This paper surveys data on possessive constructions in a number of languages that have been involved in contact-induced language change. I have structured the material following the three-way division introduced by Thomason and Kaufmann (1988), distinguishing between shift, maintenance, and new creation scenarios. It turns out that the properties of possessive constructions are affected in different ways in these different scenarios. Finally, I try to draw some more general conclusions from the observations made in discussing these different scenarios.

1. Introduction

On a very abstract level, language contact, or more precisely, contact-induced language change, can be defined as the process of change resulting from the co-existence of several language systems in the minds of (groups of) individuals. It is an individual phenomenon since it necessarily involves mental representations; however, it is a group phenomenon in that single individual speakers probably would not have much impact. On the much more concrete level of actual speech communities, however, contact-induced language change can have very different shapes. Thomason and Kaufmann (1988), distinguish three different scenarios for language contact, depending on what happens in the speech community with the two languages: shift, maintenance, and new creation. In shift scenarios (Section 2), the original language is given up in favour of a new one. In maintenance scenarios (Section 3) the speakers maintain their language, while in new creation scenarios (Section 4) completely new language systems are born as the result of language contact. It turns out that the properties of possessive constructions are affected in different ways in these different scenarios; the advantage of looking at a single construction is that these differences are systematically highlighted. The data in this paper are somewhat arbitrarily drawn from my own research experience or from material collected by former students and colleagues; the exception is the work by Aikhenvald touched upon in Section 3.3. However, they represent a reasonable sample of the types of developments found in possessive constructions cross-linguistically, and hence are adequate for my purposes.

2. Shift scenarios

In shift scenarios the contact-induced change is due to a population having shifted to a new language. As a result of this shift several things can happen: in expansion varieties there is some simplification and homogenisation (Section 2.1), and in addition there may be substrate influences from the original language of the community (Section 2.2) through the functional skeleton of the original language. The substrate influence could well be the result of transfer or conservation of L1 structures in L2 learning; in Section 2.3 I present evidence that in the L2 acquisition of possessive constructions functional skeletons play an important role.
2.1 Leveling in expansion varieties (Muysken 1977)

In Ecuador, Quechua is now widely spoken as the main language of the Amerindian population in the highlands. However, its use probably does not predate the Spanish conquest by much more than a century or so. Rather, it was introduced possibly as a coastal trade language and later with the Inca invasion. The local indigenous populations of Ecuador, which had been speaking Barbacoan and Jivaroan languages, gradually shifted to Quechua, a process which was well underway already at the end of the 18th century at the time of Independence, and completed only by the early 20th century. The Ecuadorian variety of Quechua has undergone leveling, in that it does not show the enormous internal linguistic variation characteristic of Peruvian Quechua. Furthermore it is the result of morphological simplification: both the range of suffixes and the possible complexity of words are more limited in Ecuadorian Quechua. This manifests itself in the possessive construction. As shown in (1), in Peru attributive possession is marked both with a genitive marker on the possessor and with an agreement marker on the possessum. In Ecuador, there is only a genitive/benefactive marker on the possessor:

(1) **Peruvian Quechua** >> **Ecuadorian Quechua**

Xwan-pa mama-n Xwan-pak mama
John-GE mother-3PO John-BEN mother

'John's mother'

With pronoun possessors, in Peru ordinarily only the agreement appears, while in Ecuador we find a case-marked lexical pronoun:

(2) mama-yki kan-pak mama
mother-2PO you-BEN mother

'your mother'

The pattern in (1) and (2) is typical for the kind of moderate simplification that we sometimes find in expansion varieties. However, with first person possessors there is some evidence that in Ecuador as well it has not become a purely analytical construction:

(3) mama-y fiuka mama
mother-1PO I mother

'my mother'

The benefactive case marker, which we would expect on the basis of the Ecuadorian examples in (1) and (2) is absent in the case of the first person, suggesting a degree of paradigmatisation of the nominal possessors. It does not conform to the expected transparent compositional morphology of Quechua, as with the second and third persons, where we get kan-pak 'you-BEN' and pay-pak '(s)he-BEN'.

2.2 Substrate effects (Muysken 2004)

In Andean Spanish, different types of possessive constructions occur. The type of John his mother' found in southern Peruvian Quechua construction mentioned in (1) above. It has been argued that the Quechua functional skeleton survived intact in this variety (Camacho et al. 1995). However, there is a related construction, on the surface, in the Spanish of northern Peru 'his mother of John', which has been argued to be an archaism of Iberian origin (Rodriguez Garrido 1982), but may have been the lexical model for the Quechua-related structure that we find in southern Peruvian Spanish for 'John's mother':

(4) **Southern Peru and Amazon** **Northern Peru** **Ecuador**
de Juan su madre su madre de Juan la madre de Juan
PS John 3PO mother D.F mother PS John

(archaism) (standard)
The structure used in northern Peru is limited to animate full nouns, as shown in (5) and (6). This restriction does not hold for the southern Peruvian construction, nor for Quechua, incidentally.

(5) Only with animates:

<table>
<thead>
<tr>
<th>Southern Peru and Amazon</th>
<th>Northern Peru</th>
</tr>
</thead>
<tbody>
<tr>
<td>del muro su ladrillo</td>
<td>*su ladrillo del muro</td>
</tr>
<tr>
<td>PS.+D.M wall 3PO brick</td>
<td>PS.+D.M wall 3PO brick</td>
</tr>
</tbody>
</table>

(6) Only with third persons: 'mi casa de mi madre'

Notice that in Ecuador, where the original Quechua functional skeleton has been much simplified, we do not get the 'of John his mother' construction in Spanish; we rather find either the standard construction 'the mother of John' or, in the speech of incipient bilinguals, 'John mother', as in (7).

(7) Juan madre
John mother

2.3 Second language development

The data on the L2 development of Dutch possessives presented by van de Craats et al. (2000) concern both Turkish and Moroccan Arabic learners. Here only some of the Turkish data are presented, which show a pattern quite similar to the one sketched in (4) above for southern Peruvian Andean Spanish. This is not an accident since in Turkish the attributive possessive construction has the same structure as in Peruvian Quechua: [possessor + genitive possessum + personal ending]. In the Dutch interlanguage of Turkish learners, presented in (8) below roughly in terms of the progression in complexity of the L2 representations, there is a tendency towards the order [possessor possessum], different to what we find in most Dutch sentences, and the introduction of a number of elements from Dutch that take the place of Turkish functional elements. These are italicized in (8). Notice that in native Dutch we find pre-head possessors mostly with pronouns (mijn moeder 'my mother', with names (Jans moeder 'John's mother'), and with a few kinship terms (mijn moeders huis 'my mother's house'). Some of the extra Dutch elements introduced in the examples in (8) could be characterized as functional elements, but bear no relation to the elements in the target Dutch noun phrase.

(8) vriend huis 'my friend's house'
garage die naam 'the name of the garage' (die = non-neuter deictic)
de auto van de lichten 'the lights of the car' (van = of)
die van z'n ding 'his thing' (z'n = his)
von Omer's huis 'Omer's house' (s = genitive 's, mostly with kin terms, names)
von Henry z'n foto 'Henry's photograph'
von Zorro von Turks film 'the Turkish film of Zorro'
z'n jongen z'n tekening 'the boy's drawing'
de pan z'n deksel 'the lid of the pan'
juffrouw Lia z'n feest 'Miss Lia's party'
Mark en Mieke z'n moeder 'Mark and Mieke's mother'
Mijn oom's zoon 'my uncle's son'

The data in (8) suggest that substrate influence in possessive structures as found in Peruvian Spanish may well have its roots in the process of L2 acquisition.

3. Maintenance scenarios

The other main type of language contact scenario involves maintenance, coupled with gradual convergence (3.1) or restructuring (3.2). In exceptional cases we also find multi-directional diffusion.
3.1 Gradual convergence and language change

A typical case of gradual convergence in which the possessive structure is slowly changing is Moroccan Arabic (Bouman 2004). Moroccan Arabic has a synthetic possessive, as in (9a) and (9c), as well as an analytic possessive, as in (9b) and (9d), which appears to be a new development in the language:

(9)  
a. DaR-i  
    house-1  
    'my house'

b. D-DaR dyal-i  
    D-house PS-1

c. weld t-taier  
    son D-merchant  
    'the merchant’s son'

d. l-weld dyal t-taier  
    D-son PS D-merchant

Over time, the analytic constructions in (9b) and (9d) are replacing the synthetic ones of (9a) and (9c). In Morocco, this is particularly the case in the dialect of the city of Tanger. However, while in Tanger the shift to analytic possessives characterizes both nominal and pronominal possessors, in the diaspora community in the Netherlands, the traditional pronominal possessive as in (9a) has remained fairly frequent, while (9d) is much more frequent than (9c). The maintenance of (9a) can be explained by the fact that most Moroccans in the Netherlands come from more traditional countryside areas in Morocco, coupled with the fact that in Dutch pronominal possessives involve a possessive pronoun and no preposition (mijn vader ‘my father’); the increase in frequency of (9d) can be explained through the fact that nominal possessives generally have a prepositional construction in Dutch: (het huis van mijn buurman ‘the house of my neighbour’).

The type of subtle shift in frequency distribution in Moroccan Arabic involving relatively few overt and dramatic changes can be seen as typical of not very intense contact in a maintenance scenario.

3.2 Restructured varieties

An example of a restructured variety which has undergone extensive changes is Melayu Sini, the Dutch converged variety of Moluccan Malay spoken in various places in the Netherlands in emigrant Moluccan communities. In this variety, a number of changes have occurred, which in part are the result of ongoing changes already taking place in Indonesia, and in part are due to the contact with Dutch, which has been quite intensive. The following data come from Wierden, province of Overijssel (Huwae 1992), and derive from a translation task from Dutch to Malay. First the Dutch target structure is given, and then the various translations provided. Local spelling has been maintained in the Malay examples below (e.g. in punja rather than punya, as in Indonesia):

(10)  
target:  August is de broer van mijn moeder.  
        ‘August is the brother of my mother.’

(11)  
a. Agus itu mama-ku punja kakak laki-laki  
        August DEM mother-IPO PS older sibling M

b. Agus itu kakak-nja mama-ku  
        August DEM older sibling-3PO mother-IPO

c. Agus itu kakak laki dari mama-ku  
        August DEM older sibling M from mother-IPO
In addition to the traditional structure [possessor punja possessed] as in (11a), we find the [possessed possessor] structure, as in (11b), which also is found in Indonesian Malay. Most innovative is the pattern in (11c), involving dari. In (12) the quantitative distribution of these three options in Huwae’s data is presented:

(12) | Nominal possessor |
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>possessor punja possessed</td>
</tr>
<tr>
<td>possessed-nja possessor</td>
</tr>
<tr>
<td>possessed dari possessor</td>
</tr>
</tbody>
</table>

With pronominal possessors we do not find the form with dari. Here the structure [pronoun punja possessed], as in (14a), was found 24 times, and the pattern [possessed + possessive pronoun], as in (14b), 20 times.

(13) target: Zij heeft haar tas bij haar vader laten liggen.
    lit. ‘She has her bag at her father let lie.’

(14) a. Dia kasih tinggal dia punja tas di papa-nja
    3 give stay 3 PS bag LOC father-3PO

b. Dia kasih tinggal tas-nja di papa-nja
    3 give stay bag-3PO LOC father-3PO

The innovative pattern involving dari is typical of more intense language contact in a maintenance setting.

3.3. Multi-directional diffusion

Aikhenvald (2002) discusses the complex case of multi-directional diffusion involving the Arawakan language Tariana, and East Tucanoan. In this process, Aikhenvald documents the expansion of juxtaposition and of possessive classifiers in Tariana (under the influence of Tucanoan), coupled with the simultaneous development of possessive proclitics in East Tucanoan (under the influence of Arawakan Tariana). The language contact situation can be classified as falling under the maintenance scenario, but there has been extensive and long-standing bilingualism in the region, as documented by Aikhenvald in various publications as well as a number of earlier researchers, going back to Sorensen (1967). What we see in this setting is the addition of functional morphemes to the possessive structures of both languages involved in the exchange.

4. New creation scenarios

A final set of language contact settings has given rise to completely new languages. The most well known, of course, are the creoles, an example of which is discussed in Section 4.1. Furthermore, there are intertwined mixed languages.

4.1. Creole genesis

One of the best documented early creoles is 18th century Sranan (Bruyn 1996; van den Berg 2005). While most of the lexicon of Sranan has an English origin, the syntax is based on various sources.

It appears that there is quite a bit of variation in the way possessives are constructed. The earliest sources provide both a pre-head and a post-head pronominal possessive (dates are provided for each example). The preposition used (glossed here as PS) is vor:

(15) a. mie jary 1718 b. meester vor mi 1707
    1 garden master PS 1
Possessive constructions in language contact settings

(16) a. Dem tu brara no lukku dem tatta 1783
   D.P/3.P two brother NEG take-core D.P/3.P father
   'The/their two brothers do not look after their/the father(s).'

   b. dem no lukku tatta wa dem
   DP/3P NEG take.care father PS 3P

With nominal possessors the same variation occurs, and in later sources the proposition marking possession generally is fu 'for'.

(17) a. bacara nengre 1765
   white.man black
   'white man's black(s)'

   b. wan nengre foe bakara
   one black PS white.man
   'one white man's black'

In the non-native variety of Sranan called bakra tongo 'white man's speech' we also find pre-head nominal possessors with a resumptive possessive pronoun:

(18) mie Piekien em Oema 1793
    1 little 3 sister
    'my son's wife, daughter in law'

However, this structure is not characteristic of the more widely spoken Sranan varieties. While the Sranan patterns at first sight look like a continuation of the system in English, actually the fact that, for example, in (15b) and (16b) even pronominal possessors can follow the head suggest that the pre-head/post-head alternation is an autonomous feature of the Creole.

4.2 Intertwined languages

While in creoles the lexicon generally only has one major source (the dominant European language at the time of creation), in intertwined or mixed languages we typically find lexicon from various sources. At the same time, there often is a morpho-syntactic frame roughly corresponding to one of the languages involved. In the case of the Malay-Dutch contact language Petjo from colonial Djakarta pronominal possessives can be from either Dutch or Malay, as shown in (19):

(19) Petjo (Malay-Dutch) (data from Tjali Robinson as analyzed in van Rheeden 1993)
    ooh-nja sijn mon pinggang-nja sijn golok
    eye-3PO 3.M.PO mouth waist-3PO 3.M.PO machete
    'her/his eye' 'his mouth' 'her/his waist' 'his machete'

However, their frequency varies, to some extent depending on the origin of the possessum, as shown in (20):

(20) -nja (*seja, *enkau, *(ka)-mu) mijin/jou/je/sijn/haar/chaar/ons
    25 (64 %) 14 (36 %) Malay nouns
    57 (34 %) 110 (66 %) Dutch nouns

With Malay nouns, two thirds take a Malay pronoun, with Dutch nouns, two thirds a Dutch pronoun. In the relevant cases with a pronominal possessor, we find 24 cases of [pronoun punja possessed] (cf. Section 3.2 above), and 20 cases of [possessed-pronoun].
Possessive constructions in language contact settings

The situation in Petjo is a pattern not so typical for mixed languages as a whole; suggesting that speakers had recourse to several grammatical systems at once rather than mainly drawing upon one grammatical system (with the lexicon being taken from another system).

5. Scenarios and processes

Let me first recapitulate the three different main scenarios and eight sub-cases treated in this paper, together with the main linguistic results, as in Table 1.

Table 1: Three different main scenarios and eight sub-cases, together with the main linguistic results

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Sub-case</th>
<th>Main Linguistic Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift scenarios</td>
<td>Leveling in expansion varieties</td>
<td>Gradual loss of some functional elements</td>
</tr>
<tr>
<td></td>
<td>Substrate effects</td>
<td>Retention of functional skeletons</td>
</tr>
<tr>
<td></td>
<td>Second language development</td>
<td>Retention of functional skeletons, gradual restructuring of the system</td>
</tr>
<tr>
<td>Maintenance scenarios</td>
<td>Restructured varieties</td>
<td>Retention coupled with innovation and partial convergence</td>
</tr>
<tr>
<td></td>
<td>Gradual convergence and language change</td>
<td>Convergence and exploitation of surface resemblance</td>
</tr>
<tr>
<td></td>
<td>Multi-directional diffusion in intense bilingual contact</td>
<td>Complete restructuring and adding of functional elements</td>
</tr>
<tr>
<td>New creation scenarios</td>
<td>Creole genesis</td>
<td>Use of lexical material from lexifier language for functional categories; innovation with unmarked structures.</td>
</tr>
<tr>
<td></td>
<td>Intertwined languages</td>
<td>Use of lexical material from different lexifier languages; innovation and retention of functional skeletons</td>
</tr>
</tbody>
</table>

The question to be raised then is how we can develop a theoretical model to explain these results. A number of general principles can be established, as a first start. First, four different strategies that bilingual speakers have at their disposal appear to play a role in language contact:

(21) a. Retention of L1 functional elements and grammatical skeletons
b. Convergence on the basis of surface correspondences in output patterns
c. Innovation on the basis of universal principles
d. Adoption of L2 functional elements and grammatical skeletons

Which of these strategies is adopted by bilingual speakers, or in which combination, depends on sociolinguistic factors such as power relations, opportunities for L1 maintenance and L2 learning, types of bilingual interaction, duration of contact, demographic mixes, etc.

Second, there are some constant principles, independently of which strategy is adopted. These may be arranged on the retention/innovation axis (with the exception on the last one), as in Table 2.

Table 2: Linguistic processing principles governing the outcome of bilingual strategies

<table>
<thead>
<tr>
<th>Retention</th>
<th>Innovation</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A V</td>
<td>N</td>
<td>Verbal elements are retained more frequently than nominal elements</td>
</tr>
<tr>
<td>B func</td>
<td>lex</td>
<td>Functional elements are retained more frequently than lexical elements</td>
</tr>
<tr>
<td>C inner</td>
<td>outer</td>
<td>Inner forms (i.e. abstract syntactic and representations of an element) are retained more frequently than outer forms (i.e. the morpho-phonological shape of the element)</td>
</tr>
<tr>
<td>D func~lex</td>
<td>lex</td>
<td>Functional elements are frequently taken from the same language as lexical elements in their immediate environment</td>
</tr>
</tbody>
</table>
These principles are sometimes in competition, as in the case of B and D. According to principle B functional elements in a particular language are retained more frequently than lexical elements, while according to principle D functional elements are frequently taken from the same language as lexical elements in their immediate environment. Sometimes they reinforce each other, as in the case of B and C. The combination of these principles can lead to different contact outcomes. In the array in Table 3 a few of these are illustrated:

Table 3: Examples of combinations of lexical and functional elements of different categories made possible by the principles A-D in Table 2

| i  | funcV1 | funcN1 | lexV1 | lexN1 | monolingual |
| ii | funcV1 | funcN1 | lexV1 | lexN1/2 | light borrowing |
| iii| funcV1 | funcN1 | lexV1/2 | lexN1/2 | heavy borrowing |
| iv | funcV1 | funcN2 | lexV1 | lexN2 | Michif |
| v  | funcV1 | funcN1 | lexV2 | lexN2 | Media Lengua |

Cases (ii) and (iii) reflect cases where lexical elements from a second language come in; as principle A predicts, first in the nominal and then in the verbal domain. Cases (iv) and (v) refer to the two intertwined languages Michif and Media Lengua, languages which have played an important role in the discussions about language contact. They differ from each other in that in Michif the functional categories associated with the noun are from the same language as the nouns themselves, French (following principle D func-lex), while verbal categories are from Cree, just as the verbs. In Media Lengua, a separation between functional and lexical categories is maintained, following principle B. It is not quite clear why these differences are there, but in part they surely derive from the properties of Cree and French (in the case of Michif), versus those of Quechua and Spanish (in the case of Media Lengua). The Petjo results given in (20) also suggest that principle D (func-lex) plays a role there, even if only statistically.

Further work will need to result in a more fully articulated theory of these language contact processes and their outcomes. At least it is clear that the four strategies in (21) and principles A-D play an important role in this respect.

Abbreviations

| I, etc. | 1, etc. person pronominal element |
| IPO, etc. | 1st, etc. possessive pronominal element |
| BEN | benefactive |
| D | determiner |
| DEM | demonstrative |
| F | feminine |
| func | functional element |
| GE | genitive case |
| lex | lexical element |
| LOC | locative |
| M | masculine |
| N | noun |
| NEG | negation |
| OBL | oblique |
| P | plural |
| PS | possession marker (often preposition) |
| V | verb |
References


Pieter Muysken is Professor and Chair of Linguistics at Radboud University Nijmegen, the Netherlands. Previously he taught in Amsterdam and Leiden. Recent work of his includes Bilingual speech: a typology of code-mixing (2000) and The languages of the Andes (Willem Adelaar, in cooperation with Pieter Muysken, 2004).