

Design and Grammaticalisation

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1. Introduction

Languages are different, and one of the main objectives of linguistics is to account for these differences. Why are there different languages, how did they arise, how do they differ and how can we arrange these differences? I will not try to answer these complicated questions, but instead focus on the notion of ‘difference’ in grammatical theory.

The view on how to cope with differences has changed strongly in the last century. In the 19th century it was commonly assumed that languages (but also cultures and races) could be placed on some hierarchy of development, the European type language outranking all others. This view on difference can be found very clearly in Von Humboldt (1836) who put Sanskrit, in his view the basic Indo-European language, on the highest rung and subsequently ranks all languages that differ from Sanskrit as less ideal (making a notable exception for the modern West-European languages).

As more and more became known about ‘exotic’ cultures and their languages, the insight grew the ‘exotic’ doesn’t mean ‘simple’. In all languages intricate structures were found, although often in a different way as in the well known European languages. This insight led to the abandoning of the idea of an ‘ideal’ language and a hierarchy of development. All languages came to be looked upon as equally worthwhile.

But during the 20th century the principle of ‘equal worth’ became more and more interpreted as just ‘equal’. Contemporary linguists often conclude from this thought that language should have some essential basis, being universal to mankind (for a discussion of the rise of ‘essentialism’ see Bichakijan 1995). This assumption can be seen clearly in the writings of Chomsky and others working in his theoretical framework (e.g. Pinker 1994). Also in the Greenbergian tradition of typology the research is focused on the discovery of resemblances between languages¹.

The shift from differences to resemblances as the focal point of attention has produced in many cases insights that are indispensable for a good theory of human languages. But there are cases where the rejection of every kind of ranking is counterproductive and refrains from valuable insights. I will try to formulate here a kind of ranking based on the amount of present ‘design’.

2. The concept of ‘design’

The concept ‘design’ in normal language-use is restricted to be used with man-made artifacts. A car is designed, or a watch, both being the result of human ‘research and development’ as modern industry calls it. But the concept is also used in contemporary biological thinking. The central idea in Darwin’s theory of evolution is that design can also arise without a conscious intelligent artificer; it can arise, given enough time, by trial, error and selection. Biologists look at living beings as exhibiting a lot of design, the research and development being done by natural selection (Dennett 1995: 68). There is a strong intuitive sense that there are differences in the amount of present design. As Dennett writes:

‘The more design a thing exhibits, the more research and development work had to have occurred to produce it ... How much design does a thing exhibit? No one has yet offered a system of design quantification that meets all our needs ... In the meantime we have a powerful intuitive sense of different amounts of design. Automobiles contain more design than bicycles, sharks have more design than amoebas.’ (1995: 70-71)

The ‘powerful’ intuition often runs into problems if we try to compare things on their design. Is there a difference in the amount of design between a car and a train, or between a dog and a fish? Intuition is not clear at all in these cases. It is not obvious which side of the pairs has more design. On some traits one is superior, on other characteristics the other has more design, the whole being more or less balanced. So to find differences in the amount of design we have to pop down one level and look at individual traits. The whole is balanced, but some parts are not. Consider the dog-fish comparison some more: on the level of ‘aerodynamicity’ a fish is far better designed than a dog (as it has to cope with a far greater resistance from its natural surroundings: water). But the order is reversed on the level of ‘blood-circulation’. A dog has a double loop circulation (as humans), the blood passing two times through the heart in one complete circulation. Fish have a single-loop circulation, the blood passing the heart only once. The dog heart is in fact a ‘double’ heart when compared with a fish heart, exhibiting more design.

In this sense, I will use the concept ‘design’ for human language. Whether English or Oneida (an Iroquoian language) exhibits more design as a whole is unclear, but if we look at particular subsystems there are clear design differences². In the subsystem of pronominal elements the difference of design is obvious, Oneida showing much more design than English. The design is measured here simply by the amount of elements used for pronominal reference, abstracting from the precise semantics of the elements. In English there are 18 different pronouns and the third person suffix ‘...-s’³, in Oneida there are 58 different prefixes (Lounsbury 1953).

If more languages are taken into the comparison, cross linguistic types can be established by a typological classification of subsystems. The main problem in such a classification is to find a suitable functional-semantic definition of a subsystem where the expressions languages use can be classified in different types⁴. Take for example the domain constrained by ‘*unmarked constructions for two participants performing the same action (not necessary together)*’. In English this domain is covered by expressions using the conjunction ‘and’ or using the preposition ‘with’⁵:

- (1) John **and** Mary went to school.
- (2) John went to school **with** Mary.

In Acehnese (an Austronesian language) on the other hand there is only one construction in this domain, with a preposition ‘ngön’:

- (3) adêk *ngön*-lôn ji-jak bak-sikula
 brother with-1Sg 3-go to-school
 My brother goes to school with me.
 My brother and I go to school.

(Durie 1985: 176)

These two types, a conjunctive type like English and a comitative type like Acehnese, can be identified cross-linguistically, and have interesting connections with

other domains (Cysouw 1994, Stassen - to appear). There is a clear difference in design between these two types: the English ‘and’ strategy in (1) is not present in Acehnese. The conjunctive type exhibits more design than the comitative type.

I do not claim that differences in design can be found in every comparison of subsystems. Comparing the pronominal system of English with the pronominal system of Dutch does not yield a clear design difference⁶. Nor does there seem to be a difference in design between, for example, the accusative and the ergative type of sentence structure. I do claim that design differences *can* be found, and that in those cases the differences can be ranked: the Oneida pronominal system outranks the English system and the conjunctive type outranks the prepositional type. If no difference is found, no ranking is proposed⁷.

Also I do not claim that higher ranked necessarily means higher developed. The ranking on design is one of elaboration and elaboration of linguistic structure is negotiated in the force-field of speaker and hearer interests. The hearer is interested in great elaboration, making the speech easier to understand. The speaker though wants to minimize his speech because of economic reasons. The ranking on the amount of present design could be interpreted as a ranking on hearer interests. In general there is no unidirectional development towards either increase or decrease of design as both speaker and hearer struggle for their interests. Observed differences could mean either that there has been an increase on the one side or a decrease on the other side. In individual cases though it is possible to establish a direction by using the principles of grammaticalisation.

3. Generalizing Grammaticalisation

We have seen two examples of design difference, established on the comparison of synchronic language-data. Another kind of design difference, but now with clear diachronic implications, can be found in the theory of grammaticalisation (Hopper & Traugott 1993). The word grammaticalisation was first used by Meillet to describe a process leading to an *increase* in design:

‘[grammaticalisation is] the attribution of grammatical character to an erstwhile autonomous word.’ (Meillet 1958, cited in Hopper & Traugott 1993:18)

A previously independent content word becomes incorporated into a subsystem of a language, leading to an increase of the design of the subsystem. A typical example of grammaticalisation is the development of the French future. It all started with the classical Latin verb ‘habere’ which had once locative meaning, something like ‘being in presence of’. This verb became used as a transitive verb marking possession, but also grammaticalised into an auxiliary together with an infinitive: a change from an autonomous word becoming bound to another word. In this construction it got a strong sense of obligation:

- (4) haec habeo cantare
 these have-1SG sing-INF
 I have these (things) to sing (them)

In late Latin the meaning of the construction had further grammaticalised to a clear modifier with already a strong sense of future and a fixed place after the infinitive:

- (5) veritatem dicere habeo
truth say-INF have-1SG
 I will speak the truth
 (litt: I have the truth to say)

In French this form became fully inflectional through cliticization and phonological reduction: ‘cantare habeo’ became ‘chanterai’ (Hopper & Traugott 1993: 42-44). Today it is widely assumed that this process is unidirectional from content words leading to grammatical item leading to an eventual loss. In other words: in the process of grammaticalisation there is a *decrease* of phonological design of the linguistic element itself. Generalizing we could say that *grammaticalisation is a process of loss of design on one level coupled with gain of design on another level*. The grammaticalising element, losing its autonomy, becomes a small wheel in a greater structure (see figure 1).

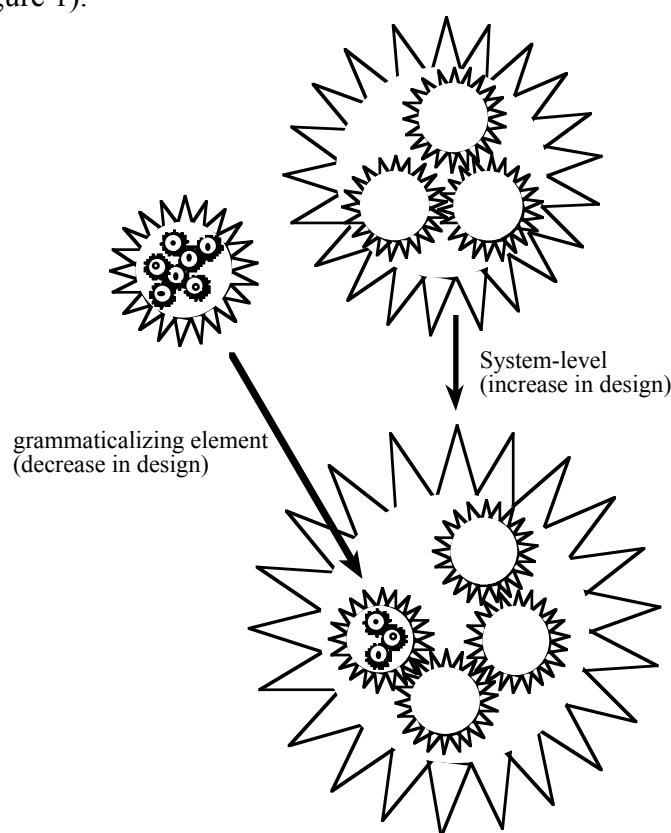


Fig. 1: grammaticalisation as a coupled process of decrease and increase of design

In the example of the French future above, the decrease of design is on the level of phonology, the increase is on the level of the system of inflectional tense-aspect marking. The same process of coupled increase and decrease of design can be found on a higher level, let's call it meta-grammaticalisation. If we look on the level of the inflectional tense-aspect marking in classical Latin, we find six different morphological paradigms. Of these six paradigms four vanish, only two remain, the contemporary French past and present. This is an example of a loss of design on the level of inflectional tense-aspect marking. But in the same process the two remaining paradigms become used in the new formed periphrastic structures as modifiers. From that time on every periphrastic tense-aspect structure can be used in one of two ways

(present vs. past) using one of the two remaining Latin paradigms in the auxiliary. These paradigms have become a small wheel in the formation of periphrastic tense-aspect forms. In this sense the Latin inflectional forms have grammaticalised into a modifier of periphrastic forms⁸.

4. Interpreting design differences

The theory of grammaticalisation gives us a possible method of interpreting design differences. It does not work in all cases. It seems highly unlikely that the above mentioned design difference between English and Oneida can be accounted for by a grammaticalisation process. If we want to interpret design differences as a result of grammaticalisation some more requirements have to be met. First, the found design in the one case has to be a subset of the other. This is not the case if we compare the pronominal systems of English and Oneida. Both systems are structured in a different way, neither is the subset of the other. For instance, the special possessive elements in English do not have a separate morphological form in Oneida, and the Oneida dual forms do not have an equivalent in English. Second, there should be some indications of a grammaticalisation cline, i.e. intermediate forms between the two different designs. In the historical research into grammaticalisation these intermediate forms can sometimes be found as different stages in the development. If only synchronic data are available, different synchronic structures can be interpreted as showing different stages in a development⁹. To find this grammaticalisation cline is important in order to establish whether the difference in design is due to an increase or a decrease, both being possible options as both are part of the grammaticalisation process¹⁰.

It is *not* necessary though that the languages showing the differences are genetically related to interpret design differences as the result of grammaticalisation. As the grammaticalisation is only proposed for a small subpart of a language, only those subparts have to be related, not necessarily the whole language. To relate subparts is exactly what is done by making a typology like the one described in §2 about ‘nominal conjunction’. All languages in one type are related on the basis of the semantic/functional criteria taken as a starting point, just as genetically related languages are related by taking the morpho-phonological structures of some morphemes as criterion. A typological relationship between languages is different from a genetical relationship, but it is equally well suited to allow design differences between types to be interpreted as grammaticalisation.

In §2 we already saw that there was a design difference between the conjunctive type and the comitative type. The conjunctive type, like English, makes a difference between ‘John and Mary’ and ‘John with Mary’. The comitative type does not make this difference, and uses a ‘with’-like construction in both cases. So the first requirement is met, the structures found in the comitative type being a subset of the structures found in the conjunctive type. The second requirement is to find intermediate forms to establish the grammaticalisation cline.

There are some languages that do not have a lexical difference between ‘and’ and ‘with’ but have some syntactic ways to distinguish between the two. I will interpret these as languages that make the difference, but have no grammaticalised morpheme to do the job. They are in a way intermediate forms. Three different kinds of intermediate forms can be distinguished:

- ‘and’ marking by number marked on the verb, as exemplified by Lamut.
- ‘and’ marking by double occurrence of ‘with’, as exemplified by Amele
- ‘and’ marking by the place of the ‘with’-constituent as exemplified by Hausa

In Lamut (a Northern Tungus language spoken in Siberia) the postfix ‘...-nun’ has a comitative meaning as found in (6) with singular marking on the verb. With plural marking on the verb it has a conjunctive meaning as in (7):

- (6) Paca er-nun nari-nun gerk-**an**
P. this-with boy-with walk-3Sg
 Paca came with this boy. (Benzing 1955: 65)
- (7) Anna Miko-nun tulle gerk-**ar**
A. M.-with street walk-3Pl
 Anna and Miko walk in the street. (Benzing 1955: 65)

In Amele (a Bogia language spoken in Southern New Guinea) the postposition ‘ca’ has a comitative meaning as found in (8). If it is repeated though after each participant it has a conjunctive meaning as in (9)¹¹:

- (8) ija Lufani **ca** belowa
1Sg L. with go(1dual)
 I went with Lufani. (Roberts 1987: 169)
- (9) Banaq **ca** Banaq **ca** ale due belesia
B. with B. with they dance go(3dual)
 Banaq and Banaq have gone to the dance. (Roberts 1987: 105)

In Hausa (A Chadic language spoken in West Africa) the preposition ‘da’ has comitative meaning (10), but if placed directly after the subject the meaning is conjunctive (11)

- (10) wa ya zo tare **da** kai
Q 3Sg come together with 2Sg
 Who came with you? (Taylor 1923: 23)
- (11) azanchi **da** dabara
knowledge with skill
 knowledge and skill (Taylor 1923: 16)

These languages do not seem to be languages in transition, there is no reason to assume that the structures found in those languages are in some way less stable or unwanted in the overall structure. They are languages that are morphologically of the comitative type, but syntactically of the conjunctive type. If we assume that syntactical marking is lower on the grammaticalisation cline than morphological marking, those examples indicate that the languages of the conjunctive type have undergone an increase of design relative to the comitative type. I do not claim that languages are necessarily on their way to become of the conjunctive type. The intermediate forms are only an argument that the languages of the conjunctive type are descendants of comitative type-languages. We can only explain that something has happened to some languages, presently I do not think we are able to foresee future developments of the structure of languages.

5. Conclusion

This paper has been an attempt to bring together two different views on the emergence of difference that are often seen as opposites. On the one hand there is ‘progressive’ evolution, seen as progressive change towards increasing complexity in design, and on the other hand there is ‘Darwinian’ evolution, seen as a blind process of diversification and selection. Those two positions are not necessarily contradictory. In the blind process of evolution (which I see as the basic process) complexity arises, although not necessarily nor planned. But if we want to give an account for the evolution of attested complexity, a story of progressive evolution has to be told. A story of how this complexity arose, and what the earlier stages of lesser complexity looked like. There is one important constraint on the applicability of progressive evolution: progressive evolution is necessarily ‘post-hoc’. It only can give a historical explanation of how things went, the changes being too contingent to make predictions. In linguistics it seems unlikely that there is a way on the level of whole languages to talk about progressive evolution. But if a different stance is taken, looking at the level of subsystems of language, there are possibilities to tell a story of emergence of complexity by grammaticalisation.

Notes:

¹ Note that the use of the word ‘universal’ is different in the two approaches. In Greenberg (1966) and others working in this tradition the word ‘universal’ is a technical term used for certain kinds of statistical correlation in human language. These ‘universals’ are in no sense universal, as it is clear that there are always counterexamples. ‘Universals’ in the Chomskyan sense are only those statements that are really universal for all human languages, no exceptions possible.

² A language as a whole is a complicated system of linguistic elements working together. Some groups of elements seem to have some coherence, they form a relatively independent part of the whole system, a subsystem.

³ The 18 pronouns are:

	1 Sg	1 Pl	2 Sg	2 Pl	2Hon	3M Sg	3N Sg	3F Sg	3 Pl
Subj	I	we	you			he	it	she	they
Obj	me	us				him		her	them
Poss	my	our	your			his	its		their

⁴ The question how to decide whether a domain is suitable or not is an interesting and intricate question which will not be pursued here.

⁵ Constructions like (1’) are ruled out by the unmarkedness constraint.

(1’) Both John and Mary went to school.

In this construction the use of the conjunctive strategy is extra marked by an adverb ‘both’. The constraint ‘not necessarily together’ is probably superfluous. I have never seen a language that makes a difference between (1’’) and (1’’’) without the use of some extra adverb-like element, marking the together/separately distinction. These constructions, with an extra adverb, are already ruled out by the unmarkedness constraint. All languages of the conjunctive type seem to allow the double interpretation of sentences like (1):

(1’’) John and Mary went to school *together*.

(1’’’) John and Mary went to school *separately*.

⁶ Dutch has 20 pronominal elements, two affixes ‘...-t’ and ‘...-en’ and 18 pronouns, although differently fitted into the system as in English (see footnote 3)

	1Sg	1Pl	2Sg	2Pl	2Hon	3MSg	3Nsg	3Fsg	3Pl
Subj	ik	wij	jij	jullie	u	hij	het	zij	
Obj	mij	ons	jou		uw	hem	zijn	haar	hen/hun
Poss	mijn		jouw						

⁷ But in these cases a design difference can probably be found on a lower level, in a sub-sub-system.

⁸ The overall tense-aspect system seems not to have changed, only the way to express certain notions. The proposed grammaticalisation is a grammaticalisation in a sub-sub-system. Note that it is not the inflectional marking that grammaticalises *into* the periphrastic marking (which would be precise the opposite direction of grammaticalisation) but the inflectional marking *becoming a modifier* of a periphrastic system that arose in another process.

⁹ This idea can be traced back to the interpretation of dialect-continua as showing different stages in a historical development. Typological work like Nichols (1992) could be interpreted as a world-wide analog to regional dialectology, although she herself refrains from any diachronic interpretation of her results, claiming she found ‘only diversity, distributed geographically’.

¹⁰ A decrease of design can for instance be found in the diachronic development of the Germanic pronominal system, losing case and some person/number/gender-oppositions. In the here proposed generalisation of grammaticalisation this decrease of design should be coupled to an increase of design in some other system. A proposal is to see the development towards stronger configurationality (with obligatory presence of pronouns in a sentence) as this increase. Note that this development towards greater configurationality is not necessarily coupled with loss of case. Configurationality can possibly arise by other developments too.

¹¹ Note that the number marking on the verb is in both cases dual, so no difference is found here in the number marking as in Lamut, although it shows that both actions are perceived as being done by both persons.

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