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

Bettina Migge

University College Dublin

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 language-internal 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

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:

1. 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 contact-induced language change are only those changes that contradict so-called cross-linguistically 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.

Table 1: Tense and Aspect in the Creoles of Suriname (Winford & Migge 2007: 78)

Forms				Category	Meanings
SN	PM	ND	SM*		
Tense					
<i>ben</i>	<i>be</i>	<i>be</i>	<i>bi</i>	Relative Past	Past events 'distanced' from Speaker background past or 'framepast' especially in narratives. Past in relation to another reference point in the past.
<i>o</i>	<i>o</i>	<i>o</i>	<i>o</i>	Future	Later time reference; Intention or prediction. Predictability.
Aspect					
\emptyset	\emptyset	\emptyset	\emptyset	Perfective	States or events seen as unanalysed wholes.
<i>e</i>	<i>e</i>	<i>e</i>	<i>ta</i>	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.
<i>k(a)ba</i>	<i>kaba</i>	<i>kaba</i>	<i>kaa</i>	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

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

Category	Form	Meanings/Uses	
Tense			
<i>Future</i>	<i>á</i> V	Later time reference	
	<i>lá</i> V		
	<i>ná</i> V		
Aspect			
<i>Perfective</i>	\emptyset	States or events seen as unanalysed wholes. Simple past with non-statives, present with statives (when reference point is Speaker).	
	<i>Completive</i>		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 reference point with statives.
	Pattern (1)		
<i>kò</i> V (Maxi-, Fongbe)			
	<i>mḵ</i> V (Xwelagbe)		
	<i>nḵ</i> V (Xwlagbe)		
Pattern (2)	VP + <i>vḵ</i> (Aja-, Gen-, Wacigbe)		
<i>Progressive</i>		Events in progress	
	Pattern (1)		In cases where the Progressive element immediately precedes the verb, e.g., intransitive verbs or transitive verbs taking a pronominal object (SVO order).
	<i>(lé)</i> VV (<i>kḵ</i>) (Ajagbe)		
<i>(lḵ)</i> VV <i>ḵ</i> (Wacigbe)			
	<i>(le)</i> VV <i>nù</i> (Xwlagbe)		
	<i>(ò)</i> VV <i>wè</i> (Maxigbe)		
Pattern (2)	<i>lé</i> XP V (<i>kḵ</i>) (Ajagbe)	In other transitive sentences.	
	<i>lḵ</i> XP V <i>ḵ</i> (Wacigbe)		
	<i>le</i> XP V <i>nù</i> (Xwlagbe)		
	<i>ò</i> VV <i>wè</i> (Maxigbe)		

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Pattern (3) *nɔ́V* (Xwelagbe) With intransitive and transitive verbs.
leé (Gengbe)

Habitual Customary or habitual situations.

Pattern (1) *V ná* (Gen-, Wacigbe)

V nɔ́ (Ajagbe)

Pattern (2) *nɔ́ V* (Maxi-, Xwelagbe)

Pattern (3) High tone on V (Xwelagbe)

Prospective Events about to occur.

Pattern (1) *ò (XP) nà 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).

Table 3: Modality in the Creoles of Suriname (based on Migge 2006: 34ff and Winford 2000: 70ff)

Forms		ND	SM	Category	Meanings
SN	PM				
LEARNED ABILITY					
<i>sabi fu</i>	<i>Sabi</i>	<i>sabi</i>	<i>sá</i>		Ability or skills acquired through learning or training
POTENTIAL					
	<i>sa</i>	<i>sa</i>	<i>sa</i>	Positive	Physical ability (Deontic) ability subject to physical or natural law.
	<i>man</i>	<i>poy</i>	<i>sa</i>	Negative	
<i>man/kan</i>					
	<i>sa</i>	<i>sa</i>	<i>sa</i>	Positive	Deontic (root) possibility ability/possibility subject to moral or social law, involving situations under the agent’s control
	<i>man</i>	<i>poy</i>	<i>sa</i>	Negative	
<i>kan</i>					
	<i>sa</i>	<i>sa</i>	<i>sa</i>	Positive	Permission Deontic possibility imposed by authority (social, legal, etc.).
	<i>man</i>	<i>poy</i>	<i>sa</i>	Negative	
<i>mag/kan</i>					
	<i>sa</i>	<i>sa</i>	<i>sa</i>	Positive	Epistemic possibility Possible situations or
				Negative	

	<i>man/sa</i>	<i>poy/sa</i>	<i>sa</i>		situations to the certainty of which the speaker is not committed.
<i>kande</i>	<i>kande</i>	<i>kande</i>	<i>kande</i>		
NECESSITY					
<i>musu/sa</i>	<i>mu</i>	<i>mu</i>	<i>musu</i>		Deontic necessity or obligation “Existence of external, social conditions compelling an agent to complete the predicate action.” Bybee et al. (1994:177)
<i>musu</i>	<i>musu</i>	<i>musu</i>	<i>musu</i>	(stronger)	
	<i>fu</i>	<i>fu</i>	<i>u</i>	(strong)	
<i>sa</i>	<i>musu</i>	<i>musu</i>	<i>musu</i>		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.
DESIRE					
<i>wani</i>	<i>wani</i>	<i>wani</i>	<i>ke</i>		Expresses speaker's desire and need.
NEED					
	<i>a(bi) fanoudu (fu)*</i>				Expresses speaker's need.
	<i>fanoudu</i>				

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

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

Forms A*	G		W		Category			Meanings
			Xwe	Xwl	M			
LEARNED ABILITY								
<i>nya</i>	<i>nya</i>	<i>nya</i>	<i>nyɔ</i>	<i>nyɔ</i>	<i>nyɔ</i>			
POTENTIAL								
<i>teŋu</i>	<i>teŋ</i>	<i>tiŋ</i>	<i>hɛn</i>	<i>tɛn</i>	<i>sixu</i> ⁴	Pos	physical ability	
<i>senŋu</i>	<i>teŋ</i>	<i>tiŋ</i>	<i>kpego</i>	<i>kpeji</i>	<i>sixu</i>	Neg		
<i>teŋu</i>	<i>teŋ</i>	<i>tiŋ</i>	<i>hɛn</i>	<i>tɛn</i>	<i>sixu</i>	Pos	deontic (root)	
<i>senŋu</i>	<i>teŋ</i>	<i>tiŋ</i>	<i>kpego</i>	<i>kpeji</i>	<i>sixu</i>	Neg	possibility	
<i>teŋu</i>	<i>teŋ</i>	<i>tiŋ</i>	<i>teŋ(u)</i>	<i>tɛn</i>	<i>sixu</i>	Pos	permission	
			<i>hɛn</i>					

<i>senɣu</i>	<i>teŋ</i>	<i>tiŋ</i>	<i>kpego</i>	<i>kpeji</i>	<i>sixu</i>	Neg
			<i>su</i>			
<i>teŋu</i>	<i>teŋ</i>	<i>tiŋ</i>	<i>teŋ</i>	<i>ten</i>	<i>sixu</i>	epistemic possibility
NECESSITY						
<i>·o a</i>	<i>·o la</i>	<i>·o la</i>	<i>·o la</i>	<i>·o a</i>	<i>·o na</i>	deontic necessity
<i>·o a</i>	<i>·o la</i>	<i>·o la</i>	<i>·o la</i>	<i>·o a</i>	<i>·o na</i>	epistemic necessity
SUBJUNCTIVE						
<i>ne</i>	<i>ne</i>	<i>nə</i>	<i>ni</i>	<i>nɛ</i>	<i>ni</i>	optative, hortative, jussive
DESIRE						
<i>ji</i>	<i>ji</i>	<i>ji</i>	<i>din</i>	<i>ka</i>	<i>jlo</i>	
			<i>jro</i>		<i>ba</i>	
NEED						
<i>·o_</i>	<i>hyã</i>	<i>hinyã</i>	<i>hyã</i>	<i>kã</i>	<i>ba</i>	
<i>wudo</i>	<i>ji</i>		<i>din</i>			

*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 ɔn tɔnwun nyɔnuvi ɔ.* MAXIGBE
 boy DET know girl DET
 ‘The boy knows the girl.’ (Elicitation 1)⁵

b. *A boy sabi a meise.* NDYUKA
 DET boy know DET girl
 ‘The boy knows the girl.’ (Elicitation 2)

(2) [Speaker looks at a house and exclaims:]

a. *xɔ eyɔ dagba.* MAXIGBE
 house this big
 ‘The house is big.’ (Elicitation 1)

b. *A osu bigi.* NDYUKA
 DET house big
 ‘The house is big.’ (Elicitation 2)

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

- a. *E wlan wema.* MAXIGBE
she write letter
'She wrote a letter.' (Elicitation 1)
- b. *A sikiifi wan biifi.* NDYUKA
she write one letter
'She wrote a letter.' (Elicitation 2)

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

(4) [Have you heard the news?]

- a. *Axusɔ ɔ wa/jawe.* MAXIGBE
king DET come
'The king has come.' (Elicitation 1)
- b. *A kownu kon.* NDYUKA
DET king arrive/come
'The king has come.' (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. *enen, un tɔnwun in.* MAXIGBE
yes I know him
'Yes, I knew him.' (Elicitation 1)
- b. *Eyee, mi be sabi en.* NDYUKA
Yes I PAST know him
'Yes, I knew him.' (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’, *vɔ*, occurs in VP-final position (6)a or by a structure employing a preverbal element (6)b.

- (6) a. *ɔ hlɔ́n wòmá vɔ.* WACIGBE
she read book finish
‘She has finished reading the book.’ (Elicitation 1)
- b. *Éé, é nɔ́ xlɛ́ xwémà ɔ.* XWLAGBE
yes she COMPL read book DET
‘Yes, she has already read this book.’ (Elicitation 1)

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 has already 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.* PAMAKA
 we stay here one-two year COMPL
 ‘We’ve already lived here for several years.’ (Elicitation 2)

b. *ə cí amā vɔ́ yé ó gbɔ́ àvɔ́ cɔ́ 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 *kpɔ́*, Xwla *kpɔ́n*) or followed (Aja *hɔ́-e*, Xwela *gba*, Ndyuka, Pamaka, Sranan *ete*, Saamaka *yete*) by another form translating as ‘yet’ (Winford & Migge 2007).

(9) a. *A kownu án doo ete.* PAMAKA
 DET king NEG arrive yet
 ‘The king has not yet arrived.’ (Elicitation 2)

b. *əfíɔ́, mə kpɔ́ va o.* WACIGBE
 king NEG yet come INSIST
 ‘The king has not even come/arrived yet.’ (Elicitation 1)

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 *vɔ́*, 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 tuwe sixu sɔ basiya ɔ.* MAXIGBE
 mother your can take container put
 ‘Your mother can put the container here.’ (Maxi-Migge1)
- b. *eme co ma sixu mɔ vuvo.* MAXIGBE
 person all NEG can find free-time
 ‘Everybody could not find the time [to repair the pump].’ (Maxi-Migge2)
- c. *ɖfin tɛn ù ɖgo nɔ.* XWLAGBE
 mouse can eat bag for.you
 ‘The mouse can eat your bag.’
- d. *òò ún kpé á kpɔ́n ùn kɛ́sín ò.* XWLAGBE
 no he-NEG can FUT see I DEM INSIST
 ‘No, he cannot even see 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
 you can wash cold water over.there
 ‘Will you be able to wash with cold water there.’ (Pamaka-Migge5)
- b. *Fu a pikin nenge, i ná man* PAMAKA
 for DET small person you NEG can
feni en enke fa i wani.
 find her/him like how you want
 ‘About the child, you cannot find it the way you want it.’ (Pamaka-Migge5)
- c. *Mi a moni nou mi sa go a booko di dia.* SAAMAKA
 I have money now I can go LOC break DET day
 ‘I have money, now I can go to the party.’ (Elicitation 2)
- 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. *kpé-é-(e)ɲí-(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: *I man sikiifi a biifi de?* PAMAKA
 you MOD write DET letter there
 'Do you (really) think that you'll be able to write that letter?'

B: *Eeye, mi man.*
 yes I can
 'Yes, I am able to do it.' (Elicitation 2)

b. *fɪnɔ̀ wé à kpé-jí á gɔ̀ bá à kpé*
 where FOC FUT can FUT still come FUT can
ɔ̀ɲkúsi do suklu wú. XWLAGBE
 eye put school on
 '[talking to a girl who had a child while still at school] Where can you still go, how will you be able to take care of your studies?'
 (Xwla-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 (*kɔ̀*) (Ajagbe)

E hlénhlèn wema wó. 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 (*kɔ̀*) (Ajagbe)

A lé enu hlén. AJAGBE

- he-FUT be-at thing read
 ‘He is reading something.’ (Elicitation 1)
 c. Pattern 3: existential/locative V + V

e.g., *leé* V (Gengbe)

- É leé po-te yebe xɔ mɛ.* GENGBE
 he be-at clean his room in
 ‘He is cleaning his room.’ (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) *A e leisi wan buku.* PAMAKA
 she PROG read a book
 ‘She is reading a book.’ (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. *Da na foluku ne en e bigi a konde.* PAMAKA
 then FOC people FOC it PROG big DET village
 ‘It’s the people who are making the village important.’ (Pamaka-Migge18)
- b. *ého ð é bá lé síén nù.* XWLAGBE
 money DET it come be-at hard PART
 ‘The price [needed for food] is getting problematic.’ (Xwla-NSF1)

- (17) a. *Nounou na a baafu hangi e kii u.* PAMAKA
 now FOC DET meat hunger PROG kill us
 ‘Now, we are suffering from lack of meat.’ (fieldnotes)
- b. *sìé ð ní-tété gblé mí lè aya ·u-nù.* XWLAGBE
 now DET thing-all spoil we be-at misery eat-thing
 ‘Now, everything is spoiled and we are suffering.’ (Xwla-NSF2)
- (18) a. *A tamaa a e gwe kaba.* PAMAKA
 FOC tomorrow she PROG leave already
 ‘It’s tomorrow she is already going to leave.’
 (lit. ‘...she is leaving already...’) (fieldnotes)
- b. *Me le jojo-ŋ.* WACIGBE
 I be-at RED.leave-PART
 ‘I will be/ am going to leaving (soon).’ (lit. ‘I am leaving.’) (Elicitation 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 after dinner?]
A e leisi wan buku. NDYUKA
 he IMPF read one book
 ‘He (usually) reads a book.’ (Elicitation 2)
- b. [What do dogs do?]
Den e bali howhow. NDYUKA
 they IMPF 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, *nɔ* occurs preverbally (20)a while in others—such as Ajagbe, Gengbe, and Wacigbe—the habitual marker, *na* (Gengbe, Wacigbe) or *nɔ* (Ajagbe), occurs postverbally (20)b. Xwelagbe marks habitual aspect with a high tone on the verb.

- (20) a. *E nɔ xa nu.* MAXIGBE
 he HAB read book
 ‘He always reads.’ (Elicitation 1)
- b. [What do dogs do?]
Ó gbò ná. WACIGBE
 they bark HAB
 ‘Dogs bark.’ (Elicitation 1)
- c. *I fɔ́n e gan atropome.* XWELAGBE
 I wake-HAB LOC hour 6
 ‘I (usually) wake 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. *Malikɔkwe e.* XWELAGBE
 banana exist
 ‘There’s a banana.’ (Elicitations 1997)
- b. *Mastra soopie de.* Early Sranan
 master rhum there [adv]
 ‘Master, there is rhum.’ (Van Dyk 1765, Arends & Perl 1995: 170)
- 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 cross-linguistically. 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: *E hún sɛ̃flɛ lɔ sá à?* AJAGBE
 you open window DET before Q
 ‘Have you opened the window (and closed it)?’
 B: *òò, n-hw-in sa gò.*
 no I-open-it before NEG
 ‘No, I have not opened it.’ (Elicitation 1)
- b. A: *I be opo a fense?* PAMAKA
 you PAST open DET window
 ‘Had you opened the window (and close it)?’
 B: *No, mi án be opo en.*
 no I NEG PAST open it
 ‘No, I have not open it.’ (Elicitation 2)

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. *Aφə á loló san.* WACIGBE
 house DET big before
 ‘The house was big.’ (Elicitation 1)
- b. *Di wosu bi bigi.* SAAMAKA

DET house PAST big.
'The house was big.'

(Elicitation 2)

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

(24) a. *Nɔ̃ n o èhò sa, na xwle èhùn .èká.* AJAGBE
if I have money before I-FUT buy car one (Elicitation 1)

b. *Yee mi bi a moni nou mi bi o bai wa wagi.*
if I PAST have money then I PAST FUT buy a car
'If I had the money, I'd buy a car.'
SAAMAKA
(Elicitation 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 ke di moni fi i, nou tide ndeti i*
 if you want DET money for you then today night you
musu ko a mi. SAAMAKA
 must come LOC me
 'If you want your money, you must come to me tonight.' (Elicitation 2)
- c. *Egbeto o na nu esi.* MAXIGBE
 human must FUT drink water
 'Humans must drink water.' (Elicitation 1)
- (27) a. *I an mu membe taki na wan sani di a*
 you NEG must believe that NEG one thing REL he
e du fu a go anga baka [...]. A soso a
 IMPF do for he go with back FOC only DET
fesi a e gwe. PAMAKA
 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 muyee 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. *O ɔ na kple akwɔ tuwe.* MAXIGBE
 you must FUT collect money your
 ‘You should save your money.’ (Elicitation 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. *Den lanti án mu koli den foluku fu den.* PAMAKA
 DET government NEG must fool DET people POSS them
 ‘The government must not fool its people.’ (Elicitation 2)

- b. *PC mɔ́ ɔ lá flù àgblɛ̀dɛ̀tɔ́ wó ò.* WACIGBE
 com.party NEG must FUT fool farmer PL INSIST
 ‘The communist party must not fool the peasants.’ (Capo, pc, 2003)

- (29) a. *A mu de a osu nounou.* PAMAKA
 he must be-at LOC house now
 ‘He must be at home now.’ (Elicitation 2)

- b. *Jan ɔ́ lá nɔ́ axóme fifian.* GENGBE
 Jean must FUT COP house now.
 ‘Jean must be at home right now.’ (Elicitation 1)

- (30) [you see a totally destroyed motorbike at a tree]
 a. *A man musu dede (tuutuu/ye).* PAMAKA
 DET man must dead true-true/assertion
 ‘The man must (surely) be dead.’ (Elicitation 2)

- b. *Kɛ̀kɛ̀tɔ́ á ɔ́ lá kú kpò é..* WACIGBE
 driver DET must FUT dead sure INSIST
 ‘The driver must surely be dead.’ (Capo, pc, Nov. 2003)

Note that there are also similarities in the categorical status. The Gbe and the Ndyuka and Pamaka Necessity elements, *mu* and *ɔ́ lá* 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 tamaa mi e dongo.* PAMAKA
 FOC tomorrow I IMPF go.down-river
 ‘It’s tomorrow that I’ll go down river.’ (elicitation 2)
- b. *mi e begin den examen taa wiki.* PAMAKA
 I IMPF start DET exam other week
 ‘I’m going to start the exams next week.’ (fieldnotes 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 *sikā*. It occurs much less frequently than *sixu* in the conversational data. The native informant never employed *sikā* 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

RED – Reduplication

REL – Relative marker