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Synchronic variation and diachronic change

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Grammaticalization: synchronic variation and diachronic change

by CHRISTIAN LEHMANN (Bielefeld)

1. Introduction¹

The term «grammaticalization» was first used by A. Meillet in an article from 1912 entitled *L'évolution des formes grammaticales*, in the sense of «attribution du caractère grammatical à un mot jadis autonome» (p. 131). I will use the concept both on the synchronic and the diachronic axes. Under the diachronic aspect, grammaticalization is a process which turns lexemes into grammatical formatives and makes grammatical formatives still more grammatical (cf. Kuryłowicz 1965:52). From the synchronic point of view, grammaticalization provides a principle according to which subcategories of a given grammatical category may be ordered. We will make this notion more precise later on and first turn to some illustrative examples.

2. Marking of case relations on nominal constituents

Consider the marking of case relations on nominal constituents. Cross-linguistically, there is an array of structural devices available in this domain which may be displayed on the scale in F1.

F1. Grammaticalization of nominal case role marking

fusional case affix	(on N)	5
^		
agglutinative case affix	(on NP or N)	4
^		
primary adposition	(+ NP ± case affix)	3
^		
secondary adposition	(+ NP + or adposition case affix)	2
^		
relational noun	+ or adposition case affix (+ NP + or adposition case affix)	1

¹ Thanks are due to Paolo Ramat for helpful criticism

This scale is greatly simplified, but will suffice for our purpose. The criteria by which it is established and by which we allocate the examples adduced below to its positions will be discussed in the next section. The five focal positions recognized on the scale correspond to a subdivision made by received terminology and have no special theoretical status, since the scale is a continuum. With this in mind, the five positions may be clarified as follows:

- 1) A relational noun is one which requires a possessive attribute. Most relevant here are nouns designating parts of space as e.g. *top* or *back*, which enter into constructions such as *on top of* NP, *at the back of* NP etc. Cf. also Italian *canto* «edge» and *accanto a* «beside», *fondo* «background» and *in fondo a* «in the back of».
- 2) A secondary adposition (pre- or postposition) is one which expresses not a grammatical, but an objective meaning and which may be morphologically complex and/or transparent, such as *below*, *during*.
- 3) A primary adposition is one which expresses an elementary objective or a grammatical meaning and is morphologically simple, such as *of*, *in*.
- 4) An agglutinative case affix is one which expresses only a case meaning, is morphologically optional (i. e. if subtracted from its carrier, it leaves a grammatical form) and attached to the noun with a clear morphological boundary, such as *-s* in *Peter's* or Turk. *-de* in *ev-de* (house-LOC) «in the house».
- 5) A fusional case affix is one which simultaneously expresses other morphological categories, is morphologically obligatory and partly fused with the stem, e.g. Latin *aedibus*, abl.pl.f. of *aedes* «house».

The Latin system of nominal case role marking may now be characterized by allocating the structural devices belonging to this domain to the positions of F1. Latin has a few secondary adpositions such as those in E1a, which are still clearly related to relational nouns or infinite verb forms and therefore would have to be arranged between positions 1 and 2 of the scale. There is another small subclass of secondary prepositions such as those in E1b, which are intermediate between secondary and primary prepositions, i.e. between positions 2 and 3 of F1. There is a wealth of primary prepositions exemplified in E1c, which occupy position 3 of F1. Finally, a paradigm of five cases exists, some of which appear in E1d; these are clearly at stage 5 of the scale.

- E1 a. *adversus* «against», *gratiā* «for the sake of», *causā* «because of»
 b. *trans* «across», *intra* «within»
 c. *ad* «at, towards», *dē* «down from», *cum* «with»
 d. *(exercitu)-s* «(army)-NOM.SG», *(exercitu)-m* «(army)-ACC.SG»

If we compare the French system of nominal case relation marking with the Latin one, we find that it has a host of prepositional locutions involving relational nouns (position 1 of F1), such as those in E2a. It also has an extensive and heterogeneous class of secondary and primary prepositions of varying degrees of grammaticalization. E2b shows some clearly secondary prepositions (position 2) which govern their complement by the intervention of certain other prepositions which we will presently come to. In E2c I have assembled a couple of prepositions which are transitional between secondary and primary status (positions 2 and 3). E2d contains the truly primary prepositions (position 3), and finally there are a few prepositions such as those in E2e, which exhibit certain properties of case prefixes (position 4) and enter into the prepositional locutions of E2a and b.

- E2 a. *à cause (de)* «because (of)», *en face (de)* «in front (of)», *autour (de)* «around»
 b. *jusqu'à* «until, up (to)», *près (de)* «near»

c. *pendant* «during», *vers* «against»

d. *par* «by», *dans* «in»

e. *à* «to», *de* «of»

3. Grammaticalization

3.1. We have seen that the devices of case relation marking do not fall into neatly distinct classes, but differ only gradually so that they may be ordered on a scale. Such a scale is a **grammaticalization scale**.

It is set up according to a set of criteria which concern the **autonomy** of the language sign. The more freedom with which a sign is used, the more autonomous it is. The grammaticalization of a sign detracts from its autonomy. Consequently, if we want to measure the degree to which a sign is grammaticalized, we will determine its degree of autonomy. This has three principal aspects. First, in order to be autonomous, a sign must have a certain **weight**, a property which renders it distinct from the members of its class and endows it with prominence in the syntagm. Second, autonomy decreases to the extent that a sign systematically contracts certain relations with other signs; the factor inherent in such relations which detracts from autonomy will be called **cohesion**. Third, a sign is the more autonomous the more **variability** it enjoys; this means a momentary mobility or shiftability with respect to other signs.

These rather abstract notions can be made more concrete by relating them to the two fundamental aspects of any operation on linguistic signs, viz. their selection and their combination (cf. Jakobson 1956:243), which I will call the **paradigmatic** and **syntagmatic aspects**, respectively. The weight of a sign, viewed paradigmatically, is its **integrity**, its substantial size, both on the semantic and the phonological sides. Viewed syntagmatically, it is its **scope**, that is, the extent of the construction which it enters or helps to form. The cohesion of a sign in a paradigm will be called its **paradigmaticity**, that is, the degree to which it enters a paradigm, is integrated into it and dependent on it. The cohesion of a sign with other signs in a syntagm will be called its **bondedness**; this is the degree to which it depends on, or attaches to, such other signs. The **paradigmatic variability** of a sign is the possibility of using other signs in its stead or of omitting it altogether. The **syntagmatic variability** of a sign is the possibility of shifting it around in its construction. These six factors are displayed in F2.

F2. Parameters of grammaticalization

	paradigmatic	syntagmatic
weight	integrity	scope
cohesion	paradigmaticity	bondedness
variability	paradigmatic variability	syntagmatic variability

Each of these six parameters provides us with a criterion according to which two signs may be ordered on a scale. To the degree that the six parameters correlate, they may be assumed to jointly identify the degree to which a sign is grammaticalized.

Applying them to the sets of devices of case relation marking exemplified in E1 and E2, we find that these must be ordered by increasing grammaticalization, exactly as they have been ordered in

F1. In this sense, the set of parameters given in F2 provides operational criteria for the establishment and justification of special grammaticalization scales.

3.2. I said at the outset that the concept of grammaticalization can be used both on the synchronic and the diachronic axes. F2 merely gives us the parameters along which grammatical devices vary on a synchronic scale. We still want to know how grammaticalization proceeds as a diachronic process. This requires a dynamicization of our parameters, their reformulation in terms of processes.

The process detracting from the integrity of a sign is called **attrition**, the gradual loss of semantic and phonological substance. Semantic attrition has also been known by the names of desemanticization and demotivation, while phonological attrition has been called erosion. Attrition also involves morphological degeneration, that is, the loss of the ability to inflect.

In the grammaticalization of Latin *ad* to Romance *a*, erosion has deleted the final consonant, while desemanticization is responsible for the loss of the concrete local feature present in *ad* and absent from *a*. An even clearer example of attrition might be Greek *thélō hina* «I want that», which was grammaticalized to the subjunctive marker *tha*.

The process promoting the paradigmaticity of a sign may be called **paradigmaticization**. This integrates syntactic constructions as periphrastic forms into morphological paradigms and leads to increasingly small, homogeneous paradigms.

Thus, when Latin *ad* and *de* were grammaticalized to French *à* and *de*, they started to form the paradigm of oblique cases, which is much more tightly integrated than the class of Latin primary prepositions. Again outside the domain of case relations we may adduce the example of the auxiliary verbs. The primary auxiliary verbs of French, *avoir* «have» and *être* «be», are completely integrated into the conjugational paradigm, which their Latin predecessors *habere* and *esse/stare* were not. The secondary auxiliaries such as *aller* «go» and *venir* «come» are slightly less paradigmaticized, but still much more so than the Latin *ambulare* and *venire*, from which they derive.

The loss of paradigmatic variability may be called **obligatorification**. Within the paradigm, choice among its members becomes constrained by grammatical rules. The whole category represented by the paradigm becomes increasingly obligatory in the sentences of the language. This expansion of its distribution is the consequence of a loosening of the selection restrictions of the grammaticalized sign.

We may again refer to the same examples. In many contexts in which Latin *dē* occurs, it is substitutable by *ab* «from» or *ex* «out of», or even omissible; cf. *cadere (dē/ā/ē) manibus* «to drop from the hands». French *de*, on the other hand, is typically neither substitutable nor omissible in contexts such as *le début de l'année* «the beginning of the year». Again, the selection restrictions of Latin *venire* allowed it to take a certain class of separative complements, possibly constructed with the preposition *dē*, but certainly excluded gerunds (corresponding to French infinitives) from this class. French *venir*, however, forms constructions such as *venir de faire quelque chose* «to have just done something», where it is hardly substitutable by any other verb.

The shrinking of the scope of a sign will be called **condensation**. The more a sign is grammaticalized, the less complex become the constituents with which it can combine. It also loses its predicativity, its ability to predicate.

Latin *dē* takes a cased NP as its complement; French *de* takes a caseless complement. Latin *habere*, even in its «auxiliary» use as in *habeo epistolam scriptam* «I have the letter as a written one», takes a full NP, here with a predicative adjunct, as its complement. However, when French *avoir* functions as an auxiliary, as in *j'ai écrit la lettre* «I have written the letter», its scope is condensed to comprise only the perfect participle with which it combines (cf. Ramat 1982 for

details). Finally, Ancient Greek *thélō hina* governs a whole subordinate clause, while Modern Greek *tha* combines just with a finite verb.

The increase in bondedness is traditionally known as **coalescence**. This leads from juxtaposition via cliticization, agglutination and fusion to symbolic alternation. Autosemantic signs become synsemantic signs; syntactic boundaries become morphological boundaries and finally disappear.

This can again be seen with French *de* and *à*, which fuse with the definite article *le* to render *du* and *au*, whereas nothing comparable happened to Latin *dē* and *ad*. Latin *habere* became suffixal when it was used to form the Romance future exemplified by *cantare habet* «has to sing» > French *chantera* «will sing». Another case of coalescence is the Romance adverb exemplified by French *clairement* «clearly», grammaticalized from Latin *clara mente* «in a clear spirit».

The loss of syntagmatic variability will be called **fixation**. The grammaticalized sign tends to occupy a fixed syntactic, then a morphological position and becomes a slot filler.

Whereas the Latin prepositions, including *dē* and *ad*, could occupy various positions within complex NPs, French *de* and *à* must precede them. Similarly, Latin allowed of permutations such as *epistulam scriptam habeo*, *habet cantare*, *mente clara*, whereas the order in French *j'ai écrit la lettre*, *chantera* and *clairement* is fixed.

The whole of grammaticalization, its parameters and associated processes with their start and end poles are shown in F3.

F3. Parameters and processes of grammaticalization

parameter	weak grammaticalization	— process →	strong grammaticalization
integrity	bundle of semantic features; possibly polysyllabic	— <i>attrition</i> →	few semantic features; oligo- or monosegmental
paradigmaticity	item participates loosely in semantic field	— <i>paradigmaticization</i> →	small, tightly integrated paradigm
paradigmatic variability	free choice of items according to communicative intentions	— <i>obligatorification</i> →	choice systematically constrained, use largely obligatory
scope	item relates to constituent of arbitrary complexity	— <i>condensation</i> →	item modifies word or stem
bondedness	item is independently juxtaposed	— <i>coalescence</i> →	item is affix or even phonological feature of carrier
syntagmatic variability	item can be shifted around freely	— <i>fixation</i> →	item occupies fixed slot

3.3. Now that the analytic concepts have been set out, let us look in more detail at another example in order to fill the frame with substance. Consider the array of structural means employed for **pronominal reference**. They are displayed in F4.

F4. Grammaticalization of pronominal reference

lexically empty noun	>	free personal pronoun	>	clitic personal pronoun	>	agglutinative personal affix	>	fusional personal affix
1		2		3		4		5

While structural means weakly grammaticalized, i.e. near the left pole of F4, are used for textual anaphora, means from the middle of the scale tend to serve for syntactic anaphora, and those near the right pole usually function in personal agreement, mainly between the verb and its actants (see Lehmann 1982[U], §6). Latin has the personal pronouns of Position 2 (E3a) and personal suffixes which may be arranged shortly before Position 5 of F4 (E3b).

- E3 a. *ego, tu, is* «I, you, he»
 b. *vide-o/-s/-t* «I/you/he see(s)»
 E4. *je vois, tu vois, il voit* «I see, you see, he sees»
 E5. *moi, toi, lui* «I, you, he»

In the evolution of the Romance languages, grammaticalization has affected the unmarked demonstrative pronoun *ille* and transformed it into a third person pronoun of stage 2. The set of personal pronouns has then lost its autonomy, in different languages to different degrees. In French they have become agglutinative personal affixes of the verb, which appear as prefixes in E4. The personal suffixes of Latin, in their turn, have been reduced, again to the greatest degree in French, where they are beyond stage 5 and on the verge of extinction; see again E4. On the other hand, French has created a new set of free personal pronouns by phonological reinforcement of certain forms of the inherited pronouns (E5). This means that the distribution of devices over scale F4 which obtained in Latin is being restored in French: although the inherited structural means have been grammaticalized, we again have free personal pronouns and personal affixes, as we had in Latin.

4. *The role of grammaticalization in variation and change*

4.1. It is now clear that a grammaticalization scale accounts for both synchronic variation and diachronic change. Consider again the range of devices for the marking of case relations on nominal constituents available to a speaker of Latin. When he wants to indicate that the referent of a nominal constituent is the cause in an event, he can use the mere ablative, as in E6a. He can also subordinate that nominal constituent to a primary preposition, as in b. Finally, he may choose a secondary adposition, as in c.

- E6 a. *Concordiā parvae res crescunt.* «Through concord, small things grow.»
 b. *Multa per avaritiam fecit.* «Many things he did out of avarice.»
 c. *Multa fecit amicitiae causā.* «Many things he did for the sake of friendship.»

Similarly, a French speaker would have the choice among primary prepositions such as *par*, prepositional locutions such as *à cause de*, etc. Variation among these alternatives is not literally free; actually, since they differ in their autonomy, they also differ in the degree of freedom with which they are employed. We will return to this below.

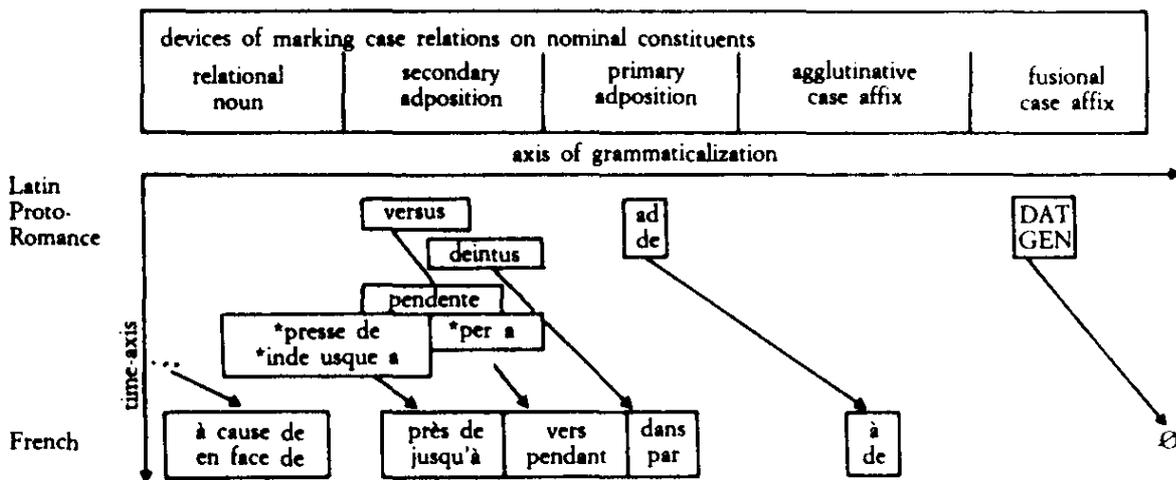
4.2. On the other hand, grammaticalization is the change of a linguistic sign in the direction of lesser autonomy along such a scale. The Latin prepositions *dē* and *ad*, with the strictly concrete, local meanings «down from» and «at, towards», developed into markers of syntactic relations, namely of possessive attribute and of indirect object, respectively. Consequently, French *à* is used in constructions such as E8a, where Latin would use the mere dative (E7a). On the other hand, in

order to convey what Latin expressed by *ad* (E7b), French tends to take recourse to a secondary preposition (E8b) which is gradually developing into a primary one.

- E7 a. Caesar Hannibali pomum misit. «Caesar sent a fruit to Hannibal».
- b. Exercitum ad fluvium duxit. «He led the army to the river».
- E8 a. César envoya une pomme à Annibal.
- b. Il mena l'armée jusqu'à la rivière.

This means that if there is typological continuity in a certain grammatical strategy of two historical stages of a language – as there is continuity with respect to prepositions in Latin and French –, then the grammaticalization of an element A, which ceases to fulfill its former function, is accompanied by a renewal by which a lexical element B is recruited to fill the place cleared by A. Both of these processes occur simultaneously and go in the same direction, since both A and B become more grammatical in their status. Thus, there is one overall movement of grammaticalization, seizing all the devices which a language has as its disposal within a given functional domain and pushing them gradually and simultaneously along the stages of a scale, normally without changing their mutual order on that scale. This may be visualized as in F5.

F5. *Grammaticalization of markers of case relations from Latin to French*



Grammaticalization asserts itself in all the domains of grammar. In the examples, we have seen adpositions which become case affixes, personal pronouns which are grammaticalized to personal affixes, and full verbs which turn into auxiliaries and finally tense/aspect/mood affixes. We might also have looked at demonstratives which become definite articles or at nouns which become numeral classifiers. In all these cases, there is, on the synchronic level, a choice among alternative strategies which enjoy different degrees of grammatical autonomy, and on the diachronic axis, a steady movement in the direction of lesser autonomy and stronger grammaticalization.

5. *Insufficient explanations of linguistic change*

5.1. Being thus clear about the pervasive nature of grammaticalization, we may approach the question of what motivates such synchronic variation and such diachronic change. One thing becomes immediately apparent: any statement which pretends to explain the grammaticalization of A by the

grammaticalization of B fails. Such explanations are legion in the literature, and there are two varieties of them. One party maintains that B was grammaticalized to fill the place of A, because A had disappeared. For example, the Latin prepositions have been grammaticalized to markers of syntactic relations because the Latin case system had broken down. The other party vigorously contradicts this, claiming that A was lost because B had been grammaticalized to fill its place. In the example at hand, the Latin case system was lost because it was no longer needed after the grammaticalization of the prepositions. It is obvious that either of these explanations lacks foundation because – assuming the historical simultaneity of these changes – there is no way to justify the logical priority of one of them over the other. Taken together, the two explanations are, of course, circular.

If two processes of grammaticalization take place within the same functional domain, they follow the same direction and may be subsumed under a functionally based generalization. Concerning the example of the Latin-Romance prepositions and cases, this amounts to arranging the observable changes in a comprehensive picture, as we tried in F5. Instead of making separate statements about each of the processes observed, we may then generalize that the whole set of devices of marking case relations on nominals was grammaticalized from Latin to Romance. Suppose we regard this as a natural generalization. Then it follows that the cooccurrence of the change of the Latin prepositions to markers of syntactic relations and of the change of the Latin case suffixes to zero is, *ceteris paribus*, more natural than the separate occurrence of one of these changes with concomitant stagnation in the evolution of the other marking device. It is in this sense that we may say that changes A and B are in mutual harmony and favor each other. At the same time, this is obviously different from saying that change A explains change B.

5.2. There is another variety of explanations of linguistic change which takes recourse to the notion of language as a functioning system. Certain principles or tendencies are assumed, such as economy, symmetry, harmony, (typological) consistency and so forth, and the language is said to continuously struggle for an optimal compromise among partly conflicting principles (cf. e.g. Ronneberger-Sibold 1980). Representatives of diachronic basic order typology (eg. W. Lehmann 1978) will rely on cross-linguistic generalizations (otherwise known as implicational universals) such as the following: if a language has basic order VO, it has prepositions (this being a simplification of Greenberg's (1963) universal 3). Such typologists will then say that French expanded the Latin prepositions, to the detriment of the postpositions, because Latin was changing from an SOV to an SVO language. Suppose the basic order did in fact change from Latin SOV to French SVO. To the degree that such a change is empirically confirmable, it occurred simultaneously with the substitution of case suffixes by prepositions. This means that we are again trying to explain one change by another change, although neither of them has logical priority over the other. Now suppose – contrary to fact – that one of these changes preceded the other, and also let us assume a strong tendency of SVO basic order to cooccur with prepositions. This would seem to suggest that once the language had acquired either SVO order or prepositions, it would then be in a transitional state of inconsistency and would hasten to overcome it by acquiring the other harmonic feature, too.

Does this notion of typological consistency explain anything? Obviously not. If the intermediate stage is inconsistent, why did the language move into it in the first place? Either typologically inconsistent languages are functionally somehow deficient; then every language should avoid getting into such an unpleasant situation (whereas, in fact, countless languages abide for centuries in inconsistent states). Or typological inconsistency does not make a language any less functional. Then it provides no reason whatsoever for a change away from such a state.

Suppose that generalizations such as «if a language has basic order VO, it has prepositions» were without exception, so that elementary propositional logic would become applicable to such

implications. This would tell us immediately that if A entails B, neither of them can be said to explain the other. B cannot explain A, since it is only a necessary presupposition, not a cause of A. A cannot explain B, because it is contingent on B and, if A and B are diachronic changes, necessarily later than B (or at most simultaneous with it).

5.3. The upshot of this discussion is that change A cannot explain change B, regardless of whether A precedes B or A and B occur simultaneously (cf. Harris 1982: 7, 11 for the contrary position). The most one can say is that the cooccurrence of changes A and B – with or without phase-displacement – is in keeping with the crosslinguistically observed mutual harmony of the resulting features.

All of these explanations of language change are ultimately structural explanations which take the notion of the linguistic system as elementary and the notion of change as something secondary affecting the system. Any such explanation ultimately runs into one question: **If a given linguistic system functions today, why can it not function in the same way tomorrow?** That is, all such explanations leave unanswered, in the end, the question of why the language changed, and why languages change.

6. *Language as creative activity*

6.1. We must reverse our basic perspective and regard the linguistic system not as given, but as created by language activity. The elementary notion of language theory is language activity, the unrestricted creation of interpersonally available meanings, i.e. signs. This is a goal-directed activity, an activity which solves a set of ever-recurring problems (cf. Seiler 1973 and 1978). Therefore it is systematic; it is, in fact, a constant systematization. The system is to the change as projecting a still from a movie is to normal projection.

Given that language activity is interpersonal and that every speaker is born into a tradition, one speaker's systematization must be very much like another speaker's systematization, and tomorrow's systematization must be very much like today's. However, there is no reason why they should be absolutely identical. Language activity is creative; it constantly finds new solutions for the problems. (This reasoning is essentially Coseriu's (1958 and 1980)).

6.2. The language theory whose basic perspective has just been sketched allows us to understand grammaticalization. We want to know why so much synchronic variation moves along scales of grammaticalization, and so many grammatical changes conform to a unidirectional passage through a grammaticalization scale. Recall that the autonomy of a linguistic sign is greatest at the start of grammaticalization and weakest at its end. The autonomy of a linguistic sign, however, is just the structural aspect of what, in terms of linguistic activity, is the greater or lesser freedom with which the speaker creates and manipulates his signs. On the one hand, the speaker is creative, i.e. he enjoys freedom in this activity. On the other hand, he is constrained by tradition, i. e. he must conform to rules. All his activity is subject to the constant tension between these two poles (cf. Humboldt 1836, § 14, esp. 437-440). For each of those functions that constantly recur in language activity, the speaker has at his disposal an array of grammatical means which fulfill that function. The most grammaticalized of them *must* be used in order to structure the signs in traditional ways and thus to secure understanding. The least grammaticalized of them *may* be chosen whenever the speaker wants to fulfill this particular function in a more prominent way. This explains synchronic variation along a grammaticalization scale.

6.3. Every speaker wants to give the fullest possible expression to what he means. The received grammatical devices are notoriously insufficient to adequately express what he wants to say. It is unimaginative to say plainly *avaritiā* «out of avarice». When I say *per avaritiam*, the causal relationship becomes much more vivid. But now a factor comes in whose empirical details are largely unexplored: the **channelization** of grammaticalization. This means that there is only a limited number of elements from among which new grammatical morphemes may be recruited. Definite articles come from demonstratives again and again, indefinite articles from the numeral «one» over and over again. There are apparently certain requirements of semantic aptitude imposed on elements which are to be grammaticalized. Consequently, the same device used by one speaker to enrich his expression will be used by another speaker, because of the limitations on available devices. Soon everybody will say *per avaritiam*; so *per* will be grammaticalized to a marker of a causal relation, and then if we want to be expressive, we will have to say *avaritiae causā*. This explains the perpetual unidirectional passage through grammaticalization scales in grammatical change. The converse movement almost never occurs. It would presuppose a constant desire for understatement, a general predilection for litotes. Human speakers apparently are not like this.

7. *The creative nature of language change*

7.1. To the degree that language activity is truly creative, it is no exaggeration to say that languages change because speakers want to change them. This does not mean, of course, that they intend to restructure the linguistic system. It does mean, however, that they do not want to express themselves the same way they did yesterday, and in particular not the same way as somebody else did yesterday. To this extent, language is comparable to fashion. The two are also comparable in another respect: given that, for reasons inherent in the nature of things, there is only a limited number of possibilities, after having run through a grammaticalization scale, we are back to its start. For example, certain languages which rely on case suffixes again and again recruit new postpositions in order to renew their case system. This is why grammatical change has been likened to a spiral (Gabelentz 1901:256; Meillet 1912: 140f).

It is intriguing to observe that a considerable number of grammatical changes are quite superfluous from the point of view of the language system; that is to say, the change leads to a state that is maximally similar to the starting point. We have seen a case in point in the development of new personal affixes on the French verb (§3.3). A striking example is the Latin-Romance future. When the Latin future *cantabit* «he will sing» was ousted by the periphrastic locution *cantare habet*, this may at first have appeared as a revolutionary innovation. The result of this change, however, is French *chantera*, a form which is structurally and semantically maximally similar to the form which was given up. The net gain in terms of change of the system is well-nigh zero. This shows once more that system-internal explanations of linguistic change do not fit. There is much change just for the sake of change.

7.2. Independent evidence for this claim comes from the alternation between strong and weak verbs. This is partly a grammaticalization phenomenon, since strong conjugation is, according to the criteria of F2, more grammaticalized than weak conjugation. The analogical regularization of conjugation by the transfer of strong verbs into the weak class is commonplace in the history of Germanic languages. Recall the English examples in E9 and the German examples in E10.

E9. wrought → worked, knit → knitted, shore → sheared; swollen → swelled

E10. wob → webte «wove», buk → backte «baked»

What is much less known is that there are also numerous cases of strong conjugation of erstwhile weak verbs (cf. Ramat 1983, §2). In English, *wore* and *tore* have been introduced instead of the regular forms **weared* and **teared* (E11). In German, we have (E12) *pries* instead of **preiste* «praised», *glich* instead of **gleichte* «resembled» and *lud* instead of **ladete* «invited». In Substandard German there is some tendency to form *frug* instead of *fragte*.

E11. weared → wore, teared → tore

E12. preiste → pries, gleichte → glich, ladete → lud, fragte → frug

Just like the reverse phenomenon of the regularization of strong verbs, this change towards strong conjugation is an analogical change which presupposes the availability of models. Just as we form Eng. *swelled* and German *backte* on the analogy of *smelled* and *hackte* «hacked», so we also form Engl. *wore* and *tore* on the analogy of *bore* and *swore* and German *glich* and *frug* on the model of *schlich* «sneaked» and *trug* «bore».

Given that such analogical changes occur in both directions, there can be no argument that the passage of verbs from strong to weak conjugation corresponds to some quasi-necessary trend towards regularization or simplification built into the linguistic system, as has been thought for a long time. On the contrary, it appears to be largely unpredictable whether English speakers will use the model of *fitted* and accordingly form *knitted*, or whether they will use the model of *hit* and accordingly form the past *knit*; and again whether German speakers will use the model of *nagte* «gnawed» to form *fragte* or rather the model *trug* to produce *frug*. What counts here is that the formation of the past is not completely subject to obligatory rules of morphology. The speaker apparently does not store morphological forms in his mental lexicon in the way our conventional dictionaries associate a list of relevant forms with a verbal entry. Instead, the speaker keeps the formation of such forms at his disposal. He reserves himself the possibility of applying available grammatical rules today in a different way than yesterday. In short, he wants to be creative.

Language being a goal-directed activity, it is not amenable to causal explanation (cf. Lieb 1978:167). The only explanations adequate to it are functional explanations. The relevant question is not: why is there this variation or that change? but rather: what are this variation and that change for? In seeking answers to such questions, we must find out what the universal tasks are that human beings constantly fulfill in language activity. They will provide the invariant both for synchronic variation and for diachronic change.

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