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Assessing the Nature and Role of Substrate Influence in the Formation and Development of the Creoles of Suriname¹

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Abstract

Over the last 30 years or so, a significant amount of research has been carried out on the genesis and development of creoles. This research has shown that the creators of creoles' first languages made an important contribution to creole grammars, but that their overall role in any specific case was largely dependent on the social circumstances in which the creole emerged. This suggests that substrate influence always interacted with other sources. However, to date, relatively little research has been done on the various ways in which the creators' first languages influenced specific creole features and how this interaction was determined or constrained by other processes and sources. The aim of this paper is to investigate these issues in more detail in the light of ongoing research on the formation and development of the Tense, Mood and Aspect system of the creoles of Suriname.

Keywords: Language Contact, Substrate influence, creoles of Suriname (Ndyuka, Pamaka, Saamaka, Sranan Tongo) , Gbe (Ajagbe, Fongbe, Gengbe, Maxigbe, Wacigbe, Xwelagbe, Xwlagbe), Tense, Mood and Aspect system

1. Introduction

A significant amount of research on substrate influence in creole genesis has been carried out over the past 30 years. This research has mainly focused on the morphosyntactic system and, to a much lesser extent, on the lexicosemantic or even phonological subsystems of grammar. In addition to demonstrating the importance of substrate influence in creole genesis, this research has led to a continuous elaboration of the methodology for establishing substrate influence and to a better understanding of its role. While there exists by now widespread agreement that the creators of creoles' first languages played an important role in the emergence and development of creoles, there is still a fair amount of disagreement about several issues:

a) the nature of substrate features,

b) the procedures to establish substrate influence and

c) its interaction with other sources and processes.

In this paper, I address these three issues but particularly issues a) and c) in light of recent research I have been conducting with Donald Winford and Laurence Goury on the origin and development of the Tense, Mood and Aspect system (TMA) in the creoles of Suriname. The paper argues that substrate influence is not a uniform process, but affected creole grammars in a range of different ways, to different degrees and at different stages in a creole's development. While some creole features appear to be complete or near-complete calques of corresponding substrate features, in the case of others, only the structures from which a particular creole feature must have derived are based on substrate patterns. The differential role and effects of substrate influence are directly linked to its interaction with other factors and processes, namely influence from the superstrate(s) and processes of languageinternal change. The paper assumes that substrate influence emerged in creoles because the creators of creoles structurally reinterpreted the kinds of superstrate structures that they encountered on the plantations according to the grammatical patterns and strategies of their L1s (Migge 2003a).

The creoles of Suriname is a cover term for seven related languages, all of which descend from the varieties that emerged on the plantations of Suriname between roughly 1680 and 1720 (Migge 2003a). Sranan Tongo is associated with the descendants of slaves that remained on the plantations and are currently settled on the coastal strip and in the capital of Suriname, Paramaribo. In modern day Suriname, Sranan Tongo also functions as the national language and lingua franca of its multilingual population. The other six languages—Aluku, Ndyuka, Pamaka, Kwinti, Matawai and Saamaka—are each associated with a Maroon group of the same name. The Maroon societies emerged roughly between the late seventeenth century and the middle of the eighteenth century when slaves defected from the plantations and set up their own societies in the rainforest, out of the reach of the plantation society. The first three languages are highly mutually intelligible and are best characterised as dialects of a common language called Nenge(e) by its speakers and Eastern Maroon Creole (EMC) or Ndyuka by linguists (Goury & Migge 2003; Léglise & Migge 2006). The traditional villages of Eastern Maroons are located in the eastern part of Suriname and the western part of French Guiana along the Maroni River and its tributaries, the Lawa and the Tapanahoni Rivers, in the interior of the rainforest. Today, the majority of Maroon populations live in and around the urban centres of Suriname and French Guiana. However, the traditional villages retain great sociocultural value. Matawai and Saamaka are equally highly mutually intelligible, but there are important lexical differences between the former and the latter group—about 30% of the latter group's lexicon derives from Portuguese-which inhibits full mutual intelligibility with the other four creoles. The main Saamaka villages are located on the banks of the

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Suriname River and the Matawai villages are on the banks of the Saamaka River in the centre of Suriname. Kwinti is roughly intermediary between the two groups. The traditional villages are on the Coppename River in western Suriname. Mutual intelligibility between Sranan Tongo and the Maroon creoles is only partial, though the similarities are greater between the EMC and Sranan Tongo than between Saamaka/Matawai and Sranan Tongo.

The creoles of Suriname are generally classified as English-lexified creoles since the majority of their lexical items derive from English. The other two European languages that played a role in their formation, though to a lesser extent, are Portuguese and Dutch. In terms of non-European languages, varieties of Gbe and Kikongo and, to a lesser extent, Akan varieties were the main L1s spoken by the creators of these creoles (Arends 1995). Local Amerindian languages also contributed vocabulary items related to flora, fauna and food-production processes (Goury 2003).

The creoles of Suriname have figured prominently in the research on substrate influence (Migge & Smith 2007 and references therein). The main reason for this is that they are widely considered to be very conservative. They are quite distinct from their European input languages and arose and developed under extreme social conditions. This has greatly promoted the survival of African language patterns. Moreover, unlike many other creoles in the region, they have had very little or no contact with their main lexical source language—English—throughout their history because Suriname changed from an English to a Dutch colony in 1667, only 17 years after its foundation, which led to the slow exodus of English planters. Equally important is the fact that throughout most of the period of their emergence and early development, the ratio of Europeans to African slaves was quite low, effectively leading to the Africans' lack of exposure to the language(s) of the Europeans. The overwhelming majority of the slaves would have only had access to reduced second language and pidgin varieties of the European languages (Migge 2003a). The Maroon populations in particular have until recently lived in relative isolation in the interior of the rainforest and have had relatively little extensive contact with the other population groups and urban mainstream cultures in the region. Being the language of the coastal and urban population, urban varieties of Sranan Tongo have however undergone a significant amount of change due to contact with Suriname's official language, Dutch. Migge and Winford (in press), for instance, show that the difference between the Maroon creoles and Sranan Tongo in the expression of notions of possibility are related to influence from Dutch. A few other examples are discussed in de Kleine (2002).²

Most of the research on substrate influence on the creoles of Suriname has focused on the Eastern Maroon Creoles (EMC), Saamaka and Sranan Tongo and on morphosyntactic properties. There are studies on the role of substrate influence in the emergence of copula elements (McWhorter 1995, 1997; Migge 2002, 2003a), property items (Migge 2000), serial verb constructions (McWhorter 1992; Migge 1998a, b, 2003a), the Tense, Mood and Aspect system (Migge 2006; Migge & Goury 2008; Migge & Winford in press; Winford & Migge 2007), focus constructions (Smith 1996), question words (Smith 2001), noun derivation (Migge 2003a), predicate reduplication (Migge 2003b), locational phrases (Bruyn 1995, 1996; Migge 1999).

There is also some work on lexical similarities between creoles and West African languages (Huttar 1981, 1985, 1986). To date, few studies have systematically explored the structure and origin of the phonological system (but see Smith & Haboo 2007; Uffmann 2008), and particularly semantic (but see Essegbey 2005; Essegbey & Ameka 2007; Huttar, Essegbey & Ameka 2007) and pragmatic notions in creoles. Overall, these studies demonstrate that substrate influence played a vital role in the emergence of a great number of grammatical features in the creoles of Suriname. The first languages of the slaves appear to have influenced Maroon creoles most strongly. This research also points to the importance of other sources though. Superstrate influences and language-internal change, for instance, also contributed in many ways to the emergence and development of the properties of modern creoles.

This paper is organised as follows: Section 2 briefly presents the research methodology for the project; section 3 assesses the overall impact of substrate influence in the TMA system; section 4 discusses the different ways in which the main substrate sources influenced the emergence of different TMA categories in the creoles of Suriname; section 5 assesses the relationship between substrate influence and other inputs and processes; and section 6 summarises the findings and discusses their implications for creole genesis theories.

2. Methodology and data for the study

The research on the origin of the TMA system in the creoles of Suriname used the methodology for investigating contact-induced language change presented in Thomason (1993: 287ff). She suggests that any credible claim for substrate influence has to be based on the following evidence:

- Evidence that the source language(s) for the feature was present and played a significant role in the setting at the time of its proposed emergence, based on a careful analysis of the contact setting.
- 2. Evidence that the feature emerged due to influence from the proposed source language, based on a detailed comparison of the feature in the creole, the

proposed source language and possibly other languages that played a role in the setting.

In terms of the research process, this meant that we first constructed a scenario of creole formation in Suriname based on the available sociohistorical evidence (Migge 1998a, b, 2002, 2003). We focused on demographic and ethnolinguistic data on West Africa and Suriname (Arends 1995) and on various sources dealing with the social context in Suriname—e.g., interactional patterns, codes of interaction, work distribution).

These data suggest that the plantation varieties emerged roughly between 1680 and 1720. During this period, speakers of varieties of Gbe and, to a lesser extent, speakers of Kikongo made up the overwhelming majority of the slaves in Suriname. In the pre-1680 period, the Europeans were mainly speakers of English and a subgroup were also speakers of Portuguese. In the later period, they were speakers of various languages. Dutch hardly played an important role in seventeenth and eighteenth century Suriname (de Kleine 2002). It was only in the eighteenth century that Dutch started to be more widely diffused in the colony. The main agents in this process were descendants of mixed Afro-Surinamese-European unions who were quite wealthy, well-educated and occupied important social positions. They adopted Dutch as their main language to distinguish themselves from the slave population (de Kleine 2002: 211). Dutch was rapidly gaining in importance during the nineteenth century. According to de Kleine (2002), well-situated families increasingly sent their children to Holland for their education and a growing number of non-white intellectuals and members of the middle class adopted Dutch as their main means of expression, teaching it as a first language to their children. The vast majority of Afro-Surinamese, however, had little opportunity to learn Dutch until 1876 when it was made the obligatory medium of instruction in Surinamese schools. The Maroons and Amerindian populations residing in the interior of Suriname have generally had little or no access to Dutch.

L2 and pidgin varieties of English were most likely used by both early planters and the slaves who had arrived prior to 1680. With regards to the social matrix, the data suggest that the overwhelming majority of the slaves came directly from Africa. Due to their numerical strength and patterns of segregation, these newcomers had little substantial contact with the small number of Europeans and existing slaves. While the early slaves and the Europeans shared common social and linguistic conventions established during the previous period, the new slaves had to newly forge such conventions. The inputs were their native social and linguistic conventions and those they encountered on the plantations. Access to the latter was quite restricted though, due to absence of close contact with the other two social groups, i.e. Europeans and existing slaves (Migge 2003a).

According to Thomason (1993), the linguistic data should ideally come from the time period when the contact occurred. Since there are no historical documents available, this study is based on modern data and, to a lesser extent, on historical data from the periods immediately following. The modern data come from recordings of natural interactions, formal elicitations using an adapted version of Dahl's (1985) questionnaire for comparative research on TMA (Migge 2006) and from discussions of constructions with informants and native Gbe linguists. This paper focuses on data from the Maroon creoles, Ndyuka (ND) and Pamaka (PM), but also considers relevant data from Saamaka (SM) and Sranan Tongo (SN). With respect to the varieties of Gbe, the study investigated data from representatives of the five main subclusters (Capo 1988). The varieties were Ajagbe, Fongbe, Gengbe, Gungbe, Wacigbe, Xwelagbe, Xwlagbe, Maxigbe.

The analytical framework is modelled after typological studies of TMA systems such as Dahl (1985) and Bybee et al. (1994). The analysis focuses on establishing the semantic domains—e.g., Necessity—and the various strategies—e.g., grammatical markers, modal verbs, adverbs, etc.—that are employed to express the meanings that are part of such a domain. In relation to each strategy, the study aimed to determine its dominant or prototypical uses and the contextually determined interpretations that arise from more peripheral uses.

3. Impact of substrate influence on TMA in the creoles of Suriname

Substrate influence in the context of creole formation is defined here as a process whereby the creators of a creole fully or partially functionally reinterpreted constructions they encountered from (L1, L2, pidgin, etc.) varieties of the European superstrate language(s) in the setting—and the elements that make them up—according to the principles and patterns of their first language(s) (Migge 2003a).

In historical linguistic and typological/descriptive approaches to language contact, it is commonly believed that a claim for substrate influence has to necessarily involve showing that a given contact phenomenon cannot have come about due to language-internal change or derive from a secondary feature or a less widely distributed feature associated with regional varieties. In relation to the first claim, this essentially means that, in these traditional approaches, valid instances of contactinduced language change are only those changes that contradict so-called crosslinguistically regular changes and tendencies. However, Thomason & Kaufman argue that though adopting this criterion is useful as a methodological strategy for convincing sceptics, it is not promising as a general theoretical approach to the analysis of linguistic change, because [...] there is every reason to suppose that external causation is responsible for common and natural changes as well as for uncommon changes. (Thomason & Kaufman 1988: 59-60)

With regard to the second claim, it has long been shown in the literature on L2 acquisition and in research on creole genesis (e.g., Valdman 1977) that the retention of substrate features is much dependent on or enhanced by the existence of semantically somewhat similar structures in the superstrate with which the substrate constructions can be identified. Such constructions maximally lend themselves for reinterpretation according to substrate patterns and principles. This then suggests that substrate features are generally not out of the ordinary linguistic features and, in a good number of cases, emerged due to multiple causes.

The findings from current research on the TMA system in the creoles of Suriname (Migge 2006; Migge & Goury 2008; Migge & Winford 2009; Winford & Migge 2007) show that the overall structure of the system closely resembles that of Gbe varieties. However, this does not mean that the Surinamese system is a direct copy of the Gbe system. In fact, there are interesting differences that appear to be due to the interaction of substrate influence with other sources and processes, such as superstrate influence and language-internal change. I discuss this in more detail in section 5.

Tables 1 to 4 show that there are important similarities between Gbe and the Surinamese creoles in the area of Aspect and Modality. The similarities are less strong in the case of Tense.

Forms				Category	Meanings
SN	PM	ND	SM*		
Tense					
ben	be	be	bi	Relative Past	Past events 'distanced' from Speaker
					background past or 'framepast' especially in
					narratives. Past in relation to another
					reference point in the past.
0	0	0	0	Future	Later time reference; Intention or prediction.
					Predictability.
Aspect					
ø	ø	ø	ø	Perfective	States or events seen as unanalysed wholes.
е	е	е	ta	Imperfective	Situations (both states and occurrences) seen
					as 'unbounded' and ongoing at reference
					time, which encompasses situations that are
					repeated, habitual, in progress or continuous.
k(a)ba	kaba	kaba	kaa	Completive ³	Situations seen as completed. Conveys the
					meaning 'already'. Expresses the sense of a
					'perfect of result' with non-statives, and the
					sense of a state beginning in the past and
					continuing to the reference point with
					statives.

*Note: SN: Sranan Tongo, PM: Pamaka, ND: Ndyuka, SM: Saamaka

Category	Form	Meanings/Uses		
Tense				
Future	á V	Later time reference		
	lá V			
	ná V			
Aspect				
Perfective	ø	States or events seen as unanalysed wholes.		
		Simple past with non-statives, present with		
		statives (when reference point is Speaker).		
Completive		Situations seen as completed. Conveys the		
Pattern (1)	kò V (Maxi-, Fongbe)	meaning 'already'. Expresses the sense of a		
	$m\dot{\mathbf{j}} V$ (Xwelagbe)	'perfect of result' with non-statives, and the		
	$n\hat{\mathbf{o}} V$ (Xwlagbe)	sense of a state beginning in the past and		
		continuing to reference point with statives.		
Pattern (2)	VP + vo (Aja-, Gen-, Wacigb	e)	Formatted:	German
			(Germany)	German
Progressive	2	Events in progress		
Pattern (1)	(lé) VV (k ɔ) (Ajagbe)	In cases where the Progressive element		
	$(l \partial)$ VV $\dot{\boldsymbol{\eta}}$ (Wacigbe)	immediately precedes the verb, e.g.,		
	(le) VV nù (Xwlagbe)	intransitive verbs or transitive verbs taking a		
	(· <i>o</i>) VV w <i>è</i> (Maxigbe)	Pronominal object (SVO order).		
Pattern (2)	lé XP V (k ò) (Ajagbe)	In other transitive sentences.		
	$l \boldsymbol{\partial} XP V \hat{\boldsymbol{y}} (Wacigbe)$			
	le XP V nù (Xwlagbe)			
	ò VV wè (Maxigbe)			

Table 2. Tense and Aspect Categories in Gbe Languages (Winford & Migge 2007: 80)

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Pattern (3) $n \hat{\mathbf{y}} V$ (Xwelagbe) With intransitive and transitive verbs. $le \hat{e}$ (Gengbe)

Habitual

Customary or habitual situations.

- Pattern (1) V $n\dot{a}$ (Gen-, Wacigbe) V $n\dot{\boldsymbol{j}}$ (Ajagbe)
- Pattern (2) $n \hat{\mathbf{j}} V$ (Maxi-, Xwlagbe)
- Pattern (3) High tone on V (Xwelagbe)

Prospective

Events about to occur.

- Pattern (1) \dot{o} (XP) $n\dot{a}$ V (Maxi-, Fongbe)
- Pattern (2) lè (XP) V gé/gbé (Ewe, Gengbe)
- Pattern (3) *lə* (XP) *já* V (Wacigbe)

With respect to Perfective Aspect, we see that both the Gbe languages and the Surinamese creoles employ the unmarked verb to express states or events seen as unanalysed wholes. They also express Completive Aspect; the postverbal strategy for expressing Completive Aspect used in the Surinamese creoles appears to closely resemble the strategy used in western Gbe varieties, Pattern 2. In relation to Progressive Aspect, both the Gbe languages and the Surinamese creoles employ the verb *to be-at* also found in existential contexts. Differences are found with respect to Habitual Aspect and Prospective Aspect. They are separate categories in Gbe languages while they are subsumed in part under the Imperfective category in the creoles.

There are also close similarities between the two language groups in the area of Modality. In relation to Potential Modality, we find the following similarities. First, an ability or a skill acquired through specific training is expressed using a verb meaning 'to know'. Second, with the possible exception of Sranan Tongo (but see Migge & Winford 2009), the notions of physical ability, root possibility, permission and epistemic possibility are expressed by the same element(s) in the two language groups. Moreover, the different notions subsumed under Necessity—such as obligations, admonition, unfulfilled obligation, inferred certainty, probability—are all expressed by the same element in both the Gbe languages and in the Surinamese creoles. Finally, Desire and Need are also conveyed by different elements with similar meanings in the two language groups. The main difference emerges in relation to the subjunctive category. While Gbe seems to have such a category, it is not well attested in the Surinamese creoles (but see Lefebvre & Loranger 2006 for a discussion of Saamaka data).

Winford 2000: 70ff)

F	Forms			Category	Meanings
SN	PM	ND	SM		-
LEARNEE	ABILITY				
sabi fu	Sabi	sabi	sá		Ability or skills acquired through learning or training
POTENTL	AL				
	sa	sa	sa	Positive	Physical ability
	man	роу	sa	Negative	(Deontic) ability subject to physical or natural law.
man/kan					
	sa	sa	sa	Positive	Deontic (root) possibility
	man	poy	sa	Negative	moral or social law,
kan					involving situations under
				D '.'	the agent's control
	sa	sa	sa	Positive	Permission
	man	poy	sa	negative	by authority (social, legal
mag/kan					etc.).
	sa	sa	sa	Positive Negative	Epistemic possibility Possible situations or

kande	man/sa kande	poy/sa kande	sa kande		situations to the certainty of which the speaker is not committed.
			NE	CESSITY	
musu/sa musu sa	mu musu fu musu	mu musu musu fu musu	musu musu u musu	(stronger) (strong)	Deontic necessity or obligation "Existence of external, social conditions compelling an agent to complete the predicate action." Bybee et al. (1994:177) Epistemic necessity Inference based on sound evidence (prior knowledge, experience, etc.). Expresses a high degree of certainty on the speaker's part about some situation.
			Ι	DESIRE	
wani	wani	wani	ke		Expresses speaker's desire and need.
				NEED	
	a(bi) fano	oudu (fu) [*]			Expresses speaker's need.

fanoudu

* Note: This construction is found in all the creoles in question.

Forms			Category				Meanings
A*	G	W	Xwe	Xwl	М		
			LEARNEI	D ABILI'	ГҮ		
nya	nya	nya	ny ə	пу э	ny 3		
			Роте	NTIAL			
te ŋ u	te ŋ	ti ŋ	hen	ten	sixu ⁴	Pos	physical
			te ŋ (u)				ability
s <i>en ŋu</i>	te ŋ	ti ŋ	kpego	kpeji	sixu	Neg	
			su				
te ŋ u	te ŋ	ti ŋ	hen	ten	sixu	Pos	deontic
			te ŋ (u)				(root)
sen ŋ u	te ŋ	ti ŋ	kpego	kpeji	sixu	Neg	possibility
			su				
te ŋ u	te ŋ	ti ŋ	te ŋ (u)	ten	sixu	Pos	permission
			hen				

Table 4: Modality in Varieties of Gbe (Migge 2006: 35)

sen ŋ u	te ŋ	ti ŋ	kpego	kpeji	sixu	Neg	
			su				• - •
te ŋ u	te ŋ	ti ŋ	te ŋ	ten	sixu		epistemic
							possibility
			NEC	ESSITY			
• <i>o</i> a	•o la	•o la	•o la	• <i>o</i> a	•o na		deontic
							necessity
• <i>o</i> a	•o la	•o la	•o la	• <i>o</i> a	•o na		epistemic
							necessity
			SUBJU	UNCTIVE			
ne	ne	nə	ni	ne	ni		optative,
							hortative,
							jussive
			Di	ESIRE			
ji	ji	ji	din	ka	jlo		
			jro		ba		
NEED							
•0_	hyã	hinyã	hyã	kã	ba		
wudo	ji		din				

*A:Ajagbe, G: Gengbe, W: Wacigbe, Xwe: Xwelagbe, Xwl: Xwlagbe, M: Maxigbe In the subsystem of Tense, the correspondences between the two language groups are less strong. First, while the Surinamese creoles have a Future and a Past category, Gbe only has a Future category. Second, the Future category in the creoles most likely developed gradually from a possible earlier Prospective Aspect category, but was not directly calqued on the Gbe Future. Third, while the past-marking element in the creoles seems to be based on a superstrate form, the past participle *been*, its functions show significant similarity with the adverbial construction used to express past time reference in Gbe.

Overall, this overview suggests that substrate influence definitely had an important impact on the emergence of the TMA system in the creoles of Suriname. However, this discussion also makes very clear that substrate influence affected different categories at different stages of their emergence, to different degrees and in different ways. This strongly suggests that substrate influence is not a homogeneous, unified process. Its operation and outcomes appear to take different forms, most likely due to its interaction with other processes and sources.

4. Nature of substrate influence

In this section, I outline the different ways in which substrate influence played a role in the emergence of the meanings and functions of Surinamese creole TMA categories.

4.1. Direct calque

In some instances, the creole feature very closely resembles its counterpart in the substrate language in structure, form and meaning. A case in point is the Perfective category in the Surinamese TMA system (Winford & Migge 2007). In both languages—creole and substrate—it is expressed by the unmarked verb. It has a sense of 'present' time reference with stative verbs (1) and property items (2) and 'simple past' with non-stative verbs (3) in the default cases, where the point of reference is speech time.

(1) a.	Sunu	3 n	t ə nwun	ny o nuv	<i>i</i> э .	MAXIGBE
	boy 'The b	DET oy knov	know ws the gir	giri l.'	DET	(Elicitation 1) ⁵
b.	A	<i>boy</i>	sabi	a	meise.	Ndyuka
	'The b	oy knov	ws the gir	(Elicitation 2)		
(2) [Sp	beaker le	ooks at	a house a	nd excla	aims:]	

a.	x ə house 'The ho	<i>ey</i> 3 this buse is bi	<i>dagba.</i> big g.'	MAXIGBE (Elicitation 1)
b.	A	<i>osu</i>	bigi.	Ndyuka
	'The ho	ouse is bi	g.'	(Elicitation 2)

(3) [What did your sister do last night?]

a.	E she	<i>wlan</i> write	<i>wema</i> letter		MAXIGBE
	'She	wrote a	a letter.		(Elicitation 1)
b.	A	sikiifi	wan	biifi.	Ndyuka
	she 'She	write wrote a	one a letter.	letter	(Elicitation 2)

The unmarked verb is also used to convey the sense of current relevance (4).

(4) [Have you heard the news?]

a.	Axus ə	Э	wa/jawe.	MAXIGBE
	king 'The k	DET ing has co	come me.'	(Elicitation 1)
b.	A	kownu king	kon.	Ndyuka
	'The k	ing has co	me.'	(Elicitation 2)

The main difference between the Gbe languages and the Surinamese creoles is that in Gbe, unmarked stative-type verbs may also have past time reference, while they are generally preceded by the past time marker *be/bi/ben* in the creoles (5).

(5) [Did you know my father, who died last year?]

a.	<i>enen,</i> yes 'Yes, I	<i>ur</i> I kne	n t ə nv knov w him.'	<i>vun in</i> w hi	m	MAXIGBE (Elicitation 1)
b.	Eyee, Vaa	mi 1	be	sabi	en.	Ndyuka
	'Yes, I	n kne	w him.'	KIIOW	11111	(Elicitation 2)

The main reason for this difference seems to be that the Gbe varieties, unlike the creoles, do not have a past time category. Past time marking is therefore generally retrieved from the context. However, in cases where such marking becomes necessary, an adverbial form can be employed (see section 4.5).

4. 2. Direct calque on one of several available substrate constructions

In the literature, it is often assumed that heterogeneity in substrate strategies tends to disfavour substrate influence (Singler 1988). Our data suggest this is not necessarily the case. Speakers can either select one among the different strategies or retain both. I discuss the first case in this section and the second in section 4.3.

In Gbe, Completive Aspect is either expressed by a construction where a main verb meaning 'to finish', *v***o**, occurs in VP-final position (6)a or by a structure employing a preverbal element (6)b.

WACIGBE		Ó.	vj	wòmá	hl ś n	à	(6) a.
(Elicitation 1)		nish book.'	fir ng the b	book hed readi	read has finis	she 'She	
XWLAGBE	Ì.	xwémà	$x l \hat{e}$	n ò	é	Éé,	b.
(Elicitation 1)	DET	book book.'	read ead this	COMPL already re	she , she has	yes 'Yes	

In the Surinamese creoles, by contrast, only the first option is attested: Completive Aspect is conveyed by an element that is formally similar to a main verb meaning 'to finish', *kaba*, occurring in VP-final position (7).

(7) [I want to give her a book. Has she read this one?'

Eyee,	a	leisi	disi	ya	kaba.	Pamaka
Yes	she	read	this	here	COMPL	
'Yes,	she ha	as alrea	dy read	this.'		(Elicitation 2)

The creole strategy does not only resemble the Gbe strategy in overall structure, but also in meaning. It conveys a sense of a 'perfect of result' (6-7) and the sense of a state beginning in the past and continuing to the reference point (8).

(8) a.	U	tan	ya	wantu	yali	kaba.	Рамака
	we	stay	here	one-two	year	COMPL	
	'We	ve alre	eady live	ed here for	several	years.'	(Elicitation 2)

b. à cí amā vò yé ó gbò àvò cò cón. WACIGBE he stay naked COMPL then they return pagne take run 'He was already naked when they came back and dressed him in a pagne.' (Waci-Migge1)⁶

Moreover, in both language groups, the Completive is not used in sentences expressing lack of completion of an activity or state. Instead, the main verb is preceded (Gen, Waci $kp \mathfrak{o}$, Xwla $kp \mathfrak{o}n$) or followed (Aja $h \mathfrak{o} \cdot e$, Xwela gba, Ndyuka, Pamaka, Sranan *ete*, Saamaka *yete*) by another form translating as 'yet' (Winford & Migge 2007).

Рамака	ete.	doo		u án	kown	Α	(9) a.
(Elicitation 2)	yet	arrive rrived.'	G et ar	NE s not y	king king ha	DET 'The l	
WACIGBE	IST	<i>0</i> . me INS	va	kp ə vet	<i>mə</i> Neg	ə fi ʻs , king	b.
(Elicitation 1)	rived yet.'	come/ai	ven d	s not e	king ha	'The	

This example demonstrates that, in cases where the substrate involves a certain degree of heterogeneity, creators of creoles may just select one of the available constructions. In this case, the choice of the postverbal construction was promoted by the following factors. First, since v_2 , like *kaba*, is a lexical verb and has the same lexical meaning 'to finish', it was easy to interlingually identify it with *kaba*. Second, even if the structure was not part of the L1, it was semantically transparent (i.e. action + to finish = completion of an action). Third, it was also reinterpretable from a consecutive construction such as "I work and finish".

4. 3. Retention of more than one of the available substrate constructions

In Gbe, possibility is expressed preverbally. In some varieties (Wacigbe, Gengbe, Maxigbe), the same element is used in positive and negative constructions (10)a, b, while in others (Ajagbe, Xwelagbe, Xwlagbe), two distinct forms are employed (10)c, d.

(10)	a.	(I)ye mother	<i>tuwe</i>	<i>sixu</i> can	s ə take	<i>basiya</i>	•0. r pui	t		MAXIGBE
		'Your i	mother ca	an put	the co	ontainer l	iere.'	L		(Maxi-Migge1)
	b.	$em \epsilon$	co	ma	six	u ma)	vuvo.		MAXIGBE
		'Every	all body cou	NEG Ild not	car t find t	the time [d to rep	air the	me pump].'	(Maxi-Migge2)
	c.	ì fìn	tén	·ù	j ge	o n ś .				XWLAGBE
		mouse 'The m	can louse can	eat eat y	bag our ba	g for.y 1g.'	ou			
	d.	òò	ún	kpé	á	kp ś n i	ìn	késín	ò.	XWLAGBE
		no	he-NEG	can	FUT	see I		DEM	INSIST	
		'No, he	e cannot e	even s	ee me	like that	.'			(Xwlagbe-NSF4)

The Gbe patterns closely mirror the distribution of possibility elements in the Surinamese creole where Aluku, Ndyuka and Pamaka distinguish negative and positive possibility (11)a, b, while Saamaka does not (11)c, d.

(11)	a.	I sa wasi koo wata anda.	Pamaka
		'Will you be able to wash with cold water there.' (Pa	maka-Migge5)
	b.	<i>Fu a pikin nenge, i ná man</i> for DET small person you NEG can <i>feni en enke fa i wani.</i> find her/him like how you want 'About the child, you cannot find it the way you want it.' (Pa	Рамака maka-Migge5)
	c.	<i>Mi a moni nou mi sa go a booko di dia.</i> I have money now I can go LOC break DET day 'I have money now I can go to the party'	SAAMAKA
	d.	Me a moni nou mi á sa go a booko di	dia.

I-NEG have money now I NEG can go LOC break DET day 'I don't have money thus I cannot go to the party.' SAAMAKA

There are also close similarities in function and meaning. Migge (2006) demonstrated in detail that these elements do not only express root possibility, but are also used to express ability, permission and epistemic possibility. Moreover, the negative forms derive from phrases denoting (lack of) physical strength:

- (12) a. man < man va V 'man to do s.th/have the ability to do' (Van den Berg 2001: 249)
 - b. kpé-é-ji 'reach-its-summit/top' (Xwlagbe)
 - c. $kp\acute{e}-\acute{e}-(e)\eta\acute{u}-(ci)$ 'reach-its-body-tree/body, be as strong as' (Ajagbe)

Man in the creoles has become a modal verb, while the negative Gbe forms are not fully verbal (Migge 2006). Finally, the negative forms in the creoles and in Gbe are also used to express a challenge (in questions) and to assert ability (13).

(13)	a.	A:	Ι	man	sik	iifi d	а	biifi	de?				PAMAKA
			you	u MOD) wri	ite 1	DET	lette	r there	e			
			'D	o you (1	really)	thin	k that	you'l	l be al	ble to w	rite tha	at letter	?'
		B:	Eeg yes	ye, mi 5 I	n c	<i>ıan</i> . an							
			'Y	es, I an	n able	to do	it.'					(El	icitation 2)
	b.	<i>fĩn</i> ở when	e	wé FOC	à FUT	<i>kpé</i> - can	<i>jí á</i> FƯ	р Г 5	g ò still	<i>bá</i> come	à FUT	<i>kpé</i> can	
		э̀ŋ kú eye	ísi	<i>do</i> put	<i>suklu</i> scho	ı ol	wú on	•					XWLAGBE
		'[tal you	lkin stil	g to a g l go, ho	irl wh w will	o hac l you	l a chi be ab	ld wh le to t	ile sti take ca	ll at sch are of y	ool] W our stu	here ca dies?'	an
		-		-		-				•		(X	wla-NSF1)

These data suggest that the two strategies that are used in the Surinamese creoles closely mirror those found in their main substrate input, the varieties of Gbe. This in turn confirms that substrate heterogeneity does not necessarily lead to an absence of substrate influence, but may lead to the instantiation of several different strategies.

4.4. Partial calque

A good number of creole features are what could be termed partial substrate calques. They resemble a certain substrate feature in several important respects only. There are two main reasons for this. On one hand, this could be due to the fact that the substrate makes categorical subdivisions that were not instantiated in the creole or that the creole has categories that are not found in the substrate. On the other hand, this could be due to influence from another source such as the superstrate. An example of the first type is the Imperfective category in the creoles.

In the Gbe varieties, Progressive Aspect is marked by one of the three related constructions in (14). Pattern 1 is used in cases where the existential or locative verb meaning 'be-at' preceded the main verb.⁷ Pattern 2 is employed where this verb does not directly precede the main verb. Pattern 3 is found in Gen and Xwela in both transitive and intransitive constructions.

(14) a. Pattern 1: (existential/locative V) + reduplicated V + Progressive Particle

e.g., (*lé*) VV ($k\hat{\boldsymbol{j}}$) (Ajagbe)

 $E \ hl\acute{e}nhl\acute{e}n \ wema \ w\acute{o}.$ AJAGBE he RED.read book PL 'He is reading books.' (Elicitation 1) b. Pattern 2: existential/locative V + XP V + Progressive Particle e.g., lé XP V (kà) (Ajagbe) A lé enu hlɛn. AJAGBE

c.	Pattern 3:	he-FU 'He i existe	JT be- s readinential/le	at thing ng sometl ocative V	g read hing.' (+ V	l		(Elicitation 1)
		e.g., i	leé V (Gengbe)				
		É	leé bo at	po-te	yebe bis	х э	<i>те</i> .	Gengbe
		'He i	s clean	ing his ro	om.'	TOOIII	111	(Elicitation 1)

While there are differences between the three constructions, they all share one important similarity: The locative verb precedes the main verb. The construction in the Eastern Maroon Creoles closely resembles this common denominator. The preverbal marker of Progressive Aspect, *e*, derives from the locative and existential verb *de* (Winford & Migge 2007).

(15)	Α	е	leisi	wan	buku.	Рамака
	she	PROG	read	а	book	
	'She	is readin	g a boo	k.'		(Elicitation 2)

The creole and Gbe constructions are also similar semantically. Besides expressing Progressive Aspect with activity verbs, they also convey Inchoative Aspect with property items (Migge 2000) and some state-denoting elements (16); a longer period in the present (beyond the time of speaking) (17); and a future meaning with motion verbs (18).

(16)	a.	<i>Da</i> then	na FOC	<i>foluku</i> people	ne FOC	en it	e PROG	<i>bigi</i> big	a det	<i>konde</i> . village	Pamaka
		'It's t	he peo	ple who	are mak	ing the	e village	e imp	ortant.'	(Pamaka	-Migge18)
	b.	ého	ò	é	bá	lé	síé	'n	nù.		XWLAGBE
		mone	y DE	тit	come	be-at	har	d	PART		
		'The	price [needed f	for food]	is gett	ing pro	blem	atic.'	(Xx	vla-NSF1)

(17)	a.	Nounou na a baafu hangi e	kii	и.	Pamaka
		now FOC DET meat hunger PROG	kill	us	
		'Now, we are suffering from lack of meat.'		(fiel	dnotes)
	b.	$si \hat{\epsilon}$ $\hat{\sigma}$ $n\hat{u}$ -t $\hat{\epsilon}t\hat{\epsilon}$ gbl $\hat{\epsilon}$ m \hat{i} $l\hat{e}$ and now DET thing-all spoil we be-at m 'Now, everything is spoiled and we are suffering.'	ya nisery	<i>•u-nù</i> . X eat-thin (Xwla	WLAGBE g 1-NSF2)
(18)	a.	<i>A tamaa a e gwe kaba</i> . FOC tomorrow she PROG leave already 'It's tomorrow she is already going to leave.'		PA	AMAKA
		(lit. 'she is leaving already')		(field)	notes)
	b.	Me le jojo-ŋ.		W	ACIGBE
		I be-at RED.leave-PART 'I will be/ am going to leaving (soon).' (lit. 'I am lea	aving.')	(Elicit	tation 1)

There is an important difference between the progressive elements in Gbe and e (and ta) in the Surinamese creoles. While e in the Eastern Maroon Creoles is regularly used to express habitual (19)a and generic (19)b meanings, the Gbe elements do not.

(19)	a.	[What does	you brother do		
		A e	leisi wan	buku.	Ndyuka
		he IMPF	read one	book	
		'He (usually	/) reads a book	. ,	(Elicitation 2)
	b.	[What do do	ogs do?]		
		Den e	bali	howhow.	Ndyuka
		they IMPF ma	make.noise	wauwau	
		'They make	wauwau/bark	,	(Elicitation 2)

In Gbe, habitual and generic meanings are typically expressed by a separate habitual element. In Xwlagbe, Maxigbe and other Fongbe varieties, no occurs preverbally (20)a while in others—such as Ajagbe, Gengbe, and Wacigbe—the habitual marker, na (Gengbe, Wacigbe) or no (Ajagbe), occurs postverbally (20)b. Xwelagbe marks habitual aspect with a high tone on the verb.

(20)	a.	<i>E n</i> ɔ <i>xa</i> he HAB read 'He always read	nu. book ds.'	MAXIGBE (Elicitation 1)
	b.	[What do dogs $O gbo$ they bark 'Dogs bark.'	do?] ná. HAB	WACIGBE (Elicitation 1)
	c.	$I f \hat{\mathbf{o}} n$	<i>∙e gan atrokpom€</i> .	XWELAGBE
		'I (usually) wal	the up at six in the morning.'	(Elicitation 1)

Based on the evidence presented above (see also Winford & Migge 2007) and in relation to the emergence and development of the locational verb and existential verb de in the Surinamese creoles (Migge 2002, 2003a), it seems mostly likely that the emergence of de as a locational and existential verb triggered its extension to the marking of progressive meanings. Essentially, the slaves identified existential constructions in Gbe (21)a with copula-less L2 English constructions (21)b and thereby created the existential verb de (21)c.

(21)	a.	Malik 3 kv	we •e	•	XWELAGBE		
		banana 'There's	ex a banan	xist a.'	(Elicitations 1997)		
	b.	Mastra master	soopie rhum	de. there [adv	Early Sranan		
		'Master,	there is	rhum.'	(Van Dyk 1765, Arends & Perl 1995: 17		
	c.	Mastra	soopie	de.	Early Sranan		
		master	rhum	exist [V]			
		'Master,	there is	rhum.'			

Once *de* had emerged as an existential verb, it came to be used in all the meanings in which its substrate counterpart was used. Thus, in addition to becoming a predicator of locational phrases and stative reduplicated adjectives, it came to function as a

Progressive Aspect marker. Its habitual and generic function seems to have emerged later, possibly due to language-internal change—a process widely attested crosslinguistically. The main reason for this later extension of *de* to habitual and generic contexts rather than the emergence of a separate Habitual Aspect category seems to have been that the creators of the creole did not find a suitable English form in the English constructions available to them which could have been reinterpreted as a Habitual Aspect marker on the model of the Gbe Habitual marker.

4. 5. Some semantic impact

In Goury and Migge (2008: 322), we argued that, both etymologically and functionally, the past time markers *ben/be/bi* in the Surinamese creoles derive from the English past participle *been*.

The slaves most likely encountered the form in English (regular) present perfect (*I've been here before.*), polite (*I've been wanting to see you.*), past perfect (*I'd been there...*) and counterfactual (*If I'd been there...*) constructions in which the auxiliary (*have/had*) was contracted and thus not at all or little perceptible to them.

Since the Gbe languages, unlike English, do not have a Present Perfect Aspect category and the slaves' contact with English was relatively minor, they would have only picked up on the past temporal reference of English Present Perfect constructions and not on its durational aspect. As a result, *been* came to be reinterpreted as a past time marker associated with past time reference, past before past, polite and counterfactual meanings. This scenario then argues that *ben/bin/bi* in the Surinamese

creoles is a superstrate retention which has undergone a contextually or pragmatically driven process of semantic and structural reinterpretation. However, an analysis of past time marking in Gbe also reveals interesting similarities between the Gbe and the creole strategy.

While Gbe does not appear to have an established Past category and past time reference is generally retrieved from contextual clues, all varieties of Gbe also make use of a postverbal adverbial form meaning 'before' to convey past meanings. This strategy shares the following similarities with *ben/bin/bi*. First, it is used to express a past before past activity (22):

(22) [regarding a window that is now closed: You OPEN the window

(and closed it again?)]

a.	A:	Ε	hún	sèfle	e i	3	sá	à?		AJAGBE
		you	open	wind	ow 1	DET	befor	e Q		
		'Hav	ve you	opened	l the wi	ndo	w (and	l closed i	t)?'	
	B:	òò,	n-hw	-in s	a g	zò.				
		no	I-ope	n-it b	efore 1	NEG				
		'No,	I have	e not op		(Elicitation 1)				
						0				Ð
b.	A:	Ι	be	оро	а	fe	ense?			PAMAKA
		you	PAST	open	DET	V	vindov	V		
		'Hac	l you c	opened	the wir	Idow	(and	close it)?	,	
	B:	No,	mi	án	be	ope	o e	n.		
		no	Ι	NEG	PAST	ope	en it			

Second, it is used to convey that a state no longer exists:

(23) [person talks about a house were they used to live which has been dismantled]

a.	Α φ ờ house	á DET	<i>loló</i> big	san. before	WACIGBE	
	'The house was big.'				(Elicitation 1	
b.	Di	wosu	bi	bigi.	Saamaka	

DET	house	PAST	big.	
'The h	ouse wa	as big.'		(Elicitation 2)

Third, in several varieties, it also regularly occurs in conditional clauses to express counterfactuality in the if-clause (24):

(24)	a.	N o n if I	$N \mathbf{\mathfrak{s}} n \cdot \mathbf{\mathfrak{o}} \dot{e}h\dot{\mathbf{\mathfrak{o}}}$ if I have mone		<i>sa</i> , ey befoi	<i>sa, na</i> y before I-FUT		<i>èhı</i> car	<i>hùn •èká.</i> ar one			AJA (Elicitatio	
	b.	<i>Yee</i> if	mi I	<i>bi</i> PAST	<i>a</i> have	<i>moni</i> money	<i>nou</i> then	mi I	<i>bi</i> PAST	o FUT	<i>bai</i> buy	<i>wa</i> a	<i>wagi</i> . car
		ʻIf I	had	the mo	ney, I'd	buy a car	.'					(Elic	SAAMAKA citation 2)

Finally, although *ben/bin/bi* express the Past category in the creoles, it is not the only strategy for expressing past time reference. As in the Gbe varieties, past time reference is commonly conveyed by the unmarked verb form in conjunction with contextual clues (25):

(25) *Di* mi go doo, a doo f' en de, a booko a booko en. when I go arrive DET door POSS him there FOC break he break it 'The other day he ate three pieces of cake.' (Pamaka 11) PAMAKA

These data show that, even though *ben/bin/bi* was clearly reanalysed from the English Present Perfect construction, there are close similarities in meaning with the adverbial Gbe construction. This clearly suggests that the emergence and retention of its meanings and broad distribution in the creoles was reinforced by substrate influence.

4.6. Conclusion

The discussion demonstrated that substrate influence affected the emergence and development of creole features in different ways. At one end of the continuum, we

find (near-)perfect copies of substrate features and, at the other end, cases where substrate influence was only one of the contributing factors in the emergence and maintenance of certain semantic properties of a creole feature. Most features would lie between these two extreme poles. Moreover, the investigation showed that absence of homogeneity in substrate strategies for expressing a particular category does not necessarily inhibit the occurrence of substrate influence; speakers either pick one of the available options or instantiate both. In relation to conceptualising creole genesis, this suggests that substrate influence played an important role in the emergence of creole grammars, but did not affect each creole feature in the same way or to the same extent. Other sources and processes interacted with substrate influence and thus came to affect them in different ways. In section 5, I look in more detail at how the different sources and processes intersected with substrate influence.

5. The interaction between substrate influence and other sources

In discussions about creole genesis, one of the questions that has received much attention is the relative contribution of each of the main inputs—namely, substrate influence, superstrate influence and language-internal change—to the formation and development of creole grammar. In some theories, such as the substrate theory and the relexification theory, the substrate contributed the bulk of the semantic and syntactic information, while superstrate influence is primarily responsible for the lexical shape and some word order phenomena (Lefebvre 1998). In other theories, such as the superstrate theory, the lexical shape and the bulk of the semantic and syntactic information are argued to come from superstrate varieties while substrate influence was seen to mainly reinforce similar superstrate features (Mufwene 2006). Language-

internal change is responsible for new features that diverged from superstrate and substrate patterns.

5.1. The interaction between superstrate and substrate influence

The discussion of the emergence of the TMA system in the creoles of Suriname so far suggests that superstrate and substrate influences interacted in different ways. In the case of some TMA features, such as the Perfective Aspect category, superstrate influence does not seem to have played a role at all. In other cases, the superstrate provided the structure from which the element expressing a category—and, ultimately, also the category itself—was reinterpreted due to substrate influence. A case in point is the emergence of the Progressive (Imperfective) marker. Although English also has a verb meaning 'to exist', it is lexically, semantically and distributionally different from its counterpart in the creoles. *De* was reinterpreted from the distal locational adverb 'there' in copulaless locational phrases of the sort given in (21)b. Once it had been interpreted as an existential verb (21)c due to its identification with its substrate counterpart, it also came to function as a Progressive marker—and locational copula, predicator of stative reduplicated adjectives, etc. (Migge 2002)—by analogy with the substrate counterpart with which it had become identified.

In other cases, there are similarities in form and function between the superstrate and the creole feature and these meanings overlap to a certain degree with those found in the substrate. The past marker *ben/be/bin*, for instance, clearly emerged from *been* in English present perfect constructions. While its primary and secondary functions in the creoles—past-time marking and marking of counterfactuality and politeness—are clearly not synonymous with its English functions, the creole functions can be easily derived from the English functions, as seen above. However,

they also overlap with those of its substrate counterpart. This suggests that the two sources acted together or reinforced each other.

In yet other cases, such as the category of Necessity, there are definite similarities in form and meaning between the superstrate and the creole feature. The semantic similarities between the creole feature and Gbe are slightly stronger, however. In the creoles, Necessity is expressed by the elements *mu* (Ndyuka, Pamaka) and *musu* (Saamaka, Sranan Tongo) which both derive from English *must*. In English, *must* conveys strong obligation, but the creole and Gbe forms express both weak and strong obligation.

- (26) a. *Mi anga yu, a moyti u mu meki a den baka*. PAMAKA me with you it effort we must make LOC their back
 '[talking about relationship to Europeans:] Me and you, we must make an effort to keep up with them.' (Pamaka-NSF 1)
 - b. Yee i ndeti i kε di moni fi i, пои tide you then if DET money for today night you you want mi. musu ko SAAMAKA a must come LOC me 'If you want your money, you must come to me tonight.' (Elicitation 2)
 - c. Egbet o na nu esĩ. MAXIGBE human must FUT drink water 'Humans must drink water.' (Elicitation 1)

(27) a. I án membe taki ná wan sani di а ти you NEG he must believe that NEG one thing REL du fu anga baka [...]. A е а go soso a IMPF do for he go with back FOC only DET fesi a PAMAKA е gwe. face he IMPF go 'You should not believe that he [European] is doing anything that makes him go backwards, he only moves forwards.' (Pamaka-NSF 1)

b. $Di \ sembe \ de \ a \ musu \ suku \ muy \ e \ bifo \ a \ gaandi.$ SAAMAKA DET person there he must search woman before he old 'That man should find a wife before he is old.' (Elicitation 2)

c.	0	•0	na	kple	akw 3	tuwe.	MAXIGBE
	you	must	FUT	collect	money	your	
	'You	ı should	icitation 1)				

In English, Gbe and the creoles, this element is also used to express admonition and forbidding (28), probability (29), inferred certainty (30).

(28)	a.	<i>Den lan</i> DET gov 'The gover	<i>ti</i> vernment mment m	<i>án</i> NEG ust not	<i>mu</i> must fool its	<i>koli</i> fool peopl	<i>den</i> DET e.'	<i>foluku fu</i> people Po	den. DSS them (Elic	Рамака itation 2)
	b.	<i>PC</i> com party	má ∙ó NEG mu	<i>lá</i> st fut	<i>flù a</i> fool t	<i>àgblàd</i> farmer	l ò tó v	vó ò. L insist		WACIGBE
		'The comn	nunist par	ty mus	t not fo	ol the	peasa	nts.'	(Capo,	pc, 2003)
(29)	a.	A mu he must	<i>de a</i> be-at L	oc h	osu i nouse i	<i>nounoi</i> now	и.		Р	AMAKA
		(Elic	itation 2)							
	b.	<i>Jan •ó</i> Jean mu	<i>lá</i> st FUT	п э СОР	<i>axór</i> hous	<i>ne fi</i> se n	<i>ifian</i> . low.		C	ENGBE
		'Jean must	be at hor	ne righ	t now.'				(Elic	itation 1)
(30)	[vc	ou see a tota	lly destro	ved mo	otorbike	e at a ti	ree]			
	a.	A man DET man	A man musu dede (tuutuu/ye).							
		'The man i	must (sure	ely) be	dead.'				(Elic	itation 2)
	b.	K əkətə á	٠ó	lá	kú	kpò	é		V	VACIGBE
		driver D 'The driver	ET must r must sui	FUT rely be	dead dead.'	sure	INS	SIST (Ca	po, pc, Nov	v. 2003)

Note that there are also similarities in the categorical status. The Gbe and the Ndyuka and Pamaka Necessity elements, mu and $\cdot \delta l a$ respectively, seem to be markers in that they cannot be extraposed without the main verb following. The Saamaka, Sranan Tongo and English forms, musu and must, are modal verbs.

5. 2. Substrate influence and language-internal change

Substrate influence also interacts with language-internal change. Our discussion so far suggests that language-internal change essentially operates on structures that had previously emerged due to the interaction of substrate and superstrate structures. Cases in point are the emergence of the Imperfective marker in the Surinamese creoles (Migge 2003a and above). Once *de* had emerged as a Progressive marker due to the substrate-driven reinterpretation of the English distal locational adverb *there* in locational phrases, *de* was extended to habitual and generic contexts. Since there are no clear models for this usage in any of the source languages, it most likely occurred due to the language-internal process of semantic extension that is cross-linguistically commonly attested.

In a few cases, the emergence of a category seems to be entirely due to language-internal change. An example is the emergence of the Future category and marker in the Surinamese creoles. Migge and Goury (2008) and others (Van den Berg 2007 and references therein) argue that the contemporary future marker *o* developed from the construction *de go V* and the Saamaka equivalent *tan go V* attested in the early texts written in Sranan Tongo and Saamaka, respectively. Superstrate sources do not seem responsible for the emergence of these constructions since this kind of Progressive Future construction is not attested in Dutch, and the '*be going to*' construction in English emerged only at the end of the seventeenth century. However, there is a possible model in the Gbe varieties, namely the Prospective Future construction (see Table 2). In the latter construction, the verb is juxtaposed with the existential/locative verb and a particle expressing Progressive Aspect (see Table 2). It seems quite likely that when the creators of the creoles reinterpreted the adverb *de* as an existential verb on the basis of the existential verb in their native Gbe (Migge 2002), *de* also came to be extended to constructions expressing prospective future.

Evidence in favour of this can be seen in the fact that modern e < de does not only express Progressive and Habitual Aspect, but also Intentional Future notions (31), as a secondary meaning.

(31)	a.	a FOC	tamaa	mi	e MDE	dongo.	n rivor		PAM	AKA
		'It's	tomorro	w that	I'll go o	down riv	ver.'		(elicitatio	on 2)
	b.	mi e I I	e be	egin d	len e	examen	<i>taa</i> other	wiki. week	Рам	AKA
		'I'm going to start the exams next week.'						(fieldnotes 2	2008)	

Once this prospective future construction had been instantiated, the combination de + movement verb go emerged as a future-marking strategy. *De* go then reduced to go and finally to o. This analysis is supported by two pieces of evidence. First, grammaticalisation of a 'movement towards a goal construction' (*I'm going to...*) to a Future construction is a well-attested path of development (Bybee et al 1994; Heine & Kuteva 2002). Second, all three stages (*de go, go and o*) are attested in the early texts.

Finally, the only case that may possibly contradict the hypothesis that language-internal change takes place after the initial emergence of creole features due to substrate and superstrate influence is the emergence scenario for the Past marker. This case suggests that the initial "interpretation" of *been* as a past marker was due to a contextally driven reinterpretation of English Present Perfect constructions involving *been*.

6. Conclusion

The discussion in this paper suggests that substrate influence was clearly central to the emergence of the TMA categories in the creoles of Suriname. However, substrate influence played a different role in the formation of the different categories. We can establish a continuum ranging from features that were completely due to substrate influence to those for which only the initial construction from which the category derived had emerged due to substrate influence while emergence was mainly driven by a different process. The study also shows that substrate influence interacted in many different ways with the European input(s) and language-internal change. While the former interacted with substrate influence to give rise to the initial categories and elements, the latter mainly affected them after their initial instantiation.

The research on the TMA system in the creoles of Suriname then challenges views that conceptualise creolisation or creole formation as a separate, unitary and abrupt process of language creation (Thomason & Kaufman 1988) and supports those that conceptualise creole formation as a gradual and multilayered process (Arends 1993; Bruyn 1995) involving processes of language change that also operate in other so-called "normal" contact settings (Lefebvre 1998; Thomason & Kaufman 1988; Winford 2003). The present-day TMA system emerged in several stages involving first, "interference through shift"—speakers of African languages reinterpreted strings and elements from L2 English according to L1 models—and retention of superstrate models. Second, other elements, categories and functions later emerged either as a result of gradual language-internal change (and contact) affecting elements that had previously emerged due to interference through shift or as a result of retention.

Notes

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2. The differences between the Bakra and Nengre varieties of Sranan posited by Schumann (1778 in Schuchardt 1994) and Riemer (1779 in Arends & Perl 1995) may be largely due to differential Dutch influence.

3. This category might also be labelled "Perfect". It is a subtype of the category PERFECT (Dahl 1985).

4. Besides *sixu*, the conversational data from Maxi also contain the element *sikã*. It occurs much less frequently than *sixu* in the conversational data. The native informant never employed *sikã* in the elicitations.

5. (Elicitation 1) refers to elicitations carried out in 2002 in Benin with native speakers of different Gbe varieties using a modified version of the Dahl (1985) questionnaire. (Elicitation 2) refers to such elicitation with native speakers of Ndyuka, Pamaka and Saamaka carried out in St. Laurent du Maroni, French Guiana, in 2002. The reference (field notes) indicates constructions overheard during natural conversations.

6. (Waci-Migge1) and similar codes refer to transcriptions of recorded conversations between native speakers of the indicated variety. The recordings involving the Surinamese Creoles were made in Suriname and French Guiana between 1994 and 2007. The recordings for the varieties of Gbe were made in Benin between 1997 and 2002.

7. Note that some varieties of Gbe, such as Fongbe and Maxigbe, have separate verbs for expressing existence and the notion of 'be-at' while other varieties, such as Wacigbe, use the same verb in both functions. In the examples, I gloss it as 'be-at'.

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List of Abbreviations

COMPL – Completive Aspect DET – Determiner FOC – Focus marker HAB – Habitual aspect IMPF – Imperfective Aspect INSIST – Marker of insistence and emphasis MOD – Modality NEG – Negative marker PAST – Past time marker PL – Plural

- POSS Possessive marker
- PROG Progressive
- Q Question particle
- ${\tt RED-Reduplication}$
- REL Relative marker