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How to Borrow a Bound Morpheme? Evaluating the Status of Structural Interference in a Contact between Closely-related Languages[1]

Abstract

This article has a twofold aim: firstly, to evaluate on the basis of a structural analysis of language contact data whether the observed Estonian-based pattern is gaining an integrated status in immigrant Ingrian Finnish, and secondly, to discuss the ways in which morphological borrowing may occur between languages. It is concluded that the use of the pattern probably exemplifies a mixing of the two morphological systems during speech processing rather than represents a permanently borrowed feature. It also becomes evident that applying the intermediate categories proposed for lexical borrowing (viz. code-mixing and nonce borrowing) is problematic, and it is suggested that the intermediate stage between code-switching and structural borrowing may be termed code-blending. All in all, the article shows that grammatical borrowing and its mechanisms differ from lexical borrowing and ought to be investigated in their own right.

1.   Introduction

Code-switching is the most discussed mechanism of interference which produces contact-induced changes in languages, although other mechanisms have also been considered recently (Thomason 1997, 2001: 129-156). The discussion has often addressed the problem of whether the borrowed elements are permanently integrated into the receiving language, or whether they are code-switches which obey the grammar of the source language. With respect to lexical borrowing, this question has been thoroughly investigated in numerous studies, whereas structural or grammatical interference has received much less attention. The aim of this article is to focus on grammatical borrowing (in a contact between closely-

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related languages) and to evaluate, on the basis of structural analysis of performance data, how integrated the borrowed morphological pattern is. The problem of sporadic versus permanent interference is discussed in general in Section 2 and the question is returned to in Section 5 in connection with structural borrowing. It is shown that the intermediate categories proposed for lexical borrowing (code-mixing and nonce borrowing) are not valid in the process of borrowing a structural feature (at least not in a contact situation between closely-related languages), and it is suggested that non-permanent morphological mixing should rather be termed code-blending.

2.   From sporadic to permanent interference

Contact linguists have for long been debating the status of cross-linguistic influence in a given language: are the observed elements or patterns incidental phenomena, 'interference in speech' in Weinreich's (1974: 11) terms, or should they be considered 'interference in language', an established part of the receiving language. Traditionally, the discussion has focused on the process by which a borrowed item or pattern is integrated into the language of a whole community, including its monolingual members, but it is also possible to raise the same question in connection with bilingual speakers and their linguistic competence. Instances of interference in bilingual speech may indicate a permanent contact-based change in one of the languages of the speaker, or they may be caused by temporary interaction of the two language systems during speech processing (cf. e.g. Altenberg 1991: 190, Romaine 1995: 92-93).
     The speech–language dichotomy has been a recurrent topic in the code-switching research, where alternating two languages within the same speech event by one bilingual speaker has been contrasted with permanent incorporation of foreign items into the receiving language (for reviews of discussion, see, e.g. Lauttamus 1990: 9-13, Romaine 1995: 142-61, Halmari 1997: 16-18, Sarhimaa 1999: 126-130 and Thomason 2001: 132-136). Although code-switching and borrowing have sometimes been considered two distinct phenomena (see, e.g. Poplack et al. 1989: 136, Bokamba 1988: 25-26), several researchers have recently argued that they should rather be seen as the two poles of a continuum, so that there is a 'grey zone' or a 'fuzzy boundary' between prototypical code-switching and prototypical borrowing (see, e.g. Lauttamus 1990: 11, 1991: 434, Andersson 1993: 250, 254, Myers-Scotton 1993: 163, 170, Lainio 1995: 284-286, Thomason 1997: 191, Sarhimaa 1999: 194). According to this view, code-switching is regarded as a path through which foreign elements are introduced into the receiving language: in a bilingual community the use of these elements

may accumulate over time and they may be gradually integrated into the grammar of the receiving language (see, e.g. Lainio ibid., Romaine 1995: 51) or at least become part of the competence of an individual bilingual speaker (cf. Halmari 1997: 18).

Because of the fuzziness, the boundaries between switching and borrowing have been drawn in various ways. Haugen (1956: 40) sees the continuum as a three-stage diffusion process, where the temporary overlapping of two language systems is termed interference, differing from both code-switching ('the alternate use of two languages') and integrated loans ('the regular use of material from one language in another'). On the basis of Finnish–English bilingual data, Poplack et al. (1989: 136) separate a special type of borrowing, which is named nonce borrowing (cf. Weinreich 1974: 11), by which they refer to the occasions of other-language items which are neither recurrent in the speech of individuals nor widespread in the community but which still are at least partly accommodated to the receiving language. The suggestion by Lauttamus (1990: 46), also based on a Finnish–English bilingual setting, resembles that of Haugen in that he claims that there is an area between code-switching proper (code-change in his terminology) and integrated loans[2] where the two grammars interact. He divides the interacting area in two parts: nonce loans, which are mainly governed by the receiving language and only phonologically by the source language, and code-mixes, in which the source language operates with some interaction form the receiving language. Some other views, however, question the appropriateness of the category of nonce borrowing (see, e.g. Romaine 1995: 144, Sarhimaa 1999: 193-194), and in their studies of Finnish–English code-switching, for example Halmari (1997) and Kovács (2001) treat the similar instances as code-switches.

Most of the above-mentioned classifications are context-bound and possibly valid only in a particular contact setting and from a particular viewpoint. It has been acknowledged that the division between switching and integrated loans depends not only on the contact situation and the typological distance of the contacting languages (Lauttamus 1990: 48) but also on the theoretical background of the study itself (cf. Halmari 1997: 171). The present study differs from those cited in this section in many respects, and the differences consequently determine how the grey area between code-switches and borrowings could be treated. The bilingual setting investigated here is characterised by intensive mutual influence in the languages of bilingual speakers, facilitated by the close typological fit between the languages.

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[2] Lately, Lauttamus has changed the terminology of his model (see Lauttamus 1999, Hirvonen & Lauttamus 2001), but in this paper I use the earlier terms because they are more compatible with the terminology used by other researches cited in this section.

Moreover, the study is concerned with inflectional morphology and focuses on the process of borrowing a bound morpheme, whereas all the above mentioned categorisations are based on lexical borrowing. Thus, the sporadic–permanent continuum is discussed here (in Section 5) with reference to structural interference between closely-related languages.

3.   A contact of language relatives: Ingrian Finns in Estonia

The Finnic language family is a continuum of genetically closely-related dialects, which have evolved from a common proto-language (late Proto-Finnic). The dialects resemble each other to a great extent but Finnish and Estonian are close to the two extremes of divergence in this continuum, and therefore they are not mutually intelligible without some training.[3] Finnish has often been described as a phonologically conservative language (see, e.g. Abondolo 1998a: 149) and it has to a large extent preserved the rich agglutinative morphology of late Proto-Finnic. Estonian, on the other hand, has gone through many changes (see, e.g. Rätsep 1989) and because of the reductional sound changes which occurred between the 13th and 16th centuries, the Estonian noun inflection is now partly fusional (i.e. grammatical categories are expressed by stem alternation, cf. Grünthal 2000: 50-54). Nevertheless, the morphological structures of Finnish and Estonian have many striking similarities, which makes it possible to transfer morphological elements in a contact situation.

This study deals with Ingrian Finnish, a dialect of Finnish which bears a resemblance to the dialects of Southeast Finland but has been originally spoken in the territory of Ingria in Russia around St. Petersburg. The dialect originated in the 17th century when Finns were transferred to the area, mainly from the Karelian Isthmus. The Finns were the major nationality of Ingria at the end of the 17th century but after St. Petersburg was founded in 1703, Russians began to move in, becoming the majority by the beginning of the 19th century. For Ingrian Finns, the socialist era of the 20th century was disastrous: many of them were executed or transferred to other parts of Russia. During World War II, part of Ingria was occupied by the German army and people from that area were transported to Finland. At the same time, Russia banished the Ingrian Finns from the Russian zone to Siberia. After the war, those who had been deported to Finland were brought back to the Soviet Union, and those who had been transported to Siberia also wished to return to their homes. They were not,

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[3] Descriptions of Finnic languages in English are provided by e.g. Comrie 1981: 95-101 and Viitso 1998a; for a brief description of Finnish and Estonian, see Abondolo 1998a and Viitso 1998b, respectively.

however, allowed to return but were distributed in different parts of Russia instead. Even though some Finns have later resettled in Ingria, the war did practically destroy the Ingrian Finnish culture and language; most Finns have gone through language shift (due to the very low socio-political status of Finnish after the war) and now use Russian as their daily language.[4]

The informants of the present study were born in Ingria in the 1910s or 1920s, grew up in the Finnish-speaking rural families and in most cases got at least part of their elementary education in Finnish. During World War II, they were forced to leave their homes, and after the war, their families were relocated in the internal parts of Russia, from where they soon fled to Estonia. In Estonia, the Ingrian Finns have always been a small minority with a low social status (see Anepaio 1999: 164-165). The domain of mother tongue has become very restricted, and nowadays Ingrian Finnish can be described as a dying language, as it has seldom been completely transmitted to the second generation. Estonian was easily learned by the Ingrian Finns because it is very similar to Finnish, and due to its prestigious status, it has also become the dominant language for most of them, while their mother tongue is decaying. The second generation of Ingrian Finns mostly speak Estonian as their mother tongue, and their knowledge about their parents' dialect is often poor (if they speak Finnish, it is the modern standard Finnish learned through education).

The overall picture of Ingrian Finnish in Estonia is that of language shift in Thomason and Kaufman's dichotomy of the linguistic results of language contact (1988: 50): for many Ingrian Finns, Estonian has become the dominant language (and as the shifting group is small and scattered around Estonia, there will not be Ingrian Finnish interference in Estonian in general, even though the shift has occurred fast). However, most first generation Ingrian Finns still use Finnish when dealing with family members or relatives, even though some attrition tendencies are observable in their mother tongue. In this respect, their contact situation resembles categories 4 and 5 of language maintenance in Thomason and Kaufman's scale (1988: 84-94): the contact has been intensive and structural borrowing from Estonian to Ingrian Finnish is extensive. This study concentrates on the latter type, i.e. on the aspects that are still left from the Ingrian Finnish dialect (for samples of the material, see Riionheimo & Kivisalu 1994).

The contact between Ingrian Finnish and Estonian presents a special type of language contact, since the contacting languages are closely related. It has been pointed out that the bilinguals seldom manage to keep their two languages completely separate (see, e.g. Grosjean 1982: 292-293), and the more the languages resemble each other, the more difficult it is for the speaker to resist

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[4] For more information about the history of Ingrian Finns, see, e.g. Nevalainen & Sihvo 1991.

interaction when speaking one of the languages. A close match of the lexicon and grammatical structure in contacting languages favours structural borrowing also in casual contacts (see Thomason & Kaufman 1988: 97), and if the contact between closely-related languages is as intensive as it has been in the case of Ingrian Finns, it may result in strong interference both in the lexicon and grammar. It has been observed that Finnish and Estonian influence each other very easily in acquisition situations (for transfer from the mother tongue of Estonian Finnish-learners, see, e.g. Kultalahti 1996, Nissilä 1999), in borrowing situations (i.e. interference in the first language of immigrants, see Sang 1993, Erelt 1999, Klaas 1999), and also in childhood bilingualism (Hassinen 2002). The data of the present study also show extensive borrowing of the Estonian elements (both lexical and grammatical) but the interference to the opposite direction is strong as well: the Estonian spoken by the Ingrian Finns is an interlanguage characterised by transfer from the speakers' mother tongue (note that the informants have learnt Estonian only in adulthood, and none of them has received any formal instruction).

The present study is based on the Ingrian Finnish corpus collected within a research project co-ordinated by the University of Joensuu (lead by professors Ilkka and Muusa Savijärvi). The corpus consists of interviews made in Finnish in the 1990s in Ingria and Estonia; the interviews were recorded and then transcribed (according to the Finno-Ugric transcription system). For the present study, I use the Estonian part of the corpus (Finns living in Tartu and Pärnu), having collected and transferred all the verb forms from 37 interviews into an electronic database. The entire database contains nearly 40 000 tokens, and the subdatabase used in this article contains roughly 18 800 past tense forms. The corpus is compared to a reference database which was collected from the recordings made in the territory of Ingria and which contains roughly 13 700 past tense forms from 27 informants.

4.   An example of morphological borrowing: past tense formation

In Ingrian Finnish, the past tense is originally formed by the suffix *i* (an old suffix which was previously used in Estonian as well), and the *i* pattern is accompanied by morphophonological changes (so-called consonant gradation and changes in the final vowel, for details see Riionheimo 1998: 254-256). However, many of the Ingrian Finns living in Estonia have began to use a different kind of past tense formation (see 1a-d), the *si* pattern which uses the suffix *si* (with allomorphs *s* and *is* in the 3rd person singular) and does not involve morphophonological changes in the stem (see also Riionheimo 1998: 260-263, 1999: 186-187).

(1) a. sis me **elä-si-mme** siel viimosen ajan[5]
         then we live-past-1pl there last-gen time-gen
         'Then we lived there for the final period' (F1914b)

     b. mie **luke-si-n** sitä kirjaa
         I read-past-1sg it-par book-par
         'I was reading that book' (F1914c)

     c. tyttär **synty-s** miul
         daughter be-born-past I-all
         'A daughter was born to me' (F1909)

     d. siis mä **kysy-si-n** jälle et – –
         then I ask-past-1sg again that – –
         'Then I asked again if – –' (F1909)

There are two possible and plausible sources for the *si* pattern used by the Ingrian Finns, one internal and the other external. The internal source is the past tense formation pattern of the contracted verbs in Ingrian Finnish: in this verb type, the past tense forms may be synchronically analysed as containing the suffix *si* (Karlsson 1977, 1983: 303, see also Riionheimo 1998: 256-258) which is attached to a vowel-ending stem (diachronically, however, *s* is part of the verb stem). The past tense formation pattern of the contracted verbs is less complicated than the past tense formation pattern of the other verb types, since the suffix is added to a stem with a strong grade and no vowel changes are involved (cf. examples 2a and 2b).

(2) a. the contracted verbs (cf. the base stem *hyppää-*)
         *hyppä-**si**-n* jump-past-1sg 'I jumped'
         *hyppä-**si**-t* jump-past-2sg 'you jumped'
         *hyppä-**s(i)*** jump-past.3sg 'he/she jumped'
         *hyppä-**si**-mmä* jump-past-1pl 'we jumped'
         *hyppä-**si**-ttä* jump-past-2pl 'you jumped'
         *hyppä-**si**-it* jump-past-3pl 'they jumped'

     b. the other verb types (cf. the base stem *otta-*)
         *ot-**i**-n* take-past-1sg 'I took'
         *ot-**i**-t* take-past-2sg 'you took'

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[5] The examples are collected from transcribed interviews. The original transcription has been simplified and the examples follow the standard Finnish orthography, more or less. A comma is used to indicate a brief pause in speech. Each example is followed by a personal code in which the letter stands for sex (female or male) and the number for the year of birth; letters a-d are used to separate informants who were born in the same year.

ott-i	take-past.3sg	'he/she took'
ot-i-mma	take-past.4sg	'we took'
ot-i-tta	take-past.5sg	'you took'
ott-i-it	take-past.6sg	'they took'

Moreover, the past tense forms of the contracted verbs are morphologically highly transparent, since the suffix begins with a consonant and consists of an entire syllable (cf. Dressler 1985: 225, 331). In a dying language morphology tends to become more transparent (see, e.g. Dressler 1988: 186), and therefore, the contracted verb pattern could be predicted to expand in a dying Finnic language.

There is, however, an external model for the use of the suffix *si* as well, namely the past tense formation of Estonian, i.e. the *si* pattern that is used in most verbs in Estonian (see, e.g. Erelt et al. 1995: 238-241). This pattern probably partly originates from the past tense of the contracted verb type (and partly from an old suffix *ś, see Viitso 1998c: 433-435), and thus the Estonian *si* pattern has the same characteristics as the contracted verb pattern in Finnish: salient suffix and invariant stem (see 3a). However, the Estonian pattern partly differs from the Finnish one because, in some verb types (the ones that are hypothesised to be based on a different suffix by Viitso ibid.), the suffix is added to a consonant-ending stem (see 3b).

(3) a. | *luge-si-n* | read-past-1sg | 'I read' |
|---|---|---|
| *luge-si-d* | read-past-2sg | 'you read' |
| *luge-s* | read-past.3sg | 'he/she read' |
| *luge-si-me* | read-past-1pl | 'we read' |
| *luge-si-te* | read-past-2pl | 'you read' |
| *luge-si-d* | read-past-3pl | 'they read' |

     b. | *and-si-n* | give-past-1sg | 'I gave' |
|---|---|---|
| *and-si-d* | give-past-2sg | 'you gave' |
| *and-is* | give-past-3sg | 'he/she gave' |
| *and-si-me* | give-past-1pl | 'we gave' |
| *and-si-te* | give-past-2pl | 'you gave' |
| *and-si-d* | give-past-3pl | 'they gave' |

In language contact, the unmarked properties facilitate the transfer of a morpheme (see, e.g. Weinreich 1974: 31, Thomason & Kaufman 1988: 56) and thus the borrowing of the *si* pattern from Estonian would be a natural process, especially in a situation where Estonian has become dominant and the Estonian elements are therefore readily available for the speakers. Bound morphemes are assumed not to be very transferable in contact (see, e.g. van Coetsem 1988: 30-

32) but the present data shows that when the contacting languages are morphologically rich and genetically closely related, bound morphology is quite easily transferred from one language to another (also confirmed by research concerning the acquisition of Finnish by Estonian learners).

The use of the *si* pattern in Ingrian Finnish is probably partly motivated by both of the sources mentioned above, but the Estonian influence seems to be the most dominant factor (for a more detailed analysis of the multiple causation of the pattern, see Riionheimo 2000). There are signs of generalisation of the contracted verb pattern in other kinds of terminal stages of Finnish, for example, in American Finnish (Martin 1993: 98), in the Finnish dialects spoken in Norway (Lindgren 1993: 108) and in Ingrian Finnish spoken in different countries (Lehto 1996: 89, 97, 100, 115, 140). However, the occurrence of the *si* pattern in each of these has been sporadic, whereas in the Ingrian Finnish data the use of the pattern is clearly more systematic: the average proportion of the *si* pattern in verb types other than the contracted ones (excluding the verbs with the highest frequency, i.e. *olla* '(to) be' and *tulla* '(to) come', and verbs borrowed from Estonian) is 11.3 per cent (see Table 1).

	si pattern %	*i* pattern %	*hakkais* type %	Total N
Contracted verbs	91.1	0.5	8.4	383
Estonian verbs	79.7	14.6	5.7	350
Verbs *olla* and *tulla*	0.1	99.9	0.0	9878
Other verb types	**11.3**	**88.1**	**0.6**	**8225**
Total	8.3	91.2	0.5	18836

Table 1. The proportions of the *i* pattern and the *si* pattern in the past tense formation of Ingrian Finns living in Estonia.[6]

The Estonian influence in the expansion of the *si* pattern in Ingrian Finnish is supported by the reference data collected from the territory of Ingria. In Ingria, Ingrian Finnish is becoming extinct under the strong pressure of Russian (see Savijärvi & Savijärvi 1999) and, as there is no external model for the *si* pattern in this situation, the changes observed in this data are more likely to be internally

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[6] The table includes a past tense formation type which is not dealt with in this article. The *hakkais* type resembles the *si* pattern, but the suffix is *is(i)*, added to a stem with no vowel changes (e.g. *kasvatta-isi-n* educate-PAST-1SG, *alka-is-∅* begin-PAST-3SG, *elä-is-* ∅ive-PAST-3SG, *kirjoitta-is-* ∅write-PAST-3SG). The type is not a mixture of Finnish and Estonian past tense formation but probably originates from a special inflection of contracted verbs which occurs in South-Eastern dialects of Finnish, including Ingrian Finnish (see, e.g. Palander 1996: 128-130 and the references therein).

motivated. In the reference data, there are a few occurrences of the *si* pattern in other verb types than the contracted ones, but the proportion of these forms is only 0.2 per cent (see Table 2). Therefore, it seems that the internal force in the expansion of the si pattern is relatively weak.

	si pattern %	*i* pattern %	*hakkais* type %	Total N
Contracted verbs	98.1	0.3	1.6	370
Verbs *olla* and *tulla*	0.0	100.0	0.0	5853
Other verb types	**0.2**	**99.8**	**0.0**	**7496**
Total	2.8	97.2	0.1	13719

Table 2. The proportions of the *i* pattern and the *si* pattern in the reference data collected in Ingria.

The external motivation is also supported by the structural analysis of the *si* pattern forms of Ingrian Finnish in Estonia. As mentioned above, the contracted verb pattern and the Estonian *si* pattern are not identical, since in Estonian consonant-ending stems are used in certain verb types (recall examples in 3b). In the Ingrian Finnish data, a vowel-ending stem is often used in these cases (see examples 7a-b in Section 5), but there are also numerous occasions where a consonant-ending stem is used (examples 7c-d). In these verb types, the use of a consonant stem is much more frequent (66.5 %, see Table 3) than the use of a Finnish-like vowel stem (24.7 %) and, since the consonant-ending stems have no internal motivation, they clearly result from borrowing the Estonian *si* pattern[7] (for a more detailed analysis of the consonant-ending stems, see Riionheimo 2000: 176, 180).

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[7] In Finnish, there are verbs that have both a vowel-ending and a consonant-ending stem but these verbs are not the same in Estonian, and the Finnish consonant stems also differ from the Estonian ones (diachronically, they are much older). Besides, in Finnish, the consonant stems are not used in the past tense forms (note, however, that the final vowel of the stem may not be present in the actual Finnish past tense forms because of morphophonological alternations).

Consonant-ending stems	Vowel-ending stems	Ambiguous cases	Total
%	%	%	N
66.5	24.7	8.8	170

Table 3. The proportions of the consonant-ending and vowel-ending stems in the *si* pattern forms[8].

5.   The status of the *si* pattern in Ingrian Finnish

While the expansion of the *si* pattern in Ingrian Finnish clearly seems to be caused by cross-linguistic influence, it is much more difficult to define the linguistic status of the pattern. It has been stated (Lauttamus 1999: 87) that although code-switching and borrowing are different types of processes, their structural realisations are not always easily distinguishable. This problem is of particular importance here, since the study is based on recorded interviews: just as Romaine (1995: 92-93) emphasises, special caution is needed if one wishes to make inferences from performance data about the possible changes in the underlying competence. In the following, however, an attempt is made to evaluate, on the basis of structural analysis, the position of the *si* pattern forms in the switching–borrowing continuum presented in Section 2.

5.1. Switching, mixing or blending the codes?

Code-switching may be defined simply as the use of elements from different languages by a single speaker during the same conversation (Thomason 2001: 132), or more precisely, as alternate use of two grammatical systems (Grosjean 1982: 307, Lauttamus 1990: 30). The informants of this study are all bilingual[9] (following Haugen's [1953: 6-7] definition, according to which bilingualism is the ability to produce complete, meaningful utterances in both languages), and thus capable of switching from one language to the other. Their bilingualism is, however, by no means balanced, since they do not have a native-like command of Estonian but speak an interlanguage with learner's errors and transfer from

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[8] In these calculations, only the verbs that have a consonant-ending stem in Estonian have been taken into consideration. Ambiguous cases refer to those 3rd person singular forms which may result either from the use of a Estonian consonant stem or from pleonastic past tense formation, where both the Finnish and the Estonian suffix are used (e.g. *jättis* 'he/she left', *ottis* 'he/she took'; cf. Fin. *jätti, otti*, Est. *jättis, võttis*).

[9] In fact, most of the informants are practically trilingual because they also speak Russian at least to some extent.

their mother tongue. Their bilingualism is further complicated by the fact that despite the deviations from the native norm, Estonian has become dominant for many Ingrian Finns, while their native tongue has begun to decay (note that dominance does not necessarily imply nativeness or even better proficiency, see Dressler 1981: 18, endnote). The bilingualism of the Ingrian Finns may be seen as a continuum where the relative dominance of the languages varies (for the idea of the bilingual continuum, see, e.g. van Coetsem 1988: 20, Seliger & Vago 1991b: 4-5, Silva-Corvalán 1991: 151 and Dressler 1991: 99): there are both Finnish-dominant bilinguals fluent in their mother tongue and Estonian-dominant bilinguals fluent specifically in Estonian.

The interindividual differences in the degree of bilingualism imply the use of different kinds of code-switches, and Poplack (1980) has demonstrated that the code-switching patterns used by fluent bilinguals indeed differ from those used by non-fluent bilinguals. Furthermore, code-switched strings are often difficult to separate in the Ingrian Finnish–Estonian context, where the languages have many common lexical items and similar grammatical forms, and where the mutual cross-linguistic influence (borrowing from Estonian to Ingrian Finnish and transfer from Ingrian Finnish when learning Estonian) produces 'compromise forms' (cf. Clyne 1987: 760) from Finnish and Estonian elements, obscuring the boundaries between the languages (cf. also the interdialectal intermediate forms, described by, e.g. Trudgill 1986: 63). The phonological criterion used in the studies of the Finnish–English code-switching (regarding phonologically unassimilated words of English origin as code-switches as opposed to phonologically assimilated borrowings, see, e.g. Halmari 1997: 17, Kovács 2001: 92) cannot be applied to the Ingrian Finnish data, as the Estonian strings used by the informants mostly obey Finnish phonological rules. Nevertheless, the past tense data contains some quite unambiguous code-switches (see examples 4a-b[10]) which are lexically, syntactically and morphologically Estonian (cf. Poplack et al. 1989: 137) despite their Finnish-like pronunciation (e.g. the vowel harmony) and some structural transfer from Finnish.

(4) a.   meit   oli   viis   tyttöö   me   olime   kaik yhes
          we-par   be-past   five   girl-par we   be-past-1pl   all   one-ine
          puntis   kaik *koos*   ***taht-si-m***   *mennä*   *ja*   *noot*
          bundle-ine all   together   want-past-1pl   go-inf   and   they
          sis   *ei*   *tahtnet*   *mint ka*   *maha*   *jättä*
          then   not   want-ptc   I-par also   away   leave-inf
          'There were five of us girls, we were all together, we all wanted to go together and

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[10] The Estonian strings are indicated by italics; they are not transcribed according to Estonian but according to the Finnish orthography, since they mainly follow Ingrian Finnish phonology.

they didn't want to leave me out either' (F1918)

b.   ja   siis   käim   *meest*   *saattamas*   ***saat-si-n***
      and   then go-past-1sg   husband-par   escort-inf-ine   escort-past-1sg
      tämä sinne,   ***ant-si-n***   *tämäl*   *kolm ruplaa*   *ära* – –
      he   there   give-past-1sg   he-all   three ruble-par away – –
      'And then I escorted my husband [to the railway station], escorted him there, gave
      him three rubles – –' (F1909)

Usually, the status of the verb containing the suffix *si* is more vague than it is in the examples above, and the *si* pattern mainly occurs in contexts where the Finnish and Estonian elements get mixed in various ways. Some of the occurrences resemble code-mixes, which Lauttamus (1990: 25) defines as one-word insertions in which the grammars of the two languages overlap, although the source language is more dominant than the receiving language (i.e. code-mixes are words that are not adapted to the grammar of the receiving language)[11]. When the term is applied to the Ingrian Finnish data, the category of code-mixes would consist of utterances where there occurs an Estonian verb, inflected according to Estonian past tense pattern, in Finnish context. Sentences with a verb that does not have an equivalent in Finnish represent the clearest case (see 5a-b), although the pronunciation is again based on Finnish. When the verb is common to both Estonian and Finnish, it can still be interpreted as a code-mix if it has some Estonian characteristics. In 5c, the verb form *juhattas* 'led' contains a different phoneme than the Finnish form (cf. the Ingrian Finnish *johatt-i* with the vowel *o* in the first syllable), and in 5d, the verb is inflected with a consonant-ending stem (*jout-si-n-ki* '(I) was taken'), which is characteristic of the Estonian *si* pattern (the Ingrian Finnish inflection of the same verb would be *jouvvu-i-n*). However, there remain some ambiguous cases where it is difficult or even impossible to know whether the speaker is using the Finnish or the Estonian (see 5e where the verb stem *istu-* 'sit' is similar in both languages).

(5) a.   ja   minä viel ***mõtle-si-n,***   ajattelin   et   täti
          and I   still think-past-1sg   think-past-1sg that aunt
          jääp   sin
          stay-pr.1sg   there
          'And I still thought that aunt will stay there' (F1923)

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[11] Lauttamus uses the term code-mixing in a narrower sense than most researchers; more often the term refers to intrasentential code-switching in which the switched sequences may be longer than one word (see, e.g. Bokamba 1988: 24, 1989: 278).

b. isäntäki   ol   itse   tul,   Siperiast   takasi   ja,
    farmer-cli was   himself   came   Siberia-ela   back   and
    kylästä-s viel minnuu
    visite-past still I-par
    'The farmer himself came back from Siberia and still visited me' (F1917)

c. ja   meit   Jumala   *juhatta-s*   sinne   lastenkotti
    and   we-part   God   lead-past   there   orphanage-ill
    'And God lead us to the orphanage' (F1914c)

d. sis   mie   *jout-si-n-ki*   sinne   sairalaa
    then I   be-taken-past-1sg-cli   there   hospital-ill
    'Then I was taken to the hospital' (F1916a)

e. ja   minä   *istu-si-n*   nyt   nii   ni   ku   teie
    and   I   sit-past-1sg   now   like like   as   you
    istutte   tässä
    sit-2pl   here
    'And I was sitting like you are sitting here now' (F1918)

However, the *si* pattern forms in the Ingrian Finnish data are not always used with Estonian verb inflection (as described in examples 5a-e), and it is in fact much more common that the verb forms can not be classified as code-switches or even code-mixes, since they contain morphemes from both Ingrian Finnish and Estonian. The personal ending of a past tense form may be Finnish even though the Estonian past tense suffix is used, e.g. *lopetta-si-mma* '(we) finished' in 6a (cf. Estonian *lõpeta-si-me* and Ingrian Finnish *lopet-i-mma*) and *elä-si-it* '(they) lived' in 6b (cf. Estonian *ela-si-d* and Ingrian Finnish *ell-i-it*), even with the Estonian-like stem variant as in the form *ost-si-mme* '(we) bought' in 6c[12]. The verb stem may be a compromise between Finnish and Estonian as *rauhone-* 'calm down' in 6d (cf. Estonian *rahune-* and Ingrian Finnish *rauhottu-*). Further, the form *män-i-si-n* '(I) went' in 6e illustrates a special type of past tense formation, where both Finnish and Estonian past tense suffixes are used. With this kind of grammatical hybrid forms, there is no clear switch from one code to

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[12] Note, however, that it is not always possible to clearly demarcate Finnish vs. Estonian morphemes. For example, the personal ending in 1st person plural has in Finnish the variant *-mme*, which differs from the Estonian suffix *-me* only with respect to consonant length, and the Ingrian Finnish pattern in forming 3rd person plural forms (vowel lengthening + *t*) mainly differs from its Estonian equivalent (*-d*) in terms of the length of the vowel. In the interview data, it is often impossible to determine which variant is used, as the duration of both the phoneme *m* (in 1st person plural) and the phoneme *i* (in 3rd person plural) vary to a considerable extent.

another, but the elements from different codes blend together in one word form.

(6) a.
kello	kakstoist	**lopetta-si-mma**	työt
o'clock	twelwe	finish-past-1pl	work-pl

'At twelve o'clock we finished work' (F1920a)

b.
Keltom	puol	viel	**elä-si-it**,	neet	**elä-si-it**
Keltto-gen	side	still	live-past-3pl	they	live-past-3pl
omas	kotilois				
own-ine	home-pl-ine				

'They were still living in the Keltto area, they were living in their own homes' (F1914a)

c.
me	**ost-si-mme**	maksimma	kolmesataa	ruplaa
we	buy-past-1pl	pay-past-1pl	three hundred	ruble-par
tollel	ajal			
this-ade	time-ade			

'We bought [it], paid 300 rubles at the time' (F1913)

d.
jällee	läks	möötä,	ja	**rauhone-s**	ja	– –
again	went	along	and	calm-down-past	and	– –

'[time] passed again and [the fighting] calmed down and – –' (F1921a)

e.
ja	mä	ikkäki	**män-i-si-n**	oman
and	I	however	go-past-past-1sg	own-gen
fundamentin	piäl			
foundation-gen	on top			

'And I, however, went on top of our foundation' (F1911)

This kind of mixing has been termed code-blending[13] in child language research, defined as a morphological phenomenon "where morphemes from one language are combined with morphemes of another language within a single word while the phonological features of the respective source languages are retained" (Kaufman & Aronoff 1991: 177, see also Kaufman & Aronoff 1989: 202). In the Finnish–Estonian context, however, blending occurs also in

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[13] In historical linguistics, the term blending is defined as "the development of a morphological 'compromise' between two forms with identical or similar meaning which are perceived as being in competition with each other" (Hock 1986: 189). Code-blending may be seen a similar kind of process, with the competing elements coming from two languages. Code-blends thus also resemble those speech errors that are termed blends, arising from the activation of two competing items at the same time (see, e.g. Hokkanen 2001: 109, for bilingual blends see, e.g. Romaine 1995: 99).

phonology, syntax and semantics and leads to word forms where the Finnish and Estonian elements are in many ways inseparable. It is probable that close structural resemblance favours blending at all the levels of grammar (note that Kaufman and Aronoff's study concerns typologically very distant languages, Hebrew and English), even though Sarhimaa (1999) has shown that in intensive contact even typologically different languages may blend grammatically at the transitional zones between code-switches. The present data also indicates that code-blending can be very robust in the contact of two languages that are both morphologically rich and genetically closely related: as Table 4 shows, the majority (66,5 %) of the *si* pattern forms in Ingrian Finnish seem to belong to the category of code-blending.

Estonian-like *si* pattern forms	Code-blends	Total
%	%	N
33.5	66.5	1253

Table 4. The proportions of the Estonian-like *si* pattern and code-blends in the past tense formation of Ingrian Finns living in Estonia[14]

In sum, code-blending clearly represents an area where the two grammars of a bilingual informant are overlapping, i.e. an area of interference in Haugen's (1956: 40) classical terminology. Sporadic mixing of morphemes from different languages in one word form resembles both code-mixing (mixing word forms from different languages in one sentence) and nonce borrowing (loanwords which have not yet been phonologically adapted to the receiving language), and this mixing represents a candidate for an intermediate category between code-switching and established borrowing at the level of morphology[15].

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[14] The Estonian-like forms in these calculations refer to the past tense forms which are unambiguously similar to Estonian forms (i.e. Estonian verbs inflected in the Estonian way and verbs common to both Estonian and Finnish in which the consonant-ending stem is used). The ambiguous cases are classified as code-blends.

[15] It is, however, possible that the code-blending phenomena do not always belong to the switching–borrowing continuum but are characteristic of situations where the two languages of the speaker are not balanced: Leiwo (2001: 137 footnote) uses the term in connection with imperfect learning, and Kaufman and Aronoff (1989, 1991) study a Hebrew–English bilingual child, whose command of Hebrew is decaying).

5.2. The degree of integration

If code-blending is seen as a path for morpheme borrowing, there should be a point where morpheme blending turns into a permanent feature in the recipient language (i.e. the borrowed morpheme is fully integrated into the receiving system). Naturally, defining this point is as difficult as distinguishing the boundary of nonce loans and established loans at the lexical level. At least three criteria may be proposed to determine the status of the borrowed element: 1) grammatical integration (the established items have to be adapted to the grammar of the receiving language), 2) spread to the whole community, and 3) decrease of variation characteristic of sporadic interference. These criteria are usually dealt with in the context of lexical borrowing; however, their applicability to the field of morphological borrowing and to the Ingrian Finnish–Estonian bilingual setting is discussed in the following.

When talking about lexical loans, it is usually stated that a foreign word is established to the receiving language after it has been adapted to its phonological, morphological and syntactic systems[16] (see, e.g. Grosjean 1982: 309, Lehiste 1988: 21). Naturally, the borrowed morpheme is often phonologically assimilated as well, if it differs from the receiving language phonologically, but otherwise the notion of adaptation is problematic in morphological borrowing; it is not clear how a morpheme is integrated into the recipient system. In the present study, the issue is even more problematic due to the fact that the source language and the recipient language have fairly similar grammatical structures (e.g. the Estonian *si* pattern in past tense does not differ phonologically or syntactically from Ingrian Finnish), and therefore the integration of grammatical loans does not necessarily require drastic changes. Morphological integration may, however, be indicated by some kind of changes in the borrowed pattern or by extension of the pattern from its original use (cf. the semantic extension of a borrowed lexical item as an indicator of its integrated status, see, e.g. Stenson 1991: 572).

A particular change which makes the *si* pattern used by the Ingrian Finns different from that used by the Estonians, is the use of different verb stems. The Estonian consonant-ending stems (recall examples 3c in Section 4) pose problems for Ingrian Finns: in Finnish, verbs do not have such stems and the past tense forms based on these stems often contain consonant clusters which violate the Finnish phonotactics. It is quite plausible that the Estonian past tense pattern

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[16] Note, however, that nativisation is not a necessary condition for an element to be established in the receiving language (Thomason 2001: 134), and especially in dying languages, borrowed elements are often left phonologically and morphologically unintegrated (see Dressler 1988: 185).

is accommodated to Ingrian Finnish by replacing the non-Finnish consonant-ending stems by vowel-ending stems characteristic of Finnish, and this is indeed the case in some instances, e.g. *osta-si-it* '(they) bought' in 7a (cf. Estonian *ost-si-d*) and *jouta-si-mme* '(we) were in time' in 7b (cf. Estonian *jõud-si-me*). However, as Table 3 in Section 4 shows, Ingrian Finns tend to preserve the Estonian-like stem rather than to accommodate it to the Finnish morphological system, and thus the consonant-ending stems are quite common in the data (see 7c-d).

(7)   a.   nämä   nyt   toivat   Suomest   **osta-si-it,**   kaks
           they   now   bring-past-3pl   Finland-ela buy-past-3pl   two
           auto neet   ol   kaks   vävvyy
           car   they   were   two   son-in-law-par
           'Well, they brought, bought two cars from Finland, they were two son-in-laws'
           (F1915)

      b.   ja   piti   tehhä   kaik työt   ja   il-, **jouta-si-mme**
           and   have-to-past   do-inf   all   work-pl   and   be-in-time-past-1pl
           kirkkoo   aina   ajal
           church-ill always   time-ade
           'And [we] had to do all the work and we [still] always made it to church on time'
           (F1925a)

      c.   -- kui   minä   kolmekymne,   neljäntel   **taht-si-n,**
           -- when   I   thirty   fourth-ade want-past-1sg
           nyt rippikoulu   männä   --
           now confirmation class   go-inf   --
           '-- when I wanted to go to the confirmation class in 1934 --' (F1918)

      d.   ja   sis   mehet   läksit   Leeninkrati,   **ot-si-t**
           and then man-pl   go-past-3pl   Leningrad-ill take-past-3pl
           jälle   auton --
           again   car-acc
           'And then the men left for Leningrad, took the car again --' (F1926a)

Another change which possibly indicates partial integration may be the extension of the *si* pattern to cases where it is not used in Estonian, i.e. the expansion of the domain. In the data, there are many examples of the use of the *si* pattern in Ingrian Finnish verbs, either in verbs which lack the Estonian equivalent (8a) or in verbs which have an Estonian counterpart but whose phonological structure is Finnish, such as *loppu-s* '(it) finished' in 8b (cf. Estonian *lõppe-s*). Moreover, the *si* pattern is also used occasionally in some verb paradigms which are inflected in the same way in Estonian as in Finnish, i.e.

using the past tense suffix *i* (e.g. *pese-si-n* '(I) washed' in 8c and *tul-i-s* '(I) came'
and *ol-i-si-n* '(I) was' in 8d, cf. Estonian *pesi-n, tul-i, ol-i-n*).

(8) a.   metsätyötä   teimme,   Siperis,   metsää   **koata-si-mma**

          lumbering-par   do-past-1pl   Siberia-ine forest-par fell-past-1pl

          'We did lumbering in Siberia, felled forest' (F1914a)

      b.   a   sitten   **loppu-s**   ärä ka   ko,   mone   päivä sis

          but   then   end-past   away also when some   day   then

          loppu-s   ära

          end-past   away

          'But then [the war] ended as well when, after a few days it came to an end then'
          (N1915)

      c.   mul oli   vapaapäivä   ja   **pese-si-n**   pyykkii

          I   have-past day off   and wash-past-1sg cloth-acc

          'I had a day off and I was doing laundry' (F1914c)

      d.   sota ko **tul-i-s,**   sis   ma **ol-i-si-n,**

          war when come-past-past then   I   be-past-past-1sg

          Sarvelan   kyläs,   siel   pianerlaakeris   työs

          Sarvela-gen   village-ine there   pioneer-camp-ine   work-ine

          'When the war came, I was in the Sarvela village, working at the pioneer camp'
          (F1914a)

     Yet another possible sign of integration could be the functional
differentiation of the borrowed pattern. When two features (the old, original one,
and a new one, borrowed from another language) compete in a language, it is not
always possible to predict whether the original feature will be totally replaced by
the new one, or whether the borrowed feature will be added to the grammar along
with it (cf. Thomason 1997: 185-186, 2001: 88-89). In the latter case, some kind
of functional division is likely to take place so that the features are used for
different functions or in different contexts. In the case of Ingrian Finnish, a
functional division would be expected to occur in certain verb types in which the
present and past tense forms are homonymous and where there may be a need for
different means of expressing tense. When the verb stem ends with the vowel *i*,
the suffix and the final vowel of the stem are fused (cf. *opin* 'I learn' and *opin* 'I
learned'), and when the final vowel of the stem is rounded, it forms a diphthong
with the past tense suffix *i*, and the latter component of the diphthong often
disappears due to a phonological phenomenon characteristic of Ingrian Finnish
(and also of many other dialects of Finnish, cf. *sanon* 'I say' and *sanon* 'I said').
It is precisely in these verb types where a similar suffix (*si* or *zi*) is used in Votian

and in a certain dialect of the Ingrian language (see, e.g. Viitso 1998c: 425, 426 and the references therein), both of which are Finnic languages and closely related to Finnish and Estonian. The published speech samples (Alvre 1971, 1990) show that the same holds true for Ingrian Finns living in certain areas in a close contact with the Votians. In my Ingrian Finnish data, however, there is only a slight tendency to avoid this homonymy by using the *si* pattern in verbs with the final vowel *i* (see Table 5a). In verbs with a diphthong in the past tense form, the proportion of the *si* pattern is actually smaller than in most of the non-homonymous verb types[17].

	si pattern		*i* pattern	*hakkais* type	Total
	f	%	%	%	N
Disyllabic *ä* stems	193	22.5	76.0	1.5	857
Disyllabic *a* stems (*a > ∅*)	64	18.7	81.3	0.0	342
Disyllabic *a* stems (*a > o*)	108	16.1	83.4	0.4	670
Trisyllabic *A* stems	52	14.9	80.5	4.6	349
i stems	19	13.8	86.2	0.0	138
Monosyllabic stems	347	13.7	86.3	0.0	2530
Stems with a rounded vowel	82	6.8	92.2	1.0	1206
Trisyllabic *e* stems	6	3.5	96.5	0.0	173
Disyllabic *e* stems	56	2.9	97.0	0.1	1955

Table 5a. The proportions of the *i* pattern and the *si* pattern in different stem types (the contracted verbs, the high frequency verbs *olla* '(to) be' and *tulla* '(to) come' and the Estonian verbs excluded).

	Monos.	Dis. *ä*	Dis. *a* (*a > o*)	Rounded vowel	Dis. *e*	Dis. *a* (*a > ∅*)	Tris. *A*	*i*	Tris. *e*	Total
F1918	**63**	24	11	31	12	13	10	6	4	174
F1921a	**40**	11	6	2	6	9	7	3		84
F1915	**23**	18	15	9	3	3	8	1	2	82
F1920a	16	**19**	14	6	5	5	3			68
F1914c	**17**	9	5	6	6	4	12			59
F1925a	**25**	16	8	2		1	2			54
F1913	**32**	9	4	2	1	5				53
F1909	10	**11**	**11**	8	3			2		45
F1916a	**21**	9	4	1	5	2		1		43
F1927a	5	2	**6**	4	3	1	3			24
F1914b	**10**	**10**	4							24
M1925	4	**8**	4	1		3	1			21
F1911	6	3	**6**		1	4		1		21

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[17] These numbers differ from those published in Riionheimo (2000: 178), due to a careful reanalysis of the data.

F1917	**18**	1				1	1		21
F1914a	2	**10**	2	2	2	2			20
F1920c	**6**	4	1	2	1	2	2	2	20
F1926c	**8**	2	1	1	2	5	1		20
F1923	5	**7**	2		2	3			19
F1916b	3	**6**	1			1	1	2	14
Fxxxxa	4	**8**	2						14
F1919a	**3**	**3**	1	1			1		9
F1927b	**7**							1	8
F1922	**5**			1	1				7
F1920b	**5**	1		1					7
F1926a	**4**			1					5
F1925b	**2**	1							3
F1921d	1				**2**				3
F1921b		1		1					2
Fxxxxb	1								1
M1926	1								1
F1930					1				1
Total	347	193	108	82	56	64	52	19	6	927

Table 5b. The interindividual differences in the frequencies of the *si* pattern in different stem types (the contracted verbs, the high frequency verbs *olla* '(to) be' and *tulla* '(to) come', the Estonian verbs and the very rare verb types excluded).

There does not seem to be a clear division between the two past tense patterns in any other verb types either, as the share of the *si* pattern is in each type notably lower than that of the *i* pattern (see Table 5a). However, when the frequencies are considered, the *si* pattern is primarily used with two kinds of verbs: in disyllabic stems ending with the vowel *ä* and in monosyllabic stems. The same holds at the individual level (see Table 5b): nearly all of the informants use the *si* pattern most frequently in either monosyllabic stems or in disyllabic *ä* stems (see the numbers in bold). An analysis of the distribution at the level of single verb lexemes reveals that this is due to two verbs, the disyllabic *ä* verb *elää* '(to) live' and the monosyllabic verb *käydä* '(to) go, (to) visit', and in these verbs the use of the *si* pattern seems to be more established than in the others. Two other verbs, *saattaa* '(to) see off, (to) send' and *maksaa* '(to) pay, (to) cost', are discerned on account of the high percentage of the *si* pattern (they are the only verbs in which the *si* pattern forms are more common than the *i* pattern forms). Thus if there is any sign of establishment of the *si* pattern, it would be at the level of single verbs, not at the level of verb types.

	si pattern		*i* pattern	type *hakkais*	Total
	f	%	f	f	N
käydä '(to) go'	**303**	32.2	639	0	942
elää '(to) live'	**144**	44.2	172	10	326
ottaa '(to) take'	29	14.4	172	0	201
viedä '(to) take'	28	16.9	138	0	166
antaa '(to) give'	23	15.6	123	1	147
tahtoa 'want'	21	19.6	86	0	107
kirjoittaa '(to) write'	20	29.4	42	6	68
pitää '(to) keep/like/must'	19	6.4	276	0	295
istua '(to) sit'	15	25.9	40	3	58
maksaa '(to) pay/cost'	14	**51.9**	13	0	27
saattaa '(to) send/may'	13	**61.9**	8	0	21
ostaa '(to) buy'	12	24.5	37	0	49
alkaa '(to) begin'	10	4.9	195	1	206
soittaa '(to) play'	8	27.6	21	0	29
ajaa '(to) drive'	8	25.8	22	1	31
loppua '(to) end'	8	18.6	32	3	43
myödä '(to) sell'	8	18.6	35	0	43
kasvaa '(to) grow'	7	28.0	18	0	25
kuulla '(to) hear'	7	28.0	18	0	25
syntyä '(to) be born'	7	14.0	42	1	50
oppia '(to) learn'	7	9.3	68	0	75
olla '(to) be'	7	0.1	8499	0	8506
lukea '(to) read'	6	22.2	21	0	27
laulaa '(to) sing'	6	8.5	65	0	71
jättää '(to) leave'	5	20.8	19	0	24
puhua '(to) speak'	5	6.2	76	0	81
tehdä '(to) do'	5	2.4	201	0	206
lopettaa '(to) finish'	4	8.3	43	1	48
löytää '(to) find'	3	11.1	24	0	27
sattua '(to) happen/hurt'	3	8.1	33	1	37
tietää '(to) know'	3	8.1	34	0	37
kysyä '(to) ask'	3	7.1	39	0	42
tulla '(to) come'	3	0.2	1369	0	1372
itkeä '(to) cry'	2	9.5	19	0	21
asua '(to) live'	2	9.1	20	0	22
lähettää '(to) send'	2	8.3	22	0	24
päästä '(to) be let/get to'	2	8.3	22	0	24
katsoa '(to) look at'	2	8.0	22	1	25
kutsua '(to) call'	2	8.0	22	1	25
mennä '(to) go'	2	0.9	224	0	226
sanoa '(to) say'	2	0.5	441	0	443
lähteä '(to) leave'	2	0.2	924	0	926
palaa '(to) burn'	1	4.2	23	0	24
juosta '(to) run'	1	4.0	24	0	25

auttaa '(to) help'		1	3.8	25		0	26
kuolla '(to) die'		1	0.6	168		0	169
saada '(to) get'		1	0.1	807		0	808

Table 6. The frequencies of the *si* pattern and the *i* pattern in different verbs (excluding verbs with N < 20).

In order to be fully integrated into a language, the borrowed element also needs to become recurrent in the speech of individuals and wide-spread in the community (see, e.g. Poplack et al. 1989: 136), until it eventually becomes part of the linguistic norm (cf. Romaine 1995: 51). This 'social' criterion for an established borrowing is problematic in the context of a dying language; it is highly questionable whether a new norm can emerge when a language is dying and when even the old norms may be fading, and it is far more probable that the speaker will rely on the norms of the dominant language instead. Furthermore, Finnish-speaking communities have never existed in Estonia but the Ingrian Finns have lived scattered all over the country; therefore it is unlikely that interference would integrate into Finnish at the community level. As implied in Table 5b, interindividual variation in the use of the *si* pattern is quite wide, and Table 7 shows that the proportional share of the pattern varies from 0.0 to 38.4 per cent (when the contracted verbs, the high frequency verbs *olla* '(to) be' and *tulla* '(to) come' and the Estonian verbs are not considered). On the basis of these numbers, the *si* pattern is not widespread among the Ingrian Finns, and even though the pattern is quite recurrent in the speech of some informants, it has not been fully established at the individual level either.

	si pattern	*i* pattern	*hakkais* type	Total
	%	%	%	N
F1913	38.4	57.2	4.3	138
M1925	35.6	64.4	0.0	59
F1916a	32.1	64.9	3.0	134
F1915	28.1	70.9	1.0	292
F1921a	23.7	75.1	1.1	354
F1909	22.8	74.6	2.5	197
F1914a	22.7	76.1	1.1	88
F1925a	22.4	77.2	0.4	241
F1918	18.8	80.2	1.1	928
F1927a	13.7	86.3	0.0	175
Fxxxxa	13.2	86.8	0.0	106
F1920a	11.4	88.4	0.2	595

F1927b	10.7	89.3	0.0	75
F1920c	9.9	90.1	0.0	202
F1917	9.1	90.9	0.0	232
F1916b	8.5	91.5	0.0	164
F1911	8.2	89.5	2.3	256
F1922	7.5	92.5	0.0	93
F1914b	7.2	92.2	0.6	360
F1914c	6.8	93.0	0.2	867
F1923	6.8	93.2	0.0	280
F1919a	6.4	92.9	0.7	141
F1920b	5.9	94.1	0.0	119
F1926c	5.3	94.4	0.3	377
F1926a	2.9	97.1	0.0	172
F1921b	1.7	98.3	0.0	118
F1925b	1.5	98.5	0.0	195
Fxxxxb	1.3	98.7	0.0	77
F1921d	0.9	99.1	0.0	335
M1926	0.7	99.3	0.0	144
F1930	0.7	99.3	0.0	151
M1928	0.0	100.0	0.0	84
F1926b	0.0	100.0	0.0	268
F1921c	0.0	100.0	0.0	53
Fxxxxc	0.0	100.0	0.0	41
F1919b	0.0	100.0	0.0	29
F1925c	0.0	100.0	0.0	85

Table 7. The interindividual differences in the past tense formation of Ingrian Finns living in Estonia (the contracted verbs, the high frequency verbs *olla* '(to) be' and *tulla* '(to) come' and the Estonian verbs excluded).

The third criterion for the establishment of a borrowed feature could be the decrease in the variation associated with it, and the same criterion has also been proposed for distinguishing between occasional deviations in the speech of bilingual persons and the contact-based change in their competence (Sharwood Smith 1983: 224). The status of the *si* pattern in Ingrian Finnish seems unstable and sporadic also in this respect; as Tables 5b and 7 show, the interindividual differences are massive and the qualitative analysis of the data reveals that also the intraindividual variation is extremely diverse. Most informants use both the original *i* pattern and the Estonian *si* pattern, this even typically within the same verb (cf. examples 9a-c), and nothing indicates that the occasional variation in the use of the past tense patterns would be decreasing.

(9) a. F1920a b. F1914c c. F1918
         el-i-me   *kirjott-i*   *taho-i-mme*
         el-i-mme   *kirjutt-i*   *taht-si-m*
         elä-si-m   *kirjotta-si*   *taht-si-mme*
         elä-si-mme   *kirjotta-s*   want-to-past-1pl
         elä-si-mmä   write-past   'we wanted to'
         live-past-1pl   'he/she wrote'
         'we lived'

In sum, this section has dealt with various phenomena which can be regarded as signalling the first stages of integration of the *si* pattern in Ingrian Finnish. However, these phenomena show only slight establishment tendencies, and none of them is unquestionable as evidence for integration but may actually represent sporadic and non-permanent interference (e.g. grammatical homonymy is liable to attract interference at the speech level, and the extension of the *si* pattern to non-Estonian verbs may well be an incidental code-blending phenomenon). Especially the wide inter- and intraindividual variation points to the conclusion that the use of the *si* pattern is mostly incidental and belongs to the category of code-blending described in Section 5.1[18]. This conclusion is even more evident when we keep in mind the fact that it is based on the analysis of interview data: in this kind of performance data, the signs of structural division and decrease of variation should be very clear, uncontroversial and unambiguous in order to be interpreted to show integrated borrowing.

6. Conclusions

In this article, the status of an Estonian-based past tense formation pattern in an immigrant variety of Ingrian Finnish dialect was evaluated with the help of a structural analysis of recorded interview data. The reference point of the evaluation was the continuum between code-switching and borrowing, widely discussed in the field of contact linguistics in connection with the process of borrowing lexical items, but it was observed that not all the criteria for establishing a foreign word in the recipient language are easily applicable to the process of morphological borrowing (especially, it is not clear how a borrowed morphological pattern is accommodated to the recipient morphological system).

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[18] It is also possible that the code-blended past tense forms do not belong to the traditional code-switching–borrowing continuum at all but represent a development towards a bilingual mixed code (cf. Sarhimaa 1999: 195, 230–231) or a mixed or fused variety (cf. Auer 1998: 15–16, 1999: 321, see also Sarhimaa 1999: 146–148). Further consideration of this possibility goes beyond the scope of this article, but this is clearly a fruitful direction for future research.

The criteria of grammatical integration, social spread and decrease of variation were nevertheless applied to the Ingrian Finnish data, and the analysis revealed a wide range of inter- and intraindividual variation and only very slight tendencies towards integrating the borrowed pattern into Finnish morphology. It is therefore concluded that the use of the *si* pattern is probably an example of mixing elements from two morphological systems during speech processing rather than a feature which is permanently borrowed from Estonian to Ingrian Finnish. Furthermore, it is important to notice that none of the observed integration tendencies provides unambiguous evidence for integration but may be a result of occasional interference as well[19].

During the analysis, it also became evident that applying the intermediate categories proposed for lexical borrowing (viz. code-mixing and nonce borrowing) to grammatical borrowing is somewhat problematic, at least in this particular contact situation between genetically closely-related languages. Very often it is not possible to show clear switches from one grammatical systems to another, but the Ingrian Finnish and Estonian elements get mixed and blended in various ways and at all the grammatical levels, so that one word form may contain phonological, morphological and semantic elements from both languages. In this article, it is suggested that this phenomenon could be termed code-blending, defined by Kaufman and Aronoff (1989, 1991) as morphological mixing but extended here to the whole grammar. It was noted that the vast majority of the *si* pattern forms in the Ingrian Finnish data are best classified as code-blends, i.e. non-permanent mixtures of morphemes from two languages. It remains to be seen, however, if code-blending really serves as a universal path of morphological borrowing, or if it is a phenomenon characteristic of the contact of relative languages (and possibly of situations where the two languages of the bilingual speakers are not balanced). All in all, the article clearly shows that grammatical borrowing and the mechanisms associated with it deserve to be investigated in their own right in future research.

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[19] The unstable status of the *si* pattern is also underlined by the possibility that the interference type involved in the use of the *si* pattern is not always borrowing (in the sense of Thomason & Kaufman 1988: 21, 37, i.e. incorporation of foreign elements into one's native language) but rather a transfer from the dominant language, Estonian, to the weaker language, Ingrian Finnish (cf. transfer from the mother tongue to the second language in the second language development; for this kind of "reversal" transfer see, e.g. Sharwood Smith 1983, Thomason 1997: 195-196). Thus the use of vowel stems instead of the Estonian consonant-ending stems could be an interlanguage feature, originally caused by transfer from Ingrian Finnish and now used in Ingrian Finnish as 'reversal transfer' from Estonian, which has become the dominant language for many speakers.

Abbreviations

acc	accusative		inf	infinitive
ade	adessive		par	partitive
all	allative		past	past tense
cli	clitic		pl	plural
ela	elative		pr	present tense
gen	genitive		ptc	participle
ill	illative		sg	singular
ine	inessive			

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