Language Change, Lexical Features and Finnish Possessors

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6.1 Introduction

The main goal of this paper is to demonstrate how morphosyntactic change can be understood and described with reference to lexical features, and also to show that the formal framework of Lexical-Functional Grammar (LFG) provides all the tools necessary to do so.¹ The data that will be considered comes from the Finnish possessive system, which involves both independent pronouns and bound affixes. These independent words and affixes interact in a complex manner, and this paper will adopt a "lexical split" analysis of the affixes, argued for in Toivonen (to appear). A "lexical split" is an instance where one form corresponds to two distinct sets of lexical features. Section 4.2 presents the Finnish pronominal possessors and outlines the lexical analysis that will be the basis for the subsequent discussion. Section 4.3 explores the origins of the lexical split and shows how the present lexical analysis can help us understand the evolution of the modern system. Section 4.4 presents further changes that have occurred in various Finnish dialects, and we will see that these changes can easily be captured with the lexical features posited in Section 4.2, together with the view of language change presented in Section $4.3.^2$

¹I would like to thank the following people for helpful comments and discussion: Ash Asudeh, Joan Bresnan, Mark Hale, Paul Kiparsky, Charles Reiss, Peter Sells, and two anonymous reviewers. The opinions presented in this paper are ultimately my own and none of the people mentioned here should be held responsible for those views. Also, any mistakes in this paper are entirely my own.

 $^{^{2}}$ It should be noted that this paper is not (nor is it meant to be) any kind of complete description of the possessive system in different (contemporary or extinct)

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6.2 Modern Standard Finnish

Pronominal possession in Standard Finnish constitutes a complex system. It is described in Dolbey (1995), Hakulinen & Karlsson (1979), Kanerva (1987), Karlsson (1991), Leino (1989), Nevis (1984), Pierrehumbert (1980), Stenberg (1971), van Steenbergen (1989), Toivonen (to appear), Trosterud (1993), Vainikka (1989), and Vilkuna (1996). What follows below is only a brief sketch of the main characteristics of the Finnish possessors, and I therefore refer to the works cited in footnote for fuller descriptions of all aspects of the data.

6.2.1 First and second person possessors

Let us first look at the first and second person possessors, which differ interestingly from the third person possessors. The first and second person possessors can be expressed either with an independent pronoun (e.g., *minun* for first person singular) together with a possessive suffix on the possessed noun (-*ni* for first person singular), or with a possessive suffix alone. This is shown in (1).³

- (1) a. Pekka näkee (minun) ystävä-ni.
 P. sees my friend-1SG.Px
 'Pekka sees my friend.'
 - b. Pekka näkee (sinun) ystävä-si.
 P. sees your.SG friend-2SG.Px
 'Pekka sees your friend.'
 - c. Pekka näkee (meidän) ystävä-mme.
 P. sees our friend-1PL.Px
 'Pekka sees our friend.'
 - d. Pekka näkee (teidän) ystävä-nne.
 P. sees your.PL friend-2PL.Px
 - 'Pekka sees your friend.'

The parentheses indicate that the independent pronouns are optional. The possessive suffixes, however, are obligatory.

Pronoun optionality is often referred to as "pro-drop". In LFG it is analyzed as an ambiguity, or a "split", in the affix. When the independent pronoun, e.g., *minun*, is present, it functions as the pronoun and

versions of Finnish. The data here is carefully chosen to illustrate the main differences between distinct varieties of the language, but it would naturally be both interesting and possible to go into much more detail. That is, however, beyond the scope of this paper.

³The following abbreviations will be used in this paper: Px=possessive suffix, SG=singular, PL=plural, NOM=nominative case, ACC=accusative case, PART=partitive case, ALL=allative case, ILL=illative case, ELA=elative case, ADE=adessive case, COND=conditional, HUM=human.

the suffix is a mere agreement marker. However, when *minun* is absent, the suffix itself has pronominal status. This analysis does not need to refer to any empty category such as "little pro".⁴ Formally, this is encoded in the entries of the relevant lexical items. The lexical entry with a PRED feature has pronominal status.⁵ The PRED feature value 'pro' for pronouns represents the referential semantics of the lexical item. Each PRED feature value 'pro' has a unique index and cannot unify with another feature, according to the principle of functional uniqueness:

(2) Uniqueness Principle:

Every attribute has a unique value.

Thus, if both *minun* and -ni had a PRED feature, it would be impossible for them to unify in the f-structure, because of the "PRED clash".⁶ Exactly one PRED feature needs to be provided for the possessor function, so when *minun* is absent, it must be provided by the possessive suffix. We thus need to posit an optional PRED feature in the lexical entry for -ni. The lexical entries for *minun* and -ni are given below:

(3)
$$minun: \begin{bmatrix} POSS & PRED 'pro' \\ PERS & 1 \\ NUM & SG \end{bmatrix}$$

(4) $-ni: \begin{bmatrix} POSS & (PRED 'pro') \\ PERS & 1 \\ NUM & SG \end{bmatrix}$

Since the PRED feature of -ni is optional, the suffix -ni in effect corresponds to two different lexical entries, one with a PRED feature and one without:

		PRED	'pro']	
(5) pronni :	POSS	PERS	1	
		NUM	SG	

⁴Previous LFG accounts of subject and object *pro-drop* phenomena include Bresnan and Mchombo (1986) for Chicheŵa, Andrews (1990) for Spanish, and Nordlinger (1998) for Wambaya.

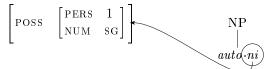
 $^{{}^{5}}$ LFG allows for alternative analyses of similar phenomena. For example, the suffix could be an unambiguous pronoun, and it could be anaphorically related to an antecedent (Bresnan (forthcoming); see also footnote 13). This alternative is not appropriate for Finnish, however, as argued by Toivonen (to appear).

⁶For an introduction to the general principles of LFG, see Bresnan (forthcoming) and references cited there. For a more detailed discussion of the specific feature analysis assumed here, see Toivonen (to appear).

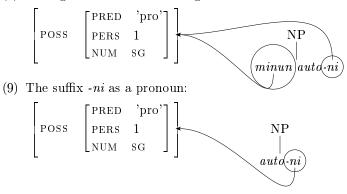
(6)
$$agr. -ni: \begin{bmatrix} POSS & \begin{bmatrix} PERS & 1 \\ NUM & SG \end{bmatrix} \end{bmatrix}$$

The c-structure to f-structure mappings in (7-9) further illustrate the ambiguity of the suffix -ni:

(7) The suffix -ni as an agreement marker:



(8) The agreement marker -ni together with *minun*:



In (8), the independent pronoun *minun* contributes the PRED feature, but in (9), the PRED feature comes from the suffixal pronoun. In sum, the possessive suffix acts as an agreement marker when the independent pronoun is present, and the suffix itself has pronominal status (i.e., it has a PRED feature) when the pronoun *minun* is absent.

What we see above is a "lexical split" analysis of pro-drop: One form corresponds to two distinct sets of features. Once we allow for these kinds of splits (which are empirically motivated), we predict that homophonous suffixes could differ in more than one feature. The third person possessors provide evidence for further differences, as we will see in the next section. Importantly, this analysis allows for each entry to change independent of the other (for example, (5) could change independently of (6)). In sections 3 and 4, we will see that such independent changes do, indeed occur.

6.2.2 Third person possessors

The third person possessors are a bit more complicated than the first and second person possessors. In the third person, it is not the case that the independent pronoun is simply optional, as in the first and second

person. The presence of an independent pronoun in the third person indicates an important difference in meaning, illustrated in (10-11).⁷

(10) a. Pekka näkee hänen ystävä-nsä. P. sees his/her friend-3Px 'Pekka_i sees his/her_{*i/j} friend.'
b. Pojat näkevät heidän ystävä-nsä. boys see their friend-3Px 'The boys_i see their_{*i/j} friend.'
(11) a. Pekka näkee ystävä-nsä. P. sees friend.3Px 'Pekka_i sees his_{i/*j} friend.'
b. Pojat näkevät ystävä-nsä.

boys see friend.3Px 'The boys_i see their_{i/*j} friend.'

In (10), the possessor and the subject have disjoint reference, whereas in (11), the possessor and the subject are coreferential. This will be formalized here with the feature SB, subject binding. The pronouns *hänen* and *heidän* have the feature [SB -], which prevents them from being subject bound. The pronominal suffix *-nsA* (11) has the feature [SB +], which makes it obligatorily subject bound. In contrast, the agreement marking *-nsA* does not have the [SB +] feature, since that would prevent it from agreeing with *hänen* and *heidän* (10).

Another interesting characteristic of the third person possessors is the fact that although the pronominal suffix can be bound by a nonhuman subject (12), the agreement suffix cannot agree with a non-human possessor (13).

(12) Se heiluttaa häntää-nsä.

it wiggles tail-3Px

'It_i wiggles its_i tail.'

- (13) a. Minä annan koiralle sen ruokaa.
 I give dog.ALL its food.
 'I give the dog its food.'
 - b. *Minä annan koiralle sen ruokaa-nsa. I give dog.ALL its food.3Px

This is captured here with a human gender constraining equation (which will be represented here as $GEND_c$ HUM) on the agreement affix, requiring

 $^{^7}$ The third person possessive suffix -nsA is the same in singular and plural. Because of vowel harmony, the suffix is sometimes realized as -nsa and sometimes as $-ns\ddot{a}$.

it to agree with a human possessor. The constraining equation requires that a human gender feature be provided to the f-structure into which the agreement suffix -nsA will be mapped. The agreement suffix does not itself provide this feature, since it does not have a (\uparrow GEND) = HUM defining equation, which inserts [GEND HUM] in the f-structure.⁸

The relevant lexical entries are thus the following:⁹

(14)
$$h\ddot{a}nen:$$
 POSS
$$\begin{bmatrix} PRED & 'pro' \\ PERS & 3 \\ GEND & HUM \\ SB & - \end{bmatrix}$$

(15) $pron. -nsA:$
$$\begin{bmatrix} POSS & \begin{bmatrix} PRED & 'pro' \\ PERS & 3 \\ SB & + \end{bmatrix}$$

(16) $agr. -nsA:$
$$\begin{bmatrix} POSS & [PERS & 3] \end{bmatrix}$$

$GEND =_c HUM$

The lexical entries in (14–16) capture the data cited above.¹⁰

In the third person, we see that the lexical split goes beyond the theory internally motivated split based on the PRED clash argument given for the first and second person possessors. The presence or absence of the SB feature, and also the constraining equation, provide further evidence for the split. Once it is recognized that this kind of "pro-drop"

⁸For a formal definition of the difference between defining and constraining equations, see Kaplan and Bresnan (1982) and Bresnan (forthcoming). The standard notation for a constraining equation in a lexical entry is: $(\uparrow \text{ GEND})=_c$ HUM. This notation is avoided here, since it would involve introducing symbols that are not otherwise needed for the discussion. Regardless of the notation, the point remains the same.

⁹For clarity of exposition, only the features relevant for the discussion of historical change are included in (14–16). For a full analysis of the modern Finnish data, more features are required. For example, the agreement suffix needs a feature that prevents it from agreeing with pronouns. Culy (1996) and Toivonen (to appear) use PRO + for this: Bresnan (forthcoming) suggests that the difference in binding features between pronominal and non-pronominal elements may be used for this purpose.

¹⁰It should be noted that there are more quirks to the third person possessors than this presentation would lead us to believe. I have only introduced the characteristics of relevance for the discussion which follows. For more data, I refer to the works cited in the beginning of this section.

phenomenon should be analyzed as a lexical split, it is not surprising that features other than PRED can be involved.¹¹

6.3 From older Finnish to modern standard Finnish

The "split system" we see in modern standard Finnish is a fairly recent development. Consider the following examples from Cajan (1836), which include third person possessive suffixes but no independent possessive pronouns, even though the possessors are not bound by the subjects (note that *marja* and the possessor are not coreferential in (17)):

(17) Niin marja ylemä nousi polosille polville-nsa niin marja ylemmä so berry up rose dear.ALL knees.ALL-3Px so berry up nousi riveille rinnoille-nsa rose nimble.ALL breasts.ALL-3Px
'Thus the berry rose up onto her dear knees, thus the berry rose up onto her nimble breasts...'

(18) Piltti pieni piikase-nsa sekä juoksi jotta...
P. little servant.girl-3Px both ran and
'Piltti, her little servant girl, both ran and...'

Examples (17–18) are Cajan's transcriptions of folk poetry, cited by DuBois (1995). DuBois discusses numerous examples which are similar in structure to (17–18). It is not difficult to find examples like (17–18). Penttilä (1957), for instance, discusses similar examples,¹² and he notes that the structure is outdated. One of the examples cited by Penttilä is given in (19):

(19) Silloin taannoin, kun isä-**nsä** vielä eli, oli Osku katsonut then recently when father-3Px still lived, had O. looked eräänä keväisenä päivänä...

certain springlike day

'Recently, when his father was still alive, on a springlike day, Osku had looked. . .'

The sentences in (17-19) would be ungrammatical in modern Finnish, since the possessive suffix -nsA is not agreeing with an independent possessive pronoun, nor is it bound by a subject. We can thus conclude that the lexical entries for the pronominal possessors were different in older Finnish. Recall that the lexical entries for the third person possessive suffix -nsA in modern Finnish are (15) and (16), repeated here as (20-21):

 $^{^{11}}$ The present analysis could be extended to the Finnish subject agreement system. However, since many details (including the binding facts) are different, we will not be concerned with subject agreement here.

¹²Penttilä's examples are not from folk poetry.

(20) pron. -nsA:
$$\begin{bmatrix} POSS & PRED & Pro' \\ PERS & 3 \\ SB & + \end{bmatrix} \end{bmatrix}$$

(21) agr. -nsA:
$$\begin{bmatrix} POSS & PERS & 3 \end{bmatrix}$$

GEND
$$=_c$$
 HUM

It is clear that (20–21) are not appropriate for older Finnish, since the binding requirements are different. There are two possible ways to analyze the older suffix:

- (22)(H1)The third person suffix was a true pronoun (with an obligatory PRED feature), which could optionally be doubled by an independent pronominal adjunct.
 - (H2) The third person suffix used to be like the modern first and second person pronouns, with an optional PRED feature.

I will consider both of the alternatives in (22), but will focus on the first hypothesis, since that hypothesis will need to appeal to more changes in order to arrive at the modern suffixes.

Under the hypothesis that the older -nsA was unambiguously a pronominal element, one single lexical entry is sufficient:

(23) *'old' -nsA*:
$$\begin{bmatrix} POSS & \begin{bmatrix} PRED & 'pro' \\ PERS & 3 \end{bmatrix}$$

The lexical entry in (23) is consistent with the data in (17-19). The suffix

-nsA is a pronominal element which marks third person possession, regardless of whether the possessor is coreferential with the subject or not. We now need to answer the question of how the lexical split of the modern -nsA could have come about.

It is clear from the examples in (17–19) and from the lexical entry in (23) that no independent pronouns were necessary in older Finnish. Such elements did, however, exist, although their function must have been different from their modern day function. I propose that these pronouns were in older Finnish adjoined *topics* which did not have argu-

ment status.¹³ These topics were presumably added for emphasis, since the suffixes cannot receive stress.

It used to be possible for the possessive suffixes to attach to independent pronouns, as can be seen in (24), from Ljungo Thomsson 1609, cited in Forsman Svensson 1983.

(24) Mies cuole ennen quin emändä tiesi **hänens** wastoin oleuan. man dies before that wife knew her-3Px pregnant be.PRT 'The man dies before the wife knew that she was pregnant.'

This supports the proposal that the independent pronouns had adjunct status, since it is not likely that two arguments with the same referent could be affixed to each other.

Under the hypothesis outlined above, the difference between the older stage and modern Standard Finnish looks like (25).

(25)	Old:	hänen	kirja-nsa
		he.GEN.TOPIC	book-3Px.PRON
		'as for him, his boo	k'

Modern:	hänen	kirja-nsa
	he.GEN	book - 3Px.AGR
	'his book'	

Although the lexical representations corresponding to the specific morphemes differ, the surface string of words is identical in the two phrases in (25). Since the surface string *hänen kirjansa* is ambiguous, it is easy to see how the change could have taken place as *reanalysis*,¹⁴ presumably in language acquisition, as discussed in Hale (1997).

Once the reanalysis has taken place, the lexical representation of -nsA has no PRED feature, and its sole function is that of an agreement marker. However, the acquirer who has posited such a representation will also be faced with sentences where there is no independent pronoun *hänen* (that is, a sentence that, as far as the speaker is concerned, contains no external topic), and the possessor is marked solely with a possessive suffix. The learner is then forced to posit another lexical entry for -nsA which has a PRED feature. We now have a "lexical split", comparable to (20–21). In contrast to (20–21), however, the hypothesized situation we

¹³This pronoun might have been a dislocated topic or external topic. This kind of topic is anaphorically linked to the pronominal suffix through the referential indexes of the two functions. This topic and the suffix are not linked through the f-structure value of the two functions and there is thus no functional uniqueness violation (see Bresnan (forthcoming) for details on how dislocated topics are formalized in LFG).

¹⁴For discussions of reanalysis, see, e.g., Hale (1997), Harris and Campbell (1995) and Lightfoot (1999:215-220).

have here is a case of pure optionality – the *hänen* is optionally present. That is, the presence of *hänen* does not entail a difference in meaning (cf. the first and second person possessors, discussed in Section 4.2.1). This would put us in the same position as hypothesis (H2) in (22). The rest of the discussion in this section will thus cover hypothesis (H2), as well as the final steps of hypothesis (H1).

Clark (1993) assumes that there is a universal "principle of contrast" available to the language learner. This means that the learner assumes that different forms never have exactly the same meaning. When faced with structures containing $h\ddot{a}nen -nsA$ and also structures containing only -nsA, the child posits a difference in meaning (following the contrast principle). Such a difference is, in the case under consideration, the coreference vs. non-coreference with the subject, marked with a simple SB feature in our representation.

It might seem puzzling that the binding distinction should emerge only in one person, namely third. There is a straightforward functional explanation for this. The first and second person reference is always fixed within the discourse: The first person is the speaker and the second person is the hearer. Although it is of course possible for first and second person to develop morphologically specified reflexive forms (e.g., myself), this will not serve to disambiguate utterances, since the first and second person reference is never ambiguous. Third person, however, is quite different. In a sentence like John washes his car, the pronoun *his* is ambiguous, since it could either refer to John or to someone else. It is therefore not a mystery that third person might develop special morphological marking denoting reference: If only one person differentiates the form of the reflexive and the form of a non-reflexive, it should be third person where a difference in form in a concrete way serves to disambiguate the meaning. This difference between the first and second person pronouns on the one hand and third person on the other may be, strictly speaking, grammar-external, but it could still influence the kinds of changes that are likely to take place in the lexical entries referring to the different persons.¹⁵

One could attempt to incorporate these kinds of generalizations directly into the theory of grammar. That is, one could try to make differences in likelihood of change for different lexical entries a direct consequence of the way grammatical knowledge is represented. This could be formalized through incorporating markedness hierarchies into the grammar, for example. However, since facts such as the one under discussion

 $^{^{15}}$ See Comrie (1998) for a similar line of argumentation. Comrie's paper was not brought to my attention until after the completion of the present paper.

here are *tendencies* rather than absolute, universal truths, and since a functional, grammar-external explanation seems sufficient, my personal preference is to leave the formal model of the grammar and the lexicon unbiased as to which changes should occur under what circumstances.¹⁶

Above I have posited a sequence of changes which are consistent with the data and with a principled view of language change. I have not, however, made a choice between the two hypotheses in (20). Hypothesis (H2) is obviously simpler, since it is contained in (H1). However, (H1) addresses the question of how lexical splits can emerge in the first place. It is very difficult to make a choice between (H1) and (H2) based on the availabe data, and I will therefore leave this issue unresolved. I hope, however, to have made clear that given a careful analysis of the lexical features of the possessive pronouns, the emergence of a lexical split can be seen as a natural step in the historical development of the possessors. The explicit lexical feature analysis made available by the LFG framework provides the tools necessary to explore the path of changes that the possessive suffixes have undergone.

6.4 Dialectal variation

There is rich dialectal variation in Finnish concerning the possessive suffixes. This section examines some of the variation which has been documented in the literature. We will see that the feature system outlined in Section 4.2 allows us to understand and make explicit exactly how the changes which led to the variation came about. We will also see that the dialectal data provide evidence that the lexical split hypothesis is correct.

6.4.1 The Tampere dialect

The possessive system of the colloquial Finnish dialect of Tampere differs interestingly from the system of standard Finnish. Below, I summarize Vainikka's (1989) description of the properties of the Tampere dialect possessors.¹⁷ In the Tampere dialect, the possessive suffixes have been lost in the plural, although they are retained in the first and sec-

¹⁶It should be pointed out, however, that a lexical approach such as the one outlined here is not in principle incompatible with the view that the model grammar should directly reflect historical tendencies. Lexical hierarchies such as the ones standardly adopted in Head-Driven Phrase Structure Grammar (Pollard and Sag 1994) could be organized with such tendencies in mind, for example. In recent work combining LFG and Optimality Theory, we see cross-linguistic markedness tendencies directly encoded in the grammar, see, e.g., Bresnan (1998, 1999).

¹⁷The dialect Vainikka describes is that of younger Tampere speakers. Naturally, there is variation within the Tampere community as well. That is not crucial for our present purposes, since the main point here is the fact that the feature system of

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ond person singular. The examples in (26) are adapted from Vainikka (1989:217):

(26) a. mun kissa-ni my cat-1SG.Px 'my cat' b. sun kissa-s(i) your.SG cat-2SG.Px 'your cat' c. sen kissa her/his/its cat 'her/his/its cat' d. Jukan kissa J.GEN cat 'Jukka's cat' e. meiän kissa our cat 'our cat' f. teiän kissayour.PL cat 'your(pl) cat' g. niitten kissa their(human/non-human) cat 'their cat'

Note that the third person pronouns *hänen* and *heidän* which specifically refer to human referents are lost in the Tampere dialect.

Let us first consider the first and second person singular pronouns. According to Vainikka, it is very awkward to include the independent pronouns mun and sun in sentences where the subject is the possessor (27):

- (27) Mä kävelytin koiraa-ni/?mun koiraa-ni.
 - I walked dog-1SG.Px/ my dog.1SG.Px 'I walked my dog.'

This parallels the behavior of $h\ddot{a}nen$ in Standard Finnish, which is marked [SB -], and cannot be coreferential with the subject. The lexical entry for *mun* in Tampere Finnish would then be (28):

Section 4.2 can be drawn upon to understand the dialectal variation. The focus will therefore be on the data that Vainikka describes.

(28) mun:
$$\begin{bmatrix} PRED & Pro' \\ POSS & \begin{bmatrix} PRED & Pro' \\ PERS & 1 \\ NUM & Sg \\ SB & - \end{bmatrix}$$

Note that the difference between (28) and the lexical entry for Standard Finnish *minun* is minimal, only the feature [SB -].¹⁸

Now let us consider the third person pronominal possessor. As we saw in (26), there is no third person agreement suffix in Tampere Finnish, perhaps due to the fact that the human third person pronoun *hänen* and *heidän* have been lost.¹⁹ However, there *is* a third person possessive suffix, but only in the function of a reflexive pronoun:

(29) Jukka/se kävelytti koiraa-nsa.
J./(s)he walked dog-3Px
'Jukka/(s)he_i walked his/her_i dog.'

This development is not surprising, under the present assumptions. In section 4.2, it was recognized that the agreement suffix and the pronominal suffix are two different lexical entries. It is then predicted that one could be lost while the other is retained. This is exactly what we find in Tampere Finnish.

6.4.2 Other dialects

This section briefly presents other varieties of Finnish, which differ in their possessive system. When suffixes are lost, other suffixes might take over their function. The suffixes that take over new functions lose some of their feature specification, as we will see below.

In some dialects of Finnish, the third person possessive suffix has become unspecified for person (recall that it was already unspecified for number). This is exemplified in (30-31):²⁰

(30) Veisatkaa kukin kovalla äänellä ja sydäme-nsä sing.2PL.IMPERATIVE each.one loud.ADE voice.ADE and heart-3Px pohjasta! bottom.ELA

'Sing loudly and from the bottom of your hearts, everybody!'

¹⁸If we replace *mun* with *minun*, some speakers of Standard Finnish agree with the judgements in (27). For those speakers, the entry for *minun* looks like (28).

¹⁹Recall that the third person agreement marker in standard Finnish has a constraining equation which requires it to agree only with an element that contributes human gender to the f-structure.

 $^{^{20}\}mathrm{Example}$ (30) is taken from Penttilä 1957:126. Example (31) is taken from Tauli 1966.

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(31) no täällä-kö sinä vielä asut emäntine-nsä?
well here-Q you.SG still live wife-3Px
'so, do you still live here with your wife?'

In the dialects where sentences like (30-31) are found, the pronominal suffix *-nsA* can be represented with the following feature matrix:

(32)
$$-nsA$$
: $\begin{bmatrix} PRED & Pro' \\ SB & + \end{bmatrix}$

Note that there is no person specification in (32), so the binder is not necessarily a third person element. The feature specification difference between Standard Finnish -nsA and (32) is, as we can see, quite small: the only difference lies in the absence of a person marker. The surface realization of this difference is, however, quite notable.

Tauli (1966) reports that in some South-West Finnish dialects, the first and second person plural suffixes have been replaced by the first person singular form. Since Tauli does not comment upon any further peculiarities, it will be assumed here that the dialects are like Standard Finnish in other respects, as far as the pronominal possessors are concerned. The lexical representation of -ni is given in (33).

(33)
$$-ni: \begin{bmatrix} POSS & [PRED 'pro'] \end{bmatrix}$$

Since the first and second person plural suffixes have been lost, -ni will appear in their place. The suffix -si is still present and specified for person and number (second person singular) and -nsA is specified for person (third). Why is it impossible for -ni to appear in the place of -nsA and singular -si? I propose that this is due to a simple blocking mechanism: more highly specified lexical entries block less specified ones (see e.g., Andrews 1990, Lightfoot 1999:97–100, and references cited therein). We see that the suffix -ni in (33) contains very little information. When it functions as an agreement marker, it contains no syntactic features at all.²¹ It is then present only to satisfy some morphological requirement, and not to contribute syntactic information.²² From a functional perspective, it is easy to understand why this type of morphology is often lost over time, since it does not add any information to what is already

 $^{^{21}}$ Except perhaps the feature [PRO +], which prevents it from agreeing with a non-pronoun (see footnote 9).

 $^{^{22}}$ Similar to the English subject agreement marker /-z/ in calls, for example. Note, however, that the third person singular verbal agreement marker in English is actually more specified than -ni in (33), since the English marker actually does contribute some f-structure information, which unifies with information already contributed by the subject.

indicated by other parts of the sentence (see, e.g., Hopper & Traugott 1993:163–164).

In the eastern part of the dialect area where South-West Finnish is spoken, the first and second person plural suffixes have been lost, just like in the dialects described above (Tauli 1966). The difference here is that the second person suffix -si covers singular and plural second person possessors, while -ni covers singular and plural first person possessors, and *not* second person plural. This is easily accounted for if we assume that the lexical entries for -ni and -si have lost their number specifications.

$$(34) -ni: \begin{bmatrix} POSS & \begin{bmatrix} PRED & 'pro' \\ PERS & 1 \end{bmatrix} \end{bmatrix}$$
$$(35) -si: \begin{bmatrix} POSS & \begin{bmatrix} PRED & 'pro' \\ PERS & 2 \end{bmatrix} \end{bmatrix}$$

This change may have come about through *analogy* with the third person possessor, which was never specified for number. Again, we see that the difference between the dialects of South-West Finnish is featurally quite small, but the consequences of these featural differences are significant.

The dialectal differences presented in this section have served to illustrate two important points: First, we have seen that it is necessary to recognize the existence of "lexical splits" in order to explain how certain changes can occur (e.g., the loss of the agreement marking -nsA in Tampere Finnish). Second, it has become clear that careful investigation of the relevant lexical features helps us describe and understand the changes that have led to dialectal variation.

6.5 Conclusion

The main goal of this paper has been to show that a detailed and specific theory of the lexicon can be useful for understanding morphosyntactic change. Section 4.2 presented a straightforward lexical account of the Finnish possessive system, which has proven to be difficult to analyze in non-lexicalist theories (see Pierrehumbert 1980, Nevis 1984, and Trosterud 1993, for example). We saw that relatively simple lexical entries together with independently motivated principles of LFG managed to capture all the relevant data. Sections 4.3 and 4.4 then went on to explore how the specific lexical features posited in Section 4.2, together with the theoretical frame of LFG, could be used to make each individual change explicit. The lexical features were also useful to refer to in the discussion of how and why it was possible for the changes to occur.

We saw evidence that slight featural differences may result in significant surface differences. Finally, we have seen that some changes affect the agreement marking suffixes, but not the pronominal suffixes. This lends support to the "lexical split" analysis assumed in this paper (and generally assumed in LFG for cross-linguistic occurrences of pro-drop): if there was no difference between the pronominal and the agreement marking suffixes, it would not be possible for one to be lost and the other retained.

References

- Andrews, Avery. 1990. Unification and Morphological Blocking. Natural Language and Linguistic Theory 8:504-57.
- Bresnan, Joan. 1998. Pidgin Genesis in Optimality Theory. In Proceedings of the LFG98 Conference, ed. Tracy King and Miriam Butt. Stanford. CSLI On-Line Publications.
- Bresnan, Joan. 1999. The Emergence of the Unmarked Pronoun. In Optimality-Theoretic Syntax, ed. Geraldine Legendre, Sten Vikner, and Jane Grimshaw. Cambrdige, MA: MIT Press.
- Bresnan, Joan. 2000. Lexicon-Functional Syntax. Oxford: Blackwell Publishers. To Appear.
- Bresnan, Joan, and Sam Mchombo. 1986. Grammatical and Anaphoric Agreement. In Papers from the Parasession on Pragmatics and Grammatical Theory. Proceedings of CLS, 278-97.
- Clark, Eve. 1993. The Lexicon in Acquisition. Cambridge: Cambridge University Press.
- Comrie, Bernard. 1998. Reference-tracking: Description and explanantion. Sprachtypolog. Univ. Forsch. (STUF) 58:335-346.
- Culy, Christopher. 1996. Agreement and Fula pronouns. Studies in African Linguistics 25:1–26.
- Dolbey, Andrew. 1995. Possessive Modifiers in Finnish. Unpublished manuscript, University of California at Berkeley.
- DuBois, Thomas A. 1995. Finnish Folk Poetry and the Kalevala. New York, NY: Garland.
- Hakulinen, Auli, and Fred Karlsson. 1988. Nykysuomen Lauseoppia. Helsinki: Suomen Kirjallisuuden Seuran.
- Hale, Mark. 1997. Theory and Method in Historical Linguistics. Book manuscript, Concordia University.
- Harris, Alice, and Lyle Campbell. 1995. *Historical Syntax in a Cross-Linguistic Perspective*. Cambridge: Cambridge University Press.
- Hopper, Paul J., and Elizabeth Closs Traugott. 1993. *Grammaticalization*. Cambridge: Cambridge University Press.
- Kanerva, Jonni. 1987. Morphological Integrity and Syntax: The Evidence from Finnish Possessive Suffixes. Language 63(3):498-521.

- Kaplan, Ronald M., and Joan Bresnan. 1982. Lexical-Functional Grammar: A Formal System for Grammatical Representation. In *The Mental Repre*sentation of Grammatical Relations, ed. Joan Bresnan. Cambridge, MA: The MIT Press. Reprinted in Dalrymple et al. (eds.).
- Karlsson, Fred. 1991. *Finsk grammatik.* Helsinki: Suomalaisen Kirjallisuuden Seura.
- Leino, Pirkko. 1991. Suomen kielioppi. Helsinki: Otava.
- Lightfoot, David. 1999. The Development of Language. Acquisition, Change, and Evolution. Malden, MA: Blackwell.
- Nevis, Joel. 1984. Five Morphemes in Finnish: Possessive Suffixes or Anaphoric Clitics. In Ohio State Working Papers in Linguistics, 174–207.
- Nordlinger, Rachel. 1998. Constructive Case: Evidence from Australian Languages. Stanford, CA: CSLI Publications.
- Penttilä, Aarni. 1957. Suomen Kielioppi. Porvoo: Söderström Osakeyhtiö.
- Pierrehumbert, Janet. 1980. The Finnish Possessive Suffixes. Language 56(3):603-621.
- Pollard, Carl, and Ivan Sag. 1994. Head-Driven Phrase Structure Grammar. Stanford, CA: CSLI Publications.
- Stenberg, Anne-Marie. 1971. Finsk Satslära. Helsingfors: Söderström och Co.
- Svensson, Pirkko Forsman. 1983. Satsmotsvarigheter i Finsk Prosa under 1600-talet. Helsinki: Suomalais Kirjallisuuden Seura.
- Tauli, Valter. 1966. Structural Tendencies in the Uralic Languages. Uralic and Altaic Series, Vol. 17. Bloomington, IN: Indiana University Publications. Also published by The Hague: Mouton.
- Toivonen, Ida. to appear. The Morphosyntax of Finnish Possession. Natural Language and Linguistic Theory.
- Trosterud, Trond. 1993. Anaphors and Binding Domains in Finnish. In *Case and Other Grammatical Categories in Finnish Syntax*, ed. Anders Holmberg and Urpo Nikanne. Berlin: Mouton de Gruyter.
- Vainikka, Anne. 1989. Deriving Syntactic Representations in Finnish. Doctoral dissertation, University of Massachusetts, Amherst.
- van Steenbergen, Marlies. 1989. Finnish: Configurational or Not? In *Configurationality*, ed. Marácz and Muysken. Foris Publications.
- Vilkuna, Maria. 1996. Suomen Lauseopin Perusteet. Helsinki: Edita.