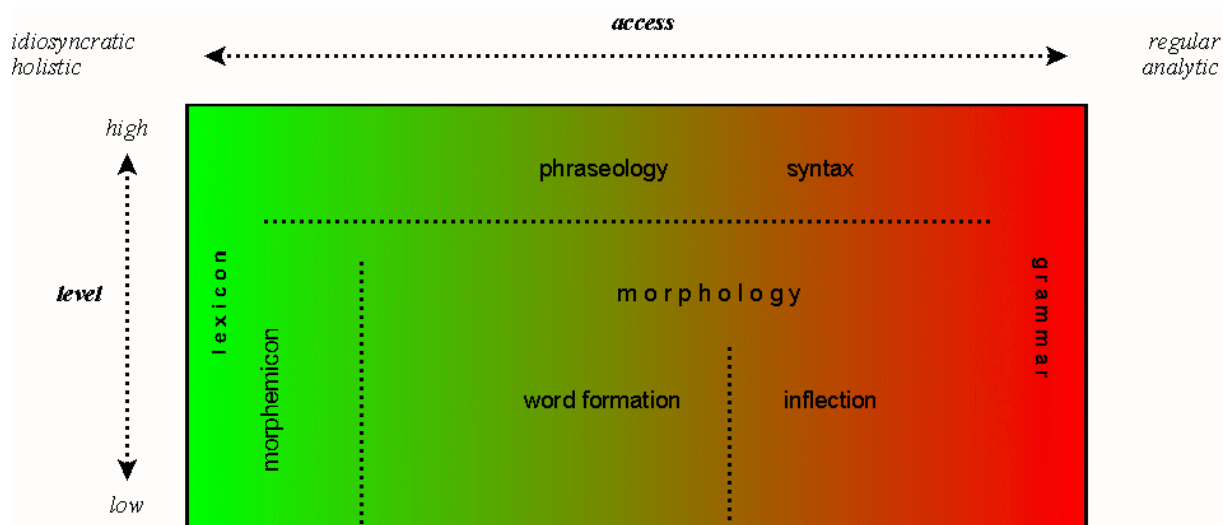
[15] Campbell (2001:144) takes it for granted that changes such as 'demonstrative > definite article' involve reanalysis because "the grammatical category has changed". This, however, requires much more serious

Recategorization is a shift from a more lexical into a more grammatical subclass of a word class. It is accompanied by obligatorification, paradigmaticization, coalescence and the other parameters of grammaticalization. The causal or logical relationships between recategorization and these constitutive processes of grammaticalization remain to be clarified. Here it suffices to see that lateral conversion has nothing to do with grammaticalization, both because of the nature of the process – a type of word formation – and because the categories connected by it do not differ in their degree of grammaticality. Consequently, the lists of examples of lateral conversion provided in Campbell 2001:146f and Newmeyer 2001:212 show nothing with respect to unidirectionality of grammaticalization.

3.5 Lexicalization

The concept of 'lexicalization' has been interpreted in many ways, as correctly observed in Campbell 2001:129. Lehmann 2002[N] is an attempt to define the two concepts of 'grammaticalization' and 'lexicalization' in a correlative way. In a simple way of speaking, we may say that grammaticalization pushes a sign into the grammar, while lexicalization pushes it into the lexicon. A conception of the relationship of the two processes therefore presupposes an account of the relationship between lexicon and grammar. This is visualized in S4.
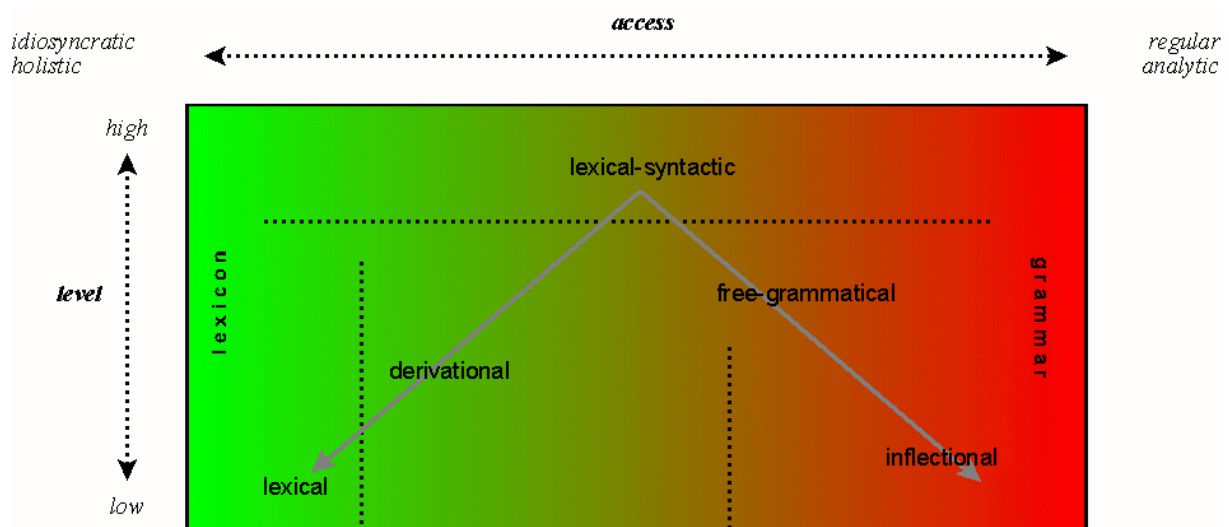
S4. *Lexicon and grammar*

The feature of S4 which is essential in the present context is that grammar and lexicon are in a polar opposition, but they have the hierarchy of complexity levels in common. It is at the lowest of these levels that lexicon and grammar are most clearly distinct. This means that the most clearly lexical expressions are not merely at the left side, but in the left lower corner of S4; and similarly the most clearly grammatical expressions are not merely at the right side, but in the right lower corner of S4.

theoretical reflection. The grammatical category has not changed simply because we have a separate name for it or because the item has passed over into a more grammatical subclass of a word class. An established way of defining a grammatical category (in the sense relevant here) is to base it on a distribution class. Do demonstratives and definite articles fall into different distribution classes?

Grammaticalization and lexicalization have a lot in common. Both of them are reductive processes, which means that both involve the loss in autonomy of component items concerned; both lead to the fusion of elements that started out in free juxtaposition. This means that both processes move items down the hierarchy of levels. From this it follows that they cannot be mirror-image phenomena. Instead, they are orthogonal to each other. Recalling the techniques of expressing a semantic component in linguistic structure from Bybee 1985:11-13, we can say that lexicalization leads from (lexical-)syntactic expression via derivational to lexical expression of a concept, while grammaticalization leads from (lexical-)syntactic expression via free-grammatical to inflectional expression of a concept. The orthogonality of the two processes is visualized by the left and right arrows in S5.

S5. *Lexicalization and grammaticalization*

Lexicalization is loss of internal structure, thus, of compositional motivation. Given a construction X-Y Z, in which X-Y is befallen by reduction, then grammaticalization and lexicalization may operate at the same time. Take German *aufgrund* 'on the basis of' as an example: X = *auf*, Y = *Grund*, Z = the genitive complement of Y. Univerbation of *auf* + *Grund* is lexicalization, because it goes against the syntactic structure and destroys it. It transforms the complex into a lexical item of the category 'preposition'. Desemanticization of the result by loss of concrete local features, accompanied by the loss of a couple of nominal properties (cf. Lehmann & Stolz 1992), is grammaticalization of the fresh lexical item.

An important methodological consequence of this conception of lexicalization is that an adherent of grammaticalization cannot counter a putative example of degrammaticalization by declaring it to be a case of lexicalization and thus falling into a different category. Such a terminological solution of the problem (a well-taken criticism of Campbell's [2001:129-131], as it seems) is not possible here since lexicalization is not the converse of grammaticalization. Consequently, saying that a certain phenomenon must be analyzed as lexicalization rather than degrammaticalization would not imply a reconceptualization or redenomination of the process but rather the objection that the phenomenology is different.

4 Unidirectionality and degrammaticalization

Grammaticalization is unidirectional in the sense that changes that go in the opposite direction of grammaticalization are observed very rarely. This proposition has been misunderstood with amazing frequency and in various respects. Misunderstandings concern both the question what 'unidirectionality' actually means and the question what role it plays in grammaticalization theory. We will take these two issues up in turn.

4.1 Degrammaticalization

Degrammaticalization is the reverse of grammaticalization. Looking back at P1 (section 2.2), we can see that this is a process in which a linguistic sign gains in autonomy, i.e. it becomes relatively free from constraints of the linguistic system. A good case of degrammaticalization would consequently be one in which, for instance, an infix first becomes a peripheral affix, this then becomes a free form, gaining more concrete semantic features and a few more phonological segments. All the while, the paradigm of forms with a similar distribution fills up by other items taking the same course, expanding into a larger class of more heterogeneous elements. In the further course of events, the degrammaticalized item joins the lexical (rather than grammatical) subclass of its category, passing, for instance, from an adposition to a relational noun, typically sprouting a case suffix that had not been there. The reverse of such a process is an everyday grammaticalization phenomenon.

The attack on the "unidirectionality principle" has also involved the construct of an "exact mirror-image undoing" (Janda 2001:295), of a "complete reversal" (Newmeyer 2001:205) of a grammaticalization process in the sense that the earlier historical stage of the language would be restituted. This is probably again a symptom of the confusion between diachrony and history. No one (at least no one working on grammaticalization) expects that any historical process could be reversed (what Haspelmath 2004:28 calls 'token reversal'). What is at stake is whether the diachronic processes that are classified as grammaticalization processes can be reversed.

Before we consider possible examples of this construct in more detail, let us first be clear about the methodological situation here. The whole issue of degrammaticalization concerns the question whether certain things can (or do) happen in language change. Since claims of non-existence in an infinite universe cannot be proved for logical reasons, grammaticalization theorists who claim that degrammaticalization does not exist cannot be expected to prove their claim. The burden of proof is, instead, on those who claim that such things can actually happen. The methodological demands on the evidence to be produced by them are, of course, analogous to those that proponents of grammaticalization must submit to (see 2 above). They must demonstrate data that have the following form:

1. There are two historical stages of language L, earlier L1 and later L2.
2. L1 has form F1 and L2 has form F2, such that F2 is diachronically identical with F1.
3. F1 is more grammatical than F2.

Let us see what these conditions entail.

Ad 1: Here again, only actual historical evidence which, upon demand, can be substantiated by historical documents counts. What does not count is reconstructed forms or developments. This is a point not sufficiently appreciated by proponents of cases of

degrammaticalization.[16] Many of the examples adduced in this function do have the above logical structure, except that L1 is not a historical, but a reconstructed stage of L. Such cases can be dismissed off-hand. The point is not, of course, that the reconstruction cannot be true because it is not in consonance with grammaticalization theory. The point is that we are not talking about the plausibility of linguistic constructs and reconstructs, but about points of actual observable fact.[17] For the same reason, degrammaticalization cannot be proved by cases of synchronic variation.

Ad 2: Examples that do not satisfy condition 2 are still brought up from time to time. Thus, the French periphrastic future *je vais faire quelque chose* 'I am going to do something' is less grammaticalized than its functionally equivalent predecessor, *je ferai quelque chose* 'I will do something'. Nevertheless, this is not a case of degrammaticalization because the auxiliary form *vais* is not diachronically identical with the conjugation ending *-ai*. On the contrary, it is an everyday case of grammaticalization.

While this point is apparently clear to most discussants by now,[18] another aspect of condition 2 is constantly underestimated. An example that comes relatively close to the idea of degrammaticalization is German *zig* 'umpteen' as in E6 (cf. Norde 2001:235f).

E6.   Das habe ich dir schon zig mal gesagt.
        'I have told you this umpteen times now.'

This is apparently a newly detached form of what otherwise only occurs as a suffix in numerals such as *vierzig* '40', *fünfzig* '50'. Thus, a genuine case of degrammaticalization, or so it seems.

First of all, these are synchronic data from Modern German, thus inapt to prove anything in terms of degrammaticalization. What we need for proof is a historical stage of German that only has *-zig* and not *zig*. Thus, everything hinges on how one can prove that a linguistic item did not exist at a certain stage of a language. The answer is that one cannot prove it because of the non-demonstrability of non-existence. One can only render it plausible. Conditions are favorable if we dispose of exhaustive documentation of the stages at stake. For instance, if some innovation happens during our life-time, then we can (collectively) remember it and can be relatively sure that the item in question did not exist in the language when we were younger. Even there we can be mistaken; and many of us are constantly mistaken in this respect: things strike me as new just because I seem to hear them for the first time.

At the turn of the 21st century, where a couple of languages are abundantly documented by written texts, linguists could agree – just in order to render constructive argument under acceptable methodological conditions possible – that whatever does not appear in the contemporary corpus before some date was not in the language before that date. However, many examples of degrammaticalization concern much earlier stages of languages that are much worse documented. Here the possibility that an apparently degrammaticalized form is actually a continuant of a less grammatical item that happens not to appear in the corpus is not

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[16] including some that summon up great rhetoric in making the analogous demands on evidence for grammaticalization; cf. fn. 4

[17] The point is similar to one made by Jakobson (1958:23), saying that linguistic universals, in the sense of empirical generalizations over all languages, cannot be disproved by properties of reconstructed languages. Again, this is not because universals research is methodologically superior to historical reconstruction, but because hypotheses cannot be disproved by hypotheses.

[18] although possibly not to everybody. Campbell (2001:133) finds that "clearly these cases go against the general directionality in grammaticalization", reinforcing this view on p. 137.

just a cheap evasion of grammaticalization adherents, but a real possibility. Consider again the case of *zig*. This is a typical colloquial item that will only appear in such written texts that imitate the colloquial language. Thus, it has perfectly good chances to have existed in the colloquial language all the time up to its first appearance in the historical records.

The degrammaticalization analysis of German *zig* is, thus, possible, but not necessary, and we are back on the field of reconstruction hypotheses. So where does German *-zig* come from? It goes back to a Pre-German noun **tigus*, Proto-Germanic **teguz* 'unit of ten, decade' (Pfeifer et al. 1989 s.v. *-zig*). In composition with one of the numerals from 'two' to 'nine', this stem is reduced to a derivational suffix that derives multiples of ten. S6 provides a conspectus of the forms and the language stages at stake.

S6. *Genesis of German* **zig**

form stage	free	bound
Pre-German	*tigus	–
first appearance of *-zig*	?	-zig
Modern German	zig	-zig

Now it is obvious that the noun **tigus* is as close as possible, both semantically and structurally, to the modern pseudo-numeral *zig* 'umpteen'. The latter can go back to the former much more easily than to the suffix *-zig*. An alternative hypothesis for the cooccurrence of *zig* and *-zig* in Modern German is thus that both continue Pre-German **tigus*, the former with fewer changes than the latter. Recall that this kind of polymorphism is standard in the first phase of grammaticalization: a grammaticalized item splits off from a lexical item; the latter, however, does not thereby immediately die out, but accompanies the former through some time in the history of the language. This analysis would, at the same time, account for the fact that Dutch has *tig* in the same functions; otherwise we would have to assume parallel and independent degrammaticalizations in Dutch and German.

The same kind of argument must be leveled against many putative cases of decliticization, including those adduced in Newmeyer 2001:209f. For instance, personal pronouns can be enclitic in 16th century English, but can only be independent today. Even if the latter were true, there would still be no process of decliticization, since (contrary to the *zig* case) these pronouns are historically documented as independent pronouns much earlier than as clitics. If "a preexisting strong pronoun was coopted to replace the clitic" (Newmeyer 2001:210), then where is the decliticization?

Campbell 2001, §3.3.1 has a list of 10 examples of degrammaticalization. Several of these involve medieval or even earlier stages of languages that are not too well documented. Unless unambiguous historical evidence is provided, they can safely be dismissed as insufficient proof on the grounds mentioned.[19]

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[19] This concerns, e.g., examples n° 3 and 6 from his list. If no specific reasons are provided why we should regard Saami *taga* 'without' as degrammaticalized from a case suffix, it is much more plausible that it has just not proceeded as far in grammaticalization as the cognate element of the other Finno-Permic languages, in which it has become a case suffix. Similarly, there is no reason to regard the adversative use of Japanese *ga* as an example of degrammaticalization, since its status as a free morpheme has not changed (cf. Lehmann 2002[T]:134 for an analysis), and it is only one of several relators which are postposed to simple and to desentential NPs alike.

In order to avoid misunderstandings: nothing of what has been said implies that a degrammaticalization development of the kind '-*zig* becomes *zig*' is impossible. In fact, the kind of historical documentation that is wanting for the German case can be provided for a very similar case in Italian. There we have E7.

E7.   Lei ha già raggiunto gli anta. (Anna Giacalone Ramat p.c.)
       'She is already well over forty.'

The noun *anta* 'amount over fourty' is a detached form of the suffix appearing in such numerals as *quaranta* '40', *cinquanta* '50' etc. Now the historical documentation of this language is such that we know that these derivatives do not go back to compounds of the basic numerals *quattro* '4', *cinque* '5' with an erstwhile noun **anta*. Instead, the derivational suffix is documented as such, albeit in different forms, throughout the 2.500 year history of the language, while there is no sign of *anta* before the 20th century (see the reference in Ramat 2001, fn. 2). This case is, thus, unobjectionable as far as historical documentation goes.

Ad 3: Many putative cases of degrammaticalization leave something to be desired on this count. We can admit at the outset that grammaticalization is not (yet) a well-delimited notion, witness the list of definitions that Campbell is able to quote. Thus, grammaticalizationists are tempted to immunize their claims by imposing limitations on their concept *ex post* ("this is not what I meant"). However, to the extent that the debate with opponents to grammaticalization is at all fruitful, proponents cannot be prevented to learn from it, sharpening their concepts. Still, a couple of things have been clear enough from the outset:[20]

Several of the degrammaticalization examples concern erstwhile derivational affixes that become independent. Such is the case of the noun *ism* 'ideology', which is a detached form of the derivational suffix found in *communism* and the like. It is also true of the fate of German *zig*, if it does come from -*zig*, and of Italian *anta* coming from -*anta* (as well as the examples of degrammaticalization adduced in Ramat 2001:393f and in Newmeyer 2001:209). For these to be genuine cases of degrammaticalization would presuppose their converses to be genuine cases of grammaticalization. Now it is true that by the criteria that operationalize the concept of grammaticalization, derivation is more grammatical than compounding. However, the whole change from a lexical stem which is a member of a compound to an affix which is a derivational operator abides in the sphere of the lexicon. The target of the process, the derivation pattern, is grammatical only to the extent that we admit that derivation generally oscillates between lexicon and grammar and that this particular derivation pattern is indeed grammatical rather than lexical. The latter supposition is not too plausible in the cases at hand, since these particular derivational processes are of no relevance to syntax. Consequently, the evolution of a derivational affix into a word is certainly a remarkable process which is reminiscent of degrammaticalization and may even be a marginal case of degrammaticalization, but it is not something that hits the nerve of grammaticalization theory.

Sometimes an inflectional suffix evolves into a derivational suffix (some examples are in Norde 2001:245f). Luraghi 1998 shows this for the Latin present participle ending –*nt*-evolving into an Italian deverbal and even denominal adjectivizer, and also mentions (p. 361f) the analogous case of the Latin infinitive ending –*re* becoming an action noun nominalizer in Romanian. Such examples do come relatively close to the notion of degrammaticalization. They fall short of being perfect for two reasons (acknowledged in Luraghi 1998): First, the

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[20] Cp. also the critical discussion of putative cases of degrammaticalization provided in Haspelmath 2004, section 4.

reverse development of a derivational affix to an inflectional affix is not a paradigm case of grammaticalization, one of the reasons being that some parameters such as bondedness do not change. Second, the formation of non-finite verbs is already half-way between inflection and derivation; in other words, what is at the starting point of this case of degrammaticalization is not a purely grammatical item.

Other apparent examples of degrammaticalization involve lateral conversion. An often adduced example concerns the use of English adverbs as nouns or verbs, as in *to out oneself, an out* (see Campbell 2001:128). Now as we saw in 3.4, it is not the case that one word class, e.g. adverbs, is intrinsically more "grammatical" than another, e.g. verbs. Consequently lateral conversion in itself has nothing to do with grammaticalization and consequently neither with degrammaticalization. In effect, none of the parameters of grammaticalization is changed in any way – in particular, in the reverse direction – in such lateral conversion processes as the ones mentioned.

Another kind of examples repeatedly adduced under the rubric of degrammaticalization evinces lexicalization, in the sense defined in 3.5. If the English syntactic construction *may be* – which consists of two grammatical items! – gets univerbated to the adverb *maybe*, this is a plain case of formation of a new lexical item, thus lexicalization.[21] It is true that it involves loss of internal grammatical structure – just like every case of lexicalization –, but this is not what is meant by 'degrammaticalization'.

Another set of examples of degrammaticalization involves analogy. For instance, in Late Middle English the inherited genitive suffix *–s* widened its syntagmatic scope and became enclitic. So far, a case of degrammaticalization. This process, however, was oriented by the existent possessive pronoun *his*, which could be used in the very same constructions as the suffix *–s* (e.g. *Gwenayfer his love* 'Guinevere[f.]'s love'), which in addition already had that wider scope and which must often have been indistinguishable, in speech, from the suffix. Assuming that this case and similar ones have been analyzed correctly,[22] they provide evidence for degrammaticalization. However, with regard to the distinction made above (3.2) between pure grammaticalization and analogically-oriented grammaticalization, they illustrate not pure degrammaticalization, but **analogically-oriented degrammaticalization**.[23]

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[21] Also, Middle High German *ge-nade* becoming Modern High German *Gnade* and a couple of similar cases (Ramat 2001:394, 396) are good examples of lexicalization.

[22] The above-illustrated 'dependent+*his*+head' construction represents an everyday case of grammaticalization. Janda (2001:301-303) tries to avoid this conclusion and postulates "an INVARIANT possessive Det that was homophonous but not identical with the masc[uline] s[in]g[ular] possessive *his*". The exceedingly complicated analysis he offers cannot hide the fact that the 'dependent+*his*+head' construction was in the language before the "upgrading" of *–s* to *'s*. Even if, as Janda appears to think, *his* in this construction was just an orthographic variant of *'s*, the question remains what motivated this orthographic variant. – Janda's (2001:270f, 287f) second example, the variation between regional Spanish 1st plural marking *–mos* and *nos*, has nothing to do with grammaticalization or degrammaticalization, but is just a bundle of analogical changes.

[23] The largely parallel case of the Norwegian genitive *–s* may be stronger, since there was no phonetically identical possessive pronoun allomorph at the relevant time (Newmeyer 2001:206f). There did, however, exist 'dependent+poss_pron+head' constructions, with the possessive pronoun containing a prominent /s/, as Janda (2001:303) points out, so that the difference between the English and the Norwegian case reduces to the greater strength of the analogical model in the former. Norde (2001:247-256) argues that in Swedish, which also evinces the scope widening of the genitive *–s*, there were no 'dependent+poss_pron+head' constructions. The Swedish case would then be a genuine case of degrammaticalization. Norde (2001:260) suggests that a presupposition for such a development could be that the form in question is the only one surviving massive deflexion (loss of inflection), so that its paradigmatic environment gets lost and it is no longer interpreted as an inflectional affix. A

Two quite different phenomena have been known by the name of **morphologization** for several decades now. Morphologization₁ is that phase of grammaticalization in which a formative that is being grammaticalized becomes an affix of its host. An example is the passage of the Proto-Romance syntactic construction X *mente* 'in an X way' to the French adverbial word form X-*ment*. Morphologization₂ is the process in which a phonological alternation that was morphologically conditioned becomes a morphological alternation – thus a carrier of morphological function – by the loss of its morphological condition. A well-known example is the acquisition of morphological function by metaphony in such German word forms such as *Mütter* (plural of *Mutter* 'mother') in the moment that the plural suffix that formerly conditioned the metaphony was lost. This, too, is a phase of a more comprehensive change where something starts out as a phonologically conditioned process, but the phonological conditions turn into just those morphological conditions which then get lost in morphologization₂.

Both of these processes of morphologization enrich morphology; and since morphology is part of grammar, morphologization in both senses has been subsumed under grammatical-ization (e.g. in Gaeta 1998). This, however, should not prevent one from realizing that apart from their goal of creating grammatical structure – which they share with other processes mentioned in 3 – these processes have nothing in common. And although morphologization₁ starts from a syntactic structure while morphologization₂ starts from a phonological structure, there is no sense in which morphologization₂ could be said to be the converse of morphologization₁ and thus of (a phase of) grammaticalization, pertinent examples thus being "clearly exceptions to unidirectionality" (Campbell 2001:133). It apparently needs repeating that for morphologization₂ to count as degrammaticalization, the converse change would have to be grammaticalization. The converse of morphologization₂ is a change by which a morphological process becomes a meaningless epiphenomenon contingent on certain emergent morphological factors that start conditioning it and themselves take on the functions until then carried by the morphological process. But there is no such change to begin with; and if there were, nobody would dream of calling it grammaticalization.

Finally, the following appears to be a genuine case of degrammaticalization, provided the historical evidence is correct, which I am in no position to check: Swed. *må* 'may' is a modal verb, with the typical morphological and syntactic features of this class in a Germanic language. Thus, its past is *måtte*. Recently, it has developed a variant as a full verb meaning 'feel' and inflecting regularly (past *mådde*), as in E8 (Auwera & Plungian 1998:105 apud Ramat 2001:395).[24]

E8.   Jag mår bra.
       'I feel fine.'

As has been observed in Ramat 2001:397, generalizations over degrammaticalization phenomena are not easy. The independentization of erstwhile derivational affixes such as Italian *anta, accio* etc., creates a hyperonym for a set of derivatives. It is interesting to observe that if these derivatives proceeded diachronically from compounds whose determinatum became a derivational suffix, as is true for many derivational suffixes in the Germanic

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similar account would be possible for analogous tendencies observable in the Spanish plural suffix *–s*: expressions like *en perro y gatos* 'in dog and cats' may be found on the web (Gerd Jendraschek p.c.).

[24] Ramat (2001:395f) adduces German *mögen* 'like' as a parallel case; but this is just another example where the historical course of events does not satisfy condition 2 above, since the modern full verb is just a continuant of the Proto-Germanic full verb, including its preterito-present morphology.

languages, then the noun constituting the determinatum would have provided such a hyperonym from the beginning. The Italian detached derivational suffix creates such a hyperonym retroactively, so to speak. The fact that this happens even in the absence of the analogical model of the compound noun points to its creative character.

4.2 Irreversibility

As to the role of unidirectionality in grammaticalization theory, there are some basic misunderstandings here, too. First a terminological stipulation: *unidirectional* and *irreversible* are synonymous. Now a unidirectional process is one whose converse does not exist. That is:

P2. Let P be a process leading from an initial stage S_1 to a final stage S_2; then for P to be unidirectional means that there is no process P' leading from S_2 to S_1.

The unidirectionality of grammaticalization is expressed by proposition P3,

P3. Grammaticalization is unidirectional.

meaning that a process leading from the end point to the start point of grammaticalization does not exist. Refinements concerning intermediate stages of the process are straightforward, but unnecessary for present purposes.

Now the issue is whether P3 is among the defining features of the concept 'grammaticalization' or a property that grammaticalization processes are empirically observed to possess. The methodological alternative is set out well in this quotation:

> if 'unidirectionality' is an *empirical property* of grammaticalization, it follows that any case of grammaticalization which runs in another direction qualifies as a counterexample to the 'unidirectionality' principle… If, however, 'unidirectionality' is a defining property of grammaticalization, it follows that any case of linguistic change which runs in another direction is simply not a case of grammaticalization by definition. (Lessau 1994:886)

Campbell (2001:124), who criticizes advocates of unidirectionality heavily, himself believes that "unidirectionality is built into the definition of grammaticalization" "because grammaticalization is defined as changes of *lexical > grammatical*, or *grammatical > more grammatical*".[25] By the same reasoning, we would conclude that the definition of man as a rational being entails that there are no non-rational beings. P3 does not in fact follow from these concepts of grammaticalization or from P1 (section 2.2).[26] Quite on the contrary, P3 is an empirical generalization arrived at inductively by analyzing a large set of grammaticalization phenomena, constructing their reverse in theory and looking out largely in vain for empirical manifestations of this construct.

Since unidirectionality is an empirical property of grammaticalization, claims about it are testable. Again, one cannot falsify this kind of generalization by adducing a couple of counterexamples (cf. Haspelmath 1998:80). They have the same status as homonyms have if brought up as counterexamples to a claim that the signs of a language are generally distinct.

Let us approach the issue of the role of unidirectionality in linguistic change in two steps: First we ask for unidirectionality in grammaticalization and other kinds of grammatical

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[25] The very same error is committed in Newmeyer 2001:203 and Norde 2001:232.

[26] This is not to deny that a few other proponents of grammaticalization have in fact explicitly incorporated P3 in the definiens of 'grammaticalization'.

change; second, we ask for unidirectionality in linguistic change. The former, more restricted issue is intimately connected with the position of grammaticalization in overall linguistic variation. In 3, we have seen that grammaticalization must be distinguished from lateral conversion, analogy, reanalysis and lexicalization. Once this is admitted, it becomes immediately clear that unidirectionality is a property of grammaticalization that distinguishes it from other kinds of **grammatical change**:[27]

1. Lateral conversion is reversible. For instance, English has both *run* (v.) > *run* (n.) and *butter* (n.) > *butter* (v.).

2. Analogical change is reversible. In the history of several Germanic languages, both some erstwhile strong verbs passed into the weak conjugation class (e.g. German *wob > webte* 'wove') and some erstwhile weak verbs passed into the strong conjugation class (e.g. German *gleichte > glich* 'resembled'); cf. Ramat 1987.

3. Reanalysis is reversible. As an example, consider the English plural suffix. On the one hand, the OE plural form *treow-es* is reanalyzed as the singular *truce*. On the other hand, the Old French *cerise(s)* was borrowed into English in the form /ʃɛriːz/, and this was reanalyzed as being the plural form *cherri-es*.

Widening now the scope outside grammatical change, it is sensible to ask which kinds of semantic and phonological change are unidirectional and which are not.

In the case of **semantic change**, we will always have to abide by tendencies. If this is granted, then there is a tendency for metaphor to be unidirectional, viz. from concrete to abstract, less commonly vice versa (Campbell 2001:135 gives the example of English *do*). For metonymy, the case is even less clear, since many cases of *pars-pro-toto* (like *three heads of cattle*) are matched by a non-negligible number of *totum-pro-parte* (like *France won by 5:4*). Moreover, just to mention the traditional concepts of semantic change, there are both cases of meaning generalization and meaning specialization, cases of melioration and pejoration.

In **phonology**, some processes have pretty exact reverse counterparts. Thus, syncope and anaptyxis occur in the very same environments, and sometimes even a vowel that was syncopated at one stage of language history gets restituted in a later stage. Monophthongization and diphthongization tend to apply in unstressed and stressed syllables, respectively, but are also capable of relating the same pairs of monophthong and diphthong in the same environment in either direction. For assimilation and dissimilation, the case is less clear, since they do not seem to occur in the same environments. Other phonological processes are clearly irreversible. For instance, in the history of many languages, /s/ became /h/; the reverse is not attested. Similarly, the converse of syllable-final obstruent devoicing has not been observed.

Irreversibility is a property of many natural processes, as correctly observed in Newmeyer 2001, section 4.2. This observation, however, is of little value in linguistics, just as most analogies between linguistic and natural processes (or, worse yet, subsumptions of the former under the latter) are misguided. As we have just seen, unidirectionality is a property of some linguistic processes, but not of others. Thus, unidirectionality in language, far from being "the most unremarkable fact imaginable" (Newmeyer 2001:204; same rhetorical figure in Janda 2001:295), is an open empirical issue that is seriously underinvestigated if compared to its theoretical significance. One of the challenges for future research will be to articulate the

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[27] Norde (2001:233) constructs a "strong hypothesis of unidirectionality" according to which all grammatical change is unidirectional and which she attributes, among others, to Lehmann 1995 (~2002[T]), without, however, substantiating this attribution. I know of no publication that has held such a hypothesis.

notion of irreversibility. For instance, the irreversibility of the change /s/ → /h/ concerns two particular segments, while the irreversibility of final obstruent devoicing concerns a class of segments. Again, syncope and anaptyxis occur in the same environment, but assimilation and dissimilation occur in different environments. Probably the most interesting cases of irreversibility are the least restricted ones, while the most interesting cases of reversibility are the most restricted ones.

The examples of degrammaticalization discussed in the preceding sections including the footnotes are representative of the quality of examples adduced in the literature. One cannot avoid the conclusion that those who wish to argue against unidirectionality of grammaticalization are amazingly sloppy in the selection and analysis of their examples.[28] If one subtracts those alleged examples of degrammaticalization that for one reason or another miss the target, then very few actual cases of degrammaticalization remain.[29] They are not "myriad" (Janda 2001:299), but closer to a proportion of 1 : 99 with historical cases of grammaticalization. It would be wrong to dismiss them. They are interesting in their own right as examples of a rare kind of linguistic change and, presumably, of linguistic creativity. But they do not invalidate the observation that grammaticalization is essentially irreversible.

Given this, unidirectionality of grammaticalization demands an explanation (cf. Haspelmath 1999 for this). One important aspect of an explanation is that grammaticalization involves loss of information. Pieces of information can go nowhere, but they cannot come from nowhere. Grammaticalization involves meaning generalization, thus loss of semantic components. Meaning generalization just happens by itself, no fostering conditions being needed. Meaning specialization (gain of features) only happens under certain conditions, for instance if a feature is in the syntactic, semantic or pragmatic context and can be transferred onto a linguistic item from there.[30] This seems a promising route towards an explanation of the fact that grammaticalization phenomena are relatively uniform and sometimes mechanic, while degrammaticalization phenomena are not easily subsumed under a common denominator and have a flavor of ingenuity.

5   The unity of grammaticalization

Grammaticalization as defined in 2.3 is a unitary, but abstract concept. Just like any useful abstract concept, it has to be decomposed into more elementary and concrete concepts. In the last resort, it has to be operationalized, i.e. the conditions of its application to particular historical instances have to be spelled out. This involves, among other things, the specification of how grammaticalization manifests itself in semantics, syntax and

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[28] Some of the examples of degrammaticalization are of the kind of Newmeyer's (2001:208) "Proto-Semitic" accusative suffix –*Vt*, which "shows up … in … Central Cushitic", but in Modern Hebrew "has developed into a preposition, *-ʔet*," to mark "definite accusativity". Here is another one (Newmeyer 2001:212): "the Spanish verb *sobrar* 'to be extra, left over' derives from the preposition *sobre* 'over, on, above'." One might think it fairer to pass over such lapses in silence. However, the overall intention of this issue of *Language Sciences* is to discredit a research paradigm (Newmeyer 2001:188: "there is no such thing as grammaticalization"); and it would be bad for linguistics if grammaticalization research receded not on account of scientific weakness, but because unjustified criticism prevailed.

[29] A sensible list comprising 8 items is in Haspelmath 2004:29.

[30] Good examples in Janda 2001:312f. This mechanism is sometimes subsumed under the concept of metonymy, e.g. in Moreno Cabrera 1998; cf. also Hopper & Traugott 1993:81f, 86f and Janda 2001:300. It remains to be seen whether this extension of the traditional concept contributes anything to a clarification of the issues.

morphology, on the paradigmatic and syntagmatic axes. This has been done in much of the relevant literature.

Opponents have reframed this methodological approach by saying that grammaticalization is a heterogeneous bundle of independently-existing elementary changes that lacks intrinsic necessity.[31] The clearest proposal of such a reduction of grammaticalization to independently-needed concepts of linguistic change is to replace grammaticalization by reanalysis and, occasionally, extension (Campbell 2001).[32] From the discussion in the previous sections it follows that this reduction misses its goal for a variety of reasons:

Reanalysis by itself is not directed towards increasing grammaticality; this is neither part of the concept nor empirically ascertainable of all or even most observable cases.[33] There are large classes of cases of reanalysis that have nothing to do with grammaticalization. Insofar, if one wished to make use of reanalysis in order to define grammaticalization, one would have to delimit the relevant kind of reanalysis beforehand. This would only be possible by recourse to the concept of grammaticalization. If one renounces to that, then it will be a coincidence that certain reanalyses lead to greater grammaticality and thus create grammatical categories and structures. We will come back to this shortly.

Moreover, grammaticalization has the potential of innovation, of creating new grammatical categories and structures. Such changes have never been analyzed as reanalysis, nor should they be, since that would void this concept of its descriptive power. While creativity itself is not amenable to scientific laws (more on this in 6.2), and certainly grammaticalization does not explain it, it at least renders such innovations intelligible as guided by general principles.

Again, extension itself is a heterogeneous concept, and not every kind of extension comes under grammaticalization. An example of analogical extension that has nothing to do with grammaticalization was given at the beginning of 3.2. Again, a restricted concept of grammaticalizational extension would have to be formed in order to base the concept of grammaticalization on it.

An analogous argument as has just been made for reanalysis, viz. that there are cases of grammaticalization that involve no reanalysis, cannot be made for extension. Grammaticalization does involve that particular kind of extension that consists in a loosening of semantic restrictions and consequently in an ever greater coverage of the class of the host of the grammaticalized item.

We may conclude that attempts to reduce grammaticalization to other concepts miss what is essential about grammaticalization: the creation of grammatical categories, items and structures. Language works only if it involves grammar. The creation and maintenance of grammar must therefore be guaranteed by linguistic activity; it cannot be an accidental byproduct.[34] If there are universal principles determining the form of grammars, then there are

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[31] "In short, grammaticalization is derivative, epiphenomenal, and has no independent status of its own." (Campbell 2001:151) In the same vein, Newmeyer 2001, section 3.

[32] In this, Campbell radicalizes the position taken in Hopper & Traugott 1993:60f: "Reanalysis and analogy are the major mechanisms in language change. They do not define grammaticalization, nor are they coextensive with it, but grammaticalization does not occur without them."

[33] Campbell (2001:150) admits this freely: "it is logically possible that the subset of reanalyses that are grammaticalizations are unidirectional, while other kinds of reanalysis need not be."

[34] Here it does not matter whether grammatical structure is a goal directly pursued by linguistic activity or whether it emerges, in an 'invisible-hand' fashion (Keller 1994), as a regular, but unintended consequence of people's intentional actions.

universal principles of linguistic change that produces such grammars. In such a dynamic perspective, it also becomes clear that while there is lexicalization as a process directed towards a goal of equal status, there cannot be a process of degrammaticalization of equal status as, but opposed to, grammaticalization, because language activity does not need to undo grammar.

The characterization of grammaticalization as the creation of grammatical categories, items and structures is a composite characterization; and both the processes involved and their results have many facets. It is therefore possible that grammaticalization is a polythetic concept. This in itself, however, would not make it unworthy of serving as a scientific concept.

6 Grammaticalization in language activity

6.1 Grammaticalization and automatization

Just as many other kinds of human activity, language activity involves a **teleonomic hierarchy** in which an operation of a given hierarchical level constitutes, at the same time, a means towards a higher-level operation that serves as its goal, and a goal for a lower-level operation that serves it as a means. Choices at the highest level of such a hierarchy – the choice of the ultimate goal of an action – are made consciously. Choices at the lowest level of the hierarchy – the choice of the ultimate means, if it be called a choice – are subconscious. To give a schematic example: 'communicative goal – speech act type – sentence type – grammatical marker of sentence type – allomorphy of grammatical marker – phonetic shape of grammatical marker' are in such a hierarchy.[35] The way down the hierarchy is a way of decreasing consciousness and increasing automatization.

Loss of autonomy of the sign corresponds to loss of freedom of the speaker to manipulate it. Where degrees of freedom shrink, **automatization** comes in. Automatization is a psychological correlate to grammaticalization as a structural notion. Grammaticalization research can contribute a lot to the issue of how much of linguistic activity is conscious and how much is subconscious (cf. Givón 1989 for relevant discussion).

Coming back to the issue of unidirectionality, we can observe that automatization of an operation that was learnt and first executed consciously is an everyday matter in human life; learning to ride a bicycle is a random example. Deautomatizing something that is usually executed mechanically is comparatively rare and not easy to achieve. Anybody who has learnt to play a musical instrument to less than perfection has made the experience that regaining control over finger movements that are executed mechanically is possible, but hard. The same goes for linguistic activity. The fact that a phonetician can learn to control consciously the movements involved in the articulation of speech sounds, or that a linguist can learn to consciously select an allomorph of the wrong inflection class, proves that undoing automatization in linguistic activity is possible. Still, it is not something that speakers do on an everyday basis. Automatization therefore seems a promising candidate as an explanatory concept in unidirectionality of grammaticalization. It is also not hard to combine in a consistent model with loss of information, which was mentioned in 4.2 as an explanatory

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[35] An early example of a linguistic analysis in terms of a teleonomic hierarchy is the analysis of agreement in Kacnel'son 1972, ch.2.

factor in the unidirectionality of grammaticalization: Decrease of information means reduction of choices; reduction of choices means automatization.

6.2   Grammaticalization and creativity

Most of the grammaticalization processes that happen constantly on the globe actually have an analogical model that serves as their goal. Whenever new members are recruited for some grammatical category by grammaticalization, as when East Asian languages complete their adposition inventory by converting verbs into coverbs and these into adpositions, the existent paradigm exerts suction.

However, this is not necessary. Grammaticalization can create genuinely new grammatical categories in a language, it can press items into a grammatical category which did not exist in the system.[36] Relevant examples include the genesis of an article system in the Romance and Germanic languages,[37] the genesis of a progressive aspect in English, the evolution of a system of numeral classifiers in Modern Persian. These in themselves are creative acts of the speech community.

However, we can make a further distinction here. The innovations alluded to are such only within a given language. They are not absolute innovations in the history of mankind. Simultaneously or at some other point in time, but in complete independence, another language on the globe may possess the same category (to the extent that two languages can at all possess the same category). Thus, when English introduced a progressive aspect, it just did the same as Yucatec Maya did, roughly at the same time, on the other side of the Atlantic. And similarly the Persian system of numeral classifiers just exemplifies a type recurring on the globe (although not in the immediate vicinity of Persian). Such grammaticalization processes lead to the hypothesis that the set of alternate possibilities of fulfilling a given linguistic function is permanently available like a set of Platonic ideas, only to be implemented by language activity in some historical instance. Their implementation in a historical situation would certainly be a creative act, but in the relevant sense it would not be a completely new idea.

On the other hand, some grammatical categories – including some evolved through grammaticalization – are *nonesuches*, i.e. they are peculiar to exactly one language. For instance, Yucatec Maya has a set of future tense/aspect categories, among them one that is called 'definite future' in the discipline. It is grammaticalized from the presentative *he'l-a'/-o'/-e'* 'voici/-la', the morpheme *he'l* takes the position of the auxiliaries, and a sentence *he'(l) S-e'* means 'I'm "holding S out to you", i.e. I am personally responsible for S to happen'. It thus amounts to something like a promise. For instance, common people would not use this particular future tense in order to say 'it will rain' (*he'l u k'áaxal ha'e'*), but it would be appropriate for the shaman having done the rain ceremony to say so. This particular grammaticalization is a creative act of the Maya speech community. Of course, this is true as far as we know; but it forces us to allow for the possibility that language activity may create something absolutely new, something that has no precedent in the history of mankind.

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[36] at least not at the stage where the first members of the category are introduced. The language may have had the category in some period predating the one at stake and have lost it again; but that may be relevant typologically, not historically.

[37] It seems plausible that one of these families got the idea by areal contact with the other; but then it was an innovation in the latter family.

This kind of creativity is peculiar to grammaticalization. It constitutes a challenge for linguistic theory. True, it is the task of the scientist to reduce the chaos in his object domain. But this kind of creativity is, in principle, not controllable by science. This may be the ultimate reason why grammaticalization is not reducible to more regular processes.

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