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Contact-induced changes in Amerindian Languages of French Guiana

Françoise Rose / Odile Renault-Lescure

Laboratoire CELIA (Paris, Cayenne), IRD-CNRS (France)

1. Introduction

French Guiana is an ideal place for the study of language contact, with its six Amerindian languages, various French based and English based Creoles, immigrant languages like Chinese or Hmong and, what is of interest for this conference, Romance languages like French, Portuguese and Spanish (Launey et al, 2003).

This paper will focus on contact between on the one hand, two Amerindian languages, Kali'na and Emérillon, and on the other hand Romance languages: French, Portuguese and Spanish. This contact will regularly be compared with the contact of the same Amerindian languages with Creole languages. Theoretically speaking, this case study is particularly interesting in that it deals with on the one hand two typologically similar languages (the Amerindian languages Kali'na and Emérillon) and on the other hand languages that are typologically distant from each other (Romance languages and Creoles) and likewise distant from Kali'na and Emérillon.

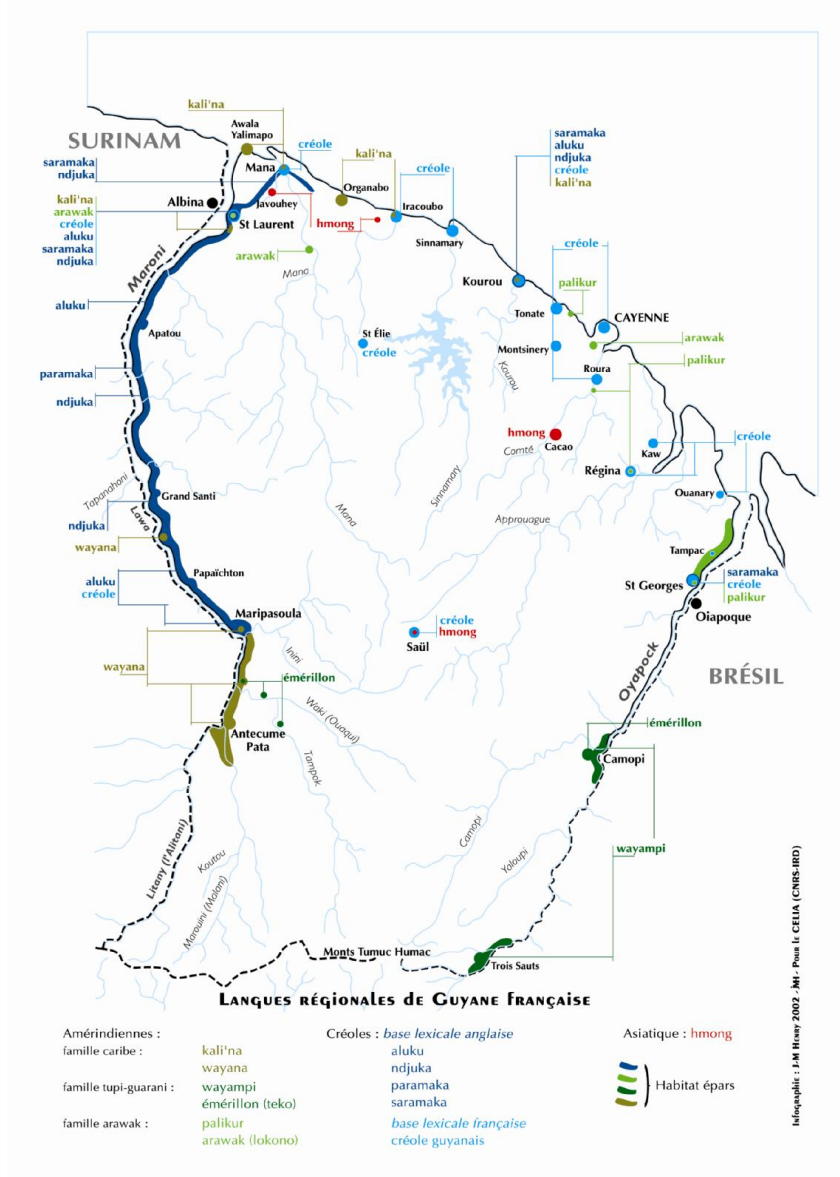
Section 2 will give as preliminaries a presentation of the Kali'na and Emérillon languages, with a short history of their contact situations. Section 3 and 4 will respectively deal with the phonological and morphosyntactic contact-induced changes in both languages.

2. Kali'na, Emérillon and their contact situations

Kali'na¹ is the Cariban language which covers the largest geographical area, spreading from the north-eastern savannahs of Venezuela to the north of the Brazilian state of Amapa, passing through all three Guyanas. In French Guiana, the Kali'na population (around 3500 people, but a lower number of speakers) is spread out into different villages to the west of Cayenne, as far as the Maroni river (Cf. map). Because of its coastal distribution, Kali'na has been in contact with a variety of other populations.

Emérillon is the more septentrional member of the geographically widespread TG family, present in Guiana since the late 15th century. The 400 members of the group (whose autodenomination is Teko), are all fluent speakers of the language, and live exclusively in Guiana, in two areas of the

rainforest, one next to the border of Surinam, and the other on the Brazilian border (Cf. map). Because of its peripheral and more isolated situation, Emérillon has looser contacts with other non Amerindian populations.



Map 1: Map of regional languages of French Guiana (Goury 2001)

These two languages display a different history of contacts. This contact history is basically constituted of three phases:

(a) First, was the arrival of the Europeans and the merchandise trade. The Kali'na people, living on the Guianese coast, referred to contact goods with the words of the first Europeans they met, namely Spanish and Portuguese, and less commonly English, Dutch and French. The Kali'na lexicon took on a stock of borrowings which were then diffused all along the coast of the Guyanas, from the mouth of the Orinoco to the Approuague, in eastern Guiana. It was mainly diffused by means of a Carib based pidgin named "langue générale galibi" used between the different Amerindian populations, among them, the Emérillon population, who was meanwhile located in the hinterland, between the Inini, the Approuague and the Oyapock rivers. This first phase corresponds to direct but occasional contacts for Kali'na people (called "casual contacts" by Thomason 2001: 70), such as the use of interpreters with traders or missionaries. For the Emérillon people, those contacts were indirect, through the use of the Galibi Pidgin.

b) In a second phase, contacts with Romance languages decreased, being taken over by contacts with vehicular languages developed in the colonies with the development of slave trade. Those languages are:

-Sranan Tongo, the Creole of the plantations of Surinam, born in the second half of the 17th century. Its lexicon is essentially based on English, with some contribution from Dutch, Portuguese and Kikongo. It has been hypothesized that a great number of its grammatical structures is based on those of the African Gbe languages.

-the Guianese Creole, a French based Creole, with possibly some grammatical structures of the Fon language.

A certain degree of bilingualism of the Kali'na speakers with Sranan lasted until the end of the 20th century, due to their history as refugees in the Dutch colony in the 17th and 19th century, and to strong commercial relations across the border.

The Emérillon population was not concerned with this contact, although they were in contact with the English based Creole Aluku in the late 18th century in the mid-Maroni region.

The Kali'na population established intense social relations with the Guianese Creoles later on, as they went back to French Guiana and some of

them very likely became bilingual. The Emérillon people also established some commercial contacts with Creole populations, but stayed isolated in the southern part of the colony.

c) In a third phase, Guiana underwent “francization”, the unification of its administrative system as a French department, and the settlement of French institutions such as administration representations and schools (in 1945 the first Kali’na children went to school, and in 1956 the first Emérillon children).

As a consequence, contact with French became more intense, especially for the Kali’na people, with French tending to substitute Creole as a vehicular language nowadays. Contacts with Creoles decrease, and speakers attitudes towards those languages change too. Mastering French is more or less seen as a key for social success (for work, studies, and implication in the political and administrative structures). Today, bilingualism with French is more widespread for Kali’na speakers than for Emérillon speakers. It is worthwhile to note that nowadays, those language contacts take place in a context of wider plurilingualism. Migrations of the late 20th century triggered a rise of Surinamese Creoles near the western border of the department and of Brazilian Portuguese near its eastern border.

Historical times	Main contact languages	Type of contact for Kali’na (Kal.)	Type of contact for Emérillon (Em.)
1) first contacts with Romance Languages	Spanish (Sp.) Portuguese (Port.)	direct and occasional	indirect
2) rise of the Creoles	Creoles: Sranan Tongo (Sr.) Guianese Creole (Cr.)	some bilingualism	little contact
3) “francization”	French (Fr.)	intense (widespread bilingualism)	quite intense

Table 1: Kali’na and Emérillon histories of contacts

To summarize, both Kali’na and Emérillon have successively had contacts with European languages, Creoles and finally French, each period being

characterized by a stronger intensity of contacts. In each period, Emérillon contact situation is somewhat less intense than that of Kali'na.

On the whole, contact-induced changes in Kali'na and Emérillon consist essentially of lexical borrowings, regardless of whether the source language is a Romance language or a Creole. A few syntactic changes will be presented further on. However, since lexical borrowing may gradually lead to phonological and structural changes in the borrowing language, we will describe both how borrowings get adapted to the receiving systems, and how the systems adjust to the borrowings. Section 3 will present the integration of the borrowings at the phonological level, and section 4 at the morphosyntactic level. Our main interest will be to compare the integration of borrowings to different languages, in two different but comparable languages.

Let us add three caveats. First, it is not always a simple task when studying a particular phenomenon of language interference to determine whether code-switching or borrowing is concerned. As a consequence, this paper is based only on linguistic facts that are unambiguously borrowings (for a discussion of code-switching, Cf. Auer 1999). Second, the source language is not always easy to determine, especially within the following pairs of possible source languages: French and Guianese Creole, Guianese and French West Indies Creoles, and also Sranan Tongo and Aluku, especially when the word is quasi identical in both of the possible source languages. Third, although beyond the scope of this paper, it is important to keep in mind that interferences among Amerindian languages are also attested. For instance, Emérillon has borrowed a Cariban plural marker *-kom*, possibly from Kali'na.

3. Similarities and differences in the phonological integration of borrowings

On the phonological level, besides phone substitution that we will not describe in this paper, many other processes of adaptation of the borrowed items can be found. In 3.1, we will focus on one very specific process: nasalization/denasalization in Emérillon.

However, borrowings do not always completely adapt to the system, and eventually it is sometimes the system itself that adjusts to the borrowed words and therefore undergoes remarkable changes. In 3.2, we will show

how the Kali'na phonological system evolved in a substantial way on account of lexical borrowing.

Eventually, and this point is particularly interesting from a theoretical standpoint, we will show in 3.3 how the same phonological constraint yields two different processes of integration for words of the same origin in the two languages in our study (Kali'na and Emérillon).

3.1. A specific integration process : (de)nasalization in Emérillon

One of the peculiarities of Emérillon is its suprasegmental nasality. The /~/ feature is assigned at the lexical level and applies across a given morpheme to specify the [+nasal] value of its phonemes. Only vowels and voiced consonants can be specified as [+nasal]. Other phonemes are transparent and opaque to nasalization: they are not affected by nasalization and do not block its spreading.

Oral morphemes		Nasal morphemes	
ba/e ~ mba/e	thing	mã/e)	COMPL
tap\ dZ	house	tam ^o)	grandfather
o-bo-aku 3-CAUS-hot	he heats it	o-mõ-ãtã 3-CAUS-hard	he hardens it

Table 2 : Examples of oral and nasal morphemes in Emérillon

Foreign items follow this constraint, and are therefore integrated as either oral or nasal morphemes, probably according to the nasal or oral value of the last phoneme, since nasality seems to apply from right to left. Accordingly, phenomena of denasalization and nasalization are observed in the borrowing process:

	Source language	Emérillon	Meaning
denasalization	MaCocotte [makok t] (Fr.)	bakokol [bakok t]	pot
	Mon Père (Fr.) [mõp @]	bopel [bop t]	priest
	pommade (Fr.) ~ pomad (Cr.) [pomad]	pobal [pombat] ²	gel

Table 3 : Examples of nasalisation in the borrowing process

	Source language	Emérillon	Meaning
	dipen (Cr.) [dip]	nĩp	bread

nasalization	farine (Fr.) ~ farin (Cr.) [fa ^h in]	panin	flour
	zoranj (Cr.) [zo ^h añ]	zonañ	orange (fruit)

Table 4 : Examples of denasalisation in the borrowing process

3.2. Contact-induced system-altering changes in Kali'na

The first borrowings from the Romance languages into Kali'na at the time of colonization do not seem to have induced any structural change on Kali'na's phonological system. This is not true, however, for the subsequent borrowings from Sranan Tongo. These borrowings induced tendencies towards certain phonological changes that were later reinforced by more recent borrowings from French and Guyanese French based Creole. Below are presented the introduction of a new phoneme and the transfer of a voice opposition.

3.2.1. Introduction of a new phoneme

The Kali'na phonological system displays eleven consonants classified in Table 5 according to manner and place of articulation.

	Labial	Apical	Palatal	Velar	Glottal
OBSTRUENTS					
stops	p	t		k	/
fricatives	(f)	s			h
SONORANTS					
nasals	m	n			
glides	w		y		
liquid		l			

Table 5: Kali'na consonant system

In the first historical phase of contact, among other regular phoneme substitutions in borrowed words, /p/ regularly substituted for /f/ in borrowings, by virtue of being the only native obstruent at the same place of articulation (Renault-Lescure 1985). This is the case regardless of the source language.

- (1) *francês* (Port.) > **palansi** (Kal.) 'Frenchman'
 (2) *swafroe* (Sr.) > **suwapulu** (Kal.) 'matches'

Later, however, variable realizations were tolerated, such as :

- (3) *fensre* (Sr.) > **pesele ~ fensele** (Kal.) 'window'

After this period of instability, the regular replacement of /f/ by a /p/ stop in borrowings was brought to an end, the fricative sound being finally maintained in borrowings.

- (4) *frigi* (Sr.) > **filiki** (Kal.) 'kite'

This tendency was reinforced afterwards through borrowings from French and French based Creole.

- (5) *lafinèt* (Cr.) > **lafinet[ʃ]** (Kal.) 'window'
 (6) *suflet* (Cr.) > **suflet[ʃ]** (Kal.) 'whistle'
 (7) *fil* (Cr. ~ Fr.) > **fil[ʃ]** (Kal.) 'sewing thread'
 (8) *foto* (Cr. ~ Fr.) > **foto** (Kal.) 'photo'

Our hypothesis, in keeping with Weinreich ([1953] 1970, p. 18), is that the empty fricative slot in the labial consonant inventory of Kali'na was a structural factor favoring the introduction of a new phoneme filling a gap in the system.

3.2.2. Transfer of a voice opposition

Although there is a the lack of opposition between p/b, t/d, and k/g in Kali'na, the stops /p/, /t/ and /k/ are sometimes realized as voiced stops [b], [d] and [g] when they are not word initial. This voicing of stops is difficult to explain. A study in progress (Renault-Lescure & Gomez 2005) shows a link between some of these realizations and the prosodic and syllabic structures, but does not yet explain all of these realizations. Among the hypotheses, a possible explanation relies on contact with languages in which the voicing opposition is relevant for stops, more specifically through lexical borrowings. With the introduction of loanwords maintaining a voiced stop word-initially, a new opposition is indeed emerging.

The oldest loanwords retain the pattern of allophonic distribution, by which voiced stops are borrowed as voiceless word-initially.

- | | | | | | | | |
|------|----------------|-------|---|-----------------------|------------|--------|---------|
| (9) | <i>bandera</i> | (Sp.) | > | <i>pantila</i> | [pandi'la] | (Kal.) | 'flag' |
| (10) | <i>barque</i> | (Fr.) | > | <i>paliki</i> | [paali'gi] | (Kal.) | 'bark' |
| (11) | <i>grasi</i> | (Sr.) | > | <i>kalasi</i> | [kalaa'çi] | (Kal.) | 'glass' |

More recent loanwords, from the Creoles or from French, maintain a voiced realization word-initially, which has led to the introduction of a new opposition:

- | | | | | | | |
|------|--------------|-----------|---|---------------------|---------------|----------|
| (12) | <i>pali</i> | 'barrage' | ≠ | <i>bali</i> | 'barrel' | (< Sr.) |
| (13) | <i>panki</i> | 'skirt' | ≠ | <i>banki</i> | 'bank (seat)' | (< Sr.) |

It is worth noting that Cariban languages do not usually display a voicing opposition, but that in certain of those languages, its emergence has been recorded and presented as a likely consequence of contact (Gildea 1998).

3.3. Differences in the processing of consonant clusters in borrowings

Both Kali'na and Emérillon share a phonological constraint that restricts consonant clusters.

Emérillon syllables are all open, with the exception of final syllables which may be closed by a single consonant. Consequently, no consonant clusters within the domain of the morpheme are allowed, and morphophonemic rules extend this domain to the word level.

(C)V- ...- (C)V - (C)V(C)

Table 6 : Canonical syllabic pattern of the Emérillon word

In Kali'na, the syllabic structure is (C)V1(V2,C). Accordingly, consonant clusters are possible, but their number is restricted by the particular distribution of consonants. All eleven consonants, with the exception of the glottal stop, can occur in the onset position. The coda consonants are either nasals (word-internally and word-finally) or the glottal stop (word-internally only). To summarize, the only sequences of consonants that are possible are word internal, C1 being necessarily a nasal or a glottal stop, and C2 being any consonant but the glottal stop.

Now words borrowed from Romance languages often contain consonant clusters that are not allowed by the two recipient languages of our study.

However, these clusters get integrated differently into the Kali'na system and into that of Emérillon.

3.3.1. In Kali'na

Consonant clusters that violate the syllable constraints are readjusted by the insertion of a vowel between two consonants (in bold in Table 7). These processes are observed regardless of the source language. The second, third and fifth lines of Table 7 also show the insertion of a final vowel.

Consonant clusters	Source language	Kali'na	Meaning
pl → pVl	plata (Sp.)	p ^h lata	money
fr → pVl	francês (Port.)	palansi[si]	Frenchman
br → pVl	brande-wijsn (Dutch)	palantuwini	rhum
sc → sVc	biscuit (Fr.)	pisukuwi	crackers
sp → sVp	spoen (Sr.)	pipunu	spoon
kl → kVl	lakle (Cr.)	lakele	key

Table 7: Examples of vowel insertion to break up a consonant cluster

The quality of epenthetic vowels is determined by progressive or regressive assimilation, or is by default a vowel prone to devoice (i, ʔ).

These rules do not apply to the most recent borrowings (from Creole or French) that conserve consonant clusters.

- (14) *garden* (Sr.) > **kalden** (Kal.) 'mosquito-net'
 (15) *dilwil* (Cr.) > **dilwil** (Kal.) 'oil'
 (16) *taxi* (Fr.) > **taxi** [taksi] (Kal.) 'taxi'

3.3.2. In Emérillon

Two processes occur with borrowed words to maintain the syllable constraints: either consonant deletion simplifies the cluster (as in Table 8) or vowel epenthesis breaks up the consonant cluster (as in Table 9). By and large, we can posit that deletion takes place when the first consonant of the cluster is a liquid³ (and possibly also when the cluster is in final position), and vowel epenthesis takes place between any other two consonants.

Simplification of consonant clusters	Source language	Emérillon	Meaning
--------------------------------------	-----------------	-----------	---------

through deletion			
rm → m	gendarme [ãda@m] (Fr.)	ãdam	policeman
rt → t	marteau [ma@to] (Fr.) ~ marto (Cr.)	bato	hammer
ld → d	soldat [sɔlda] (Fr.) ~ sòlda, soda (Cr.)	soda	soldier
final position	(la) piste (Fr.)	lapis	airstrip
final position	(la) table (Fr.) ~ tab (Cr.)	latab	table

Table 8: Simplification of consonant clusters

	Source language	Emérillon	Meaning
tr → ton	citron (Fr.) ~ sitron (Cr.)	sitonoÑ	lemon
tr → tul	citrouille (Fr.)	situlu•	pumpkin
tr → tal	travail (Fr.) ~ travay (Cr.)	talawa•	work
sk → sik	biscuit (Fr.) ~ biskwi (Cr.)	bisiku•	crackers
rt → let	carta (Sp.)	kaleta	paper, book, notebok
rk → lak	arcabuz (Sp.)	alakapusa	gun

Table 9: Examples of vowel insertion to break up a cluster of consonants

The quality of the epenthetic vowel is usually determined by assimilation to the quality of the following vowel.

In certain cases (like *kaleta* and *alakapusa*), an epenthetic vowel is found in cases where the cluster starts with a liquid, but these words were borrowed indirectly from Spanish via Kali'na.

In conclusion, the comparison between Kali'na and Emérillon shows that two languages with a similar constraint on consonant clusters may react differently to accommodate borrowed items. We can however hypothesize that Kali'na does not use the simplification process because it has a tendency to accept (and sometimes even favor) polysyllabic stems and words.

Please note that as far as phonology is concerned, the processes induced by interference of Kali'na and Emérillon with other languages are similar regardless of the phonological system of the source language, whether it is a French or English based Creole or a Romance language.

4. Similarities and differences in the morphosyntactic integration of borrowings

Once again, our data is particularly enlightening in that both Amerindian languages are typologically comparable, while they clearly differ in structure from French and Creoles, those latter being themselves typologically distant. Many linguistic constraints on contact-induced changes are indeed based on typological similarity and distance.

Kali'na and Emérillon are typologically very similar: both tend to be agglutinating and polysynthetic. Accordingly, the predicate is necessarily made up of a root and a person marker, but can also take numerous prefixes and suffixes, as well as clitics and an incorporated noun. Relations between the arguments and the predicate are marked on the predicate with a person index, following a hierarchical system (Renault-Lescure 2002, Rose 2003), and full NPs are facultative and actually rare in discourse. The syntactic importance of the predicate and the richness of its morphology contrast clearly with their French or Creole counterparts. In this respect, Kali'na and Emérillon are clearly different from the fusional Romance languages and the isolating Creoles. French verbs are characterized by personal clitics and a fusional conjugation system. Creole verb are very poor morphologically.

On one side of the debate on linguistic constraints on interference (Cf. for instance Thomason & Kaufman 1988, chapter 2) are beliefs like Field's Principles of System Compatibility, which asserts that the borrowing language's morphological typology (as isolating, agglutinating or fusional) will constrain the possibility of borrowing from another language (Field 2002). In our case, Kali'na and Emérillon, being agglutinating languages, can borrow agglutinating but not fusional morphology. There are indeed no instances of borrowed morphology from Romance languages, which are fusional languages. As a consequence, only roots are borrowed. Another of Field's assertions is that all languages can borrow instances of isolating morphology (Field 2002). Therefore the isolated morphemes of Creoles are

easily borrowed into Kali'na and Emérillon, whereas the Romance items that are borrowed are either simple roots, or roots with morphology (i.e NPs, or part of NPs) reanalyzed as simple roots.

In 4.1, we will first describe the process through which borrowed items are ascribed to a category in both receiving languages, before showing how they integrate in the morphosyntax of their host systems in 4.2. Finally, section 4.3 will suggest a few syntactic changes induced by borrowings.

4.1. Class assignment

In this section, we will focus on the attribution of a word category to borrowings. We will limit the discussion to the four predicative categories (nouns, verbs, adjectives and adverbs) Hengeveld (1992, chapter 4) uses to classify languages according to their parts of speech systems.

Whereas the Romance languages distinguish clearly these four categories, respectively nouns, verbs, adjectives and adverbs, the Creole languages offer examples of multifunctionality (Bruyn 2002). Some words function as noun, verb or adjective without any change in word class being morphologically marked. This ability seems to be quite common in Sranan Tongo, especially with forms used as a verb and as a noun, and less common in Guianese Creole.

Kali'na differentiates only three major word classes: nouns, verbs, and adverbs (playing the role of qualifiers once nominalized). All these words switch easily from one class to the other through derivational processes.

Emérillon presents four classes of roots, verbs, nouns, adverbs, and a small class of roots with “descriptive/adjectival” meaning that cannot be analyzed as nouns, verbs, nor adjectives (Cf. Rose 2003).

4.1.1. In Kali'na

We shall now examine the Kali'na's various strategies for assigning a word category to borrowings.

Borrowings without category change are illustrated in Table 10.

Category in the source language	Source language	Category in Kali'na	Kali'na	Meaning
---------------------------------	-----------------	---------------------	---------	---------

Noun	zapato (Sp.) kerki (Sr.) dilèt (Cr.) auto (Fr.)	noun (1)	sapato keleke dilet oto	shoes church milk car
Noun	perro (Sp.) poespoesi (Sr.)	noun (2)	pelo pusipusi	dog cat
Adverb	pannantan (Cr.) tijou (Cr.) exceptionnellement (Fr.)	adverbe	pannantan tijou exceptionnellement	meanwhile always exceptionally

Table 10: Borrowings without category changes

Borrowed nouns, regardless of their source language and the period of borrowing, are integrated into the class of Kali'na nouns. The vast majority of them fall into the sub-class of alienable possessed nouns – category (1) of Table 10 – while only a few fall into the sub-class of non-possessed nouns which have a suppletive form in the possessive construction – category (2) of Table 10 :

- (17) *paila* 'bow',
alakaposa 'gun' (< Sp.)
- } *O-jlapali* 'my weapon, my
bow, my gun'
- (18) *kulewako* 'parrot'
pelo 'dog' (< Sp.)
- } *ɣɛkɟ* 'my pet, my parrot,
my dog, my cat'
- (19) *nimoku* 'hammock'
litj (< Cr.) 'bed'
- } *a-pati* 'your sleeping place,
your hammock, your
bed'

There are no instances of words being transferred into the sub-class of inalienably possessed nouns (kin terms, body parts, parts of a whole).

Borrowed adverbs integrate into the category of Kali'na adverbs.

Borrowings with category changes

Tables 11 to 13 show examples of items classified as nouns, verbs, or adjectives in the source languages and that are reanalyzed as nouns in Kali'na. These nouns fall into 3 sub-classes that are specific to borrowed items and show a defective behavior.

Category in Sranan Tongo	Source language	Category in Kali'na	Kali'na	Meaning
Verb/noun	begi (Sr.)	noun (3)	begi-	prayer

Table 11: Borrowings of verb/nouns bases as nouns

Table 11 shows that borrowings to the Sranan Tongo verb/nom category fall in a specific sub-class of nouns in the recipient language – nouns (3) – and are always treated as uninflected nominal stems to which a verbalizing suffix is attached to form transitive verbs, carrying a person prefix and a tense suffix :

- (20) *tamusi* *si-begi-ma-e*
 God 1A-prayer-VERB-PRES
 'I pray God'

on the model of a regular verbalizing process in Kali'na:

- (21) *kasili* *s-aiku-ma-e* (example in Courtz1997)
 beer 1A-liquid-VERB-PRES
 'I make cassava beer'

This strategy involves a creative adaptation process and conforms fully to Kali'na patterns of derivation. A similar result of adaptation is mentioned for Japanese by Loveday 1996 (cited in Winford 2003: 50).

Thus Kali'na borrowed the verb/nouns Sranan forms as nouns, but conserved their verbal meaning by using them in a verbalizing construction. Why is the Sranan verb, unspecified for valency, always used in a transitive construction? All the authors converge in the idea that morphological adaptation and class assignment may be hindered when the recipient language has complex rules. It is the case with the verbal system of Kali'na that displays a sub-system of split intransitivity. One may think that this strategy permits to avoid the assignment of the borrowed verb to one of the verbal intransitive sub-classes, "active" or "stative".

Table 12 illustrates items that were verbs in the source language (the invariable verbal form from Guyanese Creole and the infinitive form from French) and that, once borrowed in Kali'na, are reanalysed as belonging to another sub-class of nouns – nouns (4). These nouns are characterized by the absence of flexion and their necessary integration into a postpositional group.

Category in the source language	Source language	Category in Kali'na	Kali'na	Meaning
Verb	pentiré (Cr.) nétskyé (Cr.) ~ nettoyer (Fr.) comprendre (Fr.)	noun (4)	pentiré nétskyé ~ nettoyer comprendre	painting cleaning understanding

Table 12: Borrowings of verbs as nouns

The postposition is always *poko* 'busy with'. The postpositional group functions in a single-participant copular construction (22) or in a two-participant construction with the verb *#f* 'to put' (23).

(22) **pentiré** *poko* *man*
 paint busy.with 3S.COP.PRES
 'He is painting.'

(23) *woto* **nettoyer***poko* *s-j-ya*
 fish cleaning busy.with 1A-put-PRES.
 'I am cleaning the fish.' (lit. 'I am putting it out for cleaning.')

Table 13 shows adjectives from Guyanese Creole and French, or multifunctional forms from Sranan, that are reanalyzed as nominal roots of sub-class (5).

Category in the source language	Source language	Category in Kali'na	Kali'na	Meaning
Verb/noun Adjective	pina (Sr.) pur (Fr.)	noun (5)	pina pur	(be) miserable pure person

Table 13: Borrowings of adjectives or verb/nouns as nouns

These nominal roots are invariable and take a predicative suffix to be used as a predicate in a very productive structure with a copula.

(24) **pur-me** *man*
 pure-PRED 3.COP.PRES
 'He is pure.'

On the Kali'na model :

- (25) *pitani-me* *man*
 child-PRED 3.COP.PRES
 He's a child.

To summarize, multifunctional forms, verbs and adjectives undergo a category change when borrowed into Kali'na. They are systematically reanalyzed as nouns and therefore, in order to be used as predicate, need to be embedded in predicative structures. It is noteworthy that those nouns always belong to sub-classes characterized by a defective behavior. In line with Wichmann & Wohlgemuth's typology of loan verb embedding patterns, two strategies can be identified: the strategy of indirect insertion with affixation of a verbalizer as in example (20), and the light verb strategy as in (22), (23) and (24).

This propension to favor the borrowing of multifunctional items supports Thomason's claim that "less tightly structures features are easier to borrow than features that fit into tightly integrated closed structures" (Thomason 2001: 69).

4.1.2 In Emérillon

In contrast, most of the words borrowed from Romance languages into Emérillon are assigned to the equivalent word class. The great majority of those borrowings are nouns, with only one verb and one adverb borrowed as such.

Word category	In the source language	In Emérillon	Meaning
Noun	camisa (Sp.)	kamitfa	fabric, traditional skirt (piece of fabric tied to the waist)
Verb/noun	travailler (Fr.) ~ travay (Cr.)	talawa•	to work/work
Adverb	vite (Fr.)	wil [wit]	quickly

Table 14: Examples of borrowing with no category change

The verb *talawa•* 'to work' originates either in the French verb (or noun) root or in the Creole verb. In Emérillon, it is used with the usual verb morphology (person prefix, tense...).

- (26) *si-talawa•-tal.*
 1incl-work-FUT
 We will work.

On the other hand, some borrowings are the result of a reanalysis of several morphemes as one root. The most obvious process is the fusion of the French article (or part of it) with the noun it determines. Most of such cases may be indirect borrowings through Creole, and then the fusion probably took place in the borrowing process from French into Creole.

	French	Creole	Emérillon	Meaning
article+noun	l'école [lekol]	lekol	lekol	school
part of the article+noun	orange (Pl: des oranges [dezo@ãZ])	zoranj	zonañ	orange (fruit)

Table 15: Fusion of several morphemes into one Emérillon root

Although rare, the most interesting case concerns the few roots that are borrowed in a different category from the one they belonged to in the source language. Field (2002, p.44) defines the Principle of Reanalysis. As far as equivalence of word class is concerned, semantic characteristics appear to be more relevant than word classes themselves. Thus it is possible that a form belonging to one semantic sub-type in a language may need to be reanalyzed as belonging more properly to a corresponding semantic sub-type that belongs to an entirely different word class in the recipient language. This is the case for Romance adjectives borrowed in Emérillon. Emérillon possesses two classes of words with “adjectival meaning”. One expresses qualities concerning human beings, such as physical sensations or mental phenomena, and is morphosyntactically a sub-class of nouns. The other expresses properties usually applied to objects, like size, color, value, and consists of descriptive roots that can be analyzed neither as nouns, verbs, nor adjectives. Our data show five cases of borrowing of French adjectives. Interestingly, they seem to fall into the two categories described above (i.e. the subclass of nouns expressing human qualities, and the class of descriptive roots expressing object qualities) on semantic grounds. Four of them are reanalyzed as nouns (*rif* ‘richness’, *©en* ‘youth’, *©alu* ‘jealousy’ and *tradisjonel* ‘tradition’) and refer mainly to human qualities, only one enters the descriptive root category, and is definitely an object quality (*sale* ‘salted’). As Field proposed, this reanalysis seems to be due to the semantic sub-type of the items (Field 2002).

Therefore, examples of category change include four examples of French adjectives borrowed as nouns and also one example of a French verb

borrowed as an Emérillon noun (Table 16). The French verb ‘toucher’ (to touch) is used as an Emérillon noun to refer to ‘social allowances’, on account of the collocation of both items in the French phrase ‘toucher les allocations’ (to receive social allowances).

Form in French	Category in French	Meaning in French	Form in Emérillon	Category in Emérillon	Meaning
toucher [tuʃe]	verb	to touch (to receive, for allowances)	zo-tuʃe	possessed noun	<i>the allowances</i>
traditionnel [tʁadisionɑ̃l]	adjective	traditional	nõde-tradisionɑ̃l	possessed noun	<i>our traditions</i>
jeune [ʒœn]	adjective	young	i-Zen	possessed noun	<i>his-youth</i> ~he is young

Table 16: Examples of borrowings with a category change

Manifestly, whereas French or Creole nouns are always borrowed as facultatively possessed nouns, French verbs and adjectives seem always to be borrowed as obligatorily possessed nouns. We hypothesize that this fact is tightly linked with the high predicability of possessed nouns in Emérillon. In fact, every noun with a personal prefix can constitute a possessive predicate, as illustrated in (27). Nouns expressing qualities are most often used with that function (28).

(27) *e-men.*
 1sg-husband
 I have a husband.

(28) *e-kaneʒõ*
 1sg-fatigue
 I am tired.

As a consequence, French adjectives borrowed as obligatorily possessed nouns maintain the possibility to be used as predicates, one of their main functions.

(29) *iœ-i-œn*
 RED⁴-3-youth
 They are young.

Both Emérillon and Kali’na data seem to confirm Field’s Hierarchies of Borrowability according to which nouns are more easily borrowed than adjectives and verbs (Field 2002). This is observable both in terms of the

quantity of items borrowed in each category and in terms of the need for a morphological reanalysis to allow the integration of the borrowed item. Now focusing more specifically on verbs borrowing, Weinreich ([1953] 1970) asserted that verbs are hard to borrow. A usual explanation lies in the fact that inflected forms are harder to borrow. Our data illustrate perfectly this issue, since verbs of both Amerindian languages and French take obligatory flexion. The precise nature of verbal borrowings is very enlightening: from Sranan, Kali'na borrowed verb/nouns, from Creole, verbs that are anyway uninflected in the source language, and from French, some non-inflected infinitive verbal forms. We have already seen that all of them are turned into nouns in Kali'na. Now the single French (or Creole) verb that Emérillon borrowed as a verb is actually also a noun in both the source language and also borrowed as a noun in the recipient language: *travail* 'work' / *travailler* 'to work' gave rise to *talawa*• 'work, to work'.

(30) *talawa*•-am za-baꞑe-okal zo-aꞑjɪ-a-pe.
 work-TRANSF indet-make-CAUS indet-son-a-for
 It would give work to our sons.

In brief, most verbs that are borrowed in Kali'na and Emerillon display some nominal properties, and all of them are actually borrowed under a noun form (with *talawa*• also displaying a verbal form).

4.2. Full grammatical integration

Now that we have described how borrowings get ascribed to a word category, let us show how, in Kali'na (Renault-Lescure, in press) and Emérillon, borrowed words become fully integrated into the morphosyntactic system of the language. On the one hand, they become compatible with the very rich morphology of their receiving language, and on the other hand, they assume syntactic roles just like those of the other members of the categories they now belong to.

The series of examples (31) to (36) show how borrowed nouns and verbs in Emérillon are compatible with the complete morphological apparatus of the language : possessive affixes (31), plural (31), demonstrative (32), derivative suffix (33), second position discourse particles (34), and also with the reduplication process (35), person indexes and tense markers on verbs (36).

- (31) *o-iñuÑ o-sapato-kom.* < zapato (Sp.)
 3sg-put 3coref-shoe-PL
 He puts on his shoes.
- (32) *dati aÑ magasin.* < magasin (Fr.)
 COP DEM store ~ magazen (Cr.)
 There was not this store.
- (33) *alakapusa-uhu o-mōdul-oÑ bal.* < arcabuz
 gun-big 3-send-PL bullets (Sp. via Kal.)
 Big guns were sending bullets.
- (34) *mama-ne ele-ika.* < maman (Fr.)
 Mom-CONTRAST 2sg-kill
 It is Mom that you killed!
- (35) *i©e-i-©en* < jeune (Fr.)
 RED-3-youth ~ jenn (Cr.)
 They are young.
- (36) *si-talawa-tal.* < travailler (Fr.)
 1incl-work-FUT ~ travay (Cr.)
 We will work.

The following examples show how borrowed nouns are integrated in the Emérillon syntax. They can be modified by a numeral (37) or a descriptive root (38).

- (37) *aipo bapji ©ādam.* < gendarme (Fr.)
 now three policeman ~ jandanm (Cr.)
 Now there are three policemen.
- (38) *sÆ basin-a-maĴĀ o-ilul.* < bassine (Fr.)
 big basin-a-REL 3-bring ~ bésin (Cr.)
 He brought back a big basin.

A borrowed noun can be subject (39), object (40), object of postposition (41), genitive modifier (42), or possessive predicate (43).

- (39) *toti o-ze-mim-o.* < toti (Cr.)
 tortoise 3-REFL-hide-CONT
 The tortoise is hiding.
- (40) *ladio o-indu-o.* < radio (Fr.) radio
 3-listen-CONT ~ radyo (Cr.)
 He is listening to the radio.
- (41) *wjtfj pita-kom maso-gotj o-ho.* < maso (Cr.)
 far.away child-PL nun-to 3-go
 They were going away to the nuns.

- (42) **lekol-a-zal.** <l'école (Fr.)
 school-a-master ~lekol (Cr.)
 school teacher
- (43) **d-e-sapato-i.** < zapato (Sp.)
 NEG-1-shoe-NEG
 I don't have shoes.

Although the indigenous languages Kali'na and Emérillon are structurally distant from the Romance languages, no major morphosyntactic feature seems to have been transferred. Kali'na and Emérillon have borrowed mainly lexical items from the Romance languages, and loanwords are fully integrated into the morphosyntactic systems of the recipient languages. However, those borrowings may sometimes induce indirect syntactic change.

4.3. Syntactic changes induced by borrowings in Kali'na

This section presents three syntactic changes in which contact may have triggered grammatical evolution.

The following change in Kali'na syntax seems to be indirectly induced by contact: the role of the copula construction is reinforced by the very frequent use of the copular construction and the parallel construction with the verb *iji* 'to put' in order to integrate nouns that were originally verbs in their source language. Noteworthy is the disappearance of the borrowing process of indirect insertion via a verbalizer as in *begi-ma* 'to pray' due to the stop of borrowing from Sranan. The copula construction is now the exclusive way to integrate verbs from whatever language source into present-day Kali'na, due to the recent extensive borrowing of French verbs. Examples with Brazilian Portuguese as the source language have also been recently collected in Brazil:

- (44) *misa ta reza poko wai* < reza(r) (Port.)
 mass in prayer busy.with 1.COP.PERF
 'I prayed at the mass'

This type of change where an originally more marginal native construction has been enhanced as a consequence of contact is called "change of enhancement" by Campbell (1987: 271).

The second change discussed here is induced by the borrowing of a frequent functional word, the coordinative conjunction *nanga*⁵ (< Sr.)

inserted between the two NPs as in (45). In the traditional Kali'na construction, a comitative postposition *malo* 'with' is postposed to the second NP as illustrated in (46).

- (45) *wayamaka nanga akale*
 Iguana and Caïman
 'Iguana and Caïman'
- (46) *wayamaka akale malo*
 Iguana Caïman with
 'Iguana with Caïman'

The coexistence of the two constructions create a significant typological change. This evolution has been reported, especially as a result of grammaticalization processes, as a shift from a "with-language" (with a postposition) to an "and-language" (with both a comitative postposition and a coordinator) in Stassen's work (2000).

Furthermore this conjunction is observed both as a coordinator between two phrases or two sentences. Two remarks can be drawn from this case, and will also apply to the next contact-induced syntactic change to be described. As was pointed out in Stolz (2001), conjunctions and particles are the most frequent grammatical borrowing to Spanish in Amerindian languages. The idea that utterance modifiers, regulating linguistic-mental processing activities, are the most vulnerable items to contact-related linguistic change, due to cognitive pressure, is largely developed in Matras' work (1998). The second remark is also taken over from Stolz' article. This author argues against the gap hypothesis, assuming there is no reason to posit a gap when facts show coexistence of autochthonous items and loan items, often with a stylistic difference.⁶

The third change to be discussed is linked to the borrowing of conjunctions in Kali'na. Kali'na is starting to replace its nonfinite subordination construction introduced by traditional postposed conjunctions such as (47) with a finite subordinate constructions introduced by a borrowed preposed conjunction (48), very different from the inherited model, thus opening up the possibility of a typological change in subordination.

- (47) [*na'na 'wa maina pomj-lj yako*]
 1EXCL. by garden plant-NLZ when
lo ko'ki kini-kolo'-nen
 exactly my.little.boy 3-burn-PAS
 'It was just when we were planting the garden that my little boy burned himself'

- (48) *awu ko lupota-lj s-amo-ya*
 I but 1.be tired-NLZ 1A-begin-PRES
 [*pase awosinpe awu wa*]
 because heavy I 3.COP.PRES
kjn-ka-no kaitusi mo'ko wala 'wa
 3-dire-PRES jaguar DEM ibis to
 ‘ “But I begin to be tired, because I’m heavy”, says the jaguar to
 the ibis’

A debate could be open to argue whether the conjunction alone is borrowed so that the typological change would be indirect, or whether the whole construction is borrowed (“conjunction + finite clause”) and the typological change would be direct. On one side, the literature asserts that grammatical words are always borrowed along with the rules regulating their linear ordering (Moravcsik 1978), arguing for a combined borrowing of morpheme and structure and therefore a direct change. On the other side, examples are given of the borrowing of conjunctions as a trigger for another change: Thomason (2001: 62) notes that Siberian Yupik, after borrowing conjunctions from Chukchi, replaced its inherited nonfinite subordinate constructions with constructions consisting of “conjunction + finite clause”, therefore creating an indirectly contact-induced change.

In Kali’na too, the change of structure actually seems to be posterior to the borrowing of conjunctions. A few examples constitute an intermediary stage where conjunctions borrowed to Sranan are followed by a non finite clause.

- (49) *an-ukutj-'pa man-ton*
 NEG-know-NEG 3.COP.PRES-PLUR
 [*efi tabene molo otj wai-lj*]
 if expensive DEM thing be-NLZ
 ‘They didn’t know that gold had a great value’

The complete change to a “preposed conjunction + finite clause” is therefore indirect, but not total, being restricted to those subordinate constructions with borrowed conjunctions.

As a conclusion, Kali’na data does show some contact-induced changes, but for now with a limited impact on the typological characteristics of the language. This supports the idea that grammatical borrowings is not

facilitated between typologically distant languages. In contrast, borrowing of grammatical morphemes is attested between typologically similar languages: for instance, Emérillon borrowed its plural morpheme *-kom* to Kali'na.

5. Conclusion

In the course of this paper, we noted several times that our data is confirming various assertions concerning language contact. In section 2, it is shown that borrowing of lexical items is easier than borrowing of grammatical categories. In 3.2, data illustrated the gap hypothesis. Section 4.1 illustrated the Principle of Reanalysis and the Hierarchy of Borrowability...

However, our main point here is to take advantage of the typological characteristics of the languages involved to weigh their role in the contact situation. The recipient languages Kali'na and Emérillon are quite similar, while they strongly contrast with the typological characteristics of the source languages, among which Romance languages on one side and Creoles on the other side are also typologically distant. Following this, certain aspects of our data lead to further questions:

-Why should two typologically comparable languages treat differently the borrowed items? We refer for example to the fact that Kali'na and Emérillon both share a constraint on consonant sequences but deal differently with the borrowed items, or to the fact that verb borrowings are frequent in Kali'na, not in Emérillon.

- Why should a language treat differently borrowings from typologically comparable languages?

We refer here for example to the fact that Kali'na treated differently the verbs borrowed from Sranan, and those borrowed from Guyanese Creole.

- Why should items borrowed to two typologically distant languages be treated in a similar way in the same receiving language? We refer here for example to the same integration process for verbs borrowed from French and Guyanese Creole into Kali'na.

We have looked for explanations in the system of the source languages, and in the system of the recipient languages. Now the sociolinguistic environment should be investigated, the specific type of contact that takes place between each pair of languages. For example, comparing contact-induced changes in Emérillon and Kali'na is always biased, since as we have showed in section 2, their histories of contact are always out of line. For example, using Thomason & Kaufman borrowing scale (1998, p. 74-76), Kali'na would be in step 3 "more intense contact" with French, while Emérillon would rather be between step 1 "casual contact" and step 2 "slightly more intense contact". Emérillon borrowings to French are almost limited to lexical items (although code-switching may sometimes introduce French conjunctions into Emérillon speech). Some answers could probably be put forward by referring to social factors, such as degree of bilingualism, degree of education and literacy, size of the community... For example, our data showed that verb borrowing is attested only in contexts displaying a certain degree of bilingualism, whereas noun borrowing is attested in every contact situation. A finer analysis of the contact situations is now necessary, since the sociolinguistic contexts have not been described before.

Looking now towards the future, the borrowings we have been dealing with do not constitute a closed set. While the same processes are still in progress, several elements also show that, as the socio-cultural pressure and multilingualism are getting stronger, the languages enter a new phase in their contact history: examples of nonce-borrowings and code-switching are numerous, and let us foresee other interesting types of contact-induced changes.

Notes

1. This autodenomination [ka]iña corresponds to what is called "Carib" in the literature, or "Galibi" that applies more specifically to the oriental dialect spoken in French Guiana.
2. The phonetic nasality of /o/ is the result of regressive assimilation, /b/ being realized phonetically as a prenasalized [mb], but still counting structurally as an "oral" phoneme.
3. It is important to note that liquids are usually not deleted in other positions, French or Creole /@/ being regularly substituted by /l/.
4. One of the functions of reduplication of the predicate is to indicate the plurality of participants (Rose 2005).
5. More rarely, the conjunction *et* (*p[u]is*) (< Fr.) is used.
6. Some data illustrates this very nicely, displaying a combination of both *malo* and *nanga* in utterances of the bilingual speech of children at school (Alby 2001).

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