

Degrammaticalization and obsolescent morphology: Evidence from Slavonic

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Abstract

Recent work in grammaticalization has highlighted cases where former inflectional affixes have gained independence on an unexpected path towards clitic or full-word status. Such cases challenge the hypothesized unidirectionality of grammaticalization at the formal level (word > clitic > affix). This article examines such developments, citing new evidence from the development of the person–number inflection of the conditional auxiliary in Slavonic. In some varieties, this comes to be identified with an existing clitic, the present tense of the perfect auxiliary ‘be’. This development is reminiscent of other cases where obsolescent morphology is reassigned to productive functions and which can best be treated as instances of exaptation–adaptation, a process which lacks directionality and frequently leads to counterdirectional change.

1 INTRODUCTION

Grammaticalization, the emergence of morphemes expressing grammatical categories from formerly lexical material, is generally considered to be a unidirectional phenomenon. Items may develop more grammatical functions and may become more morphologically integrated into another element, but not the reverse. This article considers a possible example of a counterdirectional change ('degrammaticalization') in Slavonic, against the background of research into one particular type of degrammaticalization involving former inflectional affixes that acquire greater independence as the inflectional system of which they were once a part disintegrates.

1.1 Characteristics of grammaticalization

Grammaticalization involves changes at formal, functional and semantic levels. At a formal level, items shift from phonologically independent words (free morphemes) to clitics phonologically dependent on neighbouring items, and ultimately to bound morphemes, affixes that select a particular category. This involves loss of phonological independence to a greater or lesser extent and / or development of narrower selectional requirements, for instance, attachment to an element of a particular grammatical category.

At a functional level, items change category, moving along a cline from the most lexical categories such as noun or verb to the most functional categories such as case or agreement inflection. Although the exact nature of the cline from lexical to grammatical is open to some debate, it is reasonable that there are intermediate stages. For instance, prepositions are less lexical than nouns or verbs, and some prepositions, for instance *despite*, are more lexical than others, such as *of*; auxiliaries are less lexical than full verbs, but more lexical than tense inflections; articles are less lexical than demonstratives, and so on.

At a semantic level, items undergo various developments that can broadly be characterized as the emergence of abstract meanings out of and alongside concrete ones.

Movement at these three different levels can be shown in terms of the following hierarchies, where > is taken to represent the single permitted direction of change:

- (1) a. Formal hierarchy of grammaticalization
free morpheme / word > clitic > affix
- b. Functional hierarchy of grammaticalization
lexical > functional / grammatical
- c. Semantic hierarchy of grammaticalization
concrete > abstract

Movement to the right along one of these clines often involves movement to the right on the others, although this is not without exception.

As Kiparsky (2005: 3–4) notes, some definitions make reference only to one of these hierarchies. Traugott (2002: 27), for instance, terms movement to the right on the cline in (1)a ‘secondary grammaticalization’, and movement to the right on the cline in (1)b ‘primary grammaticalization’. She considers only the latter actually to be grammaticalization. Other existing definitions making reference to form and lexical vs. grammatical function are given in (2) and (3). A purely semantic definition could also be conceived of along the lines of (4).

- (2) Formal definition of grammaticalization: a change “by which the parts of a constructional schema come to have stronger internal dependencies” (Haspelmath 2004: 26)
- (3) Functional definition of grammaticalization: a change “where a lexical unit or

structure assumes a grammatical function, or where a grammatical unit assumes a more grammatical function” (Heine, Claudi and Hünemeyer 1991a: 2)

- (4) Semantic definition of grammaticalization: a change whereby abstract grammatical meanings come to be encoded using items which formerly encoded more concrete meanings (cf. Heine, Claudi and Hünemeyer 1991b: 155–60, Traugott 1982, 1990, Traugott and Dasher 2001)

Newmeyer (1998: 252–60), on the other hand, assumes a definition of grammaticalization as the constellation of phonological reduction, reanalysis to a more grammatical category and a relevant semantic change (all of which occur independently).

The definitions in (2)–(4) pick out slightly different sets of changes as grammaticalization, since some changes fit only one of them. An item that develops the status of a clitic will undergo grammaticalization according to the definition in (2), but, unless it changes its meaning or grammatical function, it will not fit either of the other definitions. An example is the development of clitic auxiliaries such as in *would've* /əv/ or *I've* /v/ for full form *have* /hæv/ in English. Similarly, grammaticalization of prepositions (for instance, German *nach* ‘after’ > ‘according to’) or complementizers (for instance, English *since* ‘posterior in time’ > ‘as a result of’) to encode more abstract relations may involve movement only along the semantic hierarchy. Historical linguists often disagree as to whether such cases constitute grammaticalization or not. Movement solely along the functional hierarchy in (3) may well be impossible, since such movement always or almost always involves a semantic shift that would constitute a shift along the semantic hierarchy too.

Typically, however, examples of grammaticalization involve movement along all three clines (as in Newmeyer’s definition), and movement to more functional grammatical status often involves an increase in abstraction. A good example of grammaticalization involving all

three hierarchies is the development of the Bulgarian future marker *šte* from the third-person singular present tense of Old Church Slavonic *xŭtěti* ‘want’, *xŭšte* (for details, see Kuteva 2001: 125–8). In the course of its historical development, it changes category from control verb to auxiliary. The formal reduction involves the irregular loss of the first syllable, plus a phonological reduction to clitic status. The category shift from lexical (verb) to functional category (auxiliary) is further reflected in the loss of independent argument structure on the part of *xŭtěti*. Whereas only volitional subjects were allowed at one period, later any subject permitted by the complement verb is possible. This leads to the spread of *xŭtěti* to contexts such as ‘It will rain’. Ultimately it also ceases to show subject-verb agreement, turning into an invariant future particle. Finally, the shift from volitional meaning to prediction/future meaning represents an increase in the degree of abstraction conveyed.

1.2 Degrammaticalization and deflexion

The search for examples of degrammaticalization involves looking for developments that involve movement to the left on the hierarchies in (1). The best examples will be counterdirectional changes that involve two or all of them. Many potential cases of degrammaticalization have been discussed in the literature (for lists, see Campbell 2001: 127–8, Haspelmath 2004: 29). In order to be a serious challenge to the unidirectionality hypothesis, however, it needs to be demonstrated that the cases in question proceed in much the same way as grammaticalization itself, via reanalysis of existing forms, rather than by creation of new items *ex nihilo*. This criterion rules out zero conversions (‘lexicalizations’), such as the preposition to verb change of *down* in *down a beer* or *up* in *up the price* or the affix to free word change involved in the creation of words such as *ism* or *teens*, since they involve a morphological derivational process which has nothing in common with grammaticalization. This view is taken by Hopper and Traugott (1993: 127) and by Norde (1998: 235–6), while Newmeyer (2001: 209) takes the opposite view that these are legitimate

counterexamples. However, other cases look more promising, in particular, cases where affixes gain greater autonomy (Norde 1998, 2001a, 2001b), and cases of syntactic reanalysis leading to a category shift in the ‘wrong’ direction (syntactic lexicalization) (Willis 2007).

It is the former group that concerns us here. Potential cases involve a change from inflectional affix to a less affixal, more clitic-like status, either a clitic or a phrasal affix. They seem particularly likely during the loss of an inflectional category (deflexion). As some class of morphological inflection is lost, one or a small number of the previous inflectional morphs may survive, developing morphologically more independent properties than previously. In this section, some existing cases are outlined. A frequent, though not universal, factor in these cases is that the other morphological exponents of the category expressed by the degrammaticalizing item have become or are becoming obsolete. It means that cases of affix-to-clitic degrammaticalization by deflexion have much in common with exaptation, the phenomenon of reusing obsolescent morphological material for new uses (Lass 1990, Vincent 1995). We will return to this issue in section 3.1, where it will be argued that exaptation (and the related concept of adaptation) and affix-to-clitic degrammaticalization are essentially aspects of a single scenario for change.

A useful distinction between two types of affix-to-clitic degrammaticalization by deflexion can be made:

- (i) affix > clitic/phrasal affix degrammaticalizations leading to creation of a new item;
- (ii) affix > clitic/phrasal affix degrammaticalizations to an existing item.

We will consider each of these in turn.

1.2.1 *Affix > clitic/phrasal affix degrammaticalizations leading to creation of a new item*

The first type can be exemplified by the innovation of a first-person plural pronoun *muid(e)* in some Irish dialects from an earlier inflection (Bybee, Perkins and Pagliuca 1994: 13–14, Doyle 2002). The *-muid/-mid* suffix had become the only inflection in some paradigms, and hence was liable to reanalysis.

Perhaps the best known example that falls into this category is the development of the genitive *-s* case ending in English and Swedish into a possessive phrasal affix (Norde 1998, 2001a, 2001b, 2006) (for alternative views, see Allen 1997, Allen 2003, Börjars 2003, Delsing 1999, 2001). In Old English and Old Swedish, *-s* appeared as an inflection on each word (or, more accurately, each head) of a genitive noun phrase phrase, as in (5) and (6), as would be expected of a case feature.

- (5) þes deofles bearn
the.GEN devil.GEN child
‘the devil’s child’ (Old English) (Norde 2001b: 247)
- (6) ens salogs manz munne
a.GEN blessed.GEN man.GEN mouth
‘a blessed man’s mouth’ (Old Swedish) (Norde 2001b: 247)

In modern English and Swedish, *-s* attaches at the phrasal level, at the end of the phrase, and appears once only. This is clearest in ‘group-genitive’ constructions, where there is material after the head noun and the *-s* attaches to the last word, even though it is not the head:

- (7) the man on the street’s opinion

- (8) folket på gatans omdöme
[people on the.street]-s opinion

‘the man on the street’s opinion’

(Norde 2001b: 247)

This is degrammaticalization at two of the levels in (1). First, the item gains greater positional freedom, moving away from the bound morpheme ending of the formal hierarchy towards the clitic position. This is true even though the modern forms of these items have some affixal properties (Börjars 2003, Zwicky 1987).

The category shift also represents a move from the grammatical towards the lexical end of the functional hierarchy. English and Swedish possessive *-s* are often analysed as definite determiners (Abney 1987), in which case their historical development involves a category shift from case marker to determiner, a move from more to less functional. This view is supported by other changes in the syntax of possessive *-s*. In modern English a possessor noun phrase may not co-occur with a determiner:

- (9) *the John’s daughter (cf. the daughter of John)

Such a restriction did not hold in Old English (Rosenbach 2004: 83–5). The imposition of this restriction is a historical innovation that can be straightforwardly explained if *-s* now occupies a syntactic determiner position, thereby automatically preventing co-occurrence with another determiner. This means that it occupies a syntactic position at some level of representation today, whereas in older stages of the languages, it was a subcomponent of a word.

Taken together, these changes represents the creation of a new item, the languages not previously having had a phrase-level possessive marker *-s*.

1.2.2 Affix > clitic/phrasal affix degrammaticalization to an existing item

An example of the second case is the development of the first person plural endings in some varieties of Spanish, for instance, New Mexican Spanish (Janda 1995). Janda claims that the first person plural ending *-mos* in standard Spanish forms such as *cantábamos* ‘we were singing’ was reanalysed as a form of the object clitic *nos*, as a result of which *nos* became merely a marker of first person plural (rather than encoding case distinctively). It was susceptible to this because it was one syllable longer than other members of the verbal paradigm (such as first singular *cantaba* ‘I was singing’, second singular *cantabas*, third singular *cantaba* etc.), and the paradigm was in any case morphologically impoverished in the varieties concerned. That is, *-mos* degrammaticalized, being assigned to a more independent pre-existing morpheme, because it was paradigmatically isolated.

Norde (forthcoming: section 3.3.6), while accepting that this type is relevant to the degrammaticalization debate, prefers to put them in a separate category, namely ‘replacement’, on the grounds that one morpheme is replaced by a completely different morpheme rather than developing into a new less grammatical morpheme. That is, there is apparent continuity in the cases of degrammaticalization discussed above, but discontinuity in cases of replacement. While this is true when successive stages of a language are compared, at the level of language acquisition, the two have much in common. Both are abductive reanalyses where children fail to assign a particular morph to its historically correct morpheme. In the case of replacement, they assign it wholesale to some other existing morpheme (*-mos* is assigned to morpheme *nos*). In the cases of degrammaticalization discussed in section 1.2.1 above, children correctly give the morph the status of a separate morpheme, but assign it some grammatical properties taken over from some other existing morpheme or group of morphemes (Irish *-muid* is assigned the status of a separate morpheme, but is wrongly put in the class of pronouns and gains various grammatical properties

accordingly). The result in both cases is ‘accidental’ reassignment to a less grammatical class of items, a fact which means that they are closely connected, whatever terminology is used.

2 AFFIX > CLITIC DEGRAMMATICALIZATION IN THE CONDITIONAL IN SOME SLAVONIC VARIETIES

Let us now turn to the Slavonic degrammaticalization data, which concern the development of the conditional across the Slavonic languages. In essence, it will be argued that in some Slavonic varieties – evidence will be drawn principally from Russian, Ukrainian, Slovak, Serbian and Croatian – a reanalysis of the conditional from auxiliary + past participle to modal particle + perfect tense could only be completed because a degrammaticalization change was subsumed within the reanalysis. This led, for instance, Old Russian second person plural conditional auxiliary *byste*, where *-ste* is a person–number suffix, to be reanalysed as conditional particle *by* + (existing) perfect auxiliary *este*. Reanalysis of a person–number suffix as an instance of the perfect auxiliary involves a decrease in bondedness (suffix > clitic) and a move to a less functional category (person–number marker > auxiliary). The result is a degrammaticalization of the second type, affix > clitic/phrasal affix degrammaticalization to an existing item. I will further argue that such reanalyses occur because learners, in an attempt to make sense of an obsolescent or impoverished grammatical subsystem, resort to analysing forms that they encounter in terms of another area of grammar or lexicon.

2.1 Overview of the formation of the conditional in Slavonic languages

The conditional mood is formed in all Slavonic languages using a particle or auxiliary (both derived historically from the aorist of ‘be’) plus the ‘*l*-participle’, synchronically either a past

participle or else a finite past tense verb, depending on the language:¹

- (10) Esli **by** vy **byli** na moem meste, čto **by** vy
if COND you.PL be.PAST.PL in my position what COND you.PL
sdelali?
do.PAST.PL
'If you were in my position, what would you do?' (Russian)
- (11) Kad **biste** **bili** na mom mestu, šta **biste** **učinili?**
if COND.2PL be.PP.PL in my position what COND.2PL do.PP.PL
'If you were in my position, what would you do?' (Serbian)
- (12) Gdy**byście** **byli** na moim miejscu,
if+COND.2PL be.PP.PL in my position
co **byście** **zrobili?** / co **zrobilibyście?**
what COND.2PL do.PP.PL what do.PP.PL+COND.2PL
'If you were in my position, what would you do?' (Polish)

Forms of the conditional in the standard varieties of those Slavonic languages particularly relevant to the argument here are given in Table 1. See Panzer (1967: 30) for an overview of the different languages and, for individual languages, Bielec (1998: 55) (Polish), Pugh and Press (1999: 254–5) (Ukrainian) and Short (1993: 491) (Czech).

¹ Glosses used for Slavonic data in this article are as follows: ACC = accusative, AOR = aorist (simple past), COND = conditional, DAT = dative, GEN = genitive, INF = infinitive, MASC = masculine, NEG = negative particle, PP = past participle, PL = plural, PRES = present, Q = question marker, SG = singular.

	Polish ²	Czech	Slovak	Russian	Serbian
				Ukrainian	Croatian
first sing.	-bym	bych	by som	by / b	bih
second sing.	-byś	bys	by si	by / b	bi
third sing.	-by	by	by	by / b	bi
first plur.	-byśmy	bychom	by sme	by / b	bismo
second plur.	-byście	byste	by ste	by / b	biste
third plur.	-by	by	by	by / b	bi

Table 1. Paradigm of the conditional auxiliary or particle in selected Slavonic languages.

² The Polish conditional auxiliary normally suffixes to the lexical verb, but may appear independently under some circumstances. The example in (12) illustrates both options. It is generally analysed synchronically as involving a series of conditional suffixes, *-bym*, *-byś* etc. derived historically from an independent auxiliary, attached to the end of the past participle. However, the endings of the auxiliary have been remodelled to coincide entirely with those of the perfect, hence *byłbym* ‘I would be’ and *bylibyśmy* ‘we would be (human masculine)’ in place of historically expected ***byłbych* and ***bylibychom*, under the influence of *byłem* ‘I was (masc.)’ and *byliśmy* ‘we were (human masculine)’. This could have arisen via grammaticalization of a conditional particle *by* plus the past tense. The development would be past participle + conditional particle *by* + perfect auxiliary ‘be’, **byli + by + (je)śmy > byliśmy*. In practice, the current forms actually seem to have arisen via successive analogical reformation of the conditional auxiliary on the model of the perfect auxiliary, for instance, first person plural *bychom > bychmy > bysmy > byśmy* (Kuraszkiewicz 1981: 132–4). Thus, Polish has not undergone the reanalysis of the conditional described below.

There are two main ways in which the languages vary. First, some languages have an invariant marker *by* (enclitic form *b*) (Russian, Ukrainian), identical to the third person singular form in languages with an inflecting form. Slovak probably also falls into this category (see below). Other languages have a fully inflected auxiliary paradigm.³

A second axis of variation concerns the form with which the conditional marker combines. Although in all languages, the conditional marker combines with what is historically an active past participle (the ‘*l*-participle’), the synchronic status of this varies. In all Slavonic languages with inflected auxiliaries – namely Upper Sorbian, Polish, Czech, Serbian, Croatian and Bulgarian – the conditional marker combines with what has remained a past participle, an element that combines with auxiliary ‘be’ in other contexts. This is also true of some languages with a conditional particle, Lower Sorbian, Slovene and Macedonian.

However, in Russian, Ukrainian, Belarusian and Slovak, the conditional marker combines with what is actually a past tense. This is clearest in Slovak, where the conditional is formed using both the conditional particle (*by*) and the past tense formed using auxiliary ‘be’ (*som, si* etc.):

³ The distinction is really between languages with agreement and those without, rather than between those with particles and those with auxiliaries. Even among languages that lack agreement, some (e.g. Slovene) have non-inflecting auxiliaries, while others (e.g. Russian) have a nonverbal conditional particle. Whereas Russian *by* may be used as a modal particle in nonfinite and nonverbal contexts, Slovene *bi* requires a past participle or an elipsis context in which a past participle can be reconstructed (Panzer 1967: 25). This suggests that Slovene *bi* functions as an auxiliary, whereas Russian *by* does not.

- (13) **Keby som bol na tvojom mieste, asi by som to ohlasil policii.**
 if+COND be.PRES.1SG be.PP.MASC.SG in your position perhaps COND
 be.PRES.1SG it report.PP.MASC.SG police.DAT
 ‘If I were in your position, perhaps I would report it to the police.’

The forms such as *som bol* and *som ohlasil* in (13) are simply the past tense of the respective verbs, formed from the present tense of the auxiliary ‘be’ (*som*) plus the past participle (*bol*, *ohlasil*). This is also true in Belarusian, Russian and Ukrainian, since those languages have reanalysed the *l*-participle as a simple past tense that never co-occurs with an auxiliary. The system in these languages is historically innovative, having arisen via a reanalysis of the participle in the third person singular as a full past-tense form, which has therefore been generalized to the rest of the paradigm. It is this reanalysis that is crucial for the developments that we shall be considering. After a brief look at the ancestor system, we will consider the historical data from these languages in turn, Russian at length (section 2.3.1), and, more briefly, Ukrainian (section 2.3.2) and Slovak (section 2.3.3). Colloquial Serbian and Croatian show signs of the same development, to be discussed in section 2.3.4.

2.2 Reconstruction of the Common Slavonic conditional

The paradigms for the conditional auxiliary in two early Slavonic languages, namely Old East Slavonic and Old Church Slavonic are given in Table 2. Both languages have an inflected auxiliary, with distinct forms in all person–number combinations, except the second person singular, which is identical to the third person singular. There are also dual forms, not given in Table 2, and which survive only in Upper Sorbian. Old East Slavonic is the ancestor of the modern East Slavonic languages, Belarusian, Russian and Ukrainian. We can see that these languages once had inflections on the conditional auxiliary that are not retained in any

daughter language. Old Church Slavonic is a South Slavonic language, quite close to the ancestor of the modern South Slavonic languages, Bulgarian, Croatian, Macedonian, Serbian and Slovene. It too has inflections which have been lost entirely in some of the modern standard languages (Slovene and Macedonian). Old Church Slavonic has two variant paradigms. For practical purposes, paradigm II (historically the simple past tense (aorist) of the verb *byti* ‘be’), is the one that is relevant to most subsequent developments. For further details of the conditional in Old Church Slavonic, see Bräuer (1957) and Trost (1972).⁴

	Old East Slavonic	Old Church Slavonic I	Old Church Slavonic II
first sing.	byx''	bimĭ	byxŭ
second sing.	by	bi	by
third sing.	by	bi	by
first plur.	byxom''	bimŭ	byxomŭ
second plur.	byste	biste	byste
third plur.	byša	bŏ, bišę	byšę

Table 2. Paradigm of the conditional auxiliary in early Slavonic languages.

⁴ Here and elsewhere, the Cyrillic character <ѣ>, is transliterated as <ŭ> for Old Church Slavonic, where it represents a mid vowel (‘back jer’). During the development of Old East Slavonic this vowel was dropped. For Old East Slavonic, the convention for Modern Russian of transliterating it as a double apostrophe (‘hard sign’) will therefore be adopted. By similar reasoning, <ѣ> is transliterated as a mid vowel <ĭ> (‘front jer’) in Old Church Slavonic contexts, but as a single apostrophe (‘soft sign’) when Old East Slavonic texts are being cited.

The Old East Slavonic paradigm and the Old Church Slavonic paradigm II are so similar that they more or less guarantee the form of the paradigm that should be reconstructed for Common Slavonic. Historically, this paradigm represents the aorist (simple past) of the verb *byti* ‘be’. By the medieval period, however, any synchronic connection to the aorist had been lost and the aorist itself disappeared entirely in West and East Slavonic. The reconstructed conditional paradigms are essentially identical to those of Old Church Slavonic. Note that, like the forms of the aorist from which it derives, it distinguishes third person plural *byšę* from third person singular *by*, but does not distinguish second and third person singular, both *by*.

2.3 The role of degrammaticalization in reanalysis involving the conditional

2.3.1 Russian

East Slavonic languages have lost inflection on the conditional auxiliary, and now have an invariant particle that may appear with a past tense verb, giving an ordinary conditional interpretation, with an infinitive and in various nonverbal contexts. In this section it will be argued that the availability of a reanalysis of the second person plural form *byste* as two separate words, a clitic conditional particle *by* and a clitic past-tense auxiliary *este*, contributed to the success of a reanalysis of the conditional auxiliary as an invariant particle. Since this reanalysis involves a person–number affix being reanalysed as a clitic auxiliary, it amounts to degrammaticalization.

2.3.1.1 Erosion of inflection in the Russian conditional

Avanesov and Ivanov (1982), following Sobolevskij (1962 [1907]), cite examples of failure of subject-verb agreement as early as the thirteenth century in Russian texts, although clear and frequent examples appear only in the fourteenth century. In (14), we find third or second

person singular *by* for expected second person plural *byste* (with the verb understood as second person plural from context). Such forms co-exist with more frequent examples which retain the inherited inflected form *byste*.

(14) Ašče **by** slěpi **byli**...

if COND blind.PL be.PP.PL

‘If you (plur.) were blind...’

(*Moscow (Sjiskij) Gospels* 20v, John 9: 41) (1339) (Sobolevskij 1962 [1907]: 244)

This loss of agreement may well have been promoted by the fact that the endings of the conditional were formally those of the aorist (simple past), which had already itself been lost from spoken East Slavonic. Some of the most reliable evidence for the loss in vernacular Russian comes from birchbark documents from the city of Novgorod. Table 3 shows the patterns found in the birchbark documents dated to after 1300 in Zaliznjak (1995).

	sing.	plur.
first person	byx” (1 attestation)	not attested
second person	by esi (11), by (1)	by este (2)
third person	by (8), b” (3)	not attested

Table 3. The paradigm of the conditional auxiliary in Novgorod birchbark documents dated to 1300 onwards.

The most important change here is that, in the second person, we find almost exclusively *by esi* for earlier *by* in the singular, and *by este* for earlier *byste* in the plural. These forms are

composed of the third person conditional auxiliary *by* plus the present tense of the verb ‘be’.

Examples are given for the singular in (15), and for the plural in (16).

- (15) **čo by es’** **ospodine unjal”** ego...
that COND be.PRES.2SG lord take.away.PP.SG him
‘You should take him away, lord...’ (*DND* 446, 1340s–1390s)

- (16) **čo bi este** **poixali** vo gorodo ko radosti moei
that COND be.PRES.2PL go.PP.PL to city for joy my
‘You should go into the city for me.’ (*DND* 497, 1340s–mid 1380s)

There are similar examples with noninflecting *by* plus ‘be’ in the second person in the third section of the First Novgorod Chronicle (*NPL* 100.14–20), written in the mid fourteenth century, but not in earlier sections, dated to the thirteenth and first half of the fourteenth century. We also find examples in fourteenth- and fifteenth-century chancery documents from the northwest and northeast of Russia (second person singular: *ASEI* 97, 123; *GVNP* 53.13, 53.18; second person plural: *ASEI* 53, 102, 102, 113; *GVNP* 50.5, 50.6 (x2), 96.10).⁵

We can therefore conclude that, by the mid fourteenth century, some varieties of Russian had replaced the synthetic *byste* form of the second person plural with an analytical form *by este*, and in the second person singular had introduced auxiliary ‘be’ (*esi*).

⁵ Nikiforov (1952: 139) describes this as ‘a literary form, in which the present tense of the verb ‘be’ evidently indicated person according to the model of the perfect’. It should, however, be evident, both from the documentary evidence of it in vernacular texts, and from comparative evidence of Ukrainian and Slovak, that the form must have had general nonliterary uses in some varieties in the fourteenth and fifteenth centuries.

2.3.1.2 The basis of reanalysis

Consider now the basis for and progression of the reanalysis and emergence of the new forms *by este* and *by esi*. Crucial to the reanalysis is the morphosyntax of the Slavonic past (perfect) tense. A general feature of early Slavonic languages is that the perfect auxiliary is normally omitted in the third person singular and plural. Thus there is initially a contrast between (17), where there is an overt auxiliary in the first person plural, and (18), which is third person singular and where there is no overt auxiliary. Given this alternation, it is natural to posit a null auxiliary in the third person here for Old East Slavonic in examples like (18).

- (17) ...a to **esme dali** Ivankovi...
and that be.PRES.1PL give.PP.PL Ivan.DAT
'...and we have given that to Ivan...' (GVNP 2. 16, 1266)
- (18) ...knjaz' velikyi **poslal**" k vamo svoego syna...
prince grand send.PP.SG to you own son.ACC
'...the Grand Prince sent you his son...' (GVNP 35.4, 1302)

In Old East Slavonic, the auxiliary was, however, also increasingly omitted outside the third person from the twelfth century onwards (Kiparsky 1967: 226–7, Nørgård-Sørensen 1997: 4–5), to such an extent that it was lost entirely, and the past participle was reanalysed as a simple past tense, as it is in the modern East Slavonic languages. For more detailed discussion of the extensive changes in the tense–aspect system of Old East Slavonic and Middle Russian in the context of grammaticalization and theories of language change, see Andersen (2006).

The existence of a null perfect auxiliary created a potential problem in the conditional. It is generally accepted that reanalysis requires there to be some context in which there is potential syntactic ambiguity (Timberlake 1977), that is, a context where a language acquirer can reasonably assign two structures and must make a choice between them. Such ambiguity

was present in the third person: since the auxiliary in the perfect was habitually null in the third person, a language acquirer could interpret the *l*-participle in a conditional structure either as a participle or as a sequence of null auxiliary plus participle. That is, there was potential for the reanalysis in (19), where earlier speakers treat conditional *by* as selecting a past participle, whereas later speakers treat it as selecting for a full perfect periphrasis, represented in (19) by an auxiliary in the head of a (perfect) aspectual projection (AspP) dominating the lexical verb phrase.

$$(19) \text{ [MoodP [Mood } by \text{] [VP [V past participle]]] } \Rightarrow \\ \text{ [MoodP [Mood } by \text{] [AspP [Asp null auxiliary 'be'] [VP [V past participle]]]] }$$

The latter analysis implies that the conditional marker was not an auxiliary, assuming a sequence of two finite auxiliaries to be a crosslinguistically marked option. Therefore, this analysis could be rejected if there was evidence that the conditional marker was an auxiliary rather than a modal particle. Person–number inflection would provide this evidence. However, such evidence was clearly lacking in the third and second person singular, where the form of the conditional auxiliary, *by*, had a zero inflection. In the third person plural, evidence may also have been lacking. The inherited inflected form *byša* is not well attested in vernacular texts. It seems to have disappeared early in a number of other Slavonic languages, such as Slovak (Stanislav 1967–73: ii.451), Serbian and Croatian (Belić 1962: ii.86). The Synodal manuscript of the somewhat later Pskov Chronicle, where the third person plural is well attested, shows almost no agreement there, despite having agreement in the first person consistently. An example is given in (20), where *by* appears in place of the historically expected third person plural form *byša*.

- (20) I mnogo biša čolom' pskoviči, aby
 and much beat.AOR.3PL forehead.INST Pskovians that+COND
mstili poganym Němcom krove xristian'skyja.
 avenge.PP.PL heathen Germans.DAT blood.GEN Christian
 'And the Pskovians asked many times for them to take revenge on the heathen
 Germans for Christian blood.' (PL ii.61.24–5, end 15th c., after 1486)

If evidence for inflection from the third person plural was lacking, this left the first person and the second person plural to provide the necessary evidence. However, the evidence from the second person was also weak.

In the second person singular, the inherited form was *by* + past participle. This was instantly amenable to the reanalysis in (19). The only evidence to show that the new analysis in (19) was wrong would be negative evidence: the absence of the combination where the perfect auxiliary was overt, namely *by* + perfect auxiliary (*esi*) + past participle, could have demonstrated the historical incorrectness of the reanalysis. However, such negative evidence is rarely significant in language acquisition or syntactic change.

The second person plural also failed to provide evidence against the reanalysis in (19), albeit for a different reason. The form of the conditional auxiliary *byste* was itself open to being interpreted either as an inflected auxiliary or as a sequence of two words, conditional particle *by* plus auxiliary *este*. This potential reanalysis is given in (21).

- (21) [_{MoodP} [_{Mood} *byste*] [_{VP} [_V past participle]]] =>
 [_{MoodP} [_{Mood} *by*] [_{AspP} [_{Asp} *este*] [_{VP} [_V past participle]]]]

If a language learner at this stage accepts both reanalyses in (19) and (21), then a coherent

system emerges, reanalysis (21) being essentially a subcase of reanalysis (19). Rejection of reanalysis (21) would lead a learner to reconsider the data outside the second person plural, ultimately leading to rejection of the reanalysis in (19) and retention of the inherited analysis there. Data from the second person plural therefore had the potential to stop the main reanalysis in (19), but failed to do so, because the corresponding (degrammaticalizing) reanalysis was available in (21).

The only good evidence for the existence of an auxiliary paradigm therefore came from the first person forms *byx*” and *byxom*”. If this evidence were ignored, and these forms were treated as the exceptional case rather than the product of the productive rule, then the reanalysis in (19) could take place. It seems that this is what happened in some varieties of Old East Slavonic in the thirteenth or early fourteenth century.

The case of degrammaticalization that interests us was a by-product of the primary reanalysis in (19). Sense could be made of the form *byste* under the new analysis only if it too underwent the reanalysis in (21). The person–number suffix *-ste* was treated as a form of the auxiliary *este*. It probably underwent phonological strengthening at the same time (see above).

A second by-product of the reanalysis in (19) is the introduction of the auxiliary into the second person singular. This follows automatically once the new structure in (19) is adopted, since this treats the conditional marker *by* as selecting for a perfect (past) tense verb, and therefore any form of the perfect will be acceptable after it.

One final question needs to be addressed, namely why we do not find new analytical first person forms of the type *by esm*’ (singular) or *by esmja* (plural) in place of the inherited forms *byx*” and *byxom*”. The answer must be that the traditional forms were not open to reinterpretation and were treated as exceptions to the general pattern. These new analytical forms did emerge in Ukrainian and Slovak, but failed to do so in Russian because of the subsequent history of the language: the perfect auxiliary dropped from use before they had

the chance to develop.

In so far as this account presents an internally coherent sequence of events, the change of *byste* > *by este* amounts to degrammaticalization to an existing category as described above, parasitic on the main reanalysis stated in (19). The *-ste* affix in *byste* is reanalysed as a member of an existing morpheme, the clitic auxiliary *este*. In this case, the degrammaticalization can be seen as an attempt by learners to make sense of a form that is otherwise puzzling given their acceptance of an innovation structure resulting from reanalysis.

2.3.2 Ukrainian

Ukrainian undergoes the same development as Russian. Middle Ukrainian (fourteenth and fifteenth century), as attested in chancery documents, manifests the conditional paradigm in Table 4. For a discussion of other aspects of the development of the modern Ukrainian conditional marker *by*, see Sydorenko (1995).

	sing.	plur.
first person	by / byxʷ	byxomʷ / byxmo
second person	by / by esi	by / by este
third person	by	by

Table 4. The paradigm of the conditional auxiliary in fourteenth- and fifteenth-century Ukrainian (based on Hrynčyšyn, Humeč'ko and Kernic'kyj 1977: 63–5, 135–6, 145, Nimčuk et al. 1978: 299–303, 334).

There is no longer any inflection of *by* outside the first person. In the second person, the same analytical forms, singular *by* > *by esi* and plural *byste* > *by este*, are found as in Russian texts of the same period. Example (22) shows the introduction of the perfect auxiliary into the

second person singular. Example (23) shows the reanalysis of the second person plural form *byste* as a sequence of conditional particle *by* plus perfect auxiliary *ieste*.

- (22) A moix” pošlin” mne ne dajut’, to by esi
 and my duties me NEG give.PRES.3PL that COND be.PRES.2SG
velel dati.
 order.PP.SG give

‘And they won’t pay me my duties; you should order [them] to pay.’

(UH Appendix 2.28–9, 1484)

- (23) ...ta i Waszab miłost žalowali, syły by ieste nam
 ...and and your+COND grace ask.PAST.PL force COND be.PRES.2PL us
 w tom ne czynili...
 in that NEG do.PP.PL

‘...and we asked your Grace that you should not subject us to force for that...’

(Hrynčyšyn, Humeč'ko and Kernic'kyj 1977: 135) (1433)

As in Russian, there has been a reanalysis requiring an uninflected conditional marker to co-occur with a past tense verb. Again as in Russian, the second person forms are brought into line with this new analysis, while the first person forms, especially in the plural, retain the conservative synthetic forms. We can surmise that the first person plural form survives best because it cannot easily be integrated into the new analysis in the way that the second person forms could. It was also phonologically more salient that its singular counterpart.

The Ukrainian evidence thus provides further confirmation of the degrammaticalization of *byste*. Conceivably this is an independent development, but more likely it is part of the same reanalysis found in Russian.

2.3.3 *Slovak*

Slovak is the only modern standard Slavonic language to use a conditional particle and a past tense containing auxiliary ‘be’ together in its current formation of the conditional. Against the background of the Russian and Ukrainian evidence, this no longer seems like an isolated innovation, but rather the result of more general patterns of reanalysis. The earliest documented Slovak texts, from the late fourteenth and fifteenth centuries, show a fairly conservative pattern, with regular descendants of the Common Slavonic forms except in the third person plural, where inflection had already been lost and the expected form had been replaced by generalization of the third person singular form *by*. These are also the only forms given in Bernolák’s grammar of 1790 (Pavelek 1964: 356–9). As can be seen from Table 5, these contrast sharply with the contemporary Slovak forms, which show a thorough realignment according to the same reanalysis as we have already seen for Russian and Ukrainian. As in those languages, we must posit a reanalysis based on the uninflected third person forms, according to which the following participle was reanalysed as the entire past tense form. The second plural was reanalysed to fit this, with the inflection reanalysed as an auxiliary, and the remaining persons (first person singular and plural and second person singular) underwent radical reshaping to bring them into line with the new analysis. Dialectally, first person singular *bich* survives (Krajčovič 1988: 145). Since, unlike Russian and Ukrainian, Slovak has not lost the auxiliary ‘be’ in its perfect tense, the results of this reanalysis are still very evident in the contemporary language. It might be objected that these changes are morphological changes, whereby the ending *-ch* is replaced by *-som* on the analogy of some other verbal form, but this seems unlikely. For this to happen, the change from *bych* > *by som* would need an appropriate model from Slovak verbal morphology, but no Slovak verb other than ‘be’ has the ending *-som* in the first person singular. The change only makes sense if *som* really is a form of auxiliary ‘be’.

	Fifteenth-century	Contemporary
	Slovak	Slovak
first sing.	bych	by som
second sing.	by	by si
third sing.	by	by
first plur.	bychme	by sme
second plur.	byste	by ste
third plur.	by	by

Table 5. The paradigm of the conditional auxiliary in fifteenth-century and contemporary Slovak (based on Krajčovič 1988: 144–5, Stanislav 1967–73: 451).

2.3.4 Serbian and Croatian

In Serbian and Croatian, there are some similar, but apparently independent, developments. Colloquial varieties have reanalysed the conditional auxiliary as a sequence of particle *bi* + perfect auxiliary ‘be’. In the plural, we find first person *bismo* being interpreted as *bi smo* and second person *biste* being interpreted as *bi ste*. In the first and second person singular, new forms *bi sam* and *bi si* replace standard *bih* and *bi* respectively (Panzer 1967: 39). These effectively arise via reanalyses parallel to those posited for other Slavonic languages in (19) and (21) above. Evidence for this reanalysis comes from the fact that, in such varieties, the conditional auxiliary may be split in two by the question clitic *li*:

- (24) **Bi li ste** vi to učinili?
 COND Q be.PRES.2PL you that do.PP.PL
 ‘Would you do that?’

Such forms are possible for many speakers today, and, although rare historically, they are attested. Daničić (1880–82: i.362) cites examples of *bismo*, *biste* and even *bih* being split up by other clitics from the fifteenth century onwards:

- (25) Bez toga ne **bi ih smo** poslali.
 without that NEG COND- them -1PL/be.PRES.1PL send.PP.PL
 ‘With that we would not have sent them.’ (Spom. sr. 9) (Daničić 1880–82: i.362)
- (26) **Bi li ste** mi umjeli rijeti?
 COND- Q -2PL/be.PRES.2PL me be.able.PP.PL tell.INF
 ‘Would you be able to tell me?’ (Besjed. kr. 28, 30, 39) (Daničić 1880–82: i.363)
- (27) Rad **bi- ti- h** znati.
 glad COND- you -1SG know.INF
 ‘I’d be glad to know you.’ (N. Nalješković 2, 39) (Daničić 1880–82: i.363)

Such splitting of the conditional is not found in earlier South Slavonic, for instance, in Old Church Slavonic. The innovation only makes sense if *ste* in *biste* has been reinterpreted as a clitic form of ‘be’, rather than a person–number suffix as it once was.

Elsewhere in South Slavonic, some Macedonian speakers also allow *bi* plus perfect auxiliary ‘be’ plus past participle in a form reminiscent of these forms and of Slovak (Panzer 1967: 27). There are no such developments in Bulgarian, where the endings of the conditional do not resemble forms of ‘be’, and where five distinct forms of the paradigm remain.

2.4 The shift of *byste* etc. > *by(e)ste* etc. as degrammaticalization

The evidence presented above suggests that as part of the reanalysis of the conditional auxiliary as an uninflected particle in various Slavonic varieties, the second person form *byste*

(stem *by-* plus person–number suffix *-ste*) was reanalysed as a combination of a conditional particle and an auxiliary. Consider now the relation of this reanalysis to the hierarchies of grammaticalization sketched above in (1), repeated here as (28).

- (28) a. Formal hierarchy of grammaticalization
free morpheme / word > clitic > affix
- b. Functional hierarchy of grammaticalization
lexical > functional / grammatical
- c. Semantic hierarchy of grammaticalization
concrete > abstract

In undergoing this reanalysis *-ste* clearly shifts to the left along the functional hierarchy of grammaticalization in (1b)/(28b) in changing category from a person–number inflection to an auxiliary, assuming that the latter is less ‘functional / grammatical’ in the relevant sense. This seems justified given that the change of an auxiliary into a tense suffix (as with the Romance future suffixes from earlier forms of Latin *habere* ‘have’) is normally treated as an instance of grammaticalization.

The perfect auxiliary in the relevant languages was a clitic – as auxiliaries are in a number of modern Slavonic languages (Anderson 2005, Franks and King 2000) – hence there is also movement to the left along the formal hierarchy of grammaticalization in (1a)/(28a), from affix to clitic status. In Russian and Ukrainian, this appears to have been accompanied by a degree of phonological strengthening (from *-ste* to *este*) as the item is brought into line with the form of the perfect auxiliary. Word order in the Serbian data in (24), where *bi* and *ste* are separated by another clitic, demonstrates the reduced bondedness of *ste* to its former stem.

Movement along the semantic hierarchy in (1c)/(28c) is less evident, since it would

depend on the exact semantics assigned to a person–number inflection and a perfect auxiliary. Since the meaning of the conditional in the innovative varieties is not straightforwardly compositional, it is not possible to establish whether there is movement to the left on the semantic hierarchy.

In sum then, the reanalysis represents movement to the left along two of the hierarchies. Such movement represents counterdirectional change, which we can provisionally, pending discussion below, refer to as degrammaticalization.

Note that the claim is not that the second person plural forms motivated the reanalysis in (19), or that these forms were the first to come into line with the new analysis.

Degrammaticalization is therefore not viewed as a mechanism driving the reanalysis, but rather a response bringing aspects of the language structure into line with the new analysis.

Learners were confronted with instances of the second plural form *byste*. If they had analysed these instances in accordance with earlier generations, they would have realized that *-ste* was a person–number suffix, and this would have reinforced the evidence against the innovative analysis in (19), leading them to reject that analysis and therefore to reject the hypothesis that there was a conditional particle *by* in the language that they were learning. However, having posited the innovative post-reanalysis structure in (19), they made *byste* fit in to their new analysis. The only way that this could be done was by compounding the first reanalysis with the second, degrammaticalizing reanalysis in (21).

3 ISSUES IN DEGRAMMATICALIZATION

We have seen that, at various points in the history of the Slavonic languages, forms of the conditional have been reanalysed as though they consist of a conditional particle plus a clitic form of the perfect auxiliary ‘be’. This amounts to degrammaticalization via reanalysis to an existing morph, the second of the types discussed in section 1.2 above. The new status of the inflectional ending is less ‘grammatical’ on the hierarchy from lexical to grammatical

(auxiliary > person–number marker), and is expressed using material that is more independent morphophonologically (affix > clitic). We now turn to examine the status of this change within recent approaches to degrammaticalization and to related concepts such as exaptation and adaptation.

3.1 Exaptation and adaptation

Heine (2003) offers a critique of degrammaticalization, arguing that all (or almost all) proposed instances of degrammaticalization are in fact instances of some other process. Heine cites euphemism, lexicalization, exaptation, adaptation, replacement and upgrading as the processes involved. The two that are relevant here are adaptation and exaptation. Let us consider each in turn.

3.1.1 *Adaptation*

Heine defines adaptation as “a process whereby old taxa are adapted to new taxonomic categories”, which “serves in particular to adapt grammatical forms to new word classes or morphological paradigms” (Heine 2003: 169). He goes on to note that adaptation is often a part of grammaticalization: when an item changes category, it takes on the characteristics of its new category. To give an example, when Welsh *hyd* ‘length’, a noun, grammaticalized as a preposition ‘along’, it gained person–number inflections like other Welsh prepositions, hence *hyd* ‘along’ but *hyd-ddo fe* ‘along it (masc.)’, just like *gan* ‘with’ but *ganddo fe* ‘with it (masc.)’. Adaptation then is simply an aspect of category reassignment, that is, it is one of the possible consequences (actualizations) of reanalysis. If adaptation is part of grammaticalization, then it is nonsensical to say that an example of degrammaticalization is excluded because it involves adaptation. In the current instance, category reassignment goes in the ‘wrong’ direction, hence the adaptation also goes in the ‘wrong’ direction. The conditional inflection is reanalysed as the perfect auxiliary, hence automatically takes any phonological and morphosyntactic properties of that auxiliary.

Heine has another definition of adaptation in mind when he says that adaptation “may take place when a grammatical category declines ... and the surviving form is adapted to other categories” (Heine 2003: 170). This is a special case, and, as Heine notes, it is nondirectional. It has much in common with exaptation, to which we turn in the next section.

Taken together, this gives us two distinct senses of the term ‘adaptation’:

adaptation₁: the process by which an item that has been assigned to a new morphosyntactic category in time adopts the morphosyntactic characteristics of its new category;

adaptation₂: the phenomenon of a morph that instantiates an obsolescent morphosyntactic feature being reassigned to express some other existing morphosyntactic feature and which, in doing so, is reassigned to some other existing morphosyntactic category.

The stronger definition 2 also applies to our case. The conditional inflection encoded the person–number features of the conditional auxiliary which eroded, becoming obsolescent. It was reassigned to express the perfect auxiliary (including its person–number features), and, in doing so, became an auxiliary.

3.1.2 *Exaptation*

Definition 2 of adaptation is very reminiscent of exaptation, a phenomenon first highlighted in Lass (1990) and Vincent (1995), and discussed more recently, with specific reference to grammaticalization, by Norde (2002), Ramat (1998) and Traugott (2004). Heine defines exaptation as occurring when “grammatical forms which have lost most or all of their semantic content ... are put to new uses as semantically distinctive grammatical forms” (Heine 2003: 168). In his original formulation, Lass (1990) viewed linguistic exaptation as the reuse of morphology that formerly encoded a grammatical distinction which has now been

lost. According to his account, the grammatical distinction is lost *before* the reassignment of the morphology that encoded it to some other function. The language goes through a period where the item in question has no function, and is purely “linguistic junk”. This is clear from his example of Afrikaans adjective endings, where, he claims, the endings, which formerly encoded gender, number, case and definiteness, encoded nothing for a period, before being reassigned to encode adjective class. As Vincent (1995: 435–6) points, it is not clear that the notion of “linguistic junk” is coherent. In particular, it seems unlikely that language learners can successfully acquire an item that has no function in their language. To learn the distribution of an item, and therefore to be able to use it natively, is, in effect, to learn its function. Given this objection, it seems more reasonable to assume instead that exaptation involves the direct reanalysis of the obsolescent function (or a related function that emerged from it) to the new function. Exaptation, unlike adaptation₂, often leads to the expression of a new category. Lass comments that “prior coding of the category in question is not a precondition for exaptation” (Lass 1990: 82), which suggests that the item can be reassigned either to encode a feature that was not encoded in the language before (as is the case in Afrikaans, which did not previously encode adjective class), or one that was previously encoded. This leads us to the following definition of linguistic exaptation:

linguistic exaptation: the phenomenon of a morph that instantiates an obsolescent morphosyntactic feature being reassigned to express some other new or existing morphosyntactic feature and which, in doing so, is reassigned to some other new or existing morphosyntactic category.

The only difference between this definition and the definition of adaptation₂ is that adaptation₂ is necessarily assimilation to an existing feature or category, whereas exaptation

can (and perhaps preferentially does) involve the creation of a new feature or category. This difference does not justify making a distinction between them. Furthermore, the second part of the definition amounts to category reanalysis (Harris and Campbell 1995: 63). Hence, we reach the following definitions:

exaptation–adaptation₂: the phenomenon of a morph that instantiates an obsolescent morphosyntactic feature undergoing category reanalysis;

category reanalysis: a type of reanalysis that involves some morphosyntactic item being reassigned to express a different morphosyntactic feature and which, in doing so, is reassigned to a different morphosyntactic category;

reanalysis: a process which changes the underlying structure of a morphosyntactic pattern without any immediate modification of its surface manifestation (Harris and Campbell 1995: 61, Langacker 1977).

Therefore, what is special about exaptation–adaptation₂ is (only) that it involves obsolescent morphosyntactic features. In effect, by using a special term, we are saying that morphs that encode obsolescent morphosyntactic features are more likely to undergo reanalysis than morphs that encode productive morphosyntactic features and that the reanalyses that they undergo may be unexpected or atypical. In other contexts, category reanalysis, like grammaticalization, is largely unidirectional. In contexts of exaptation, it can give rise to counterdirectional, degammaticalizing changes. The correct position may be that language change (of the relevant kind) always proceeds from less grammatical to more grammatical except under defined circumstances. This approach aligns very much with Traugott's view of

exaptation as ‘the emergence of a new grammatical function at what could otherwise be expected to be the end of a cline of grammaticalization’ (Traugott 2004), possibly limited to situations of system disruption (*Systemstörung*) (Norde 2002: 49, 61, Plank 1995).⁶

Our task in working on degrammaticalization is then to define the circumstances under which counterdirectional changes may take place. This can be summed up in the following hypothesis:

- (29) Category reanalysis is unidirectional (N > P, V > Aux etc. but not *P > N, *Aux > V; and free word > clitic and clitic > affix etc. but not *clitic > free word and *affix > clitic), except in exaptation–adaptation₂.

This hypothesis is too strong. Degrammaticalization of Estonian *es* ‘question particle’ and *ep* ‘affirmative adverb’ (Campbell 1991) does not appear to have accompanied the obsolescence

⁶ In more recent work, Lass (1997: 316–24) has extended the notion of linguistic exaptation to include cases where the starting point is not junk: an item with a defined function takes on an entirely new function. Such a move takes it away from the kinds of situation under discussion here and could not fall under exaptation–adaptation₂ as proposed here. While Lass insists that the examples that he cites are distinct from abduction (reanalysis) and extension, it may well be possible to deal with them under those headings. For instance, Lass considers the innovation of new cases in Finnish from recombinations of older case endings to be exaptation e.g. inessive *-ssa* < locative adverbial morpheme *-s-* + locative case ending *-na*. The original recombination of morphemes, however, amounts to extension; and the fusing of these into a single new case ending is reanalysis (loss of morphological boundaries).

of a grammatical feature, nor does the change of abessive case suffixes to clitics in various Balto-Finnic languages (Seto, Võru, Vepsian and Saami), which Kiparsky interprets as being due to paradigmatic analogy (Kiparsky 2005). However, it does account for a sizeable proportion of the well-documented cases involving deaffixation, including the English and Swedish possessive above, Irish *muid(e)* (person–number suffix > independent pronoun ‘we’) (Bybee, Perkins and Pagliuca 1994: 13–14, Doyle 2002), and New Mexican Spanish *-mos* > *-nos* (Janda 1995).

3.2 Degrammaticalization and reconstruction

Identifying exaptation–adaptation₂ as a systematic cause of counterdirectional changes does not make them any less of an exception to unidirectionality. This is particularly clear when we examine its effect on the task of morphosyntactic reconstruction. One of the things that made research in grammaticalization so exciting was the fact that it seemed to offer a watertight guide to reconstruction. If change can only proceed from less to more grammatical or if all grammatical markers have their origin in lexical or at least less grammatical markers, then, in comparative reconstruction, if a given form has a more grammaticalized status in one language and a less grammaticalized status in another, we can confidently posit the less grammaticalized form and function in our reconstruction. Exceptions to unidirectionality, however they arise, pose practical difficulties for this procedure (Newmeyer 2001: 215–16).

Consider again the data set out in Table 1 above. Using principles of grammaticalization as our guide, a hypothesis easily comes to mind: the protolanguage was like Slovak in forming its conditional using a conditional particle plus auxiliary ‘be’ and a past participle. In all the daughter languages except Slovak, the auxiliary ‘be’ has grammaticalized as a person–number affix. In some (Polish, Serbian and Croatian) this is relatively clear, but in others (Czech and various languages not given in Table 1, such as Bulgarian and Upper Sorbian) the endings have been reformed analogically (the endings in

question exist or existed in other paradigms, so an analogy story would not be implausible). Some languages (Russian, Ukrainian etc.) have gone further in eliminating the endings that grammaticalized in this way entirely. This hypothesis is completely wrong, but the logic of grammaticalization does not refute it. In fact, it offers it support. Unless we can identify that a counterdirectional change has taken place (which is only possible in this case using the textual record), we cannot know that we should rule out this hypothesis.

4 CONCLUSION

The grammatical change described in this article has been shown to be counterdirectional in the sense that it results in the assignment of an inflectional affix (person–number suffix) to a less grammatical category (perfect auxiliary), where it is assigned greater morphosyntactic freedom. This development represents an instance of counterdirectional (leftward) movement on two of the clines of grammaticalization presented in (1)/(28) above (formal and functional), and is thus an instance of ‘affix > clitic/phrasal affix degrammaticalization to an existing item’. We have seen that the change can be characterized as exaptation–adaptation: material from an obsolescent subsystem survives and is reinterpreted, adapting to fit the properties of other members of the category to which it is reassigned. Exaptation–adaptation is non-directional, and hence it may lead to degrammaticalization, as in this case.

Degrammaticalization is not intended to describe a process or a mechanism of change, and so identifying a change as exaptation–adaptation does not make it any less valid as a counterexample to unidirectionality. Rather such changes demonstrate one of the important scenarios under which unidirectionality does not apply, namely in contexts of obsolescent morphosyntax.

TEXT ABBREVIATIONS

ASEI Golubcov, I. A., Zimin, A. A., and Čerepnin, L. V. eds. 1952. *Akty social’no-*

- èkonomičeskoj istorii severo-vostočnoj Rusi konca XIV-načala XVI v.* Moscow: Izdatel'stvo Akademii Nauk SSSR.
- DND* Zaliznjak, A. A. 1995. *Drevnenovgorodskij dialekt*. Moscow: Jazyki Russkoj Kul'tury.
- GVNP* Valk, S. N. ed. 1949. *Gramoty Velikogo Novgoroda i Pskova*. Moscow: Izdatel'stvo Akademii Nauk SSSR, 1949.
- NPL* Dietze, Joachim ed. 1971. *Der erste Novgoroder Chronik nach ihrer ältesten Redaktion (Synodalhandschrift)*. Leipzig: Edition Leipzig.
- PL* Nasonov, A. 1967 [1941]. *Pskovskie letopisi*. Düsseldorf, The Hague [Moscow]: Brücken-Verlag, Europe Printing [Izdatel'stvo Akademii Nauk SSSR].
- UH* Rusanivs'kyj, Vitalij Makarovyč ed. 1965. *Ukraiïns'ki hramoty XV st.* Kiev: Naukova dumka.

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