

Language Contact and Contact Languages

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Remodeling grammar

Copying, conventionalization, grammaticalization

Lars Johanson
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The paper discusses processes involved in copying of grammatical elements. The Code Interaction framework is applied in the description and analysis of contact induced phenomena. This framework distinguishes between different types of copying. Extensive Selective Grammatical Copying creates new morpho-syntactic elements which may be conventionalized and result in grammatical remodeling. It is, however, claimed that diachronic processes are not copiable and that Selective Grammatical Copying is not a process of unidirectional contact-induced grammaticalization. The importance of one specific type of copying, namely Frequential Copying, is stressed.

Keywords: code copying, combinational copying, conventionalization, frame-changing, frequential copying, global copying, habitualization, selective grammatical copying, target of copying, target of grammaticalization

1. Introduction

The topic of this paper is how grammar may be restructured through conventionalized results of Code Copying, and how these results relate to grammaticalization processes.

The goal is to show how Selective Grammatical Copying creates contact-induced morphosyntactic elements, which may be conventionalized and thus lead to linguistic change in the sense of grammatical remodeling. The stages of grammaticalization of the elements involved in the relevant contact processes will be discussed. It will be claimed that diachronic processes are not copiable and that Selective Grammatical Copying is not a process of unidirectional contact-induced grammaticalization. These discussions will be followed by concrete examples of analyses according to the theoretical concepts. The often ignored importance of

Frequential Copying will be stressed. Finally, the overall results of grammatical remodeling through extensive Selective Grammatical Copying will be summarized.

The issues will be dealt with in a specific Code Interaction framework, an integrated model for the coherent description and analysis of various kinds of contact-induced phenomena and their interrelations. This framework is intended to make the complexity, dynamics and creativity of code interaction visible with a minimum of technical machinery.

While a detailed account of this framework, which has been presented in a number of publications since 1992, e.g. in Johanson (1992, 1998, 1999a, 1999b, 2002a, 2002b, 2005a, 2005b), is not possible within the limits of the present paper, its main tenets will be summarized in the first sections.

The structure of the paper is as follows: Sections 2–4 present hypotheses and methods following from the Code Copying framework. Sections 5 and 6 present the specific concept of Selective Grammatical Copying. Section 7 provides examples of analyses. Section 8 deals with the effects of Frequential Copying. Section 9 summarizes the results of extensive Selective Grammatical Copying.

2. Insertional code copying

The following is a very brief summary of the principles of the Code Copying framework.

One important component of the Code Interaction framework is *code copying*, a common creative resource available to ease the tension between interacting linguistic systems, whether related or unrelated.

The term *code* refers to languages and language varieties (dialects, sociolects, idiolects, registers). It is used in the same sense as in *code switching*, which means alternation between two or more languages or language varieties. The difference is that copying does not imply alternation of codes, but insertion of elements of one code into another code. All contact-induced processes to be discussed here are subsumed under this kind of code interaction.

Contact-induced copying means that users of a Basic Code copy elements of a Model Code. The Model Code is the 'source', 'donor' or 'diffusing' code, while the Basic Code is the 'recipient' or 'replica' code.

The term *copying*, which covers what is otherwise called 'borrowing', 'diffusion', 'transfer', 'interference', 'replication', etc., is chosen to stress that copies are per definition *not identical* to their models. Copies are never 'imported' or 'transferred' foreign elements and never true replicas of their models. There are always

dissimilarities in substance, meaning, contextual applicability and frequency between models and copies. It is true that the Basic Code becomes more similar to the Model Code than it was before the act of copying, but identity between models and copies is in principle excluded, all similarities being partial.

The differences between the model and its copy are essentially due to *adaptation*, modification in the direction of the Basic Code because of various kinds of incongruence between the two codes. Properties of the models may thus be replaced by properties typical of the Basic Code. The modifications in question include adaptation to the phonological system, to the lexical semantic system (causing denotative and connotative differences), to the morphosyntactic system, etc.

Insertional copying means that copies are inserted into Basic Code clauses. On the basis of structural and conceptual similarities, equivalence relations are established, consciously or intuitively, between elements in the Model Code and elements in the Basic Code.

Basic Code clauses provide a morphosyntactic frame of native and nativized grammatical markers and patterns. Inserted copies are immediately part of the Basic Code and subject to its internal processes. According to our theoretical concept, all languages are 'contact languages' in this sense.

Insertional copying is an innovative act, not necessarily the result of imperfect learning. The differences should not be viewed as failure to meet the norms of the Model Code. They are rather due to creative restructuring according to cognitive principles and communicative needs. Copying often serves as a creative technique of enriching codes and enhancing their functionality; cf. Csató's remarks (1998) on "the creativity of code-copying" as observed in the Europeanized Turkic language Karaim. Copies do not necessarily fill gaps, but can be inserted even in cases where the Basic Code possesses close equivalents.

The motivation for copying is mostly social, i.e. the wish to communicate in a prestigious way or in the same manner as the social environment. The structural, cognitive and psychological factors involved need close attention.

Insertional copying may proceed in two directions:

Take-over insertion means that code users take over copies from a secondary code in their primary code, which is then the Basic Code. For example, speakers may copy elements from English when using their primary code Swedish.

Carry-over insertion means that code users carry over copies from their primary code into their variety of a secondary code, which is then the Basic Code. For example, speakers may copy elements from their primary code Swedish when using their more or less idiosyncratic variety of English.

Secondary codes shifted to by code users may retain carried-over copies as substrate phenomena. Complex situations including both take-over and carry-over insertion are often observed in intensive language contacts.

3. Global and Selective Copying

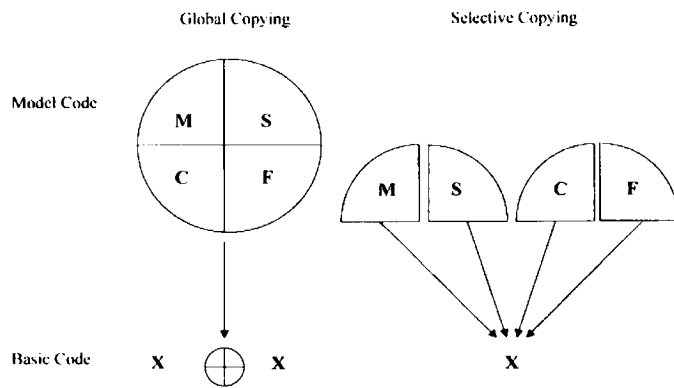
Global Copying, a process often called ‘transfer’, means that units, i.e. morphemes and morpheme sequences, of the Model Code are copied *globally*, as a whole, including their material shape (substance) and properties of meaning, combinability and frequency. The copy is inserted into a position felt to be equivalent to that filled by the model in the Model Code.

Global Grammatical Copying produces grammatical function units such as English *they, their, them*, global copies from Scandinavian, the Karaim superlative prefix *nay-*, a global copy from Slavic, Danish *hvis* ‘if’ < *hwes*, a global copy from Middle Low German, German *in puncto* ‘in respect of’, a global copy from Latin. Persian *ham* ‘and, also’, Arabic *amma* ‘but’, Russian *i* ‘and’, *no* ‘but’ are examples of grammatical function units that have been copied globally into numerous contact codes, e.g. in various Turkic languages.

Selective Copying means that only individual selected properties – material, semantic, combinational and frequential properties – of elements of a Model Code are copied onto units of a Basic Code. This term should not be confused with selection processes in the sense of adaptation, which are common to all kinds of copying and which result in differences between models and copies (see Section 2). An equivalence relation is established, consciously or intuitively, between an element in a Model Code and a suitable Target of Copying in the Basic Code, a native element onto which the relevant properties can be copied. The target is reanalyzed with respect to these properties, its functions becoming more similar to those of the element in the Model Code. Various kinds of Selective Grammatical Copying will be discussed below.

The Code Copying framework allows the study of Global Copying and Selective Copying within one and the same framework. These are simply two well-defined types of copying rather than different types of code interaction. The relation between them may be illustrated in Figure 1. On the left side, we find a whole ‘globe’ of properties, i.e. of material, semantic, combinational and frequential properties. On the right side, we only find loose parts of a corresponding ‘globe’, i.e. selected material, semantic, combinational and frequential properties.

Selective Copying may thus comprise Material Copying, Semantic Copying, Combinational Copying and Frequential Copying.



M = Material properties (substance); S = Semantic properties (also including pragmatic meanings); C = Combinational properties (in syntax and word structure); F = Frequential properties; X = elements of a Basic Code.

Figure 1.¹ Synoptic representation of Global and Selective Copying.

4. Momentary, habitualized and conventionalized copies

Insertional copying acts may be momentary, ephemeral phenomena, corresponding to Weinreich's 'nonce-borrowing' (1953: 11). They begin in individuals, more precisely in the mind of individuals, if we do not take this to exclude intuitive, unconscious copying. Copying grammatical function units and patterns is certainly less conscious than copying content units, which speakers tend to be more aware of. On the other hand, individual speakers who perform an ordinary act of copying normally have some degree of knowledge of the Model Code. Selective grammatical copying presupposes some degree of familiarity with Model Code structures and some ability to analyze them.

Code copies may habitualize, i.e. become used habitually, and thus have more lasting effects, with various degrees of recurrence in the individual. Code copies may also become more or less conventionalized, i.e. have effects on the linguistic behavior of speech communities of varying sizes. Code copying starting as momentary performance phenomena may thus have diachronic effects. The path leading to conventionalizing is a continuum of changes in the sociolinguistic status, of degrees of recurrence in the speech community.

So-called 'integration', which, according to some scholars, leads from structurally less 'integrated' to more 'integrated' copies, whatever this may mean, is in

1. Figure 1 was first presented in my talk "Code copying in historical linguistics: The case of Selective Grammatical Copying", at the 17th International Congress of Linguists in Prague, 2003.

principle a different development, and not an unequivocal or necessary criterion for distinguishing degrees of conventionalization.

As soon as a copy is conventionalized, the degree of the individual speaker's knowledge of the Model Code is irrelevant. Deviations originally perceived as 'interference' may establish themselves as new sets of norms, even replacing their Basic Code equivalents. The processes lead to linguistic change. New systems are created in which conventionalized copies form integral parts. They are now facts of linguistic history and thus objects of historical linguistics. The development may include further diffusion, the code-copying variety becoming the unmarked way of speaking in ever-expanding groups. Copies may, however, also be unsuccessful or only reach a very limited diffusion. They can of course also be subject to deconventionalization and loss.

5. Selective Grammatical Copying

Selective Grammatical Copying means that copies of grammatical markers and patterns of a Model Code are inserted into the morphosyntactic frame of a Basic Code. Semantic, combinational and frequential properties are copied, without accompanying material properties, onto Basic Code elements. Copying of semantic and combinational properties is traditionally referred to as 'grammatical calquing', 'loan semantics', 'loan translation', 'loan syntax', 'structural borrowing', 'grammatical replication', 'loanshift', 'indirect morphosyntactic diffusion', etc.

Selective Grammatical Copying creates new or modified grammatical elements. Semantic copying yields grammatical meanings, combinational copying affects the combinability, e.g. causing extended or narrowed applicability to contexts, and frequential copying leads to increased or decreased occurrence of a given element.

Copies may include grammatical markers such as voice, aspect, mood, tense, case and number markers, articles, pronouns, junctors for word- and clause-combining, or ordering patterns relevant for word-formation, phrase-, clause- and sentence formation, clause-combining, text construction, text subdivision, other morphosyntactic or morphosemantic structures, and patterns of pragmatic organization. Some aspects of Selective Grammatical Copying are dealt with in Johanson (2003, 2005b), etc.

Thus the following situation obtains: Global Grammatical Copying involves copying of material properties (substance). Neither these nor other properties of the model are, however, simply 'transferred' from one code to the other. In the case of Selective Grammatical Copying, the relevant properties are in a similar way just copied and not 'transferred'. Basic Code users employ means that are

available in their own code to create elements that are felt to be equivalent to elements in the Model Code.

The results of Selective Grammatical Copying may vary:

1. a new element may be *added*;
2. the Basic Code equivalent may be *replaced* by the copy;
3. the Basic Code equivalent may be *retained*, while assuming modified functions.

In all these cases, copying leads to morphosyntactic convergence of the interacting codes, but never to identity of models and copies. It must be emphasized here again that all cases involve adaptation to the grammatical system of the Basic Code. It is the task of the linguist to describe similarities and differences as accurately as possible.

What operational procedures make Selective Grammatical Copying possible? Users of a Basic Code become aware of a certain grammatical element in a Model Code. On the basis of some conceptual similarity, an equivalence relation is established, consciously or intuitively, between the given Model Code element and a suitable Target of Copying in the Basic Code. The Target of Copying is a native lexical or grammatical element that seems to match the grammatical element of the Model Code and onto which the relevant properties of that element can be copied most naturally. The Target of Copying is reanalyzed and remodeled, e.g. assigned the relevant properties.

Properties of a dual marker in a Model Code may for example be copied onto a numeral *two* as a Target of Copying to create a dual marker in a Basic Code:

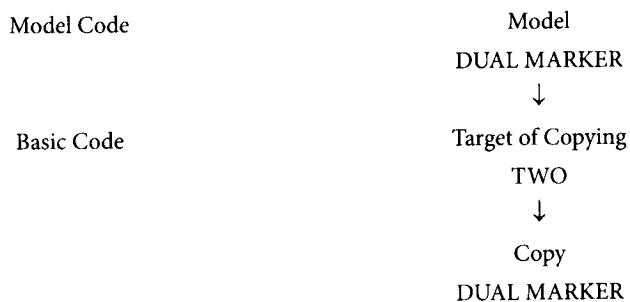


Figure 2. Properties of a dual marker copied onto a numeral 'two'.

This example is not imaginary, but empirically attested. For example, speakers of Tayo, a French-based creole in New Caledonia, have copied properties of dual

markers from the two Melanesian languages Drubéa and Cèmuhi onto the Basic Code unit *-de* ‘two’ (< French *deux*) (Corne 1995).

6. Grammatical copying and stages of grammaticalization

The relations between Selective Grammatical Copying and stages of grammaticalization raise intricate problems and merit special attention. They are discussed in highly stimulating ways in Aikhenvald’s book on language contact in Amazonia (2002), in Aikhenvald (2003), in Aikhenvald & Dixon (2001), and in Heine & Kuteva (2003, 2005).

I refer to the following schematic picture in order to illustrate my own understanding of the relationship between Selective Grammatical Copying and stages of grammaticalization:

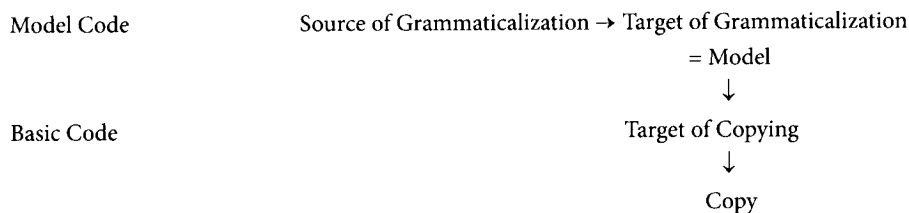


Figure 3. Relationship between Selective Grammatical Copying and degrees of grammaticalization.

An element of the Model Code, the model, is copied at a specific stage of its code-internal development along a specific grammaticalization path. It goes back to a lexical Source of Grammaticalization and is thus a Target of Grammaticalization within the Model Code.

Similarly, each Target of Copying in the Basic Code has its own history and occupies a certain position in its own code-internal development. Each instance of copying is a product of this coincidence. The elements involved represent certain stages of grammaticalization, the results of previous processes reached at the moment of coincidence.

The interpretation of this situation is the only essential point in which I cannot follow Heine & Kuteva (2003, 2005) in their attempts to relate grammaticalization theory to contact-induced language change. These authors (Heine & Kuteva 2005:92) take contact-induced changes to follow the same principles of grammaticalization as changes that do not involve language contact. They contend that speakers of “language R“, the replica language or Basic Code,

replicate a grammaticalization process which they assume to have taken place in “language M”, the Model Code. Basic Code users would thus assume a certain grammaticalization process to have occurred in the Model Code and actually copy this assumed process.

I maintain that diachronic processes are not copiable and that Selective Grammatical Copying is not a process of unidirectional contact-induced grammaticalization.

6.1 Diachronic processes are not copiable

There are certainly cases in which the chosen Target of Copying is similar to the Source of Grammaticalization of the model. For example, the dual marker of the Model Code may have developed from the numeral *two*, and Basic Code users may have chosen their corresponding numeral as the Target of Copying. This establishes an analogous relation, but it does not mean that the Target of Copying has undergone or undergoes the grammaticalization process that has taken place in the Model Code. The act of copying does not imply a repetition of this gradual process from less grammaticalized to more grammaticalized items. It is even irrelevant whether the choice of the Target of Copying is motivated or not by knowledge of the diachronic Source of Grammaticalization of the model, i.e. whether the choice is guided or not by the etymological relation between the model and its Source of Grammaticalization.

It follows from our theoretical concept that diachronic processes are not copiable, even if they happen to be recoverable. The process from the Source of Grammaticalization to the Target of Grammaticalization cannot be copied, and no corresponding process takes place in the Basic Code as a result of the act of copying. This act immediately turns the Target of Copying into a grammatical element. What is copied is just the *result* of a grammaticalization process as assumed for the Model Code element. The claim that diachronic processes may be copied in certain contact situations cannot be empirically verified and must mean something else, i.e. that analogous processes may take place. Needless to say, observations to this effect are highly interesting in their own right and merit our full attention.

6.2 Fresh copies are less advanced

Fresh copies often represent less advanced stages of grammaticalization than their models with respect to semantic, combinational and frequential properties.

Properties of less grammaticalized elements of the Model Code are not likely to be copied onto more grammaticalized Targets of Copying. This would be an odd instance of reversed directionality.

The semantic functions of copies have often not reached the stage of grammaticalization of their models. They have not undergone the stages of grammaticalization that their models have undergone. Their use is often pragmatically determined. They often have lower text frequencies than their originals. Their use is often optional rather than obligatory. They often have a lower degree of combinability, being less generally applicable to contexts. It might sometimes even be difficult to decide whether fresh copies already represent fully grammaticalized categories or not. For example, the use of newly copied aspectual-temporal elements is often contextually restricted and optional. This is also true of Sorbian, Czech and Slovenian definite articles copied from Germanic, or the Basque indefinite article copied from Romance. Heine & Kuteva (2005:101) note: “wherever there is sufficient evidence, it turns out that the replica construction is less grammaticalized than the corresponding model construction”.

If we would take the act of copying itself to imply a grammaticalization process, these phenomena would have to be viewed as backward movements, cases of reversed directionality, violations of the unidirectionality principle that is generally assumed for grammaticalization paths.

6.3 Code-internal development

Copying is a punctual interaction across code borders. The further development of copies is code-internal and gradual. Once a copy is conventionalized, it is subject to the internal processes of the Basic Code and may be dealt with in the same way as non-copied innovations. Selective grammatical copies may be further grammaticalized, acquiring properties typical of advanced stages, developing more general grammatical meanings, being used in wider ranges of contexts, increasing their use and degree of obligatoriness, being decategorialized into clitics and affixes, eroded in the sense of loss of phonetic substance, etc. All this is solely a matter of code-internal development. Copies representing advanced stages of grammaticalization have few chances to develop further, except for taking on highly general functions and being subject to material erosion.

In their further developments, copies often become indistinguishable from native elements. They may survive and develop further, even after their models have vanished. A copy may also become more and more similar to its model, which makes it increasingly difficult to tell which of two similar grammatical

elements in chronologically remote contact situations was the model and which one was the copy.

7. Examples of analyses

In what follows, I will give a few examples of analyses of copying of selective grammatical properties onto various Targets of Copying. To make comparison with other frameworks possible, I deliberately choose well-known instances dealt with in previous literature, particularly in Heine & Kuteva (2005).

7.1 Nongrammatical elements as Targets of Copying

Targets of selective grammatical copying may be nongrammatical words, e.g. nouns, verbs and adverbs, onto which grammatical properties are copied.

Selective properties are often copied onto units that are materially similar to the model, e.g. Dutch *in termen van* on the model of English *in terms of*. These types represent relatively early stages of grammaticalization. Complexes in which the lexical element is still clearly identifiable may later, in the copying language, develop into more advanced grammatical function units, e.g. adpositions of the type 'in the house of' > 'at, beside': French *chez*; cf. Latin *casa* 'house', Swedish *hos*; cf. *hus* 'house'.

A Model Code item may have both a nongrammatical function and a grammatical function. A verb *to have* may have a nongrammatical function and a grammatical function as an auxiliary. A noun meaning *body* may have a nongrammatical function and a grammatical function as a reflexive marker *self*. A numeral *one* may have a nongrammatical function and a grammatical function as an indefinite article. A relational noun such as *front* may have a nongrammatical function and a grammatical function as an element of an adposition *in front of*.

Basic Code users may copy the grammatical function onto a nongrammatical item that corresponds to the Model Code lexeme. The result will exhibit the same kind of polysemy as found in the Model Code. The ambiguity between the nongrammatical function and the grammatical function of the model is mirrored by the copy. For example, speakers of Pipil, an Aztecan language of El Salvador, have copied combinational and semantic properties of Spanish prepositions onto relational nouns to use them as adpositions (Heine, Claudi & Hünemeyer 1991). Speakers of Basque in southwestern France have copied properties of Gascon and

French *un* onto their numeral *bat* 'one', to use it as an indefinite article as well (Haase 1992: 59–61, 71).

Models and targets do not necessarily belong to the same word class. Properties of one word class in the Model Code may be copied onto a target of another word class, e.g. verbal properties onto adverbs. In the English-based creole Sranan, spoken in Suriname, *doro*, a global copy of Dutch *door* 'through', can be used as a verb, 'to put through', 'to go through' (Heine & Kuteva 2005: 242, quoting Adrienne Bruyn).

7.2 Grammatical elements as Targets of Copying

The Target of Copying may also be a more or less grammaticalized element. Its functions are restructured, which may entail modifications, e.g. an extended or a narrowed functional range.

A certain function, e.g. that of a relative clause marker, may be copied onto a native Target of Copying. Let us assume that the model is polysemic, functioning both as a question marker and as a relative clause marker. Basic Code users may choose a Target of Copying that corresponds to the question marker function. The copy thus becomes polysemic in the same way as the model is. This has occurred in many languages. For example, Gagauz, a Turkic language spoken mainly in the southern region of the Republic of Moldova, has copied properties of Slavic interrogatives onto the question marker *ani* 'where' in order to use it as a relative clause marker 'which, who' (Menz 2001). Basque varieties have copied properties of Spanish relative clause markers onto *zein* 'which, who?' in a similar way (Trask 1998: 320). Users of the North Arawak language Tariana have copied properties of Portuguese interrogative pronouns to create relative clause markers (Aikhenvald 2002).

The Rhaeto-Romance language Sursilvan possesses a permissive auxiliary *(la)schar* 'to allow to do'. The properties of a corresponding German model *lassen* 'to let', which also has the causative meaning 'to cause to do', are copied onto the auxiliary, which can then also be used in a causative function (Stimm 1984). Swedish immigrants to the USA have copied properties of English *have* onto the Swedish verb *ha* 'have' to use it as a causative auxiliary as well (Myers-Scotton 2002: 104).

A Model Code marker with comitative and instrumental function may be copied onto a corresponding instrumental marker in a Basic Code, so that the latter can be used in both functions. Karaim *-Ba*, the enclitic form of a postposition meaning 'with', has extended its use as a grammatical case marker due to

copied semantic and combinational properties of the Russian instrumental case (Csató 1998).

On the model of the German polite second person pronoun *Sie* 'you', which is homophonous with (and developed from) the third person pronoun *sie* 'they', the third person plural pronoun of the local Polish dialect of Silesia has extended its use to polite address (Weinreich 1953: 40).

7.3 Grammatical patterns as Targets of Copying

Basic Code users may be able to analyze a grammatical pattern found in a Model Code and to copy its combinational and semantic properties onto a corresponding Target of Copying, an existing construction of the Basic Code.

Speakers of several languages have copied properties of Turkish reduplication patterns onto native elements in order to use them as intensives. They have, for example, analyzed *dümdüz* 'entirely even' as a reduplicated form of the adjective *düz* 'even' and copied the relevant properties onto a corresponding adjectival Target of Copying, e.g. Serbian and Croatian *ravravno* from *ravno* 'even' (Weinreich 1953: 42). (The consonant *m* in *dümdüz* is one of four consonants that may occur in Turkish partial reduplications of this kind.)

With regard to pronominal referencing by means of anaphora, language contact frequently results in over- and undermarking (Johanson 1992: 181–182, 2002a: 16–17). A Model Code may represent a 'pro-drop' type of clause patterns, which makes limited use of anaphora, e.g. subject and object pronouns, for referents recoverable from the cotext and the situational context. Combinational and frequential properties of Model Code patterns that apply more explicit pronominal referencing may be copied onto corresponding elements of a Basic Code. Conversely, properties of Model Code clause patterns of the 'pro-drop' type may be copied onto a Basic Code of a more explicit type. Both kinds of copying lead to the violation of anaphoric conventions.

Certain Anatolian Turkish dialects exhibit overmarking that most likely results from Greek influence. Speakers of Greek in the East Black Sea area seem to have carried over copies of combinational properties of anaphoric clause patterns to their own brand of Turkish (Brendemoen 1993). Turkish children and adolescents growing up in northwestern Europe are prone to an increased use of anaphora, evidently under the influence of the surrounding majority languages.

Copies of this kind may originally be less grammaticalized, and their use in terms of zero anaphora conventions may be generalized through code-internal

development, entailing a change from a 'pro-drop' structure to a 'non-pro-drop' structure, or vice versa.

Combinational copying may also affect constituent ordering patterns. Users of the Basic Code may copy an ordering pattern found in the Model Code onto a selected Target of Copying, an existing structure which is thus redefined. For example, a Model Code pattern of the SVO type *I love you* may be copied onto an equivalent Basic Code pattern of the SOV type *I you love*. This may give rise to variation. The variation may vanish in favor of a new fixed word order, i.e. the old Basic Code pattern may be replaced by SVO, which is then the only pattern. Another result may be that a new pattern is added, while the old pattern is retained, but assigned a modified function, e.g. becoming a pragmatically marked pattern.

8. Frequential copying

Frequential patterns of Model Code elements can be copied onto Basic Code elements, leading to increased or decreased use of the latter. Frequential copying may, in its initial, weak forms, violate pragmatic norms, while not leading to manifest linguistic change.

As noted above, language contact frequently results in over- or undermarking. Frequential copying may thus increase or decrease the use of anaphora (Johanson 1992: 254, 2002a: 110–111). The use of one linguistic option may increase at the expense of another option. This may mean increased use of plural markers in codes with restricted plural marking patterns, or of anaphoric pronouns in 'pro-drop' codes (see 7.3). The use of an element may also decrease due to frequential copying. A two-way system of definite articles may, for example, lose ground in favor of a one-way system. Speakers of Dutch in Australia tend to copy combinational properties of the English definite article *the* onto the Dutch article *de*, gradually giving up the article *het* (Clyne 2003: 22, 31).

Frequential copying is a major factor in supporting constituent ordering patterns. Under the influence of an equivalent ordering pattern in the Model Code, frequential properties are copied onto existing patterns available in the Basic Code. An existing ordering pattern may thus be extended to new contexts and used more frequently. A pre-existing pattern may be overgeneralized, i.e. reinforced by frequential copying, while the frequency of use of an unsupported alternative diminishes accordingly. This reinforcement by analogy gives preference to properties which the contact languages seem to have in common (Johanson 1992: 182–183, 215, 252, etc., 2002a: 18, 61, 108, etc.).

Thus the resulting constituent ordering patterns are not really new; only their frequency and their extended or narrowed contextual occurrence are new. This analysis corresponds to Heine's scenario (2006, this volume) of "word order change without word order change". After his overview and discussion of numerous data in various languages, Heine (2006: 19) notes that he has "not come across a single case where speakers produced an entirely new word order". This conclusion is perfectly in line with my understanding of frequential copying.

A simple example: The Basic Code may have the two alternative constituent order patterns, SOV *I you love* and SVO *I love you*. SVO order may be acceptable, but more marked. The frequency of a Model Code SVO pattern *I love you* is copied onto the equivalent Basic Code SVO pattern *I love you*, i.e. onto the alternative that matches the Model Code order. Due to this frequential copying, the SVO pattern is extended to new contexts and used more frequently. It may develop from a pragmatically marked pattern into a pragmatically unmarked pattern. The alternative SOV pattern *I you love* may eventually be replaced by SVO *I love you*, which is then the only pattern available. Alternatively, it may be retained, while assigned modified functions. Gagauz provides a good example of frequential copying affecting the use of an existing SVO order in the sense of increased frequency relative to a normal SOV order (Menz 1999:40–41, 2006: 141).

Heine (2006: 20) notes that the word order changes dealt with by him concern processes of grammaticalization "that could in principle have happened as well *internally*, that is, without language contact – in other words, it is not possible to 'prove' that contact was a contributing factor". I have claimed that a 'natural' or 'universal' tendency (e.g. towards analytic constructions as against synthetic constructions) can be more or less reinforced by frequential copying. A certain natural structure, which is already latently present in the Basic Code, can be strengthened through contact with a Model Code that possesses an equivalent structure. The introduction of the structure in the Basic Code is facilitated or accelerated through frequential copying. As I have suggested, we must thus supplement the simple question '... copying or independent tendency?' by the further alternative '... or a natural tendency reinforced by the contact language?' (Johanson 1992: 278–279, 2002a: 142).

9. Remodeling the Basic Code frame

With increasingly more conventionalized grammatical copies, the Basic Code frame may change considerably.

Changes of the Basic Code frame, into which copies are inserted, are produced by global copies of grammatical markers, selective copies of grammatical markers, and selective copies of combinational patterns. Successive copying processes of different kinds promote each other, and may lead to 'snowball effects' with respect to the remodeling of the Basic Code frame. Copying of constructional patterns goes hand in hand with progressive selective copying of grammatical markers. Older copies prepare the ground for new copies. At each stage of development, the Basic Code frame must be described anew. Every given new norm is deviated from by new 'marked' copying. All new systems offer new frames for further insertion and conventionalization. On frame-changing developments, see in particular Johanson (1999a).

Combinational Copying creates new equivalence positions for further copying of grammatical markers. On the other hand, copied markers trigger copying of combinational properties, e.g. of new constructional patterns in which the markers are contained. The use of a copied grammatical marker may be tied to a certain position in a pattern. For example, Tariana of northwestern Brazil has copied Portuguese subordination markers, which has triggered the copying of a Portuguese combinational pattern, according to which a complement clause follows the main clause predicate instead of preceding it (Aikhenvald 2002: 182).

In high-copying codes, complex and combined processes may essentially reshape the morphosyntactic frame, adding new typological properties to it. The codes can acquire seemingly disparate properties. It is even "perfectly possible for a language to copy structures that might appear to be 'typologically inconsistent' with the rest of its structure" (Comrie 2002: xi). A precondition for this is that the new properties are not imported or transferred foreign elements, but just copies adapted to Basic Code structures.

Gradual processes extending over centuries may involve multiple layers and complex combinations of copying, conventionalization and subsequent code-internal grammaticalization. Established copies which are considered part of the 'inherited' inventory may be the final result of long series of changes, and they cannot easily be traced back to the copying act.

Long-lasting intense contacts between one specific Basic Code and one specific Model Code – with high, perhaps increasing, degrees of bilingualism among the Basic Code users – lead to increased isomorphism between the codes, convergent developments irrespective of their genealogical affiliations. Structural adaptation of the copies to the Basic Code, on the other hand, reduces the degree of isomorphism. Convergence means that the codes become more similar to each other. If the convergence is due to bilateral influence, the codes move toward each other, acquiring more and more common characteristics. Convergence is, however, mostly due to unilateral influence, a one-sided inclination, with one code

approaching the other and becoming more similar to it (cf. Clyne 2003:79; Johanson 2005a:4).

The opposite development is divergence. Two codes may bilaterally draw apart from a common norm, acquiring dissimilar properties. Codes descended from a common ancestor may evolve into different forms when used under different conditions. The divergence may be caused unilaterally, with one of the codes deviating and branching off from a common norm.

Selective Grammatical Copying may create highly isomorphic structures that make codes more compatible and intertranslatable. To reduce the planning effort in forming sentences in the two codes, groups of advanced bilinguals often develop strategies that indicate common mental procedures for arranging the information (Matras 2006). Gradual isomorphic processes are typical of intense communication areas, in which codes develop shared constructional patterns and morphosyntactic markers regardless of genealogical boundaries. Even codes that differ strongly from each other in their vocabulary may become increasingly isomorphic.

Many types of Selective Grammatical Copying serve isomorphism by creating convenient translation equivalents in the interacting codes. This may mean combinational and/or semantic reorganization of grammatical devices in certain subsystems, e.g. in those of case markers and adpositions. Other types of Selective Grammatical Copying entail a more radical restructuring of syntactic constructions on Model Code lines. These larger structures, e.g. constituent ordering patterns, tend to be copied in varieties spoken by advanced bilinguals, i.e. in cases where the codes are already morphosyntactically similar and include copies of the less radical type. The two kinds of copies, which correspond to Ross's (2005) dichotomy "grammatical calquing" vs. "metatypy", differ in degree, but they do not seem to be distinct contact phenomena with precise demarcation lines. While "grammatical calquing" was earlier included in "metatypy" (Ross 2001), Ross (2005) now conceives of the two types as distinct kinds of contact phenomena.

Extensive copying processes may lead codes to converge strongly with others, including unrelated codes, and also to diverge strongly from their genealogical heritage. On the other hand, codes do not completely abandon their heritage and do not fuse with unrelated contact codes. No high-copying code seems to have turned into the Model Code it has copied extensively from (cf. Johanson 2002c).

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