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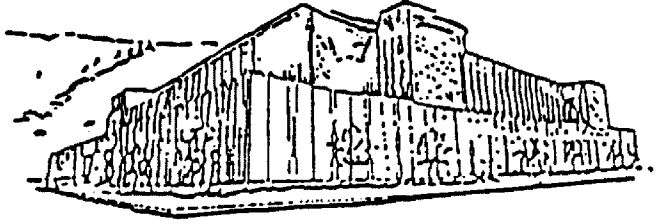

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Grammaticalization, Lexicalization and Russian Amalgams

By

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M.S., Moscow State University, Russia, 1983

Presented in partial fulfillment of the

requirement for the degree of

Master of Arts

The University of Montana

2002

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Kalachev, Natalia I., M.A., May 2002 Linguistics Department

Grammaticalization, Lexicalization and Russian Amalgams

Director: Anthony Mattina, Ph.D.

This theasis is a review of grammaticalization and lexicalization. It also considers such formations as amalgams, specifically Russian amalgams, to place them in the methodological framework of grammaticalization and lexicalization.

Grammaticalization is a well-known phenomenon, whereby lexical items and constructions come, in certain linguistic contexts, to serve grammatical functions, and, once grammaticalized, continue to develop new functions. Grammaticalization occurs on a 'cline', that involves an evolution from content item to grammatical word to clitic to inflectional affix. Although grammaticalization is primarily understood as the diachronic process through which lexical words lose their independent status, much recent scholarship has focused as well on the synchronic aspect of grammaticalization.

Chapter 1 reviews different definitions of grammaticalization given in various scientific articles and some major issues raised in these articles.

Chapter 2 reviews lexicalization, defined as the process by which complex lexemes tend to become single units with a specific content, through frequent use. Lexicalization is a phenomenon almost opposite to grammaticalization. This is a gradual process that can only be examined diachronically.

Chapter 3 reviews various claims about grammaticalization theory and the hypothesis of unidirectionality

Chapter 4 considers word-formation in Russian, restricted to the fusion of words that belong to closed classes such as conjunctions, prepositions, and other discourse functors. The chapter focuses on amalgams that consist of (or include) members of such closed classes, and includes four preliminary lists of Russian amalgams.

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Chapter 1

Introduction

The thesis includes, along with discussion of Russian amalgams, the review and my own analysis of literature on grammaticalization and lexicalization, as well as the critiques the contemporary theories of these subjects.

The term *grammaticalization* was first introduced by the French linguist Antoine Meillet. A few decades later Kurylowicz defined *grammaticalization* as consisting in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status, e.g. from a derivative formant to an inflectional one:

Free lexical item > Clitic > Grammatical item

Full word > Grammatical word > Clitic > Affix

Some linguists study the semantic-pragmatic aspects involved in the early stages of grammaticalization: *less abstract* > *more abstract*, or *more referential* > *less referential*. The same cline can be represented as a structural type cline: *discourse* > *syntax* > *morphology* > *morphophonetics* > *zero*.

Many linguists approach language from one of two perspectives: that of its structure at a single point in time ("synchronic") and that of change between two or more points in time (historical or "diachronic"). If we consider a language from a synchronic point of view, it is a system of grammatical units, rules, and lexical items (together with

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their meanings), that is, its grammar. It is stable and homogeneous. On the other hand when linguists consider a language from a diachronic viewpoint, they understand it as the set of changes linking a synchronic state of a language to successive states of the same language. So, from the diachronic point of view grammaticalization is usually thought of as a subset of linguistic changes whereby lexical material in highly constrained pragmatic and morphosyntactic contexts become grammatical, and grammatical material becomes more grammatical.

Grammaticalization is primarily understood as the diachronic process through which lexical words lose their independent status: their meanings become generalized until such forms take on grammatical meanings and are subject to phonological, morphological and syntactic change. Much recent scholarship has focused as well on the synchronic aspects of grammaticalization. Synchronic studies place emphasis on the current state of grammaticalization process showing uneven rates of change and different paths lexical items may have taken.

A simple example that illustrates the process is the development of *be going to* into a marker of prospective temporality in English *gonna*. Originally it was the progressive form of the main verb *go* together with a subordinator. It introduced a purposive clause. Later in specific contexts *be going to* started to function as an auxiliary.

The development of auxiliaries from complement-taking verbs (as in the case of the English modals) is an example of grammaticalization. Similarly, the development of adpositions from serial verbs or relational nouns, or the development of tense markers from already-grammaticalized aspectual constructions, can be viewed as grammaticalization since the same general process is involved in these developments.

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In current work the term *"grammaticalization"* is used in a broader sense. It also refers to shifts in the function of syntactic constructions. Examples are shifts from paratactic to hypotactic structure (e.g. relative constructions arising from conjunction), or the development of English *that*-complements from a bisentential structure, as for example,

I saw that. He came. > I saw that he came.

In more recent years the nature and significance of grammaticalization have been widely discussed by linguists. The term now refers to that part of the study of language that focuses on how grammatical forms and constructions arise, how they are used, and how they shape the language. The framework of grammaticalization is concerned with the question of whether boundaries between categories are discrete, and with the interdependence of structure and use, of the fixed and the less fixed in language. It therefore highlights the tension between the relatively unconstrained lexical structure and the more constrained syntactic, morphosyntactic, and morphological structure. The term *"grammaticalization"* also refers to the actual phenomena of language that the framework of grammaticalization seeks to address, most especially the processes whereby items become more grammatical through time"

It is interesting to mention that various studies show that not all lexical items or classes of lexical items are used to code grammatical categories. For example, words like *wallpaper* or *digress* would be unlikely to become grammaticalized directly without intervening semantic changes. This is because they are not used in restricted syntactic contexts, as they are highly specific semantically. Cross-linguistic studies show

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that there is a limited set of lexical fields for any given grammatical domain. Within these fields only a limited set of lexical items is likely to undergo grammaticalization. Usually these are items with general meaning. Examples of such changes are case markers (prepositions and postpositions), which in most cases derive from verbs of motion, giving or taking. Other examples are temporals derived from spatial terms.

"Another unsolved puzzle", as it is called in the literature, is the differential speed with which this development takes place in different functional domains and what motivates it. Some observations show that some kinds of grammaticalization proceed faster than others. Examples of such cases are new categories of tense and aspect that have emerged within a relatively short period. More conservative developments are the formation of noun class systems or verbal derivations. Some morphological paradigms can be found today that already have existed in a similar form and function for millennia.

The theory of grammaticalization claims that there is a unidirectional process by which lexemes become phonologically and semantically reduced to clitics and, eventually to affixes, so all grammatical morphemes derive from longer lexical items. The evidence shows though, that as language develops words that are grammatical functors may group together, become unanalyzable synchronically as separate morphs, take on some lexical content and function, and form a lexeme. This opposing phenomenon is called *"lexicalization"* and is often ignored by many linguists as unimportant. The multiple-morpheme lexicalization is a subject of my research in Chapter 5. In Chapter 3 I present a survey of different definitions of lexicalization in the literature and different outlooks on this phenomenon and its place in language change. I

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also review how some linguists address the topic of relationships between grammaticalization and lexicalization.

The concept of *"lexicalization"* as a part of the discipline of word-formation appeared only in the 1980s.

"Lexicalization" is defined as the process by which complex lexemes tend to become a single unit, with a specific content, through frequent use. In this process they loose their nature as a combination, to a greater or lesser extent. This is a gradual process, which can only be explained diachronically, and which results in degrees of "lexicalization", a synchronic state of lexemes:

Syntactic units > lexical words

Examples of lexicalization are: *callboy* and *call girl* that may be interpreted as 'boy who calls (actors onto the stage)'and 'girl who is called (by men on the phone)'. Both these interpretations can be considered as examples of lexicalization.

Lexicalization results in various degrees or stages (states of lexical items) in synchrony. For example, at one end of the scale, items only show small phonological and semantic changes, as in *postman, blackboard,* and *sleepwalker.* At the other end, the combination of several aspects may produce considerable phonological, or semantic deviation (idiomaticity) as in *Wednesday,* or *holiday.*

There are different *internal* processes (mechanisms) of renovating, replacing and introducing words back into vocabulary (word-building).

Demorphologization is the process when a morpheme loses its grammatical-semantic contribution to a word but retains some remnant of its original

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form, and thus becomes an indistinguishable part of a word's phonological construction. These are segments that have no identifiable meaning but are purely phonological. An example of this change is (Old English adjective *seld-* 'rare, strange' + the Old English dative plural suffix *–um*) > English *seldom.* The suffix now is simply a part of the segmental constitution of the word *seldom*, since there is no Modern English suffix *-om* in adverbials or anywhere else. Another example is Modern English *alone* that comes from Middle English *al one* (*al* = *all*). There is now no synchronic relationship between the two words, so that the initial *al-* is purely phonological.

Degrammaticalization and *lexicalization* are two main types of counterdirectional changes that do not result in a shift from left to right on the grammatical cline. It is more adequate to keep the two apart, and distinguish degrammaticalization from both grammaticalization and lexicalization of grammatical items.

Examples of lexicalization_from grammatical item to lexical item (i.e. members of a major lexical category) are very common:

- the shift from adverb to noun (*ups* and *downs*);
- adverb to verb (*up the price*),
- conjunction to noun (*ifs* and *buts*),
- pronoun to noun (*Is it a he or a she?*).
- Even suffixes may be lexicalized, e.g. *-ism* (as in *behaviourism and other isms*), or *teens 'age between thirteen and nineteen'*. Affixes jump directly to the level of lexicality instead of gradually shifting from right to left, passing through intermeditte stages.

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In view of these examples we can suggest that lexicalization is not simply grammaticalization reversed. Although lexicalization may be counterdirectional when grammatical items are involved, it is essentially non-directional.

Although *degrammaticalization* is a type of grammatical change which results in a shift from right to left on the cline of grammaticality it also is not the mirror image of grammaticalization in the sense that it cannot be the complete reverse of a grammaticalization cline. This would be logically impossible, since grammaticalization frequently involves semantic and phonological reduction, and while the grammaticalization into a reduced form may be predictable from the original full form, a full form is evidently not predictable from a reduced form.

Degrammaticalization should be kept separate from lexicalization. It is obvious that degrammaticalization changes differ from grammaticalization changes since they result in a less grammatical status. On the other hand, they also differ from lexicalization changes because they are gradual, whereas lexicalization may result in a straight jump to the leftmost end of the cline.

Compare grammaticalization and lexicalization:

The *grammaticalization* process goes from the lexicon to the syntax, and affects lexical items (it is a lexicogenetic process). From the semantic point of view, grammaticalization is a process of metaphorical abstraction.

Lexicalization goes from syntax to the lexicon. It affects syntactically-determined words and phrases or sentences (it is a syntactogenetic process), and abides by the Metonymical Concretion Hierarchy.

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With regard to the relationships between grammaticalization and lexicalization we can argue that the two processes are complementary language changes or two complementary aspects of essentially one single type of evolutionary dynamics for grammatical and lexical items,. Language evolution is bidirectional and comprises both grammaticalization and lexicalization. In language change there is a constant movement from the lexicon to the syntax and the other way around. We do not observe languages gradually losing their lexicon and enriching their morphology and syntax. Nor do we observe languages gradually increasing their lexicon and losing their morphology.

In recent years interest in grammaticalization phenomena has increased, and so has the debate about the nature and limits of grammaticalization. A number of papers assess fundamental aspects of grammaticalization, and its connection with other processes in language change, for example lexicalization. As mentioned above, many authors ignore this opposing phenomenon of lexicalization as rare, unproductive and thus unimportant. In the central section of Chapter 4 I present different outlooks on what grammaticalization is together with the major related questions addressed by each author. Then I review the set of claims that has been made in the literature concerning the phenomena central to grammaticalization. I outline major questions raised as follows:

-Is the 'unidirectionality claim', the suggestion that, in grammaticalization, linguistic elements always become more grammatical, never less grammatical, a tenable claim?

-Is grammaticalization unidirectional and can it at least be countered (undone) in some way?

-How do "degrammaticalization" and "lexicalization" relate to the

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unidirectionality claim?

-What are the mechanisms that underlie grammaticalization and what is the role of reanalysis, metaphor, and analogy?

Many linguists who discuss the future of grammaticalization theory think that it is seriously flawed and misleading, since existing mechanisms already suffice to account for this phenomenon. Even the term 'grammaticalization' experiences a considerable extension into various directions. Some claim that grammaticalization has no independent status of its own and that it involves other kinds of changes, like sound change, semantic change, and reanalysis, which are not limited to cases involving grammaticalization.

Unidirectionality, the claim that grammaticalization is irreversible, and "grammatical elements do not turn back in the direction of the lexicon" is one of the basic principles of grammaticalization. It is striking though that some treat it as a hypothesis (an empirical property) and others include it into definitions of grammaticalization and take it for granted (as an axiom, a defining property). Although many linguists think that in its strong form the unidirectionality claim is false, not much can be found on lexicalization, especially lexicalization in closed classes. That is a topic of my research in Chapter 5.

In Chapter 5 I consider differences between several processes of word formation, like compounding, lexicalization, amalgamations.

Compounds are distinguished from phrases conceptually, by being written solid or hyphenated, or by their stress pattern. All three criteria need to be taken into account. An example of compound is *blackbird.*

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Compounding should not be confused with *lexicalization*, which differs from compounding because the constituents of lexicalized forms are primarily grammatical functors (prepositions, conjunctions, demonstratives, pronouns, complementizers) rather than content words. The reanalysis of acronyms into full words is one example of such change.

Amalgams are forms that formerly were composed of more than one free-standing word. These words occurred together in some phrase, and as a result of the change get bound together in a single word, for example *nevertheless* and *already*. Other examples from English are (*almost <all most*, *alone <all one*, *altogether < all together*, *always <all ways*, *however< how ever*, *without < with out*, *wannabe(e)* of slang origin<*want to be).*

The motivation behind and the effect of these changes, is though not in so much adding new meaning where none was before, but in increasing 'bulk', the sheer physical length, of the word.

Interesting and also ironic examples of this tendency in language change are the words *grammaticalization* and *lexicalization* themselves. In fact, if you call a formation of grammatical category (morpheme) a gram, then the process could be referred to as simply *grammation*. The same can be said about *lex*, and *lexicalization* - *lexation* would do. These and other examples show that speakers have a tendency to add 'bulk' to words at the morphological level, and illustrate two different forces in language change, one that wants to conform, and the opposite one.

Amalgams and compounds are found in all word classes, particularly in nouns and adjectives. Although extensive research has been done on compounding in

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open classes, not much can be found in the scientific literature on the fusion of words that belong to closed classes such as conjunctions, prepositions, or sentence (discourse) connectors. Some of these forms function as discourse markers. *Discourse markers* form a category the prime function of which is to mark relations between sequentially dependent units of discourse. These items are all primarily pragmatic, which may account for why they have been largely ignored until the last few years.

In Chapter 5 I provide examples of *Russian amalgams* that consist of morphemes that belong to closed classes, and function as coordinators and subordinators (*Discourse Connectors*). Some examples from this class are:

chto-bi 'in order to, so as, that' (what bi(particle)) - subordinator. This amalgam introduces a clause that expresses a wish, request, demand, command, or necessity:

Ona skazal-a jemu vsjo chto-bi zastav-it' jego uj-t'i.

'She told him everything in order to make him leave.'

she say(past fem. sing.) he(dat. case) everything what bi(particle) make

inf. he(acc. case) leave inf.

Ja khochu chtobi on prishol.

'I want him to come'

I want(pres. 1st sing.) what *bi*(particle) he come(perf. masc.)

po-to-mu chto 'because' (at that dat. case what) - subordinator.

Mi speshil'-i po-to-mu chto bilo pozdno.

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'We were in a hurry because it was late.'

we hurry(past plur.) at that dat. case what be(past sing. neutral) late

bud-to bi 'as if, as though' (be that *bi*(particle)) - subordinator. Clauses introduced by *budto bi* report some supposed or doubtful fact or phenomenon, and modify verbs of speech, thought, or physical perception:

On ulibajetcja budto (bi) rebjonok.

'He smiles as if he is a child.'

he smile(pres. 3rd sing.) be that *bi*(particle) child

In Chapter 5 I give many examples of discourse connectors in context, with notes that attempt to describe their import, and when appropriate, their multiple functions. The other sets of amalgams are simple lists, data that remain to be studied in detail.

I also give examples of complex forms that function as prepositions, pronouns-amalgams of question words, quantifiers, indefinites, and a list of forms commonly labeled *adverbs*. Even though adverbs form an open class, I give these examples because each of them consists of at least one morpheme that belongs to a closed class – and these examples do show the kinds of morphemes that are likely to form amalgams.

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Chapter 2

Grammaticalization

Although grammaticalization is a well-known process, different definitions of what it is can be found. The term *grammaticalization* was first introduced by the French linguist Antoine Meillet, and the process characterized as "the attribution of grammatical character to an erstwhile autonomous word" (Meillet 1912).

A few decades later Kurylowicz gave this useful preliminary definition:"Grammaticalization consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status, e.g. from a derivative formant to an inflectional one" (Kurylowicz 1965, p.69).

In more recent years the nature and significance of grammaticalization have been widely discussed by linguists. Hopper and Traugott write: "'Grammaticalization' as a term has two meanings. As a term referring to a framework within which to account for language phenomena, it refers to that part of the study of language that focuses on how grammatical forms and constructions arise, how they are used, and how they shape the language. The framework of grammaticalization is concerned with the question of whether boundaries between categories are discrete, and with the interdependence of structure and use, of the fixed and the less fixed in language. It therefore highlights the tension between the relatively unconstrained lexical structure and the more constrained syntactic, morphosyntactic, and morphological structure. It provides the conceptual context for a principled account of the relative indeterminacy in

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language and of the basic non-discreteness of categories. The term "grammaticalization" also refers to the actual phenomena of language that the framework of grammaticalization seeks to address, most especially the processes whereby items become more grammatical through time" (Hopper and Traugott 1993, pp.1-2). Grammaticalization is primarily understood as the diachronic process through which lexical words lose their independent status: their meanings become generalized until such forms take on grammatical meanings and are subject to phonological, morphological and syntactic change. Much recent scholarship has focused as well on the synchronic aspects of grammaticalization. Synchronic studies place emphasis on the current state of grammaticalization process showing uneven rates of change and different paths lexical items may have taken.

The development of auxiliaries from complement-taking verbs (as in the case of the English modals) is an example of grammaticalization. Similarly, the development of adpositions from serial verbs or relational nouns, or the development of tense markers from already-grammaticalized aspectual constructions, can be viewed as grammaticalization since the same general process is involved in these developments. In current work (DeLancey 1993) the term "grammaticalization" is used in a broader sense. It also refers to shifts in the function of syntactic constructions. Examples are shifts from paratactic to hypotactic structure (e.g. relative constructions arising from conjunction), or the development of English that-complements from a bisentential structure, as for example,

I saw that. He came. > I saw that he came.

Traugott and Konig (1991, p.189) use "grammaticalization" to refer primarily to "the dynamic, unidirectional historical process whereby lexical items in the

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course of time acquire a new status as grammatical, morpho-syntactic forms, and in the process come to code relations that either were not coded before or were coded differently." Here the authors claim that "the study of grammaticalization challenges the concept of a sharp divide between *langue* and *parole*, and focuses on the interaction of the two, and on the concept of "a continuum of bondedness from independent units occurring in syntactically relatively free constructions at one end of the continuum to less dependent units such as clitics, connectives, particles, or auxiliaries, to fused agglutinative constructions, inflections and finally to zero" (see also Bybee 1985, p.11-12; Lehmann 1985, p.304).

Some linguists have studied the semantic-pragmatic aspects involved in the early stages of grammaticalization. Much research has been done on the development of lexical items into clitics, particles, auxiliaries, connectives, and this work has focused on very general kinds of the inferencing involved.

Traugott (1982) suggested that at the early stage of grammaticalization the main path of change is: *Propositional (>textual)> expressive*. Later she changed this formulation, describing this shift as the shift "from meanings grounded in more or less objectively identifiable extralinguistic situations to meanings grounded in text-making (for example connectives, anaphoric markers, etc.), to meanings grounded in the speaker's attitude to or belief about what is said" (Traugott 1989; 1990). She has shown that it is a part of the larger general mechanism of semantic change. In a later paper Traugott and Konig (1991) show that different kinds of inferencing are involved. What particular kind of inferencing is at work depends on the kind of grammatical function that is evolving. Although it is widely accepted that metaphoric inferencing is involved in the

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development of markers of tense, aspect and case (cf. Bybee and Pagliuca 1985; Sweetser, 1988; Heine et al. 1991b), Traugott and Konig show that, by contrast, a different kind of inferencing is dominant in the development of connectives, specifically causals such as *since*, concessives such as *while*, and preference markers such as *rather (than)*. This kind of inferencing is a strengthening of informativeness as a conversational implicature becomes conventionalized. Traugott and Konig (1991) suggest that metaphor and strengthening of informativeness can be considered as complementary kinds of pragmatic processes, not inconsistent with each other.

One of the well-known processes of language development is semantic weakening, also known as bleaching. There has been an assumption since Meillet (1948 [1912]) that grammaticalization involves a process of semantic weakening. Traugott and Konig think that this assumption has made it difficult in the past to think about the semantics-pragmatics of grammaticalization. Thus Heine and Reh define grammaticalization as: "an evolution whereby linguistic units lose in semantic complexity, pragmatic significance, syntactic freedom, and phonetic substance, respectively" (Heine and Reh 1984, p.15), and Lehmann views grammaticalization as a process whereby signs lose their integrity (Lehmann 1985, p.307). Traugott and Konig (1991) argue that although bleaching can occur in the process of grammaticalization, it most clearly can be observed only in the later stages of this development, as shown by examples like the development of the main verb *do* into a dummy auxiliary in Standard English, or the development of third person pronouns into agreement markers.

Traugott and Konig argue that to understand better the semantic-pragmatic processes in the early stages of diachronic grammaticalization bleaching and

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grammaticalization "must be uncoupled". They agree with Sweetser who argues that "in cases of grammaticalization, where image-schematic metaphoric transfer occurs, there is less elaboration of the source meanings than in lexical change, but the grammatical meaning is added" (Sweetser 1988), and conclude that "bleaching" is an inappropriate concept in this case. As Sweetser says referring to examples such as the development of future *go*, "we lose the sense of physical motion (together with all its likely background inferences). We gain, however, a new meaning of future prediction or intention together with its likely background inferences. We thus cannot be said to have merely 'lost' meaning; we have, rather, exchanged the embedding of this image-schema in a concrete, spatial domain of meaning for its embedding in a more abstract and possibly more subjective domain" (Sweetser 1988, p.392).

It is important to mention here two basic principles: informativeness and economy.

Traugott and Konig (1991) argue that the expression of speaker involvement is strengthened in the process of grammaticalization. They consider an example in which a principle of informativeness or relevance motivates the development. This is a fundamental principle in language development, that states: Be as informative as possible, given the needs of the situation (cf. Atlas and Levinson, 1981). Traugott and Konig write that from a historical perspective, "the principle of informativeness and relevance presumably drives speakers to attempt to be more and more specific through grammatical coding, and most especially to invite hearers to select the most informative interpretation. It does not, however, require a teleological movement to one-meaning-one-form that an unbounded principle of expressiveness would require" (Traugott and

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Konig 1991, p.192). They consider the development of the phrase *pa hwde pe* 'at the time that' into the temporal connective *while.* In this development, they say, "the textual meaning is strengthened and pragmatic functions pertaining to metalinguistic text-building are added. Later temporal *while* developed into the concessive *while* in the sense 'although', which construes a world that has no reference in the described situation, but only in the speaker's world of belief about coherence, especially about correlations between situations or eventualities. At this stage the pragmatics of the speaker's belief-state is strengthened" (Traugott and Konig 1991, p.191).

Another fundamental principle, the principle of economy, is at work here. This principle states that there is "a trade-off between speakers' tendencies to say no more than they must given assumptions about hearers' willingness and ability to be cooperative, and hearers' tendencies to select the most informative among possible competing interpretations" (Traugott and Konig 1991, p.191).

Traugott and Konig refer to another interpretation of the same principle, which was given by Lehmann (Lehmann 1985, p.315): "every speaker wants to give the fullest expression to what he means," but puts bounds on it. They say that if Lehmann's principle were unbounded, then each meaning would be expressed with a different form. But it is not so, since we know that one form may mean several things (for example, *while*, *since* and *rather* (*than*)). That is why the principle of informativeness or relevance requires that the "contribution is as informative as required, and presupposes that more will be read in" (cf. Levinson 1983, p.146-147).

Sperber and Wilson underline the importance of these two basic principles in language development by saying that "human cognitive processes ... are

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geared to achieving the greatest possible cognitive effect for the smallest amount of processing effect... [T]o communicate is to imply that the information communicated is relevant... the principle of relevance is enough on its own to account for the interaction of linguistic meaning and contextual factors in utterance interpretation" (Sperber and Wilson, 1986, p.1).

Traugott describes grammaticalization as "the linguistic process whereby grammatical categories such as case or tense/aspect are organized and coded" (Traugott 1994, p.1481). She describes typical examples of grammaticalization as involving lexical items, constructions, or morphemes. When those are used in certain highly specific environment, they may come to code an abstract grammatical category. Therefore grammaticalization reflects the relationship between relatively unconstrained lexical expression and more constrained morphosyntactic coding. The mechanism involved in this process is local reanalysis.

Hopper and Traugott (1993, p.19) describe Humboldt's ideas about the evolutionary development of human speech. Humboldt (1825) divides this process into four stages.

At the first stage, only things are denoted, relationships of concrete objects were not made explicit in utterances but had to be inferred by the listener. Traugott designates this stage as the "pragmatic" stage. Eventually some orders in which the objects are presented become habitual. A second stage fixes word order, and Traugott calls it the "syntactic" stage. At this stage, some words start to waver between concrete and formal (i.e. structural or grammatical) meanings, and some of these words function in more relational ways. In the third stage, which can be called a stage of "cliticization",

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these functional words become "loosely affixed to the material words". Here "agglutinative" pairs arise, which are dyads consisting of a material word and a relational word. The next, fourth stage is characterized by the fusion of these agglutinative pairs into synthetic, single word complexes. Now a stem and (inflectional) affixes contain material and grammatical meanings at the same time. This is the "morphological" stage, where some of the function words continue to serve only as formal indicators of grammatical relationships. The functional life of words is reflected in their forms and meanings. In time their meanings become lost and some sounds are worn down.

The German neogrammarian Gabelentz (1891) had suggested that grammaticalization was "a result of two competing tendencies, one tendency toward ease of articulation, the other toward distinctness". In usage pronunciations become more relaxed, bringing about sound changes, which wear down words. Distinctions become blurred, and new forms appear and take over the approximate function of the old ones. He gives the example of a form of the Latin future tense of a verb *video 'I see,' videbo.* It was formed with the suffix *'bhwo,* first person singular form of the verb *'to be'* used as an auxiliary, which later developed into *-bo.* So, a construction that consisted of a main verb and an auxiliary verb *(vide +bhwj),* an old periphrastic construction, was collapsed into a single inflectional form. In time this form was also replaced by new periphrastic forms such as *videre habeo 'I have to see.'* Meillet (1912) labelled this process as a "renewal" ("renouvellement").

Gabelentz developed one more important notion. He considered grammaticalization to be not a linear process, but rather a cyclical one, and allowed that even the idea of a cyclical process is an oversimplification. He went on to consider a

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spiral, in which "changes did not exactly replicate themselves but paralleled earlier changes in an approximate manner." Referring to Humboldt's generation synthetic (inflectional) languages (Hopper and Traugott 1994, p.20) as the classical Indo-European languages that represented an evolutionary endpoint, Gabelentz considered the process of recreation of grammatical forms as a recurrent process. He added that the conditions for the cycle were always present in languages.

Hopper and Traugott point out that many linguists approach language from one of two perspectives: that of its structure at a single point in time ("synchronic") and that of change between two or more points in time (historical or "diachronic"). If we consider a language from a synchronic point of view, it is a system of grammatical units, rules, and lexical items (together with their meanings), that is, its grammar. It is stable and homogeneous. On the other hand when linguists consider a language from a diachronic viewpoint, they understand it as the set of changes linking a synchronic state of a language to successive states of the same language. So, from the diachronic point of view "grammaticalization is usually thought of as a subset of linguistic changes whereby lexical material in highly constrained pragmatic and morphosyntactic contexts become grammatical, and grammatical material becomes more grammatical" (Traugott 1994, p.1481).

In connection with my research it is interesting to mention that various studies show that not all lexical items or classes of lexical items are used to code grammatical categories. Traugott (1994, p.1481) proposes that words like *wallpaper* or *digress* would be unlikely to become grammaticalized directly without intervening semantic changes. This is because they are not used in restricted syntactic contexts, as

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they are highly specific semantically. Cross-linguistic studies show that there is a limited set of lexical fields for any given grammatical domain. Within these fields only a limited set of lexical items is likely to undergo grammaticalization. Usually these are items with general hypernymic meaning. She considers examples of case markers (prepositions and postpositions), which in most cases derive from somatic terms or verbs of motion, giving or taking. Other types she mentions are temporals derived from spatial terms, middles from reflexives, articles and certain grammatical gender markers from demonstratives (for other examples see Greenberg et al. 1978; Givon 1979: ch. 9; Lehmann 1995[1982]; Traugott and Heine 1991).

Traugott (1994) underlines that the paths of change are highly restricted, and "evidence minimal step-by-step developments, not large leaps across semantic or pragmatic domains". The reason these restrictions apply come from cognitive constraints (Langacker 1977), communicative strategies (Slobin 1985), or the competing motivations of iconicity, economy of expression, and arbitrary grammatical structure (Haiman 1983; Du Bois 1985).

One more interesting aspect of grammaticalization is the differential speed with which this development takes place in different functional domains and what motivates it. Some observations show that some kinds of grammaticalization proceed faster than others. For Traugott this is "another unsolved puzzle" (Traugott 1994, p.1485). Examples of such cases are new categories of tense and aspect that have emerged within a relatively short period. Examples taken from some African languages show that in some cases a new morphology evolving along the same grammaticalization pattern is emerging and competing with the old one. More conservative developments are

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the formation of noun class systems or verbal derivations. Some morphological paradigms can be found today that already have existed in a similar form and function for millennia.

It is also worth mentioning that until recently the study of grammaticalization has been concerned with the development of languages with relatively homogeneous histories. It is interesting to ask how processes of grammaticalization in one language will be disrupted when this language comes into contact with another, and to what extent and how fast these processes arise in the new contact language (Baker and Syea 1996).

In sum, grammaticalization is "the process whereby lexical material in highly constrained pragmatic and morphosyntactic contexts becomes grammatical" (Traugott 1995, p.1).

Traugott (1994, p.1481) considers a simple example that illustrates this process. It is the development of *be going to* into a marker of prospective temporality in English *gonna*. Originally it was the progressive form of the main verb *go* together with a subordinator. It introduced a purposive clause. Later in specific contexts *be going to* started to function as an auxiliary. From this example Traugott extrapolates some interesting factors that are typically involved in grammaticalization. (These factors were previously described by Hopper and Traugott (1993, chaps.3, 4).) They are

(1) The change occurs only in purposive directional constructions with nonfinite complements (*He is going to help Bill* (i.e. *He is leaving/traveling to help Bill*)). This is a very local context. The change does not occur if the locative expression is present.

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For example, *He is going to London* or *He is going to London to help Bill.*

(2) An inference of prospective action from purposives makes this change possible. For example, if a person is traveling in order to help someone, the help is to be expected in the future. If there is no a directional phrase, prospective eventhood can be interpreted as salient. From this it follows that syntactic change is triggered by pragmatic factors, and therefore is not autonomous.

(3) Reanalysis of the *be going to* phrase and also of the clause following it is involved in the shift from purposive *be going to* to auxiliary *be going to.* Thus [*He is going* [*to help Bill*]] is rebracketed and understood as [*He is going to help Bill*].

(4) The linguistic contexts in which *be going to* can occur have been generalized to contexts which were unavailable before. So, the reanalysis is better discovered when the verb following *be going to* is incompatible with a purposive meaning, or at least unlikely in that context. For example, *He is going to like Bill.*

(5) After the first stage (the reanalysis) there is no longer an internal bracket [*He is going* [*to help Bill*]] → [*He is going to help Bill*]. Then *be going to* can undergo changes typical of auxiliaries. So, the phonological reduction of the three morphemes *go* + *ing* + *to* results in occurrence of a new form *gonna.*

(6) The process of changing is continuous. It started in the fifteenth century, but still

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we can find the various stages of the grammaticalization of *be going to* in Modern English (variation vs. homogeneity).

(7) The change is not quite arbitrary. *Be gonna* expresses a future of intention, plan, or schedule. It is a prospective aspect. It can occur in constructions where a future form cannot. Traugott compares two examples: *If she's going to go to London, we'll have to change our plans* and *If she'll go to London, we'll have to change our plans.* The only reading under which the former is acceptable is the *will* of agreement or intention, not of futurity. So, the original purposive meaning continues to constrain the use of the auxiliary. It demonstrates the fact that the older *be going (to)* coexists with the newer use.

(8) Only semantically empty words, e.g., the verb *go* which is the hypernym for verbs of movement, can undergo those changes.

(9) The loss of some of the original semantics of *go* (e.g., motion and directionality) has been compensated by the development of temporal meanings (which are more abstract) in the process of grammaticalization.

Another example of a detailed account of grammaticalization is Carey's "The Grammaticalization of the Perfect in Old English" (Carey 1994).

The author discusses the development of the possessive - stative verb *have* into a marker of the English present perfect tense. Carey proposes that in certain Old English constructions *have* + *participle, have* designates the relation between the subject

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and a completed action performed by the subject rather than the relation between the subject and the object. In early Old English such constructions refer to a current state rather than a past action as in Middle English and Modern English. Carey also argues that the new perfect - like meaning was first conventionalized in mental state verbs but not with verbs that require external objects, as it had been proposed elsewhere.

In traditional approaches to the grammaticalization of the Old English perfect, Carey says, most linguists agree that the perfect came from *have* + *particle* constructions with transitive verbs. It is important to note that the participle here is viewed as an adjectival complement referring to the state of the object. As an example she gives two Modern English sentences with different word order:

I have the letter written.

I have written the letter.

These two examples show the semantic difference between an adjectival complement and the perfect meaning. The traditional point of view on the development of the perfect from adjectival is the following:

Stage 1. *Habban* is used only with perfective transitive verbs that have an expressed object.

Stage 2. It is used with the verbs that take a genitival, dativa1, or prepositional object.

Stage 3. It is occasionally found with true intransitive verbs (Mistanoja, 1960).

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The problem here is that because of the relatively free word order of Old English it is not possible to determine perfect or adjectival meaning from the syntax. It is also difficult to distinguish between the two meanings from the context. It leads to a situation when there is no agreement about the steps in the grammaticalization process of the perfect.

To add to the confusion, no explicit definition of the perfect meaning had been provided. So, the difference in opinions could be a result of the difference in definitions. Carey characterizes previous definitions as "one – dimensional", so "examples must be judged on an all - or - nothing basis", so that an example that incorporates some but not all of the aspects of the perfect meaning would be excluded.

In view of all these problems, Carey proposes to categorize "verb participles by semantic class and examine how the frequency by semantic class changes over different historical periods".

It seems unclear though how frequency by semantic class could argue for or against the establishing of the perfect meaning.

Carey examines in great detail the analysis given by Kurylowicz (1965). His view differs from the above views because he takes semantics into account. He considers the semantic shift: *result (of previous action) > action (with present result).* Kurylowicz claims that the perfect meaning was first conventionalized in constructions with external objects (pre - existing objects), and that, only after that, the *have + participle* construction could spread to internal objects. That means that in Kurylowicz's account these constructions could not be used with internal objects even with a non - perfect meaning until the perfect meaning was established with external objects.

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Carey tries to cast doubt on this claim and, to do so she examines data from Old English and early Middle English. Old English data (Carey 1994, p.107) show that during the period when *have* + *participle* construction with either external or internal object included an adverb, the adverb usually specified the time of the final state. For example, *nu 'now, now that'*:

(1) *Ða cwæð se Wisdom: Nu ic hæbbe ongiten þine ormodnesse...*

'Then wisdom says: now I have understood your unhappiness.'

The historical data given by Carey show that in the early Old English 65% of the examples included an adverb referring to the current state ('now' or 'when'). Another set of data indicates that at the same period of time at least 35% of the examples included internal objects. This argues against Kurylowicz's claim that the *have* + *participle* constructions could not even be used with internal objects until the perfect meaning had been conventionalized with verbs with external objects.

In fact, from the historical data we have clear evidence that the *have* + *participle* constructions were used with internal objects as early as Old English, when the perfect meaning of these constructions was not yet established. Her claim is further supported by the fact that no early Old English examples included adverbs clearly referring to the manner or time of the previous action.

The situation is quite different for Middle English examples. Only 10.2% of the examples (compared to 65% in Old English) include an adverb referring to the current state. It shows that *have* + *participle* constructions in Middle English did not

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already designate a final state. Also, in Middle English manner and time adverbs that refer to the past action can be found as in example (2):

(2) *Himm haffst tu sla3enn witeeeli3 Wiþþ herrte & nohht wiþþ hande.*

'You have slain him knowingly with heart and not by hand.'

All these contradict Kurylowicz's assumption.

As for the semantics of the *have* + *participle* constructions in early Old English, Kurylowicz had argued that the *have* + *participle* constructions with internal objects could not be stative, because the notion of physical possession in a stative construction would be nonsensical. With the Modern English example: *"Now that I have the first part figured out, I can go on to the next part"* Carey demonstrates the compatibility of internal objects with a stative meaning and that *have* does not necessarily mean ownership or physical possession in a stative construction.

False assumptions about the semantics of such constructions, Carey concludes, led Kurylowicz to the false conclusions that: 1. constructions with external objects were the first that conventionalized the perfect meaning; 2. *have* + *participle* constructions with internal objects became permissible only after a semantic shift to past action has occurred.

Carey proposes a different account of the semantic shift that has occurred, not a shift in focus from the current state to the previous action, but a change in the components of the stative relation itself. She claims that in *have* + *participle* constructions with internal objects "the relevant stative relation is typically not between

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the subject and a completed process, but rather the more perfect - like relation between a subject and a completed process" (Carey 1994, p.109). So, she proposes that at this period a change in the components of the stative relation itself took place as a step toward establishing the perfect meaning. Then later, she says, a shift in focus to the previous event itself occurred as a separate step. In order to confirm her account of the shift to the subject - completed process relation, she takes pragmatics into account.

The impact of the pragmatics is that a certain meaning (the completed event) present in the context can become indexed and in time becomes the meaning of the expression itself. Relying on her own interpretation of the roles played by semantics and pragmatics in the grammaticalization process Carey says that Traugott and König (1991) describe this phenomenon as the "conventionalization of conversational implicatures through pragmatic strengthening". Then she refers to their example of the development from the temporal to the casual meaning of the Old English *sippan "since"*. But Traugott and Konig clearly differentiate the role of pragmatics for the development of markers of tense, aspect, case and the development of causals. They say: "Our purpose here is to show that different kinds of inferencing are at work, depending on the particular kind of grammatical function that is evolving. We will argue that the development of markers of tense, aspect, case and so forth involve primarily metaphoric inferencing as is widely accepted ... By contrast, the kind of inferencing that is dominant in the development of connectives, specifically causals such as *since*, concessives such as *while*, and preference markers such as *rather (than)*, is strengthening of informativeness as a conversational implicature becomes conventionalized. Of course, metaphor and strengthening of informativeness are not inconsistent with each other, but rather can be regarded as

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complementary kinds of pragmatic processes, provided we analyze metaphor as involving a kind of inferencing" (Traugott and Konig 1991).

It seems that Carey mixes these two different kids of inferencing while trying to prove her point of view.

She starts with the definitions of the notions adjectival and perfect, as follows:

adjectival

i. The subject is in a *have* relation with the object, which has the property of *having been V - ed.*

ii. The subject need not be the agent of the process.

perfect

i. The subject is in a *have* relation with the completed process referred to by the *Past Part.*

ii. The subject is the agent of the process referred to by the *Past Part.*

She provides Grice's definition of a conversational implicature (Grice 1975), and then she considers the role of pragmatics (conversational implicatures) in the shift from adjectival to perfect in constructions with external objects, and with mental state verbs and verbs of reporting. She comes to the conclusion that "lexicalization of the perfect meaning" took place first in the latter case.

Here I summarize her arguments. Historical data shows that the first *have + participle* constructions were with the external objects because the original meaning of have is presumed to be the physical possession alone. Also, the data shows that such

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constructions with internal objects were well established in the earliest Old English prose. This means that the first uses with external objects must pre-date the Old English time.

Carey shows that some constructions with external objects could involve a conversational implicature to the perfect meaning, with the example:

ƥonne hæbbe we begen fet gescode swiðe untællice

'when we have both feet shod very blamelessly'

Here both conditions of the definition of adjectival are satisfied and we can say that the subject *we* is in a *have* relation with *the feet*. Then Carey assumes that in some context the shoeing of the feet was a task that had to be performed by the subject before another event occurred. Also, a speaker and a hearer could have no interest in the final state: *the shod feet.*

This context, Carey says, gives rise to conversational implicatures with the perfect meaning. First, the subject is clearly the agent of the process. Second, according to the Gricean maxim of Relevance, the hearer assumes that the speaker intends to convey the perfect *have* relation, meaning that the subject is in a *have* relation with the completed process of shoeing.

It is not clear, though, from her explanations why "the final state of the object and consequently the relation between the subject and the object is not relevant in this context". Also, the following argument seems to be insufficient: "Although the truth conditions of both the adjectival and the perfect *have* relations are satisfied by the

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context, the context makes it clear that the more relevant relation and presumably the most cognitively salient one is the perfect relation".

Carey concludes that the perfect meaning was not first conventionalized in constructions with external objects; in a high percentage of the contexts in which the *have + participle* construction is used with external objects, either part (i) or part (ii) of the perfect meaning is not satisfied. Part (i) could be not satisfied since the adjectival meaning does not convey that the subject is the agent of the process. On the contrary, this construction could be chosen instead of the simple past to emphasize the fact that the subject is not the agent of the process. In Carey's opinion this kind of situation is likely to arise in contexts where the object is external. For example, *I have my paper written.* In this case a conversational implicature to perfect is blocked because (ii) could not be satisfied. However, Carey thinks that 'the more significant factor preventing conventionalization of the perfect meaning involves part (i) of the definition" (1994, p.113). In fact, in contexts with external object the object is changed by the verbal process. It means that the relation between the object and the subject is highly relevant. So, she concludes, it is difficult to see how *have + participle* constructions with external objects in certain contexts would occur with enough frequency to conventionalize the perfect meaning.

With verbs such as *understand, realize, notice, see* the subject is the agent of the process. "In consequence, the agent of the process emerges, in and through this syntagm, as the possessor of the result which is his property" (Benveniste, 1968).

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Consider the example:

Ic hæbbe nu ongiten þæt ðu eart gearo to ongitanne mina lara...

'I have now understood that you are ready to understand my teachings.'

Carey analyses this sentence as follows. First, she proposes that "the permissibility of the perfect meaning has already been established by isolated examples with external objects". Now, the subject of *understand* is always the agent of the process, so part (ii) of the perfect meaning is satisfied. Note that the adjectival relation is also satisfied here. However, the purpose of understanding is to change the state of the subject rather than the state of the object. Thus, the perfect relation between the subject and the completed process is more relevant. So, in the latter example the subject is in a relation of completeness with the process of understanding, so this construction favors the perfect meaning.

Carey concludes that mental state verbs rather than verbs that have external objects "would be the first semantic class to lexicalize the perfect meaning" (1994, p.114).

The same analysis could be applied to the verbs of reporting. For example,

Nu hæbbe we ymb Africa Landgemæro gesæd.

'Now we have talked about the African land.'

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Again, with this kind of verbs part (ii) of the perfect meaning is satisfied. Also, the most relevant relation here is between the subject and the completed process of talking about the African land.

So, "mental state and reporting verbs are semantically well-suited to cause the shift from the adjectival to the perfect meaning..." (Carey 1994, p.115). Carey also briefly mentions one interesting question: What part of the meaning of *have* is preserved in semantic shift from adjectival to perfect? Sweetser (1988) introduced the notion of metaphorical mapping and the idea of meaning preservation in the topological / image - schematic structure. The image - schematic structure of *have* could be described as an asymmetric relation between a "reference point" and a "target". It is clear what is what in the adjectival and the perfect meaning, but "exactly how the shift could be considered a mapping from a source domain to a target domain requires further investigation" (Carey 1994, p.116). Carey thinks the shift from the former to the latter can be best described as a process influenced by both metaphor and pragmatics.

To summarize, grammaticalization is a well-known phenomenon in language change. It is defined by most linguists as the process by which lexemes become phonologically and semantically reduced, and eventually become clitics and affixes. Grammaticalization theory claims that this is a unidirectional process, and thus all grammatical morphemes derive from longer lexical items.

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Chapter 3

Lexicalization

The theory of grammaticalization claims that there is a unidirectional process by which lexemes become phonologically and semantically reduced to clitics and, eventually to affixes, so all grammatical morphemes derive from longer lexical items. The question is: Is there the opposite process by which small grammatical morphs join together into larger words with more lexical content? Heine et al. (1991, p. 50) elaborate, "while development in grammatical morphemes is unidirectional, leading from 'more concrete' to 'more abstract' meanings...developments in the lexicon do not undergo such a constraint." This opposing phenomenon is called 'lexicalization' and is often ignored by many linguists as unimportant. The evidence shows though, that as language develops words that are grammatical functors may group together, become unanalyzable synchronically as separate morphs, take on some lexical content and function, and form a lexeme. This multiple-morpheme lexicalization is a subject of my research in Chapter 5. Here I present a survey of different definitions of lexicalization in the literature and different outlooks on this phenomenon and its place in language change. I also review how some linguists address the topic of relationships between grammaticalization and lexicalization.

The concept of 'lexicalization' as a part of the discipline of word-formation (WF) appeared only in the 1980s. Earlier approaches to WF had focused almost exclusively on already lexicalized words, words as registered by lexicographers in dictionaries.

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I found the first reference to the phenomenon of lexicalization in the first edition of Marchand's handbook on English word formation (Marchand 1960).

Kastovsky (1982), in a book on word formation and semantics, considers lexicalization as a process in which complex lexemes and syntactic groups become fixed parts of the vocabulary. Formal and semantic properties of these groups often cannot be derived or predicted from their constituents or the pattern of formation. Kastovsky considers concomitant demotivation and idiomatization as subcategories and symptoms of the lexicalization process[1].

One subcategory of the same process is the pragmatic disambiguation of WF complex lexemes. Kastovsky gives an example of *callboy* and *call girl* that may be interpreted as 'boy/girl who calls' and 'boy/girl who is called.' Both these interpretations as 'boy who calls (actors onto the stage)' and 'girl who is called (by men on the phone)' can be considered as examples of lexicalization. So, Kastovsky understands lexicalization as the incorporation of a complex lexeme into the lexicon with specific properties.

He distinguishes between idiosyncratic and systematic lexicalization. For example, semantic features like **habitual** and **professional** can be added to agent nouns (examples are: *drinker, gambler, worker, driver*); a feature **purpose** can be added to such forms as *drawbridge, chewing gum, cooking apple.* The feature notation emphasizes the regularity of certain types of systematic lexicalization. Bauer (1983) considers the development of morphologically complex words, and divides this development into three stages.

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[1] The term "lexicalization" has been used in the grammaticalization literature with a different meaning. Lehmann (1995 [1982], p.136) uses 'lexicalization" to refer to cases he considers "the last phase of grammaticalization," Cabrera (1991, p. 214) defines "lexicalization" as "the process creating lexical items out of syntactic units."

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The first stage is the use of a complex word as a nonce formation, defined as: "a new complex word coined by a speaker/writer on the spur of the moment to cover some immediate need" (cited in Lipka 1994, p.2164).

The second stage is institutionalization. The term 'institutionalization' was first employed during the 1980s (Bauer 1983), and concerns the social aspects of language. At the institutionalization stage potential ambiguity is ignored and only some of the possible meanings are recognized. Bauer uses the term 'item-familiarity.' It means that a particular lexeme is recognized, e.g., *telephone box* as synonymous with *telephone kiosk.* Speaking of institutionalized lexemes Bauer includes 'the extension of existing lexemes by metaphor,' as in *fox* 'cunning person,' under institutionalizaton, not only under WF processes.

The third stage in the development of a morphologically complex word is lexicalization, described by Bauer as follows:

"The final stage comes when, because of some change in the language system, the lexeme has, or takes on, a form which it could not have if it had arisen by the application of productive rules" (cited in Lipka 1994, p.2164). He considers two examples of lexicalization: *warmth* and *involvement. Warmth* is an instance of lexicalization because the suffix *-th* is not a productive pattern in the English language now. So, for Bauer, *warmth* is analyzable but lexicalized. The same can be said about *involvement* because *-ment* appears to be no longer productive.

While Bauer considers lexicalization an essentially diachronic process, he recognizes that " the traces it leaves in the form of lexicalized lexemes have to be dealt with in a synchronic grammar" (Lipka 1994, p.2164). He divides lexicalizations into five

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types: phonological, morphological, semantic, syntactic, and mixed lexicalizations. All of these types have in common some kind of idiosyncrasy, that is irregularity and unpredictability.

As examples of phonological lexicalization Bauer gives irregular stress pattern *('Arabic, 'chivalric* as opposed to regular *syn'chronic, phon'etic)*; vowel reduction (in *day* in the names of the weekdays (as opposed to *payday*)); and isolation due to phonetic change in the language system, as in *lammas, husband.*

Linking elements in German *Gerechtigkeits-liebe, Kind-er-liebe*; alternants like *eat/edible, legal/loyal, two/tuppence,* and the irregularity of the affix in *warmth*, are all examples of morphological lexicalization.

Semantic lexicalization is not in Bauer's view, ' a unified phenomenon.' He illustrates it with examples such as *Schreibfeder, mincemeat, understand, playboy,* adding the corollary observation that some complex words *(boyfriend, girlfriend, town house)* may depend on varieties of English since such forms may have different meaning in Britain, America, and New Zealand.

According to Bauer, syntactic lexicalization is the most problematic type of lexicalization. Idioms are an example of this type of lexicalization.

Mixed lexicalizations are a grab bag of cases that may exhibit several types of lexicalization simultaneously (as in *length, lammas).*

Different kinds of lexicalization have been investigated also by other German and English linguists (see articles on lexicalization in (Lipka 1981), two seminal papers on compounding by Brugmann and Paul, published in (Lipka and Gunther 1981)). These authors consider the most important semantic changes, "which contribute to the

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aspect of lexicalization often labeled 'idiomatization,' resulting in various degrees of idiomaticity."

Traugott (1994, p.1485) turns her attention to the fact that "like grammaticalization, the term 'lexicalization' is used in a number of different ways." It is used to describe as much the part of semantic change in general as of grammaticalization, and in this sense it can refer to the expression as a linguistic form of a semantic property. For example, we can say that *have* and *be* 'lexicalize' ownership, location, possession, and existence in English. The term is also used as the name for the process "whereby an originally inferential (pragmatic) meaning comes to be part of the semantics of a form, that is, has to be learned." For example, we can say that "the inference of prospective eventhood in the purposive (*be going*) *to* construction became part of the meaning of *be going to* as an auxiliary. In referring to this fact it can be said that "the inference of prospectivity is lexicalized."

Lexicalization can also be viewed as the process "whereby independent, usually monomorphemic, words are formed from more complex constructions" (Bybee 1985). Traugott (1994, p.1485) notes that in this definition 'lexicalization' is used in more restricted sense of the word, which pertains more particularly to grammaticalization. As an example Traugott considers the development of *tomorrow*. This word originated in a prepositional phrase. Later the boundary between preposition and root was lost, and a mono-morphemic word developed. Here we see the morphological development that can result from processes of reanalysis typical of grammaticalization. Traugott notes that *to* can be recognized as the unit that also occurs in *today, tonight*.

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That means, she claims, that there may be different opinions about whether *tomorrow* is monomorphemic.

Another example of the use of 'lexicalization' in the sense just described is the phonological change followed by the morphological loss and the development of idiosyncratic lexical items. This can be illustrated by the English pairs *lie—lay, sit—set, stink—stench.* All these pairs have their origins in *i*-umlaut. In these pairs we see how the loss of a morphological processes can result in a more elaborate lexicon, since i-umlaut here appears to be a result of the loss of an original causative marker. It is interesting to note that Traugott sees those cases as "the counterexamples to the unidirectionality from lexical item to bound morpheme". Nevertheless, she concludes, " their development is part of an overall shift in causative word formation in English away from post root affixation to periphrasis."

Traugott thinks of lexicalization as "part of a shift in coding to a simpler more streamlined system of word formation", and a part of a larger framework of grammatical re-coding or grammaticalization. In this process several local changes took place at different rates and at different times. She notes that 'modern English' (like any other language) exhibits characteristics from many layers of coding practices, and is far from homogeneous.

The definitions of lexicalization provided by Marchand, Kastovsky, and Bauer are not entirely consistent with each other. Marchand and Bauer use the term 'nonce formations' to denote nonlexicalized complex words resulting from the process of WF. Later, linguists started to use the term 'ad hoc formation' apparently with synonymous reference. In 1977 Downing introduced the term 'deictic compounds' to

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refer to sequences of nonlexicalized Noun + Noun compounds, interpretable in a concrete situation. She illustrated such cases with the form *apple-juice seat,* meaning 'the *seat* in front of which a glass of *apple-juice* had been placed.'

In 1979 E. and H. Clark introduced the term 'contextuals', to refer to innovative verbs, as in the example, *to porch a newspaper* and *to Houdini out of a closet.* 'Contextuals' depend heavily on context and may be decoded in it.

In an article on lexicalization in German and English (Lipka 1981) 'lexicalization' is defined as "the process by which complex lexemes tend to become a single unit, with a specific content, through frequent use" (cited also in Lipka 1994, p.2165). Lipka notes that in this process they lose, to a greater or lesser extent, their nature as sintagms, or combinations. He views this as a gradual process that results in degrees of 'lexicalizedness'. It is a synchronic state of lexemes, but we can explain this process only diachronically.

He also considered idiomatization and demotivation as aspects of lexicalization, which both can come about through linguistic and extralinguistic changes or a combination of both. The examples can be slight phonological changes, as the reduction of the final vowel in *Monday,* or considerable as in *breakfast, Wednesday.* It can be also a combination of phonological and morphological changes, as loss of inflection, in German *Hochzeit* 'wedding', or loss of features in *lady-killer, saddler* (who makes other leather articles as well). *Bluebell, red breast, dogfight* (in the military sense) are examples that involve metaphor and metonymy. Examples of extralinguistic changes that have caused the demotivation are *blackboard* (often green), a *cupboard* that is today neither a board nor for cups only, *shoemakers, watchmakers* that do no longer denote

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makers of these things. *Sail* and *ship* are two more examples of the same changes. *Blackbird, breakfast, holiday, huzzy* (from *housewife*), *gospel, Christmas, vinegar* demonstrate the combination of several changes on various levels of language and in the extralinguistic world.

The term 'motivation' had been introduced by Saussure (1922). In his view linguistic signs are not completely arbitrary, but may have been motivated by something else. Ullmann (1962) introduced a distinction between four types of motivation: (a) phonetic (onomatopoeia) *(crack, cuckoo);* (b) morphological (word formation) *(preacher, pen-holder);* (c) semantic (metaphor and metonymy) *(coat* (of paint), the *cloth);* and (d) mixed motivation *(bluebell, red-breast).* Ullmann refers to the loss (to a greater or lesser degree) of the various types of motivation as 'demotivation'. He claims that this loss, or 'demotivation', results in a change from what he calls (metaphorically) 'transparent' to 'opaque' words.

Later Lipka defined the phenomenon of lexicalization as: 'a gradual, historical process, involving phonological and semantic changes and the loss of motivation" (Lipka 1990).

Institutionalization is defined as 'the integration of a lexical item, with a particular form and meaning, into the existing stock of words as a generally acceptable and current lexeme" (Lipka 1994, p.2165). Lipka calls 'institutionalization,' 'demotivation,' and 'idiomatization' 'notational terms' meaning that all these terms are technical terms. He points out that there is no single 'correct' use of them, and that they can be defined differently in different theoretical frameworks (Kastovsky's, Bauer's, Lipka's).

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Lipka says also that "institutionalized and lexicalized complex lexemes clearly neither belong to the level of the langue nor to parole" (Lipka 1994, p.2165). He refers to E. Coseriu's work in 1951 (Lipka 1990), where the latter proposed a new intermediate level in the language development. This level is called the 'norm' of a language, is not restricted to the lexicon, and is characterized by the conventional, unsystematic realization of certain sounds and for irregular inflections like *oxen, brethren, sang*, and *took.*

Lipka also notes that there are stages in both processes of lexicalization and institutionalization. He calls them "not of an all-or-none kind, but of a more-or-less kind." It means that both lexicalization and institutionalization result in various degrees or stages (states of lexical items) of 'lexicalizedness' and 'institutionalization' in synchrony. Lipka writes that: "at one end of the scale, items only show small phonological and semantic changes, as in *postman, blackboard, writer, gambler*, and *sleepwalker*. At the other end, the combination of several aspects may produce considerable graphemic, phonological, or semantic deviation (idiomaticity) as in *viz.*, i.e., *fo'c'sle, Wednesday, gospel, wryneck, cupboard, prayer, holiday*" (Lipka 1994, p.2165). When one considers lexicalization and institutionalization in an attempt to classify lexicalized and institutionalized words, one needs to look at different aspects that crisscross and combine in individual words. This means that it is impossible to achieve a neat hierarchic ordering, and 'cross-classification' is inevitable.

Various factors can influence the degree of lexicalization and institutionalization, such as different regional, social, 'stylistic' and other varieties of a language, and smaller or larger speech communities within the National Standards of a

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language such as British and American English. A change in stress pattern can also be a factor, as when a phrase is turned into a compound, or into a single word for this particular speech community, as with *blackbird, fallout, deep structure, fast-food,* and *software.* In these compound lexemes there is a single, so-called 'fore-stress'. Lipka also notes that "a change in spelling, from distinct words, via a hyphened group, to a single graphemic unit is also indicative of lexicalization and institutionalization as in late twentieth-century *handout.*"

The origins of compound lexemes may be units, smaller than words, even letters or syllables. The letters *U* and *S* in English *U-turn* and German *S-Kurve* are iconic constituents of the forms, given their shapes. In forms like *U-Bahn* and *S-Bahn* the letters have been clipped from *U(ntergrund)-Bahn, S(chnel)-Bahn,* Lipka calls the process reductive **WF.** Acronyms like *YMCA, USA, BRD,* pronounced as single letters or read as a word, productive also in French (*O.N. U.* and *H.L.M.* from *habitation a loyer modere*) are "a further sign of unification and loss of motivation, as in *radar, laser.* In combinations like *laser printer, laser surgery, laser technology* the acronym has completely lost its motivation" (Lipka 1994, p.2166).

Both lexicalization and institutionalization denote historical processes. They are the result of the frequent use of originally complex lexical items, which may consist of morphemes but also of smaller elements. Lipka proposes that lexicalization must be extended to include nonsyntagmatic and reductive word formation processes, semantic transfer, loan processes and combinations of these.

Hopper (1990) adds a number of interesting issues to the above discussion on the matter of lexicalization as a part of language development. Indeed, where do

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words come from? Hopper first says that the answer is obvious. Words come from other words: Old English *feoh* 'money'>Modern English *fee*.

Hopper states that if one believed that the normal course of events is attriction or loss, then the only possible outcome of the development from free morpheme to clitic, to affix, and to eventual absorption into a stem is zero or the disappearance of a word. Evidence suggests, however, that in language there exist mechanisms or strategies by which words can be renovated, replaced and introduced back into vocabulary.

Hopper discuses such well-known mechanisms as external (*discontinuous*) strategies of introducing new words, like *borrowing* (examples are Modern English acronyms) or *calques,* (or *loan-translations*), which are translations of the components of compounds (German *Kernwaffe* 'nuclear weapon').

There are also *internal* processes of word building. First, Hopper refers to Greenberg's (1978) work on 'degrammaticalization', which is absorption of older morphological material. In Greenberg's (1978) example (which describes a situation in Hausa with common and proper nouns), demonstrative adjectives start out as full words, become clitics, then affixes, and finally disappear. Greenberg brings in four stages in this diachronic trajectory for morphemes: the definite article stage (Stage I), non-generic articles (Stage II), noun markers (Stage III) and the disappearance stage (Stage IV). For him degrammaticalization results in the complete loss of an article or class marker.

Hopper (1990) is more concerned with the source of the phonological substance of words. He considers cases where "a phonological vestige of the erstwhile morpheme remains." In these cases "the earlier morpheme has assumed a phonological

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role by reforming the phonological constraints on word structure", and 'zero' is not the final outcome of grammaticalization.

Hopper studies what he has called 'morphological residue.' These are segments that have no identifiable meaning but are purely phonological. He has suggested that the phonological segments of the forms identified, as 'stems' might often be the debris of former affixes. He proceeds "it is probable... all our 'words' consist ultimately of morphological residues which sometimes together simply carry on the meaning of an earlier stem and sometimes modify it quite drastically; these earlier 'stems,' of course, themselves consist of phonological segments which are the morphological residue from yet earlier stems and/or affixes" (Hopper 1990, p.158).

Hopper (1990, p.154) calls the process when "a morpheme loses its grammatical-semantic contribution to a word but retains some remnant of its original form, and thus becomes an indistinguishable part of a word's phonological construction" as *demorphologization*, and the resulting phonological material as *morphological residue*.

An example of this change is (Old English adjective *seld-* 'rare, strange' + the Old English dative plural suffix *–um*)> English *seldom.* Hopper concludes, the suffix now is simply part of the segmental constitution of the word *seldom*, since there is no Modern English suffix

-om in adverbials or anywhere else.

Similar constructions are common and can be found in other languages. For example, multiple-morpheme lexicalization in Russian is the subject of my research in Chapter 5.

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Demorphologization also can result in changes where "instances of words... have become fused together so that one or more of the original components survives only as part of the phonology of the new word." An example is Modern English *alone* that comes from Middle English *al one* (*al* = *all*). There is now no synchronic relationship between the two words, so that the initial *al-* is purely phonological. Hopper (1990, p.154) notes "complexes of prepositions are especially prone to this kind of re-analysis. In languages with long written histories it may be possible to identify several layers." Two English examples are *about* from *on* (*at*?) + *by* + *out* and *besides* =*by* + *side* + *s* (*-s* comes from a genitive singular with adverbial sense). Another example is English *about* in which the *b* can be understood only as an unanalyzable phonological segment. See also the Russian data below.

One more kind of demorphologization is changes in already present phonemes, but not the addition of new segments. An example of this is vowel mutations (umlaut). Hopper (1990, p.155) thinks, these processes "were an important contributing factor in English to the emergence of a full contrast of voicing in the fricatives, so that while no new segments accrued to individual words, the paradigmatic inventory of the phonological system was indirectly increased." E.g. the voiced fricative [v] in Modern English *alive* comes from an earlier dative suffix *-e* (OE *on life),* which caused the fricative to be intervocalic and thence to be voiced (compare with the [f] of *life*). Hopper also points out that reduplication is another source of new phonology.

After considering various examples of the origins of phonological segments, like affixes, 'root determinative,' (suffixes), prepositions, and infixes, Hopper concludes, the segmental make-up of words is historically quite fragmentary. He follows:

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"it is not only that stems and affixes may merge, but that the stem/affix distinction itself tends to become blurred. It happens quite often that what was once an affix comes to be the most prominent part of the word, and conversely that the earlier stem becomes phonologically subordinate," (Hopper 1990, p.157) (e.g. a reduplicating syllable has become the main component of the stem in German *beben* 'quake' (*be-*), and stem is reduced to a single segment (*-b-*).

So, Hopper (1990, p.152) answers the question where words come from from the perspective of *the accretion of new segmental material* by words. He thinks, "this accretion compensates for the loss or impending loss of phonological substance through attrition," increases what he calls the 'bulk, the sheer physical length, of the word,' and counterbalances the attrition brought about by 'normal wear and tear' on words. They can affect any word, given the right discourse circumstances.

It is clear for Hopper (1990, p.159) "that behind the seemingly fixed, self-contained, robust structure which we are inclined to attribute to the parts of a language there lies a crumbling, unstable framework that is forever being restored by the collective action of speakers".

Hopper notes that the study of morphology privileges "the more recent accretions to stems, in which the relationship of two or more terms (such as stem and affix, parts of a compound) is still transparent and even paradigmatic". By neglecting the older layers of language development, Hopper (1990, p.158) thinks, "morphology buys for itself considerable simplification and generality", but also sets up "*artificial* boundaries between 'new' morphology and 'old' morphology, and between structure viewed as 'fixed' and structure viewed either as 'fossilized' (old) or as 'variable' (new)".

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Norde (2001, pp. 211-263) discusses degrammaticalization and lexicalization as two main types of counterdirectional changes. He says that although the former is sometimes treated as a subset of the latter (e.g. in P. Ramat, 1992), it is more adequate to keep the two apart, and distinguish degrammaticalization from both grammaticalization and lexicalization of grammatical items. He notes that, though a number of counterdirectional changes have been discussed in the literature some linguists maintain that grammatical forms generally evolve along similar paths.

Norde (2001, p.235) discusses "three types of change that do not result in a shift from left to right on the cline of grammaticality: lateral conversions [changes from one category to another on the same level of grammaticality], which do not affect the grammaticality of a morpheme at all, lexicalization and degrammaticalization". He notes that examples of lexicalization from grammatical item to lexical item (i.e. members of a major lexical category) are very common. He provides English examples of the lexicalization of function words including the shift from adverb to noun (*ups* and *downs*); adverb to verb (*up the price*) and conjunction to noun (*ifs* and *buts*), and also lexicalazations of pronouns, for instance, from pronoun to noun (English *Is it a he or a she?*). Norde (2001, p.235) emphasizes that "even suffixes may be lexicalized, e.g. English *-ism* (as in *behaviourism and other isms*)". Similarly, in English *teens 'age between thirteen and nineteen'* or in Italian *anta 'age from forty upwards'* (A.G.Ramat 1998, p.115) and some other suffixes are used as nouns. Norde points out that affixes jump directly to the level of lexicality instead of gradually shifting from right to left, passing through intermeditte stages. So, in view of these examples he suggests that lexicalization is not simply grammaticalization reversed. He adds that although

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"lexicalization may be counterdirectional when grammatical items are involved, it is essentially non-directional" (Norde 2001, p.236).

With regard to degrammaticalization Norde says that it is not the mirror image of grammaticalization in the sense that it cannot be the complete reverse of a grammaticalization cline. He thinks "this would be logically impossible, since grammaticalization frequently involves semantic and phonological reduction, and while the grammaticalization into a reduced form may be predictable from the original full form, a full form is evidently not predictable from a reduced form (except in the case of spelling pronunciations)" (Norde 2001, p.236). He defines degrammaticalization as "the type of grammatical change which results in a shift from right to left on the cline of grammaticality" (Norde 2001, p.237), but argues that although degrammaticalization sometimes is equated with lexicalization, these two should be kept separate. It is obvious that degrammaticalization changes differ from grammaticalization changes since they result in a less grammatical status. Norde points out that on the other hand, they also differ from lexicalization changes because they are gradual, whereas lexicalization... may result in a straight jump to the leftmost end of the cline.

He thinks, lexicalization is not synonymous with or a subset of degrammaticalization.

At the same time A.G.Ramat (1998, p. 121) argues that "grammaticalization" and "lexicalixation" are not clearly distinct: "I argue that...the limits between grammatical elements and lexemes may be blurred, and propose to rethink the traditional view according to which grammaticalization and lexicalization are quite distinct, even opposite processes. Rather, they seem to be complementary or overlapping processes of change... grammatical materials may become lexical through a number of

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developments", and considers various examples of "lexicalization" from this point of view. For Hopper (1991, p. 145) lexicalization and grammaticalization are also not distinct. Norde has a different view, which distinguishes between "degrammaticalization" and "lexicalization," so he thinks, it is unfortunate that both adherents of the strong hypothesis of unidirectionality (e.g. Haspelmath 1999) and its critics (e.g. P.Ramat 1992; Cowie 1995) often restrict their discussions on the directionality of language change to the lexicalization of grammatical items.

As an example of the relationships between grammaticalization and lexicalization it is interesting to consider two processes of grammatical change in Estonian, described in (Campbell 1991, p.285-299). Hopper and Traugott (1993, p. 127) believe these Estonian examples are cases of "lexicalization", and Traugott and Heine (1991. p. 7) say that these examples "can be regarded as instances of reanalysis".

One of these two processes in Estonian is the rise of a new category of modality in verbs, called *Modus Obliquus* forms; another is the development of question markers. Although Campbell calls both processes grammaticalization, I think that the latter is better classified as lexicalization. He also calls this paper bottom-up type, meaning that he first considers concrete cases and then examines their implications for theoretical claims.

The first grammatical change is the creation of so-*called Modus Obliquus.* It developed from some of the participle constructions for subordinate clauses. It is a finite verb form associated with "reported" speech, when the speaker has not experienced the event personally or does not want to take responsibility for the report ("indirect"). This change involves two alternative "complement" structures: speech-act main verb

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(SAV) and mental-state main verb (MSV). The process of changing is divided into three stages.

Stage I. Before the change took place there were two alternative constructions:

(a) main verb [SAV/MSV] ... et [complement] ... finite verb

(b) main verb [SAV/MSV] ... non-finite verb - ACTIVE.PARTCP

Stage II. One more construction is added:

(c) main verb [SAV/MSV] et verb - ACTIVE.PARTCP

At this stage "verb - ACTIVE.PARTCP" was interpreted as "*Modus Obliquus*", a finite verb form. It was still used in subordinate clauses after a complement *et*.

Stage III. At this stage the re-interpreted "verb - ACTIVE.PARTCP", now "verb - MODUS.OBLIQUUS" is employed in main clauses.

Examples (1), (2) demonstrate the Stage I.

(1) *sai kuul-da, et seal üks mees ela-b*

got hear-INF that there one.NOM man.NOM live-3.PRES.INDICATIVE

She came to hear / she heard that a man lives there.

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(2) *sai kuul-da seal ühe mehe ela-vat*

got hear-INF there one.GEN man.GEN live-PRES.PARTICP

He came to hear / he heard (of) a man's living there.

Example (3) shows the appearance of a new construction with *Modus Obliquus*:

(3) *sai kuul-da, (et) seal üks mees ela-vat*

got hear-INF that there one.NOM man.NOM live-MODUS.OBLIQUUS

He came to hear / he heard that (they say) a man lives there.

Example (4) shows how later the *Modus Obliquus* forms (INDIR) were extended, occurring in main clauses also:

(4) *ta tege-vat töö-d*

he.NOM do-PRES.INDIR work-PARTV

They say he is working.

So, it is clear that in Estonian an "indirect" modality marker for finite verbs was created from a former participle construction.

An interesting part of this article is the discussion about all traditional explanation for the origin of the Estonian *Modus Obliquus*. Grunthal (1941) proposed the following explanation. It is based on a presumed loss of the main verb (SAV or MSV). For example, (6) is derived from (5):

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(5) *naaber ütle-b ost-vat kolm hobust*

neighbor.NOM says buy-PRES.PARTCP three horses

The neighbor says he is buying three horses.

(6) *naaber ost-vat kolm hobust*

neighbor.NOM buy-INDIR three horses

They say the neighbor is buying three horses.

The main verb *"says"* in (5) was self-evident and was left out in (6). Kettumen (1924) gives another explanation. *Modus Obliquus* had developed from the participle in subordinate clauses and then gradually the main verb was lost. One more explanation is Ikola's (1953). He thinks that there was a confusion of the two constructions (a) and (b). So, as a result of this confusion (c) has appeared, and the blending of the *et* complement and the participle construction occurred. But clauses with the *et* complement conjunction require a finite verb. So, the participle in this "blended" construction was reinterpreted as a finite verb. It seems that this explanation does not account for the semantics acquired by the former particle - the indirect sense. It looks as if Cambell's explanation of the change is more to the point. This is how he explains the change. Since the construction (*et ... verb - present participle* or *et ... verb - past participle*) occurred only after speech-act and mental state verbs, a sense of "reported speech" was attributed to the particle even before the change. So, because the participles

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after SAVs and MSVs already had an "indirect" sense, these particles grammaticalized the "reported speech" function. This permitted the use of the reinterpreted particles (now indirect modality) where otherwise the use of a finite verb was required.

Another process of grammatical change in Estonian described in this paper is the development of question particles. The change occurs especially in yes - no questions. Proto-Balto-Finnic language had a suffix *-ko* for the questions (and *-pa* for emphases). The Finnish language has now *-ko* as a question marker: *tule-t-ko huomenna? [come-you-Q tomorrow?] 'Are you coming tomorrow?'* It was subsequently lost and was replaced first with the question particle *es*.

Particles such as *es* (question particle) and *ep* (emphasis) were once bound forms, which became "lexicalized" due to phonological developments. The process started when at some point final vowels were lost. But when the clitics *-pa* (emphasis) and -(*ko*) *-s* (question - informal speech) were attached, the final root vowel was no longer in word-final position. It was, so, protected from the loss. For example:

(7) Kelta (from whom?) > kelt, but

kelta-s > keltes

(8) paallaa (on) > paall, but

paallaapa > paallap > paallep

Thus, in example (8) the change (loss) was applied to the clitic *-pa*, giving *-p*. Vowel harmony was lost, and non-initial *a* changed to *e*, giving *-ep* in example (8), and *-es* in example (7). The next step was the following. This vowel loss

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left many stems with less common forms ending in a vowel when the clitics were attached. As a consequence, the morpheme boundary was reinterpreted, and the vowel was considered as a part of the clitic: *kelte-s* > *kelt-es; peale-p* > *peal-ep*. After that they were reinterpreted as independent words, lexicalized as specific lexemes. After this happened, the word *ep* could change its syntactic position and precede the affirmed word: *see ep* --> *ep see*. The question word (*es*) derives from a suffix signaling informal speech (*-s*), which became independent and came to be used in sentence second position.

The main conclusion that comes to my mind after reading this article is the following. The "lexicalization", which created the new "affirmative adverb" *ep* and the question word *es* as independent words, goes against the expected change from independent word to clitic/affix.

It is interesting to compare various claims about grammatical change in general and the changes described in this article. Some of them hold true for these particular changes, some of them do not work. The first claim to consider is: "syntactic change affects main clauses before subordinate clauses; the converse does not occur" (Biener 1922; Givon 1971,1984).

It is clear that this claim was falsified by the Estonian *Modus Obliquus* example. In this case the change from particle/affix to "indirect" finite verb began first in lower verbs and later appeared in main clauses.

Givon (1984, p.315) claims also: "The more dependent the SUB-clause is semantically on the MAIN clause, the less likely are independently - expressed tense - aspect - modality markers to appear in the SUB-clause".

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The Estonian *Modus Obliquus* goes against this claim since a time - aspect -modality category developed in subordinate clauses.

One more claim (Anderson 1980, Comrie 1980, Givon 1971, etc.) is: "Changes in structure may affect syntax of grammatical relations before the morphology that encodes them". Or, by Heine et al. (1991): "Since conceptual shift precedes morphosyntactic and phonological shift, the result is asymmetry between meaning and form; languages show examples of morphemes or constructions which have acquired a new meaning or function although they still retain the old morphosyntax".

This is true for *Modus Obliquus*. The participles *-vat* and *-nud* (the morphological form) do not change. But their grammatical status is re-interpreted in these constructions. If we consider the development of the question particle *es*, we see that it goes against this claim. The question particle was developed from a bound clitic. First, the "lexicalization", that is a change in morphological status took place. Then, the form was reinterpreted as a question marker. After that it could be used in the second position.

The next claim by Harris (1985, pp.382-384) and Plank (1980) is: "The extension of the grammatical function of a morphological marker proceeds by the removal of conditions on the rules that assign the marker". The Estonian changes illustrate and confirm this claim. First, the constraint that the *-vat* and *-nud* participles should not appear after the *et* complement conjunction was removed. Then, another constraint that they should not appear in main clauses was removed. A similar situation appeared with the question particle.

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Also, the development of the question particle confirms that "syntactic change may be actualized in affirmative clauses before negative ones; the converse does not occur" (Givion 1975, p.94 and Disterheft 1980, p.114).

The next two points of view are the most interesting. The Estonian changes prove that these claims do not always hold. First, "grammatical morphemes usually arise out of lexical words through semantic bleaching and phonological reduction" (cf. Bybeeand Pagliuca 1987; Givon 1984). But, the Estonian examples do not come from lexical items. They come from the (re)grammaticalization of particles, bound clitics, affixes. So, this claim is not always true, and in some changes we can see the opposite direction of the development. This leads us to the discussion of a very widely accepted claim: "In language change independent words tend to lose their boundaries, cliticize, and become bound morphemes. The reverse does not happen" (cf. Comrie 1980; Givon 1971,1984; Langacker 1977). Again, the development of the question particle *es* in Estonian demonstrates that it is not always true: a suffix was reanalyzed and separated off as an independent from.

I would like to conclude with the following. These changes represent cases of reanalysis. Reanalysis is a major factor in change that could be defined as "change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation". In the Estonian examples reanalysis leads to the development of new independent particles from former affixes/clitics.

So, not all cases of reanalysis are cases of grammaticalization, but rather some of them are the cases of developing of a more grammatical item into more

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lexical item. It seems that this process can be considered a spiral, since more lexical items (the new independent particles in Estonian) themselves could be grammaticalized to more grammatical items.

A.G.Ramat (1998, p.121) points out that "grammatical materials may become lexical trough a number of developments which do not mirror the ones occurring at the initial stages of grammaticalization of lexemes. What is striking is that all counter-examples to unidirectionality..., including cases like Italian *anta*, etc., refer to idiosyncratic changes. It is not possible to identify a tendency of language change, as in the case of unidirectional changes".

A.G.Ramat sees various instances of lexicalization in the final stages of grammaticalization. For example, gradual development of affixes or prefixes may lead to lexemes in which the original affix is no more recognizable (the Latin comparative suffix *-ior-* in Italian *signore* with semantic shift from *'older'* to *'noble, respectable man'*); compound words become opaque, as time passes (English *lord* <Anglo-Saxon *hlaf* + *weard 'bread-guard'*); gradual evolution of constructions across time may lead to new lexemes: Latin *ad ipsum* (Accusative) > Italian *adesso 'now'*. In all these examples "the result of the process is a new lexeme, a new form/meaning unit, not just a meaningless phonological sequence" (A.G.Ramat 1998, pp. 121-122).

Ramat and Hopper (1998, p.8) suggest that "the possibility of a close and possibly inextricable relationship between processes that result in grammar and those that result in lexical items must never be excluded. The on-going dialectic between grammar and lexicon cannot be closed off, and we should not allow terminological constraints to govern our thinking to the point of excluding some higher synthesis of these two

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concepts". They refer to Cabrera's work that "aims to sort out the grid of grammaticalization/ lexicalization, metaphor/metonymy by studying the shift from present participle to noun in Spanish, Basque and Hungarian. He concludes that grammaticalization and lexicalization processes are two complementary aspects of language evolution, the one involving metaphorical abstraction processes, the other metonymical concretion processes" (Ramat and Hopper 1998, p.8).

Cabrera (1998, pp. 211-227) investigates the interrelations between grammaticalization and lexicalization. He tries to demonstrate that "grammaticalization and lexicalization processes are two complementary aspects of essentially one single type of evolutionary dynamics for grammatical and lexical items" (Cabrera 1998, p.223), and can be semantically characterized by using one single conceptual hierarchy. Ramat and Hopper (1998, p.2) agree that although "the source of grammatical morphemes is in the lexicon, [Y]et the lexicon itself is susceptible of explanation along lines very similar to those of grammatical morphemes."

Cabrera analyses lexicalization from this point of view and argues that grammaticalization feeds lexicalization. From the semantic point of view, he characterizes grammaticalization processes as processes of metaphorical abstraction. He explains, that lexical items having their denotation in the conceptual domain PERSON can develop by metaphorical abstraction a new meaning in one of the right domains of the so-called Metaphorical Abstraction Hierarchy. Cabrera suggests though that the evolution cannot be unidirectional, because if we considered only grammaticalization we would expect languages to become more and more grammaticalized. But that is not confirmed by the facts.

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For Cabrera (1998, p. 214) the grammaticalization process is constrained by the following main properties:

-It is a syntactotelic process (it goes from the lexicon to the syntax)

-It affects lexical items (it is a lexicogenetic process)

-It abides by the Metaphorical Abstraction Hierarchy (Heine, Claudi, Hunnemeyer, 1991b, p.157)): PERSON > OBJECT> PROCESS > SPACE > TIME> QUALITY

-It feeds the syntax and bleeds the lexicon.

By lexicalization Cabrera means "the process creating lexical items out of syntactic units" (1998, p. 214). Such items become lexicalized and can be listed in the lexicon as unanalyzable wholes. He claims also that "lexicalization proceeds from syntax towards the lexicon. The source units for lexicalization are not lexical items but syntactically-determined words or phrases" (Cabrera 1998, p.217).

It is clear for Cabrera that "lexicalization goes in exactly the opposite direction in regard to grammaticalization" (1998, p.214). He calls lexicalization a lexically-oriented or a lexicotelic process, and proposes that it abides by the very same grammaticalization hierarchy but reads in exactly the opposite direction. For example, *reading* (an inflected form of the verb *to read*) with an original PROCESS meaning (an abstract entity) has been lexicalized and appears now in the dictionaries as a noun with a concrete OBJECT meaning. We see here a semantic shift towards the left-end of the grammaticalization hierarchy. Considering this and other examples of a leftward movement in the grammaticalization hierarchy Cabrera (1998, p. 216) proposes that lexicalization abides by the following Metonymical Concretion hierarchy: QUALITY >

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TIME> SPACE> PROCESS > OBJECT> PERSON. He claims that while the grammaticalization hierarchy accounts for metaphorical abstraction processes, metonymy is involved in lexicalization, so the lexicalization hierarchy reflects metonymical concretion processes.

He summarizes the main properties of lexicalization process in the following list:

-It is a lexicotelic process (it goes from syntax to the lexicon).

-It affects syntactically-determined words and phrases or sentences (it is a syntactogenetic process)

-It abides by the Metonymical Concretion Hierarchy

-It feeds the lexicon and bleeds the syntax

With regard to the relationships between grammaticalization and lexicalization Cabrera argues that the two processes are complementary language changes. He thinks, "Language evolution is... bidirectional and comprises both grammaticalization and lexicalization. In language change there is a constant movement from the lexicon to the syntax and the other way around. We do not observe languages gradually losing their lexicon and enriching their morphology and syntax. Nor do we observe languages gradually increasing their lexicon and losing their morphology and syntax. This means that language evolution is not exclusively a process of grammaticalization or lexicalization. Only the interaction of the two processes can produce the balanced results we observe in language evolution" (Cabrera 1998, p.224). Moreover Cabrera argues that, since grammaticalization and lexicalization are two complementary principles of language evolution, they are guided by two complementary

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and equally important cognitive strategies: metaphor and metonymy. From a semantic point of view, grammaticalization is a metaphorical process (since abstraction and similarity are the two basic operations giving rise to metaphorical thinking). Lexicalization is a metonymical process, because concretion and contiguity characterize context-dependent elements (and metonymic reasoning) and play the starring role in lexicalization processes. So, we need to consider the interactions between metaphor and metonymy in language evolution as well.

Cabrera investigates how grammaticalization and lexicalization interact with each other and argues that grammaticalization processes can feed many lexicalization developments (Cabrera 1998, pp. 218-223). He discusses three lexicalization phenomena: the Romance present participles in *-ent(e),* the Hungarian affix *-o* and the Basque suffix *-ko.* These examples demonstrate not only a semantic shift in the metaphorical abstraction hierarchy (QUALITY meaning out of a PROCESS meaning), but also semantic shifts QUALITY > OBJECT and QUALITY > PERSON in accordance with the Metonymic Concretion Hierarchy.

For example, in Latin a strong tendency exists to use present participles as nouns denoting the agents of the actions formerly viewed as qualities: *calmante (>calmar 'to soothe') 'sedative', presidente (>presidir 'to preside over').* In Hungarian many *–o* participles become nouns denoting the person involved in the action implied in the participial form: *igazgato (> igazgat 'to direct') 'director', kolto (> kolt 'to compose') 'poet', Hallgato (> hallgat 'to listen to') 'student'.* In Basque a suffix *-ko* can function as a locative genitive, but at the same time a strong tendency toward the lexicalization of *ko* words can be observed: *aurretiko 'guide' (lit. 'the one going ahead'),*

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etxekoak 'family' (lit. 'those of home'), buruko 'pillow' (lit. 'that of the head'), soineko 'dress' (lit. 'that of the body'), Hileroko 'menstruation' (lit. 'that of every month'), Geroko 'future, result' (lit. 'that afterwards').

All these words come from other original lexical items inflected for case and provided with the adjectivizing suffix *–ko*. It is interesting to note here that the same tendencies found in Roman, Hungarian and Basque can be observed in the evolution of Russian. These shifts exemplify QUALITY> PERSON, QUALITY> OBJECT, QUALITY > PROCESS, and QUALITY> TIME moves and not only abide by the Metonymic Concretion Hierarchy but also yield full-fledged lexical items. They represent the final result of a lexicalization process.

Cabrera (1998, p.221) points out that this "data clearly show that grammaticalization feeds lexicalization", and that "the lexicalization path proceeds from the grammar to the lexicon". The input units for lexicalization are phrases or syntactically-determined words that are highly context-dependent. It is evident also that there is "a close dialectical interaction between both procedures. This interaction is crucial for having a better understanding of the evolutionary dynamics of lexical and grammatical elements and of metaphorical and metonymical processes in language change" (Cabrera 1998, p.223).

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Chapter 4

Critical assessments

In recent years interest in grammaticalization phenomena has increased, and so has the debate about the nature and limits of grammaticalization. A large range of definitions of grammaticalization has been introduced in the literature. Different writers use the term "grammaticalization" in different ways, and sometimes it is not clear what is intended. At the same time claims about grammaticalization have come under increasing criticism from scholars. A number of papers assess fundamental aspects of grammaticalization, and its connection with other processes in language change, for example lexicalization. As mentioned above, many authors ignore this opposing phenomenon of lexicalization as rare, unproductive and thus unimportant. In the central section of this chapter I present different outlooks on what grammaticalization is together with the major related questions addressed by each author. Then I review the set of claims that has been made in the literature concerning the phenomena central to grammaticalization. I outline the criticisms raised to such claims as follows:

-Is the 'unidirectionality claim', the suggestion that, in grammaticalization, linguistic elements always become more grammatical, never less grammatical, a tenable claim?

-Is grammaticalization unidirectional and can it at least be countered (undone) in some way? (Janda 2001)

-How do "degrammaticalization" and "lexicalization" relate to the unidirectionality claim, and what impact does the existence of

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"deflexion" have on grammaticalization claims? (Campbell 2001, Newmeyer 2001, Norde 2001)

-What are the mechanisms that underlie grammaticalization and what is the role of reanalysis, metaphor, and analogy? (Campbell 2001, Newmeyer 2001, Joseph 2001)

-Does grammaticalization have any independent status and does it have any explanatory value, or is it derivative and can be explained by already known principles of linguistic change, such as sound change, lexical and semantic change, or reanalysis? (Campbell 2001, Janda 2001, Joseph 2001, Newmeyer 2001)

-Is grammaticalization best described as *lexical>grammatical* and *less grammatical > more grammatical* (this being the so-called "canonical" case)?

-What are the roles of "semantic bleaching" (loss) and "phonetic reduction" in grammaticalization phenomena, and how can they be explained? (Campbell 2001)

I start with a survey of definitions of grammaticalization and then consider a number of interesting outlooks of the critical sort in some detail.

Hopper and Traugott (1993) define grammaticalization as "the process whereby lexical items and constructions come in certain linguistic contexts to serve grammatical functions, and, once grammaticalized, continue to develop new grammatical functions... whereby the properties that distinguish sentences from vocabulary come into being diachronically or are organized synchronically (Hopper and Traugott, 1993, p. xv).

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Bybee et al. do not see grammaticalization as only the transition between lexical and grammatical status, but rather "recognize the same diachronic processes at work in a long chain of developments. Included are changes in lexical morphemes by which some few of them become more frequent and general in meaning, gradually shifting to grammatical status, and developing further after grammatical status has been attained" (Bybee et al., 1994, pp. 4-5). They confer grammaticalization the status of a theory that consists of the following eight hypotheses, which also function as diagnostic traits of grammaticalization (Bybee et al, 1994, pp. 9-22), (cited also in (Campbell 2001, p. 101)):

1. *Source determination.* The actual meaning of a construction that enters into grammaticalization uniquely determines the path, which such grammaticalization follows, and consequently the resulting grammatical meanings.

2. *Unidirectionality.* The path taken by grammaticalization is always from less grammatical to more grammatical.

3. *Universal paths.* From [1] and [2], it follows that there are universal paths of grammaticalization.

4. *Retention of earlier meaning.* Semantic nuances of a source construction can be retained long after grammaticalization has begun.

5. *Consequences of semantic retention.* From [3] and [4], it follows that attested forms can be used to reconstruct earlier stages of a language.

6. *Semantic reduction and phonological reduction.* Semantic

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reduction is paralleled by phonetic reduction, this yielding a "dynamic coevolution of meaning and form".

7. *Layering.* The rise of new markers is not contingent on the loss or dysfunction of its predecessors.

8. *Relevance.* The more semantically relevant a grammatical category is to a stem, the more likely it is that it will develop into an affix.

McMahon (1994, p.160) sees grammaticalization as the complex process where "words from major lexical categories, such as nouns, verbs and adjectives, become [members of] minor, grammatical categories such as prepositions, adverbs and auxiliaries, which in turn may become affixes. Full words, with their own lexical content, thus become form words, which simply mark a particular construction;... this categorial change tends to be accompanied by a reduction in phonological form and a bleaching of meaning. Thus, grammaticalization is not only a syntactic change, but a global change affecting also the morphology, phonology and semantics" (McMahon, 1994, p. 160). Pagliuca (1994, p. ix) defines grammaticalization as "the evolution of grammatical form and meaning from lexical and phrasal antecedents"; while von Fintel (1995, p. 175) thinks: "grammaticalization is the gradual historical development of function morphemes from content morphemes". Bybee (1996, pp. 253-255) suggests: "The vast majority of affixes in the languages of the world evolve from independent words by the gradual process of 'grammaticization' or 'grammaticalization'... In the progression from a lexical morpheme to a grammatical one, changes occur in the phonological shape of the morpheme, its meaning and its grammatical behavior. The process of grammaticization is not discrete, but continuous...; in the form of semantic change and further phonological

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reduction and fusion..., it continues even after grammatical status is achieved, and even after affixation occurs".

Lass (1997, pp. 293-296) sees the process of grammaticalization as "irreversible or nearly so", and Whaley thinks it is "a process of language change by which a free lexical morpheme becomes semantically generalized and phonologically reduced" (Whaley 1997, p.283).

Hopper (1987, p. 148) introduces a different and more controversial outlook with the notion of 'emergent grammar': "There is, in other words, no 'grammar', but only 'grammaticalization' movements towards structure." He views grammar as "the name for a vaguely defined set of sedimented (i.e. grammaticized) 'recurrent partials' whose status is constantly being renegotiated in speech and which cannot be distinguished in principle from strategies for building discourses" (Hopper 1988, p. 118).

More recent definitions of grammaticalization represent different views on this process. A.G.Ramat (1998, p.107) thinks that "grammaticalization is not a uniform process". Haspelmath (1998, p.78) recognizes grammaticalization as "the gradual unidirectional change that turns lexical items into grammatical items and loose structures into tight structures, subjecting frequent linguistic units to more and more grammatical restrictions and reducing their autonomy", but also thinks "grammaticalization comprises the development of simple sentences from complex sentences, the development of function words from content words, the development of affixes from function words.... These changes can be understood as resulting from the gradual loss of autonomy of linguistic signs" (Haspelmath, 1998, p. 32). He points out the need for general definition of grammaticalization that does not "restrict this notion to changes from a lexical

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category to a functional category but would say that grammaticalization shifts a linguistic expression further toward the functional pole or the lexical-functional continuum" (Haspelmath, 1999, p.1045).

Gaeta (1998, p. 89) also understands grammaticalization in a broader sense as having "to do with the *whole* range of phenomena that give rise to grammatical formatives, not merely with those originating from lexical forms," (as emphasized in earlier classic definitions).

In addition, Heine (in press, p. 4) thinks, "grammaticalization...[includes but] is not confined to the evolution of lexical items," while Traugott defines grammaticalization as "the development of constructions (not bare lexical items, as has often been supposed in the past) via discourse practices into more grammatical material" (cited in Campbell and Janda 2001, p.106). Traugott characterizes most definitions of grammaticalization as focusing "on lexemes...and, in later stages, [on] the grammaticalization of already grammatical items into more grammatical ones". She notes that increasing attention "has recently been paid to the fact that... lexemes grammaticalize only in certain highly specifiable contexts, and under specifiable pragmatic conditions". So, in recent definitions of grammaticalization "the focus is on... the contexts in which... [lexemes] take on grammatical functions" (cited in Campbell and Janda 2001, p.106).

While examining all the above definitions it is interesting to consider Lessau's (1994, p. 416) outlook on this issue. He thinks that "the term experiences a considerable extension into various directions," and, as "a consequence, it is not easy to find a general definition, a common denominator, for the various contents and applications 'grammaticalization' has today".

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Many papers discuss what the future of grammaticalization theory will be. Campbell and Janda (2001, p.108) summarize their view as follows: "'Grammaticalization theory' is seriously flawed and misleading, as well as, arguably, totally superfluous, since existing mechanisms already suffice to account for the phenomena at issue; what we need, instead, is a deepening and broadening of knowledge, not the inappropriate and erroneous claims surrounding this putatively new and qualitatively unique conceptual apparatus".

Joseph (2001) also attempts to criticize the "most basic tenets" of grammaticalization theory framework. He considers two grammatical morphemes in Modern Greek — the very future marker and a set of innovative weak subject pronouns. The examination of the origins of these two morphemes provide him a basis for testing of "some claims that have been made within the context of what has come to be known as "grammaticalization theory". Using these two examples he criticizes the framework's most basic claims on where grammatical morphemes come from and what the nature is of the process or processes of language developments by which they arise.

Joseph says that although "everyone agrees that the term [grammaticalization] refers to the phenomenon in which forms that at one stage of a language have fairly concrete lexical meanings and functions come to have more abstract grammatical uses and meanings at a later stage" (2001, p.164), there is disagreement on the nature of this phenomenon. It is evident, for example, that there is no agreement in the literature on whether grammaticalization is a single process or several processes or a result of other developments, and as to what its relationship is to other mechanisms of

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language change. In particular, Heine and Reh (1984) refer to it as an "evolution" and Bybee et al. (1994) refer to it as "a long chain of developments".

Joseph points out that the basic nature of grammaticalizationis understood differently by various scholars:

- "(grammaticalization) is a *process* which turns lexemes into grammatical formatives and renders grammatical formatives still more grammatical" (Lehmann 1982, p. v),
- "Grammaticalization is a process ... whereby linguistic units lose in semantic complexity, pragmatic significance, syntactic freedom, and phonetic substance" (Heine and Reh 1984),
- "'grammaticalization' ... refers to... *the processes* whereby items become more grammatical through time" (Hopper and Traugott 1993, p. 2),
- "grammaticalization is in some sense *the process* par excellence whereby structural relationships and associations among them are given grammatical expression" (Hopper and Traugott 1993, p.72),
- "grammaticization theory begins with the observation that grammatical morphemes develop gradually out of lexical morphemes... the same diachronic processes (are) at work in a *long chain of developments*" (Bybee et al. 1994, p.4-5),
- "We attempt to answer the questions: what motivates grammaticalization in the first place, *what mechaniims lead to it...*" (Hopper and Traugott 1993, p.32),

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- "Grammaticallzatlon is a(n) ... *'evolution'* ... (Heine and Reh 1984).

Joseph also points out inconsistencies on whether grammaticalization is a cause or an effect and how it is related to other mechanisms of change:

- "How can we distinguish grammaticalization from language change? The answer is that grammaticalization is a kind of language change" (Traugott and Heine 1991, p.3),
- "A number of mechanisms of language change have already been alluded to as being relevant to grammaticalization. This is hardly surprising if indeed grammaticalization is a subset of phenomena occurring in change." (Traugott and Heine 1991, p.7),
- "Reanalysis and analogy are the major mechanisms in language change. They do not define grammaticalization,, nor are they coextensive with it, but grammaticalization does not occur without them." (Hopper and Traugott 1993, p.60-61)[2].

Joseph (2001, p.165) notes that these and many other definitions use "vague wording", e.g. "subset of phenomena occurring in change", "relevant to grammaticalization", etc. It follows from these definitions, he says, that, on one hand grammaticalization can be viewed as something parallel to other mechanisms of change,

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[2] As with "grammaticalization", there is no consistency in the use of the term 'lexicalization' by Marchand, Kastovsky,and Bauer. Lipka(1994, p.2165) calls "lexicalization"a "technical" term or "notational" term, since there is no one 'correct'use of them and they are defined differently by different linguists.

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and on the other as something caused by these other mechanisms, or as something including at least "metaphorical transfer..., metonymic transfer ..., reanalysis..., and analogy" (Hopper and Traugott 1993).

Joseph also turns his attention to "another crucial tenet in most accounts of grammaticalization", which is the notion of 'unidirectionality'. Although "the direction of development is claimed always to be from free word to clitic, from clitic to affix, from content morpheme to function morpheme, etc.", Joseph thinks that it is not clear whether this process can be "viewed as a linear and irreversible" (Herring. 1991, p. 253). In his view the claim that "movement is always from less grammatical to more grammatical on the "cline" of grammaticality, from concrete meanings to abstract meanings" is more a hypothesis than a principle. Thus, it requires verification and empirical testing.

Joseph notes also that we can not decide whether a constraint of unidirectionality exists until there is a disagreement on the nature of the grammaticalization phenomenon. In fact, other processes or mechanisms of change are not subject to a constraint like unidirectionality, which requires movement only in one direction. For instance sound change, analogy, or reanalysis are not so constrained. Joseph (2001) argues that if grammaticalization is a process separate and independent of other mechanisms of change, then a constraint like unidirectionality, could be applied to it, but if, on the other hand, grammaticalization is not a distinct process or mechanism, but the result of the workings of other mechanisms of change, then unidirectionality would have to fail, since these other mechanisms can take different directions.

Campbell (2001) also raises the question whether grammaticalization has any value at all. While he deems the phenomena of grammaticalization interesting, he

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sees serious problems with the claim that grammaticalization is a theory. He says that "grammaticalization has no true status of its own, but rather relies on other processes and mechanisms of linguistic change which exist independently of grammaticalization but which provide the explanations for the phenomena involved in grammaticalization".

Campbell presents a number of standard paradigm examples, such as *will 'future' < 'want', be going to > 'future'*, English examples that illustrate *lexical > discourse marker*: *deed 'a doing, act' > indeed, while 'a time'* (concrete noun) > *'temporal conjunction' (While I waited, they played) > 'concessive conjunction' (While it may be troubling to consider, it is not expensive)* (Traugott and Konig 1991; Hopper and Traugott 1993, pp.4, 52-85), and an example similar to the Estonian example (see Chapter 3):

Old Norse *sik '3rd person accusative reflexive pronoun'* (cf. Swedish *sig*) > Swedish (and Scandinavian generally) *-s 'passive, 'impersonal'* (for example Swedish *dorren oppnas 'the door opens', hoppas 'it is hoped, one hopes'*) (Norde 1997, Hopper 1998, pp. 154-156).

The typical grammaticalization of *postposition > case* can be illustrated with the development in several Balto-Finnic languages of the postposition *'with' > 'comitative'* case. That can be seen in the Estonian construction *poja-ga [boy-COMITATIVE] 'with the boy'* with its case suffix, in comparison with the Standard Finnish construction *poja-n kanssa [boy-GEN with] 'with the boy'*, where the postposition corresponds to the older form from which the Estonian comitative case developed. As in Estonian, in some Finnish dialects postpositions like *kans* have become a clitic and even a case suffix, e.g. *isanka 'with father' (isa 'father')*; *koiranka:n 'with the dog'*, (*koira*

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'dog') with the 'comitative/instrumental' clitic or case, *-ka, -ka:n* in Upper Satakunta and Savo dialects (Laanest, 1982, pp.174-175).

After examining these and various other examples Campbell comes to the conclusion that grammaticalization does not have any independent status of its own. He then argues that it is rather a derivative of other kinds of language change. His views of grammaticalization are similar to Janda's (2001), Joseph's (2001), and Newmeyer's (2001).

In sum, while supporters claim that grammaticalization can predict and has explanatory power in its own right:

- "...a theory of grammar gains in explanatory power once it incorporates findings on grammatacalization and reanalysis" (Heine and Reb, 1984, p. 264),
- "Grammaticalization studies are not only a means of relating present language states to past situations, rather by proposing generalizations on past development they also allow us to predict future developments" (Heine, 1993, p. 124),
- "The things that happen in grammaticalization do so in an orderly fashion which not only predicts what changes can occur but also puts constraints on what synchronic grammatical systems are found...it opens up a way of explaining grammatical phenomena that has largely been neglected in post-Saussurean linguistics" (cited in Campbell 2001, p.117),

detractors claim that grammaticalization has no independent status of its own and that it involves other kinds of changes, like sound change, semantic change, and reanalysis,

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which are not limited to cases involving grammaticalization. Their arguments are of the following sort:

- "More and more things are recognized as belonging to general characteristics of language change (instead of being specific to grammaticalization)" (Lessau, 1994, p. 219).
- "ultimately grammaticalization is not separately definable from the concept of change in general. Such a position has in fact been claimed by Hopper (1991)" (Ramat and Hopper 1998, p.3).
- "...if grammaticalization is not already a given, the principles do not in fact identify it unambiguously" (Hopper 1991, p.31).
- [the principles which characterize grammaticalization] "are not distinctive for grammaticalization," but [can be applied to changes which] "are not distinctively examples of grammaticalization" (Hopper 1991, p. 21).

It is particularly interesting that even Traugott and Heine (1991, p. 7) acknowledge that "a number of mechanisms of language change, [metaphorical transfer, metonymic transfer, analogy, borrowing] [are]... relevant to grammaticalization". Hopper (1991, p. 19) and Joseph (2001) express a similar view. Campbell agrees with Bybee et al.'s (1994, pp. 5-6) claim, that "the events that occur during this process [grammaticalization] may be discussed under rubrics of semantic, functional, grammatical, and phonological changes". Campbell (2001, p.117) shows that "the types of change involved in grammaticalization are also known for their extensive application

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outside of grammaticalization and that no type of change is unique to grammaticalization".

Campbell considers also some of the assumptions about semantic bleaching or loss, phonetic erosion, and metaphor. It is clear for Campbell that the semantic 'bleaching' or loss (also called desemanticization, fading, semantic attrition, semantic decay, semantic depletion, semantic impoverishment, weakening, generalization of semantic content, and abstraction) is not in any way diagnostic of grammaticalization. He also does not think it is an empirical property that can be tested., since the change *lexical > grammatical* seems to imply by definition loss of lexical semantics. Campbell notes that semantic bleaching is viewed as built into the definition of grammaticalization as a shift from more lexical meaning to more grammatical meaning. Similarly Heine and Reh (1984, p. 67) think, that "the more grammaticalization processes a given linguistic unit undergoes,...the more does it lose in semantic complexity, functional significance and/or expressive value". And, "according to the most common interpretation, the mechanism involved may be conceived as of as a filtering device that bleaches out all lexical content and retains only the grammatical content of the entity concerned" (Heine et al. 1991, pp. 108-109).

However, several kinds of phenomena considered as instances of grammaticalization do not require any loss or shift in meaning. An example can be the cline *free lexical> clitic > affix*. Particularly, in the shift in Balto-Finnic languages *postposition> case suffix,* both have a meaning *'with'*.

Campbell (2001 p.119) concludes, the "semantic bleaching (loss) is neither sufficient (since the kinds of semantic change in grammaticalization operate in

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lexical change in general, not just in grammaticalization) nor necessary (given grammaticalizations which do not involve meaning change or loss) for defining grammaticalization".

Metaphor and metonymy can be examples of semantic changes that take place not only in grammaticalization but also outside, while the above-mentioned shift in Balto-Finnic languages can illustrate grammaticalizations without meaning change or loss. Layering (or polysemy) is another illustration of the same kind of changes. Layering is defined as a semantic change in which "a form can acquire a new meaning without losing its old meaning, becoming polysemous with both the old and new meanings surviving along side each other" (Campbell 2001 p.119), for example *be going to* which before grammaticalization was only a motion verb (with purpose), but now has not only its old lexical meaning as a motion verb, but also the grammatical meaning *'future'*.

Some linguists do not see semantic generalization as central to the process, but instead, consider semantic bleaching/generalization as "a cause of the other processes of grammaticalizations". Haspelmath for example thinks: "a lexical item can become grammaticalized only if it is used in a basic discourse function, because otherwise it would not increase significantly in frequency...semantic generalization or bleaching is usually a prerequisite for use in a basic discourse function, that is, for the increase in frequency that triggers the other changes" (Haspelmath 1999, p. 1062).

At the same time some linguists think, metonymy is more important: "...reanalysis, not analogy has for long been recognized as the major process in grammaticatizattion at the structural, morphosyntactac level" (Hopper and Traugott 1993, pp. 8041). Others think that metaphorical changes play a central role in grammati-

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calizations. Moreno Cabrera (1998), for example, considers grammaticalization as a metaphorical process but lexicalization as a metonymical process, so the semantic change is not a crucial part of the definition of grammaticalization, but an independent process. Thus, semantic loss is not diagnostic for grammaticalization.

Campbell turns his attention to phonological reduction (phonological attrition, phonological weakening, phonetic erosion, phonetic loss), and criticizes those who see phonological reduction as inherently connected with grammaticalization. Heine (1993, p. 106) for example thinks: "reduction, or erosion,...is in fact predicted by grammaticalization theory. Once a lexeme is conventionalized as a grammatical marker, it tends to undergo erosion; that is, the phonological substance is likely to be reduced in some way and to become more dependent on surrounding phonetic material". Bybee et al. (1994), and Heine and Reh (1984) express similar views. They see a direct link between semantic and phonetic reduction in the evolution of grammatical material. Their hypothesis is that the development of grammatical material is characterized by the dynamic co-evolution of meaning and form (Bybee et al., 1994, p. 20). Bybee and Pagliuca (1985, p. 76) call it the *parallel reduction hypothesis:* "As the meaning generalizes and the range of uses widens, the frequency increases and this leads automatically to phonological reduction and perhaps fusion". Givon (1975, p. 96) expresses the similar view.

Campbell (2001) notes, however, that there are numerous exceptions to this rule in individual instances of grammaticalization. It is clear for him that like semantic bleaching, phonological reduction (erosion) "is neither a necessary nor a sufficient property of grammaticalization" (Lessau 1994, p.263). He argues,

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"grammaticalization can take place with no phonetic reduction, and erosion of form is not unique to grammaticalization, but is normal phonological change. Phonological reduction processes apply to items in appropriate phonological contexts generally, not just to items involved in grammaticalization" (Campbell 2001, p.121). He quotes Heine (1994[3], p. 109) who also thinks: "conceptual grammaticalization precedes [phonetic] erosion. This means that at a given stage, a morpheme may become firmly established as a grammatical marker although its phonetic substance is still unaffected by this process". Lehmann (1995 [1982], p.127) notes "that phonological attrition... plays its role not only in grammaticalization, but affects, in the long run, practically every sign" and Heine's (1994[3], p. 109) example of the High German auxiliaries *haben 'have'* and *sein 'be'* illustrates these claims. These auxiliaries had assumed their grammatical functions as Perfect or Passive markers at the stage of Old High German, but still have the same phonetic shapes of their respective lexical items.

Campbell (2001, p.121) concludes, "erosion is in no way confined to grammaticalization...; rather it is a natural process to be observed in all kinds of language development and it is not always possible to decide unambiguously which kind of forces were involved in a given case", and adds: "phonological reduction often follows grammaticalization (sometimes only after a very long time interval) precisely and mostly only because it is then that the conditions favorable to the sound changes which result in phonological reduction first come about, e.g. where forms (with little or no independent lexical meaning) come to be in relatively unstressed positions - but this is not really about grammaticalization; it is about standard phonological change of any form that happens to

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satisfy the environment of phonological reduction processes" (Campbell 2001, pp.121-124).

In sum, Campbell believes that semantic bleaching, or phonological reduction are neither necessary (since there are grammaticalizations with no phonological reduction) nor sufficient (since there are phonological reductions in the absence of grammaticalization) properties of grammaticalization, so, cannot be considered diagnostic of grammaticalization.

Unidirectionality, the claim that grammaticalization is irreversible, and "grammatical elements do not turn back in the direction of the lexicon" (A.G.Ramat, 1998, p. 115) is one of the basic principles of grammaticalization. It is striking though that some treat it as a hypothesis (an empirical property) and others include it into definitions of grammaticalization and take it for granted (as an axiom, a defining property). For example, Traugott thinks that "'Grammaticalization'... refers to the dynamic unidirectional historical process whereby lexical items in the course of time acquire a new status as grammatical, morphosyntactic form" (Traugott 1988, p. 406). Cowie (1995, p.1881) has a similar view. Newmeyer (1998, p.261) observes that when unidirectionality is built into the definition of grammaticalization, it cannot be used as an empirical hypothesis. That makes a change, which results in a shift from left to right on the cline of grammaticality an instance of grammaticalization. However, some grammaticalization studies (e.g. Lehmann 1995) extend the notion of unidirectionality to grammatical change in general.

The existence of some counterexamples shows that unidirectionality cannot be regarded as an absolute principle. Tabor and Traugott (1998, pp.229-272)

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consider cases of structural scope increase and conclude that previously proposed claims of structural unidirectionality need careful reformulation. Ramat and Hopper (1998, p.7) note doubts that have been recently cast on unidirectionality as criterial for grammaticalization: "Even though the (relatively) few examples going in the opposite direction of change should warn us against making a strong claim of unidirectionality".

It is interesting to consider how these counterexamples have been treated. Campbell (2001, p.125) notes that most typically "they have been denied or ignored in hopes they will go away", as when, for example, Heine et al. claim that "Examples like these [the Estonian given below and others of 'degrammaticalization'] are, however, rare and will be ignored" (Heine et al., 1991, p.52) or that "examples of degrammaticalization [present when the direction of grammaticalization is reversed, that is, when a more grammatical unit develops into a less grammatical one]...have been observed to occur, but they are statistically insignificant and will be ignored in the remainder of this work" (Heine et al. 1991, pp.4-5). Norde discusses "degrammaticalization" from a point of view different from that of other authors. He (Norde 2001, pp.211-263) notes that, though a number of counterdirectional changes have been discussed in the literature some linguists maintain that grammatical forms generally evolve along similar paths. Thus, Heine (1997, p.6) states that, "The development of grammatical forms proceeds from less grammatical to more grammatical; from open-class to closed-class categories; and from concrete, or less abstract, to less concrete and more abstract meanings.... A number of exceptions to the unidirectionality principle have been claimed, but they have either been refused or are said to involve processes other than grammaticalization".

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The rejection of counterexamples to unidirectionality is often rooted in the argument that grammaticalization is a natural process that cannot be reversed. Many linguists though see grammaticalization as a result, rather than a process. For example, Newmeyer (1998, p.232) does not think that grammaticalization is "a distinct phenomenon requiring an inherent set of explanatory devices," but views it as "essentially an epiphenomenal result of independent historical developments" (Newmeyer, 1998, p.235). Joseph (2001, pp.163-186) also challenges the view that grammaticalization is a 'process'. Norde (2001, p. 233) agrees that grammaticalization is best conceived as a result, not a process, although he "would not go so far as" Newmeyer who says that "there is no such thing as grammaticalization, at least in so far as it might be regarded as a distinct grammatical phenomenon requiring a distinct set of principles for its explanation" (Newmeyer 2001, p.188).

Campbell (2001, p.126) notes that some proponents of grammaticalization theory have expressed inconsistent views. Haspelmath has acknowledged "at most a few cases [that counter unidirectionality]", yet he has remained firm that "it is an undeniable empirical fact that such changes [the reverse of grammaticalization changes] do not occur, and that change in grammar is overwhelmingly in one direction" (1998. p. 53). He sees "no reason to regard these isolated cases as threats to the robust empirical generalization that grammaticalization is overwhelmingly unidirectional" (Haspelmath, 1998, p. 80). Campbell (2001, p.127) calls curious A.G.Ramat's (1998, pp. 107-127) treatment of counterexamples. She considers processes involving a refunctionalization of old grammatical forms as representing a serious challenge to the unidirectionality hypothesis, and suggests keeping them apart

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from cases of grammaticalization "for conceptual clarity". Instead of rejecting unidirectionality as a necessary condition she concludes that grammaticalization is a specific form of language change. She feels that "what we call 'grammaticalization theory' would be left with a too vague definition of its field, including almost every instance of change. The unidirectionality of changes from lexical categories to grammatical (functional) categories constitutes a significant constraint on possible language changes. In the light of this constraint, possible counterexamples can be excluded because they do not adhere to the sequence of changes entailed in grammaticalization" (A.G.Ramat 1998, p. 123). In this case counterexamples to unidirectionality are simply shut out by definition, and from this point of view the unidirectionality claim has no empirical content whatsoever, since it cannot be tested.

Campbell (2001, p.127-128) considers some cases of counterexamples to the unidirectionality claim as, for example the English genitive -*'s'*,which in modern English (compared to OB) is much more independent(it can be separated from its main word by an adverb such as *else*) or English *down, in, out, up* (prepositions) > verb, noun, adjective, e.g. verb *to down* (as in *they downed one* [in hunting, sports events]), noun *a down* (in football, the act of computers going down, a negative turn/trend), adjective *down* (as in *down time, down side).* Two more examples are:

-Estonian former bound affirmative suffix *–p/-pa/-pa' 'emphatic'* (bound) > an independent affirmative adverb *ep 'yes, indeed, just so, then' 'emphatic'* (free), which can now change its syntactic position and precede in the sentence,

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-Estonian question marker *-s* > *es 'question marker' (suffix> independent word.* Both of these examples are taken from (Campbell, 1991) and considered in detail in Chapter 3 as cases of lexicalization. Additional kinds of counterexamples are discussed in (Joseph and Janda 1988; Ramat 1998; Cabrera 1998; Janda 2001).

Campbell notes that some linguists attempt to explain away some of these exceptions in an effort to save unidirectionality. For example, Lehmann (1995 [1982], pp. 16-19) discusses several counterexamples to unidirectionality, which he calls examples of 'degrammaticalization' and attempts to explain away as involving a reinterpretation based on homophony. Hopper and Traugott (1993, p. 127) treat the Estonian example and the English prepositions example mentioned above as instances of reanalysis and call them cases of 'lexicalization', or "a shift from grammatical to lexical structure" (1993, p. 49). They imply that these are not counterexamples to unidirectionality but cases of a different process, which is not unidirectional (Traugott and Heine 1991, pp.6-7). Campbell (2001, p.128) finds all these attempts unsuccessful. Heine et al. (1991, p. 50) also note that "the act of labeling the exceptions (as 'lexicalization') does not change the fact that they are exceptions".

Campbell (2001, p. 131) summarizes the attempts to ignore counterexamples as following: "changes of *lexical* > *grammatical* are called 'grammaticalization' and are unidirectional, by definition; changes of *grammatical* > *lexical* are called 'lexicalization' and while they would appear to go against the unidirectional assumption of 'grammaticalization', because they are given a different name, 'lexicalization', they can be considered, again by definition, not really to be counterexamples to the unidirectionality claim". He concludes, however, that "instances

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of the conversion of grammatical material into lexical items are clearly against the unidirectionality claim, regardless of whether such examples are given a new name ('lexicalization') or not".

He also gives counterexamples, such as Estonian question markers discussed in Chapter 3, which do not involve lexicalization in the above sence, but at the same time go in the wrong direction according to the unidirectionality claim: *-s* [bound clitic] *'question marker'* > *es* [independent word] *'question marker'*. In this case both morphs are grammatical (without lexical content), but the change goes against the direction predicted by the 'cline of grammaticality': *content item* (lexical) > *grammatical word* > *clitic* > *affix* (Hopper and Traugott 1993, p. 7). It is more striking that Hopper and Traugott (1993, pp. 128-129) conclude: "To date there is no evidence that grammatical items arise full-fledged, that is, can be innovated without a prior lexical history in a remote (or less remote) past".

Finally, it is interesting to note that the notion of unidirectionality has been applied in very different ways (which may be in conflict with each other) to different phenomena, for example, semantics/pragmatics: *more referential> less referential meaning* (Traugott and Konig, 1991); semantics: *less abstract* > *more abstract meaning* (Sweetser 1990; Heine et al. 1991; Bybee et al. 1994); phonetic form: *phonetic substance is reduced, not increased* (Heine and Reh 1984; Bybee et al. 1994; Haspelmath 1998); statistical nature: *frequency of occurrence increases, not decreases* (Bybee et al. 1994; Haspelmath 1999; Heine et al. 1991); structural type cline: *discourse> syntax>morphology* (cf. *free lexical item* > *clitic* > *affix*) (Givon 1979; Lehmann 1995 [1982]).

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To summarize, most linguists recognize the overall tendency towards unidirectionality in changes involving grammatical elements. However, there is disagreement about whether unidirectionality is a (testable) hypothesis at all and whether any attempts involving grammaticalization are appropriate for explaining this recognized directional tendency. In light of various counterexamples many linguists including Campbell (2001, p.133) think that in its strong form the unidirectionality claim is false. Campbell argues also that "the directionality tendency observed in changes discussed in the grammaticalization literature is derived as an expected by-product of general properties of linguistic change and requires no special appeal to grammaticalization itself to explain it".

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Chapter 5

Russian amalgams

Some of the most frequent words in our language are simple, and cannot be divided into smaller meaningful segments. Most words, though, are composite. They have a recognizable internal structure. Some of these words have a base (root) with affixes - prefixes and suffixes - attached to this base. Some words are compounds, consisting of more than one base. Compounds contrast with phrases, which consist of two or more words that are grammatically related. For example, the distinction between *blackboard* and *black board* can be viewed conceptually. *Blackboard* is a name of an object that is not necessarily black in color. It differs from the combination of the adjective *black* plus the noun *board* written as separate words. Sometimes the conceptual criterion is not entirely satisfactory. Another criterion is word stress. Compounds tend to have their main stress on the first base. The same tendency applies if the compound is written as two words. So, compounds are distinguished from phrases conceptually, by being written solid or hyphenated, or by their stress pattern. All three criteria need to be taken into account.

Compounding should not be confused with lexicalization. Lexicalization differs from compounding because the constituents of lexicalized forms are primarily grammatical functors rather than content words. As a kind of lexical change lexicalization is almost opposite to grammaticalization. In this process words that are primarily functors (including prepositions, conjunctions, demonstratives, pronouns, complementizers) join together to form a new word. It happens when certain words

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become commonly used together in certain contexts. In time, the original meaning of the group of words may be lost, but the expression continues to be used in those contexts. Though some of these groupings are still written as separate words and may be transparent, they now cannot be analyzed as strictly the sum of their parts. After being lexicalized the new word becomes an unanalyzable lexical item. In every case, a new specific meaning and function is attached to the group. In this way, new lexemes can be created out of grammatical words, and the language can rejuvenate itself. These forms seem to contradict the unidirectionality postulate. One example of lexicalization can be the reanalysis of acronyms into full words, where a new lexeme is created from parts that individually do not carry lexical content.

Another example of lexicalization, amalgamations are forms that formerly were composed of more than one free-standing word. These words occurred together in some phrase, and as a result of the change get bound together in a single word, for example *nevertheless* and *already*. Campbell (1999, p.277) notes that "amalgamation is often considered a kind of analogy", and gives an example of amalgamation under way inferred by the frequent (mis)spellings of *alright* for *all right* (probably influenced by analogy with *already*) and *alot* for *a lot* meaning 'many, much'. He lists other such examples from English (*almost <all most, alone <all one, altogether < all together, always <all ways, however< how ever, without < with out, wannabe(e)* of slang origin<*want to be)*. Campbell (1999, p.277-278) presents also examples from Spanish, Latin, and French.

Campbell (1999, p. 278) notes that "many of the cases today called *grammaticalisation* are instances of amalgamation, where formerly independent words

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are amalgamated with the result that one becomes a grammatical affix." In a familiar example, *mente 'in mind'* (from the ablative of Latin *mens 'mind'*) was amalgamated (grammaticalized) as an adverbial clitic in Spanish and other Romance languages or as suffix in French. From *absoluta mente 'in absolute mind'* Spanish *absolutamente* and French *absolument 'absolutely'* develop.

As Hopper points out, the process of form and meaning change neither has an anterior limit, nor is restricted synchronically. He adds (1990, p.158): "The accretion of phonological segments through more or less redundant affixation is a constant process; we often do not recognize it as such because the accruals are usually quite respectable morphemes, such as *–ate* in *orientate*, *ir-* in *irregardless*, and so on." Hopper sees the effect of the accretions, though "not [in] so much add[ing] new meaning where none was before, but [in] increase[ing] 'bulk', the sheer physical length, of the word" (Hopper 1990, p.158).

Interesting and also ironic examples of this tendency in language change are the words *grammaticalization* and *lexicalization* themselves. In fact, if you call a formation of grammatical category (morpheme) a gram (Bybee 1998), then the process could be referred to as simply *grammation.* The same can be said about *lex*, and *lexicalization - - lexation* would do. These and other examples show that speakers have a tendency to add 'bulk' to words at the morphological level, and illustrate two different forces in language change, one that wants to conform, and the opposite one, or, as Bynon (1977, p. 34) puts it "two opposing views regarding the relationships between form and meaning in language: (1) that it was governed by analogy (i.e. by orderliness and

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regularity) and (2) that it was governed by anomaly (i.e. by the absence of such regularity)."

As amalgams, compounds are found in all word classes, particularly in nouns and adjectives. New coinages are mainly nouns and adjectives. Some of the prepositions, semi-auxiliaries, and conjunctions are not strictly compounds because the segments can be separated by the insertion of other words: *was (perhaps) going to*; *except (I think) that.*

Examples of multiple-morpheme lexicalization (or amalgams) can be found in different languages, for example in English: *because 'for the reason that, since'*, *however 'but, in spite of'*, *whereas 'since'*, *within 'in an inner place'*, *without 'indicates lack of somebody or something'*, *before 'in advance'*. Although extensive research has been done on compounding in open classes (see Townsend 1968 for examples on Russian word-formation in open classes), not much can be found in the scientific literature on the fusion of words that belong to closed classes such as conjunctions, prepositions, or sentence (discourse) connectors. Some of these forms function as discourse markers. Traugott describes discourse markers as a category "the prime function of which is ...to mark relations between sequentially dependent units of discourse. These items are all primarily pragmatic, or at least non-truth functional, which may account for why they have been largely ignored until the last few years" (Traugott 1995, p.5). She argues that "a cline: Clause-internal Adverbial > Sentence Adverbial > Discourse Marker should be added to nominal clines of grammaticalization theory" (Traugott 1995, p.1), and thinks that developments of lexical items (for example, verbs) into auxiliaries "can also be regarded as involving increase in syntactic scope... The large number of changes of this

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type suggests that syntactic scope increases must be allowed for in a theory of grammaticalization" (Traugott 1995, p.14). She also pointes out that "if a language has a disjunct slot with a specific syntactic-pragmatic function the data ... suggest that items can migrate there provided they have the appropriate semantics. This claim would seem to run directly counter to Givon's well-known cline (1979, p. 209): discourse > syntax > morphology > morphophonetics > zero" (Traugott 1995, p.5).

It is also interesting that in his article on desemanticization Greenberg notes that at the end of its life a grammatical morph can contract with a free morpheme to the point that it is no longer analyzable as a separate morph. He says, "We can then say that it is lexicalized in the sense that synchronically it is a part of the host morpheme. We may also say that it is desemanticized in the sense that it can no longer be assigned a meaning" (Greenberg 1991, p.301).

Now I provide examples of Russian amalgams that consist of morphemes that belong to closed classes. I divide my examples in four broad categories. The first is a class I label *Discourse Connectors*. These are coordinators and subordinators.[3] The second is a set of complex forms that function as prepositions. The third includes examples of pronouns (amalgams of question words, quantifiers, indefinites), and the fourth is a list of forms commonly labeled *adverbs*. Even though adverbs form an open class, I give these examples because each of them consists of at least one morpheme that belongs to a closed class – and these examples do show the kinds of morphemes that are likely to form amalgams. It is interesting that almost all examples that I found are cases of a prefix becoming part of the host morpheme, not a suffix.

[3] The difference between the two does not seem always clear to me. Additionally, the labels *coordinator, subordinator, discourse connector,* do not necessarily match the labels conventionally assigned to those forms in dictionaries.

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I give many examples of discourse connectors (the first group) in context, with notes that attempt to describe their import, and when appropriate, their multiple functions. The other sets of amalgams are simple lists, data that remain to be studied in detail.

1. Discourse Connectors (coordinators and subordinators)

Here is a list of complex forms with members belonging to closed classes that function as sentence connectors (discourse coordinators and subordinators):

iz-za 'because of' (from-after) - subordinator. This amalgam has causative import.

On ushol iz-za togo chto shol dozhd'. 'He left because it was raining.'

he leave(past masc.) from-after what go(past masc.) rain

iz-za can also function as a preposition, and then it is followed by a noun in a genitive case:

On vi-shel iz-za dom-a. 'He came from behind the house'

he prefix(out) go(past masc.) from-after house gen. case

tak kak 'because, since' (so how) - coordinator. Also with causative import:

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On choroshij student, tak kak mnogo rabota-jet.

'He is a good student, because he works hard'

he good student so how much work (3rd sing.)

li-bo...li-bo 'either...or'(li(particle) bo(particle)... li(particle) bo(particle)) – coordinator. This 'paired' conjunction is used when one clause precludes the other:

Libo ti pozvonish, libo ja ne prijdu.

'Either you call, or I am not coming.'

li(part.) bo(part.) you call(fut. 2nd sing.) li(part.) bo(part.) I neg. come(fut. 1st sing.)

i-li...i-li 'either...or' (and li(particle)... and li(particle)) - This 'paired' conjunction is synonymous with *libo...libo.*

ne to...ne to 'either...or' (neg.that...neg.that). This 'paired' conjunction is used in environments similar to those in which *ili...ili* is used, but has a nuance of uncertainty:

Ne to veter zakhlopnul dver', ne to kto-to voshol.

'Either the wind slammed the door, or somebody had come.'

neg.that wind slam(perf. past masc.) door neg.that who part. come(perf. past masc.)

chto-bi 'in order to, so as, that' (what bi(particle)) - subordinator. This amalgam introduces a clause that expresses a wish, request, demand, command, or necessity:

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Ona skazal-a jemu vsjo chto-bi zastav-it' jego uj-t'i.

'She told him everything in order to make him leave.'

she say(past fem. sing.) he(dat. case) everything what bi(particle) make

inf. he(acc. case) leave inf.

Ja khochu chtobi on prishol.

'I want him to come'

I want(pres. 1st sing.) what *bi*(particle) he come(perf. masc.)

po-to-mu chto 'because' (at that dat. case what) - subordinator.

Mi speshil'-i po-to-mu chto bilo pozdno.

'We were in a hurry because it was late.'

we hurry(past plur.) at that dat. case what be(past sing. neutral) late

bud-to bi 'as if, as though' (be that *bi*(particle)) - subordinator. Clauses introduced by *budto bi* report some supposed or doubtful fact or phenomenon, and modify verbs of speech, thought, or physical perception:

On ulibajetcja budto (bi) rebjonok.

'He smiles as if he is a child.'

he smile(pres. 3rd sing.) be that *bi*(particle) child

Ja slishal budto bi vi ujezzhajet'e.

'I heard you are leaving.'

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I hear(past masc.) be that *bi*(particle) you leave(pres. 2nd plur.)

odn-a-ko 'but' (one fem. ko(particle)) - coordinator. This amalgam has the same meaning as *no* 'but':

On plak-al, odn-a-ko nikto jego ne slish-al.

'He cried but nobody heared him'

he cry past masc. one fem. ko(particle) he(acc. case) neg. hear past masc.

v-proch-em 'however' (in other prep. case) - coobordinator.

Im ne nravit-sja eto, v-proch-em oni so-glas-il-is'.

'They don't like it, however, they have agreed.'

they(dat. case) neg. like(pres. 3rd sing) this in other prep. case they perf.

agree past

v-proch-em 'however' (in other prep. case) can also function as an adjective in specific environments:

Vo vs-jom proch-em oni so-glas-il-is'.

'In everything else they have agreed.'

in everything prep. case other prep., case they perf. agree past refl.

blagodar-ya 'due to, thanks to' (thank ger.) - subordinator. In clauses headed by the demonstrative *to-mu* (that dat. case) and a question word *chto* (what):

blagodar-ya to-mu chto Ivan s-del-al 'due to what Ivan has done'

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thank ger. that dat. case what Ivan perf. do past

blagodar-ya can also function as a preposition, and then it is followed by a noun in a dative

case:

*On pri-sh-ol vo vremja blagodar-ya Ivan-**u*** 'He came in time thanks to Ivan'

he perf. come past in time thank ger. Ivan dat. case

or can be a gerund, and then the object is a noun in an accusative case:

*On ulib-al-sja blagodar-ya Ivan-**a*** 'He smiled while thanking Ivan'

He smile past refl. thank ger. Ivan acc. case

khot-ya 'though, although' (wish gerund(old)) - subordinator

On ne prijekh-al, khot-ya mi zhd-al-i jego.

'He has not come although we have been waiting for him.'

He neg. come (past masc. sing) wish gerund(old) we wait(past plur)

he(acc. case)

nesmotr-ya na 'in spite of ' (negative look gerund on) - subordinator. Its function also parallels *blagodar-ya* in a clause introduced by a demonstrative *to* (that) and a question word *chto* (what). In such case the negative *ne* is attached to the gerund:

On prish-ol ne-smotr-ya na to chto Ivan s-del-al.

'He came in spite of what Ivan has done.'

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he come past masc. neg look ger. at that what Ivan perf do past

nesmotr-ya na can also function as a preposition, and then the noun is in the accusative case. Here too the negative *ne* is attached to the gerund:

Ne-smotr-ya na mnenie Ivan-a on u-sh-ol.

'He left in spite of Ivan's opinion.'

neg look ger. at opinion Ivan acc. case he perf. leave past

ne smotr-ya na can also function as a gerund in specific contexts, followed by a noun in the accusative case. In such case the negative *ne* is written separately from the gerund:

On ush-ol ne smotr-ya na Ivan-a.

'He left without looking at Ivan.'

he leave past masc. neg look ger. at Ivan acc. case

v-ryad li 'unlikely' (in row acc.case particle li) - coordinator.

Pogoda plokhaja. V-ryad li mi po-jd-jom gul-jat'.

'The weather is bad. We unlikely will go for a walk.'

weather bad in row acc.case li (particle) we fut. go 1st plur. walk inf.

Other examples of connectors (coordinators or subordinators) are:

coordinators:

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ot-sjuda 'hence, from here'
from here (gen. case)

po-eto-mu 'therefore'
at this dat. case

za-odno 'at the same time'
for one acc. case

boleje meneje 'approximately'
more less

pust' 'let,let's'
let imper.(old) *(pustit')*

vsjo-taki 'for all that'
everything-so

dejstv-itel'no 'indeed, actually' – verbal adverb
act adv.suffix

s-nachal-a 'at first'
from beginning gen. case

v dejstv-itel'nost-i 'in fact'
in reality prep. case (a noun *reality* is formed from a verb *act* with a nom. suffix)

v-mest-e 'together'
in place prep. case

v-nachal-e 'at first'
in beginning prep. case

v-plotnu-yu 'closely'
in dense acc. case

v-posledstvi-i 'afterwards'
in consequence prep. case

v-predveri-i 'in front of'
in front prep. case

v prodolzhenie 'during, in the course'
in continuation acc. case

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v-sledstvi-e 'because of'
in consequence acc. case

v sil-u 'because'
in force acc. case

v techenie 'during'
in stream acc. case

v-vid-u 'because of'
in sight(view) prep. case

subordinators:

bol-eje to-go 'furthermore'
more that gen. case

t-em ne men-eje 'nevertheless'
that instr. case neg. less

zhe 'but' – is used to express contrast.
particle

na-oborot 'on the contrary, vice versa'
on turn acc. case

v-mest-o 'instead of'
in place acc. case

The next two groups are complex forms (amalgams) that include only members of closed classes, all examples of members of closed classes fused together into a lexical word:

2. Prepositions

vo-krug 'around'
in circle.acc case

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v-ne 'outside'
in not

v-plot' 'right up to'
in density(old, spelled same as flesh) acc. case

v-rod-e 'like, kind of'
in kind prep. case

3. Pronouns

chto-ni-bud' 'something, anything'
what neg. be

gde-ni-bud' 'somewhere'
where neg. be

kak-ni-bud' 'somehow'
how neg. be

kakoj-ni-bud' 'some, any'
which neg. be

kto-ni-bud' 'somebody'
who neg. be

4. Adverbs

These are of interest because they are complex forms that include at least one member of closed class.

gde-ni-bud' 'somewhere'
where neg. be

iz-dalek-a 'from far away' (*dalek(o)* here is an adverb functioning as a noun)
from far(adverb) gen case

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iz-dal-i 'from far away' (*dal'* here is a noun)
from far(noun) gen case

iz-redk-a 'from time to time'
from seldom gen case

kak-ni-bud' 'somehow'
how neg. be

na-bok 'on one side'
on side.acc. case

na-chisto 'clean'
on clean(adv.)

na-edin-e 'in private'
at one(old) prep. case

na-konets 'finally, at last'
on end.acc. case

na-legk-e 'light'
on lightness prep. case

na-levo 'to the left'
on left.acc. case

na-litso 'present, available'
on face.acc. case

na-pravo 'to the right'
on right.acc. case

na-verkh 'up'
on top.acc. case

na-verkh-u 'above'
on top prep. case

na-vek-i 'forever'
on age(century).plural

na-vsegda 'for good'
on always

ne-khotya 'reluctantly'

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not wish gerund(old)

pod-ryad 'one after another'
under row

polnost'-yu 'completely'
fullness(old) instr. case

se-go-dn'-ya 'today'
this gen.case day gen.case

sei'-chas 'now'
this hour

s-legk-a 'slightly'
from lightness gen. case

s-lev-a 'from the left, on the left'
from left gen. case

s-lishk-om 'too'
with excess(old) instr. case

s-naruzh-i 'outside, from the outside'
from outside gen. case

s-niz-u 'from below'
from below gen. case

s-nov-a 'again'
from new gen. case

so-vs-em 'quite, totally'
with everything instr. case

s-pered-i 'in front of'
from front gen. case

s-perv-a 'first, at first'
from first gen. case

s-prav-a 'from the right, on the right'
from right gen. case

s-raz-u 'at once'
from one gen. case

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s-verkh-u 'from the top'
from top gen. case

tot-chas 'immediately'
that hour

v-bliz-i 'near by'
in closeness(old) prep. case

v-dal' 'into the distance'
in distance acc. case

v-dal-i 'in the distance'
in distance prep. case

v-dvo-yom 'both, two of us (you, them)'
in two prep. case

v-glub' 'deep into'
in depth acc. case

vo-krug 'around'
in circle

v-mig 'in a moment, in no time'
in instant acc. case

v-niz 'downward'
in bottom acc. case

v-niz-u 'below'
in bottom prep. case

v-per'jod 'forward'
in front acc. case

v-pered-i 'in front of'
in front prep. case

v-poln-e 'quite'
in full prep. case

v-por-u 'fit'
in time acc. case

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v-pravo 'to the right'
in right acc. case

v-prok 'for later use'
in use(profit) acc. case

v-shir 'in width, in breadth'
in width acc. case

vse-tselo 'fully'
every whole

v-skor-e 'soon'
in quickness prep. case

v-sled 'after'
in footprint acc. case

v-slukh 'aloud'
in hearing acc. case

v-slep-uyu 'blindly, in a dark'
in blind acc. case

v-tajn-e 'secretly'
in secret prep. case

v-verkh 'upward'
in top acc. case

v-verkh-u 'above, overhead'
in top prep. case

v-vol-yu 'to one's heart's content'
in freedom(liberty) acc. case

vo-vrem-ja 'in time'
in time acc. case

za-novo 'over again'
for new

za-odno 'together with, in support'
for one acc. case

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Conclusion

In this thesis first I reviewed the well-known phenomenon called grammaticalization, the process whereby lexical items and constructions come, in certain linguistic contexts, to serve grammatical functions. Grammaticalization occurs on a 'cline', that involves an evolution from content item to grammatical word to clitic to inflectional affix.

Then I reviewed lexicalization, a phenemenon almost opposite to grammaticalization, and defined as the process by which complex lexemes tend to become single units with a specific content, through frequent use.

Then I reviewed several assessments of the so-called grammaticalization theory, its basic tenets, and the hypothesis of unidirectionality.

Finally, I gave examples of Russian amalgams, defined as complex forms consisting of members of closed classes. These examples are aimed to show that the process of amalgamation as I have defined it is a common process in Russian, as it is in English and other languages.

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