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Tracing the origin of modality in the creoles of Suriname*

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1. Introduction

Creole TMA systems have received a great deal of attention in the debate over the nature of creole formation ever since Bickerton (1981, 1984) argued that the significant similarities between the TMA systems of (radical) creoles are evidence “for a linguistic-universals [bioprogram] explanation of creole genesis.” (Singler 1990: viii). Two types of challenges have been leveled at this claim. First, research on the TMA system of individual creoles (see papers in Singler 1990, Lefebvre 1996, Winford 2000a&b) shows that the TMA categories and combinations or orderings posited by Bickerton’s (prototypical) creole TMA system do not closely match those actually attested in creoles. Second, scholars have presented sound arguments in favor of the role of language-internal change (e.g. van den Berg 2001) and particularly substrate influence in the emergence of specific TMA-expressing elements in creoles. In relation to the latter, for instance, Corne (1983) argues that the semantics and use of completive *fin* in Isle de France Creole are a compromise between the semantics of French *finir* ‘finish’ and the completive category found in the Bantu languages that provided the major substrate input to the formation of Isle de France Creole. A similar case has been made for the sources of completive markers in Portuguese-lexicon creoles (Stolz 1987). Stolz argues that even the syntactic position of these markers in different creoles (pre-verbal or VP-final or both) can be attributed to the relevant substrates (e.g., Kwa languages in the Caribbean, Malay in the case of Papia Kristang). The most comprehensive argument for substrate sources of creole grammar, including TMA systems, can be found in the work of Lefebvre and her associates.

Lefebvre (1996, 1998) provides a detailed description of the TMA system of Haitian, its superstrate language French and one of its substrate languages, Fongbe, and an in-depth comparison of the Haitian system with that of French and Fongbe. With respect to modality, she argues that Haitian has three modality or irrealis markers, as she calls them. They are the definite future marker *ap*, the indefinite future marker *a va* and the subjunctive marker *pou*. The comparison reveals that the Haitian modality markers do

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not have direct counterparts in French. However, there are similarities in form and a few basic resemblances in meaning between the Haitian forms and elements in French periphrastic expressions. The Haitian element *pou*, for instance, is posited to derive from the French preposition *pour* occurring in periphrastic expressions such as (1) although French *être pour* and Haitian *pou* only share a tenuous semantic element in common, namely their irrealis meaning (Lefebvre 1998: 118-119).

- (1) French *Jean est pour partir.*
'John is about to go.' (Lefebvre 1998: 113)

The Haitian markers, however, match up very well in their semantics, syntax, and their combinatory possibilities with their Fongbe counterpart. Haitian *pou*, for instance, is argued to closely resemble the Gbe subjunctive marker *ní*. To Lefebvre, "these facts argue for the claim that the semantics of the TMA system of Haitian comes from its substratum languages" (Lefebvre 1996: 295-296) while the lexical forms seem to be derived from French lexical or periphrastic forms that share some semantic similarity with the Fongbe forms. This 'division of properties' suggests to Lefebvre that the process of relexification played a major role in creole genesis. Essentially, speakers of Fongbe copied the lexical entries of their (Fongbe) modality markers and relabeled the native lexical items with a phonetic string from French which comes from a somewhat semantically related element in French periphrastic constructions (Lefebvre 1996: 297).

While Lefebvre's work provides important insights into the nature of the Haitian TMA system and its relationship to its superstrate and substrate input, it is not entirely conclusive. First, it is just concerned with preverbal markers, i.e. grammaticalized strategies for expressing modal notions, and does not consider modal verbs and periphrastic constructions. This is quite surprising given that other creole functional elements (e.g. equative copula) have been found to originate from this kind of 'secondary construction' in the superstrate and/or the substrate (Migge 2002). Lefebvre's account explicitly acknowledges that French secondary constructions were involved in the emergence of the (lexical form of the) Haitian TMA markers but she does not discuss such constructions for Fongbe or Haitian. A possible second shortcoming to Lefebvre's account is that she does not consider diachronic data. These data are, however, important to provide a comprehensive account of the origin of creole TMA systems.¹

The present paper attempts to shed light on the origin of creole TMA systems by investigating the emergence of two subsystems of modality in the creoles of Suriname. The investigation is based on a comparative linguistic analysis of modality in three maroon creoles and six Gbe varieties, and on a preliminary investigation of early historical documents (Goury 2003). The aim is to determine the role of the Gbe languages in the formation of these creoles and to show how input from both European and African sources, aided by universal principles of contact-induced change and language-internal change, shaped the grammar of these creoles. The paper suggests that many aspects of the creole modality system have their source in Gbe languages. At the same time, it is clear that they are in no way exact (or in some cases even close) replicas of the Gbe modality systems.

¹To her defense, there may not be much historical data available yet.

The comparative linguistic study follows the approach outlined by Thomason (1993: 287). According to this approach, a comprehensive analysis of language contact phenomena has to involve a careful analysis of the contact setting in which the contact occurred and an in-depth linguistic investigation of the affected subsystem of grammar in the languages that were involved in the contact setting and the resulting language.

The study focuses on the maroon creoles, Ndyuka (ND), Pamaka (PM) and Saamaka (SM) because they are quite conservative and unlike modern Sranan Tongo have undergone relatively little contact induced change.² The study focuses on varieties of Gbe (Aja, Waci, Gen, Xwela, Xwla, Maxi) because both sociohistorical evidence (Arends 1995) and linguistic evidence (Migge 1998a & b, 2000, 2002, 2003; Smith 2001) suggest that speakers of Gbe played an important role in the formation of the plantation varieties from which all modern creoles of Suriname descend.³

The data for this study come from elicitations with selected native speakers and from recordings of natural conversations. The former data were elicited employing a modified version of Dahl's (1985) questionnaire. The questionnaire consisted of a number of sentences and short connected texts in French which were offered for translation to informants. Informants were given clear indications, with additional explanation where necessary, of the contexts in which they were to envisage the sentences being uttered. For example, to elicit sentences containing a verb with habitual aspectual reference, a prompt sentence such as the one in (2) was used.

- (2) [Q: What does your brother normally do after lunch? A:]
He WRITE letters.

Material enclosed in square brackets is meant to provide a context for the utterance to be elicited (the translation of which is outside the brackets). Verbs are offered in bare form (capitalized in the text) so as to minimize the possibility of interference from English or French when translating. In addition to providing equivalents of the English/French sample sentences, the informants were also encouraged to supply additional examples of their own, to evaluate differences in meaning between similar constructions, and to assess sample sentences constructed by the fieldworker/author. The elicited data were also evaluated and discussed in some detail with linguists who are native speakers of Gbe varieties.⁴

²A preliminary comparison of modality in the maroon creoles and Sranan Tongo (Winford 2000a) showed that the Sranan Tongo system differs in several important respects from that of the maroon creoles. These differences appear to be largely due to influence from Surinamese Dutch on modern Sranan Tongo. More in-depth work on this issue is presently being conducted in the framework of the NSF grant.

³The study focuses on several Gbe varieties because the creators of the predecessor(s) of the modern creoles of Suriname were speakers of different Gbe varieties. Moreover, such an approach provides insights into the nature of variation across the Gbe continuum. In the absence of a broad range of data from the very early period, a consideration of data from several modern creoles of Suriname was deemed necessary in order to get a better insight into the kinds of strategies that most likely existed at the time of creole formation.

⁴An anonymous reviewer suggested that native speaker linguists are not a reliable source of information but did not explain why. I, however, found that discussions with native speaker linguists and the additional data supplied by them were very helpful in putting into perspective the collected data and the available literature on the Gbe varieties.

The conversational data were recorded by members of the different communities. These consultants were asked to make 60 minute recordings of mainly unguided and also one guided conversation with (conservative) members of their native village. The consultants who all had some training in linguistics or anthropology also transcribed and translated the recordings. The modality data from the recordings were also discussed with both the consultants and Gbe linguists.

The framework used is modeled after typological studies of TMA systems such as Dahl (1985) and Bybee et al. (1994). The analysis focuses on semantic domains, e.g. necessity, and the various strategies, e.g. grammatical markers, modal verbs, adverbs etc., employed to express the meanings that are part of such a domain. With respect to each strategy used, the study aims to determine its dominant or prototypical uses and its secondary meanings, that is its contextually determined interpretations that arise from more peripheral uses. This is crucial because a close match between languages with respect to the nature of the strategies employed, their meanings and uses is a powerful argument for typological similarity between them. This would be strong evidence of continuity from the Gbe to the Surinamese varieties.

The study is divided into four parts. Part Two gives an overview of the strategies used to encode modal categories in the three maroon creoles and six Gbe varieties. Part Three discusses and compares the strategies employed to express potential mood and necessity in some detail and proposes a scenario for their emergence based on the comparative evidence and some historical data. The last part summarizes the findings and discusses their theoretical implications.

2. Comparing modality in the creoles of Suriname and Gbe

Tables 1& 2 provide an overview of modality categories in the maroon creoles of Suriname and Gbe.

Table 1. *Modality in three maroon creoles of Suriname*

Forms PM ¹	ND	SM	Category	Meanings
LEARNED ABILITY				
<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
<i>man</i>	<i>poy</i>	<i>sa</i>	Negative	(Deontic) Ability subject to physical or natural law.
<i>sa</i>	<i>sa</i>	<i>sa</i>	Positive	deontic (root)
<i>man</i>	<i>poy</i>	<i>sa</i>	Negative	possibility Ability/possibility subject to moral or social law, involving situations under the agent's control
<i>sa</i>	<i>sa</i>	<i>sa</i>	Positive	permission
<i>man</i>	<i>poy</i>	<i>sa</i>	Negative	Deontic possibility imposed by authority (social, legal, etc.).
<i>sa</i>	<i>sa</i>	<i>sa</i>	Positive	epistemic possibility
<i>man</i>	<i>poy</i>	<i>sa</i>	Negative	Possible situations, or situations to the certainty of which the speaker is not committed.
<i>kande</i>	<i>kande</i>	<i>kande</i>		
NECESSITY				
<i>mu</i>	<i>mu</i>	<i>musu</i>		deontic necessity or
<i>musu</i>	<i>musu</i>	<i>musu</i>	(stronger)	obligation "Existence of
<i>musu</i>	<i>musu</i>	<i>musu</i>	(strong)	external, social
<i>fu</i>	<i>fu</i>	<i>u</i>		conditions compelling an agent to complete the predicate action." Bybee et al. (1994:177)
<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>k</i> 𐄂		Expresses speaker's desire and need.
NEED				
<i>a(bi) fanoudu</i>	<i>(fu)</i> ²			Expresses speaker's need.
<i>fanoudu</i>				

Note 1: PM=Pamaka, ND=Ndyuka, SM=Saamaka

Note 2: Constructions are found in all varieties.

Table 2. *Modality in the six Gbe varieties*

Forms		Category			Meanings	
Aja	Gen	Waci	Xwela	Xwla	Maxi	
LEARNED ABILITY						
<i>nya</i>	<i>nya</i>	<i>nya</i>	<i>ny/ɛ</i>	<i>ny/ɛ</i>	<i>ny/ɛ</i>	
POTENTIAL						
<i>te ɛu</i>	<i>te ɛ</i>	<i>ti ɛ</i>	<i>h ɛn</i>	<i>t ɛn</i>	<i>sixu</i> ⁵	Pos. physical ability
<i>s ɛn ɛ</i>	<i>te ɛ</i>	<i>ti ɛ</i>	<i>te ɛ(u)</i>	<i>kpeji</i>	<i>sixu</i>	Neg.
<i>u</i>			<i>su</i>			
<i>te ɛu</i>	<i>te ɛ</i>	<i>ti ɛ</i>	<i>h ɛn</i>	<i>t ɛn</i>	<i>sixu</i>	Posi. deontic (root)
<i>s ɛn ɛ</i>	<i>te ɛ</i>	<i>ti ɛ</i>	<i>te ɛ(u)</i>	<i>kpeji</i>	<i>sixu</i>	Neg. possibility
<i>u</i>			<i>su</i>			
<i>te ɛu</i>	<i>te ɛ</i>	<i>ti ɛ</i>	<i>te ɛ(u)</i>	<i>t ɛn</i>	<i>sixu</i>	Pos. permission
<i>s ɛn ɛ</i>	<i>te ɛ</i>	<i>ti ɛ</i>	<i>h ɛn</i>			
<i>u</i>			<i>kpego</i>	<i>kpeji</i>	<i>sixu</i>	Neg.
<i>te ɛu</i>	<i>te ɛ</i>	<i>ti ɛ</i>	<i>su</i>			
<i>te ɛu</i>	<i>te ɛ</i>	<i>ti ɛ</i>	<i>te ɛ</i>	<i>t ɛn</i>	<i>sixu</i>	epistemic possibility
NECESSITY						
<i>ɛo a</i>	<i>ɛo la</i>	<i>ɛo la</i>	<i>ɛo la</i>	<i>ɛo a</i>	<i>ɛo na</i>	deontic necessity
<i>ɛo a</i>	<i>ɛo la</i>	<i>ɛo la</i>	<i>ɛo la</i>	<i>ɛo a</i>	<i>ɛo na</i>	epistemic necessity
SUBJUNCTIVE						
<i>ne</i>	<i>ne</i>	<i>n ★</i>	<i>ni</i>	<i>n ɛ</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>ɛo_</i>	<i>hya ɔ</i>	<i>hinya</i>	<i>hya ɔ</i>	<i>ka ɔ</i>	<i>ba</i>	
<i>wudo</i>	<i>ji</i>	<i>ɔ</i>	<i>din</i>			

A comparison of Tables 1 and 2 reveals several important similarities between the maroon creoles of Suriname and varieties of Gbe in the area of modality. They distinguish mostly the same kinds of semantic categories and express them with independent forms that precede the verb. They have closely similar meanings and distributions but different etymologies. The Surinamese forms derive from European languages such as English, Dutch and Portuguese. For reasons of space, the following discussion will focus on learned ability, potential and necessity.

⁵ Besides *sixu*, the conversational data from Maxi also contain the element *sika ɔ*. It occurs much less frequently than *sixu* in the conversational data. The native informant never employed *sika ɔ* in the elicitations.

3. Ability and possibility

The first striking similarity between the creoles of Suriname and Gbe is that in both language groups a mental or physical ability that requires special knowledge or learning is distinguished in the same way from other kinds of ability or possibility. Both employ a construction with the verb meaning ‘to know’, *sabi* in Ndyuka and Pamaka, *sá* in Saamaka, all derived from Portuguese *sabir*, and *nya*①, *ny*↗① etc. in Gbe. The examples in (3) illustrate:

- (3) PM *A pikin de, a sa(bi) suwen.*
 DET(sg)child DEM s/he know swim
 SM *Di mii aki, a sá wata bunu.*
 DET(sg)child here s/he know water good
 Xwla *e↗vi ↗↗ ny↗↗ t↗↗ lin ny↗↗ ↗↗↗↗.*
 child DET know lake swim well
 Waci *↗↗★vi a nya① ★↗ci↗ ↗↗↗↗↗↗ y↗↗↗↗↗↗↗↗.*
 child DET know water wash.RED well
 ‘The child knows swimming (i.e. how to swim (well)
 (in the water/lake)).’

In the maroon creoles, the verb ‘to know’ selects an activity verb or a noun that implies a certain activity, e.g. *wata(a)* implies the activity of swimming.⁶ In Gbe, the verb *nya*①, *ny*↗① etc. also selects an activity verb in this construction. If it is an inherent complement verb (cf. Essegbey 1999) as in the case of ‘swim’, the verb is always accompanied by a noun (e.g. ‘water’, ‘lake’) because it is essentially the verb and the noun together that denote the activity. The order of the noun and the verb is reversed in Gbe and in some varieties the verb is also reduplicated because the verb ‘to know’ in Gbe belongs to a class of verbs that trigger OV and OV.RED alternation (cf. Aboh to appear).

‘To know’ in the creoles and Gbe appear to be a lexical verb. First, it may also select other kinds of complements to express various functions. It may select a clausal complement headed by a complementizer/quotative (*taki* (EMC), *taa* (SM), *be* (Gen, Waci), *↗↗★* (Maxi), *fan* (Xwela) etc.) to express the notion of ‘to know that ...’ or an NP complement to express ‘to know something’.

Second, verbhood tests for these languages (cf. Lefebvre & Brousseau 2002: 101-107; Aboh 2004: 168-170) provide positive results. Like other lexical verbs in these languages, ‘to know’ can, for instance, be predicate-clefted in this function (4).

- (4) PM *Sabi a sabi wata/suwen so?*
 know she know water/swim so
 ‘She KNOWS how to swim that well?’
 Waci *Nya① ↗↗★vi a ye nya① ★ci fufu l★k★?*
 know child DET PRE know water swim.RED like that
 ‘Does the child KNOW how to swim like that?’⁷

⁶There seems to be a small set of nouns that may be selected by ‘to know’ in this type of construction, e.g. *buku* ‘book, read’, *sitaati* ‘street, how to act in town’, *wagi* ‘car, drive a car’.

⁷Capitalization of entire words indicates special emphasis.

Moreover, it may be combined with the imperfective marker in the creoles and appear in the progressive construction in Gbe, like other lexical verbs in these languages (5).

- (5) PM A *e sabi wata/swen.*
 she IMPF know water/swim
 ‘He is getting to know how to swim.’
 Waci *☒★vi a le eci fufu nya ① ②.*
 child DET(sg) COP water swim.RED know PART
 ‘The child is knowing, i.e. getting to know, how to swim.’

Finally, the VP of ‘to know’ may be elided in the maroon creoles. In the case of the Gbe languages, the VP complement may not be deleted, most likely because *nya ①* etc. are inherent complement verb (cf. Aboh to appear, Essegbey 1999) which always requires the expression of the NP. The NP may, however, be extraposed.

- (6) PM A: *Da a sabi swen/wata?* B: *Ya baa, a sabi.*
 then she know swim/water yes POL she know
 A: ‘Does she know how to swim? B: Yes, she knows.’
 Waci A: *☒★vi a nya ① ★ci fufu a?*
 child DET know water swim.RED QP
 B: *En e nya ① *(eci fufu).*
 yes she know water swim.RED
 ‘A: Does the child know how to swim?’
 B: Yes, she knows how to swim.’
 Waci *En, eci fufu ye e nya ①.*
 yes water swim.RED FOC she know
 ‘Yes, she knows how to SWIM.’

Most of the Gbe varieties and the EMC also use a single preverbal form to express the semantic notion of physical ability, deontic (root) possibility, and permission. In the maroon creoles, the form *sa* is used to convey all these senses, see examples (7-9).

(Physical Ability).

- (7) ND A *taanga, a sa diki wan ondoo kilo.*
 he strong he can lift one hundred kilo
 ‘He is strong, he can lift one hundred kilos.’

(Permission).

- (8) PM *Mi mama no wani fu en pikin, en umanpikin,*
 my mother NEG want for her child her daughter
 go libi anga den sama dati, ma en manpikin
 go live with DET(pl) person that but her son
 sa go libi. (PM1)⁸
 can go live

⁸In the case of examples taken from the conversational data, I provide the name of the variety and the tape number on round brackets following the example, e.g. (PM 1).

‘My mother doesn’t want for her daughter to live with those people but her sons may live with them.’

(Root possibility)

- (9) PM *Den sa kon puu u ma den ná o puu u.*
 they can come remove us but they NEG FUT remove us.
 ‘They [Surinamese government] may come to remove us [from the gold-mining area] but they won’t (be able to) remove us.’ (PM1)

Most of the Gbe varieties (Gen, Waci, Maxi, Xwla) also employ a single form to convey all these meanings, as shown by the examples (10-12) from Xwla, but the forms are not the same in all varieties (Table 2).

(Physical Ability)

- (10) Xwla *e ɣjɣ a ʌsu ɣ. e ɣ t ɰn kɣ kilo kɣnwe ʌwi.*
 he be man he can lift kilo 100
 ‘He is very strong, i.e. he acts like a man should. He can lift 100 kilos.’

(Permission)

- (11) Xwla *e ʌvi ɣ ʌ t ɰnnɣ fi ɣ xwe ʌsa ʌ xe ʌɣ.*
 child DET can stay here night this
 ‘The boy may stay here tonight.’

(Root possibility)

- (12) Xwla *Vɣ ʌ e t ɰn lutterna m ʌ-bu ya*
e
 but he can fight PREP person-other EMPH he
t ɰn u n kpe do ʌm ʌ-bu wu.
 can NEG associate PREP person-other skin
 [Talking about the presidential campaign:] ‘But he can fight for someone else, he can get together with someone else.’
 (Xwla 4)

Note that in several Gbe varieties, such as Aja and Vhegbe varieties (e.g. Waci, Anlo), and to a lesser extent in Gengbe, this form is always combined with the future potential marker (13).⁹

⁹ The term Vhegbe comes from Capo (1988). The cluster is more widely known by the name of Ewe.

Essegbey (p.c. November 2003) for Anlo and Capo (p.c. March 2004) for Waci argue that it is this marker that contributes the possibility interpretation.¹⁰ *Tɛn* in Xwla, *teɛu* in Xwela and *sixu* in Maxi are generally not combined with *(l)n**a* in non-future contexts (13) since the future marker does not appear to have a modal meaning in these varieties (Aboh 2004: 158-164 but see also Lefebvre & Brousseau 2002: 91ff for a different point of view).

- (13) Waci *Yɛbɛ aɛɛu-wósɛú ɛtɛ; yɛa*
tiɛɛ a kpa aɛgɛnɛ
 his tooth-PL strong very they FUT can FUT cut coconut
ku-wo jro. (Capo p.c. 2003)
 with-PL will
 ‘His teeth are so strong that he can peel a coconut with them.’

- (14) Maxi *Nyavi ɛ, (e) sixu nɛ fi oɓadannu*.
 boy TOP he can stay here evening
 ‘The boy can (i.e. is authorized to) stay here.’

In Xwela, the situation is a little bit more complex. In positive constructions, there is variation between the element *teɛ(u)* ‘can’ (15a) and a bi-clausal construction involving the verb *hɛn* ‘carry’ (15b) to express physical ability, possibility, permission and epistemic possibility. The Xwela consultant does not see any clear difference in meaning between these two options. In other varieties of Gbe, such as Gun and Waci, the construction with *hɛn* implies a lesser commitment to the truth and lesser certainty than the one involving *teɛ(u)* (Aboh p.c. 2004; Capo p.c. 2003).

- (15a) Xwela *vi lɛ teɛ wa jɛ ɛe hwedo*.
 child DET can be fall LOC night
 (15b) Xwela *vi lɛ hɛn ɛ, e la wa ɛe hwedo*.
 child DET carry PART he FUT be LOC night
 ‘The child can remain here tonight.’

4. Negative possibility

Another interesting similarity is found in the expression of possibility in negative contexts. In such constructions, Pamaka and Ndyuka and several of the Gbe varieties (Aja, Xwela, Xwla) employ forms that are different from those used in positive contexts (16-18). Pamaka (and Aluku) employs the element *man*, Ndyuka *poy*, Aja *sɛnɛu* and

¹⁰ Evidence suggests that *(l)a* in these varieties conveys a sense of (future) intention. To convey a sense of certain future, *(l)a* has to be combined with a periphrastic construction that expresses certainty (i).

(i) Waci *Mɛ k aɛɛ ɛɛɛɛɛ bɛ Jaɛɛaɛɛ aɛyi*
Flaɛɛsɛɛ-du mɛ
 I bet LOC it-on that Jean POT go France-village in
lɛ kɛɛsiɛa nɛ gbɛnɛ mɛ
 LOC week REL come in
 ‘I am sure that Jean will definitely go to France next week.’

Xwela and Xwla use *kpego/wu/ji*. The conversational data from Xwela show that *su* (<*isu* ‘prohibition’) can also be employed to express negative possibility and negative permission.

(Negative physical ability)

- (16) PM K., da i no man leysi a beybel moo?
 name, then you NEG can read DET(sg) bible anymore
 ‘K, then are you no longer able to read the bible, i.e., hold mass.’
 (refers to the fact that K.’s vision has considerably deteriorated) (PM 6)
- ND Ape yu á poy pasa anga a lay a boto.
 there you NEG can pass with DET(sg) load at boat
 ‘There you cannot pass with a loaded boat.’ (ND 1)
- Xwla sa n mi e n s n kla ku sa n
 kla ku e
 before we HAB go Klakou before Klakou PART
 ha n-la n flan lo kpo -nu n u n
 kpe wu a
 pig-meat franc one-for you NEG can¹¹ FUT
 ku n flan-lo kpo. (Xwla 3)
 eat franc-one
 ‘When we used to go to Klaku before, it was pork for one franc,
 you could not eat for one franc.’

(Negative permission)

- (17) PM A boy án man tan ya tide neti.
 DET(sg) boy NEG can stay here today night
 ND A pikin á poy tan ya tide neti.
 DET(sg) child NEG can stay here today night
 ‘The child cannot stay here tonight.’
- Xwla e vi n u n kpe ji a n n fi hwe sa
 xe n o
 child DET NEG can FUT stay here night this NEG
 ‘The child cannot (i.e. absolutely not) stay here tonight.’

(Negative root possibility)

- (18) ND Mi á poy de na a kiiman se. (ND 2)
 I NEG can COP LOC DET(sg) killer side
 ‘[why he won’t vote for the party:] I cannot be/work together with a killer.’
- PM So wan libi so wan libi ná o man libi. (PM 6)
 so a life so a life NEG FUT can live
 ‘[about troubles with wife:] Such a life, such a life cannot be lived.’
- Xwla m bu e ca n ka kpla n to n

¹¹The consultants who transcribed the conversational data consistently glossed *kpego/wu/ji* with French ‘pouvoir’, i.e. English ‘can’. An anonymous reviewer and Aboh (p.c. 2004) suggest that this gloss may not be entirely adequate. For want of a better gloss, I stick to ‘can’ for now, but see also the discussion on its structure, categorial status and meaning below.

person-other PL also want accompany country DET
a ʌzan-m ɛ ke ʌna ɛ y ʌ e ʌga ɛ u n
g ɛ kpe wu ka
 night-in when you chief DET NEG again can want
k ɛ ʌb ɛ ga ʌnx ɛ n-m ɛ le ʌ a ʌzan-m ɛ o ʌ-a ʌ
 open-mouth moment-in LOC night-in NEG
 ‘Other people also want to govern the country in the night, you, the boss,
 you cannot say anything now in the night.’ (Xwla 4)
 Xwela *y ɛ l ɛ n ɛ do na mi y ɛ tetel ɛ mi h ɛ n l ɛ*
 they IMPF accuse PREP us COR even PL we want PART
mi su gb ɛ ɛ?
 we ?? refuse QP?
 ‘It is them who are accusing us, but if we want we are able to refuse.’
 (Xwela 2)

Saamaka patterns with several other Gbe varieties (Gen, Gun, Waci, Maxi) that employ the same modal in both positive and negative contexts (19-21).

(Negative physical ability)

(19) SM *Mé sa ko tide moo, mi fii siki tide.*
 I-NEG can come today more I feel sick today
 ‘I cannot come tonight/today because I am/feel sick.’

Gen *Docteur ke gba va ya e ya gba nyran wu.*
 doctor who again come DEM he DEM again be bad body
 ‘The doctor who arrived, as for him, he is even worse.’
o ma te ʌ mi o.
 you NEG-FUT can swallow NEG
 ‘You cannot even swallow it (the medicine).’ (Gen 3).

(Negative permission)

(20) SM *Á sa fika ku mi di ndeti aki.*
 NEG can remain with me DET(sg) night here
 ‘The child/he cannot stay here tonight.’

Waci *★ ʌvie ʌ ʌm ★-bu m ★ ʌ vi nyi*
 child person-other POSS child COP
ye ʌ vi ʌe ma t[i ʌ] a n ɛ gb ɛ.
 COR child-PART NEG-FUT can FUT stay at
 ‘The child, it’s a child of someone else and the child, can’t he stay
 with her?’ (Waci 2)

(Negative root possibility)

(21) SM *Mé a(bi) moni, nou mi á sa go a booko di dia.*
 I-NEG have money now I NEG can go LOC break DET(sg)day
 ‘I don’t have money, thus I cannot go to the party.’

Waci Mi yi T. A. gbo T. A. be ye ma
 te
 we go name name at name name say she NEG-FUT can
 yi a wa.ye ka tutu kpo l x
 m ku vi e o.
 go FUT come she one IEDO only COP house in with child PL
 ‘We went to T. A.’s and T. A. said that she cannot go. It’s her alone in the
 house with the children.’ (Waci 1)

In Waci, Gen, Maxi (and Fon) *kpe-ji/go* and *kpe-wu/ɛu* may also be used to express negative ability (22).

- (22) Waci A: Ko fi a ti a k/a a gba ma a?
 name FUT can FUT lift load DEM QP
 ‘Can Kofi lift that load?’
 B: M a kp a-ji o, a a m a
 nu gb a o.
 NEG FUT can NEG because NEG eat thing today NEG
 ‘He cannot lift it because he did not eat anything today.’
 (Capo, p.c. 2004)

In all varieties of Gbe *kpe-ji/go* and *kpe-wu/ɛu*, just like *man* and *poy* in Pamaka and Ndyuka, are also used in positive declarative constructions and in questions to convey emphasis (23B, 24B) or to express a challenge (23A, 24, 25A).

- (23) Xwela A: y/ f/ aa kp/ go lo s/ /?
 you also FUT can for go QP
 ‘Can you also go?’
 B: la a kp/ go di /!
 FUT can very
 ‘Of course, I can!’ (Capo, p.c. 2003)

- (24) Xwla fi n/ we a kpe-ji a g/ ba a
 kpe
 where FOC FUT can FUT still come FUT can
 / ku si do sukluwu. (Xwla 2)
 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?’
 Maxi Emi ma kpewu o na xwenu a ani utu emi
 n/
 you NEG can and FUT speak NEG why cause you HAB
 ji fi sukpf/ ? (Maxi 2)
 give.birth child many QP
 ‘[If] you cannot talk, why do you have that many children?’

- (25) PM A: *I man sikiifi a biifi gi mi?*
 you can write DET(sg) letter for me
 ‘Are you (really) able to write this letter for me?’
 B: *Iya, mi man sikiifi en gi i oo!*
 Yes I can write it for you EMPH
 ‘Yes, I am able to write it for you!’

5. Epistemic Possibility

In the maroon Creoles, the category of epistemic possibility, that is, possibility based on the speaker’s subjective evaluation of the situation is either expressed by *sa* or by the adverb *kande* in conjunction with the future marker *o* or with *sa*, see examples in (26).

- (26) PM *Goon yuu, a pasa tuu, a tuu, ma a sa koti ete.*
 field hour it pass true it true but it may cut yet
 ‘The time for preparing the field has truly passed, but it may still be cut.’ (PM 2)
 PM *J. án sa go a faansi taa wiki.*
 J. NEG may go LOC France other week
 ‘J. may not go to France next week.’
 ND *Kande alen o/sa kai tide bakadina.*
 maybe rain FUT/may fall today evening
 ‘It may rain this evening.’
 PM *Den ná e kon, neen mi puu en, kande sama sa*
 they NEG IMPF come then I remove it maybe person may
go de.
 go there
 ‘They [animals] were not coming, then I removed it [gun], someone may go there.’ (PM-NSF)

It is also possible to employ the construction *a sa de taki* to convey epistemic possibility (27).

- (27) PM *A sa de taki a o go a Faansi djonson.*
 it can COP say she FUT go LOC France soon
 ‘It’s possible that she’ll go to France soon.’

In the Gbe varieties, epistemic modality is generally conveyed by the element *te* 𐄂 etc. which is also used to express ability, permission and root possibility (28). As in the creoles, epistemic modality can also be conveyed by a periphrastic type construction as in (29) though.

- (28) Gen *Jan la 𐄂 te 𐄂 yi yovo 𐄂 de 𐄂 wetri 𐄂 𐄂 a m 𐄂.*
 Jean FUT can go Europe month other DET in
 ‘Jean may go to Europe next week.’

Gen *Jan (la) te n axo m fi vij n faa.*
 Jean FUT can COP house now easily
 ‘Jean may be at home now.’

(29) Waci *★ ti nyi b ★ Ko fi ɛu ʌ-na ʌ*
nu cu sa
 it can COP that name eat-HAB thing all before

‘It is possible that Kofi was greedy before’ (Capo, p.c. Nov. 2003)

Waci *Ta m ny o a, K ʌjo jo v ʌ.*
 head NEG be.good NEG PART name go finish
 ‘Maybe Kojo is already gone (and I wish he is not gone).’
 (Capo, p.c. March 2004)

6. The categorial status of the modality elements

The categorial status of the elements employed to express physical ability, deontic and epistemic possibility and permission in Gbe and the maroon creoles is somewhat difficult to pin down in most cases. Some elements, notably *poy* in Ndyuka, *man* in Pamaka (and Aluku), *sixu* in Maxi, *te(u)* in Gen and *ti* in Waci appear to be modal verbs rather than auxiliaries because their VP complement may be deleted:

(30) PM A: *Luku a gaan beki, (n)ku a gaan beki de.*
 look DET(sg) big container look DET(sg)big container there

B: *A ná o man.*
 he NEG FUT able

A: *A o man.* (PM 12)
 he FUT able.

‘A: Bring me that big container.

B: He cannot (carry it).

A: He can (carry it).’

ND A: *A be o, sa wani booko den sowtu sani de.*
 he PAST FUT may want break DET(pl) sort thing there

Ma a poy? A á poy!

but he can he NEG can

B: *Mmm! A á poy!* (ND 1)
 EXCL he NEG can

‘A: He wanted to destroy all these things (the power of maroons).

But could he? He couldn’t!

B: He couldn’t!’

(31) Maxi *O na l ɛ emi na do alu m nu,*
 you FUT again say you(EMPH)FUT plant dry-season thing
ehi u kpo ge ɛ, o sixu a! (Maxi 2)
 you(EMPH)alone PART you can NEG

‘You’ll say again that YOU’ll plant for the dry season,
 YOU alone, you cannot!’

Waci Ga ʌ m ★ ʌ n ★ m ★ nyi ʌ ʔ ★ kaj ★ ʋ a m ★
 ti ʔ
 when that I COP young.man DET I can
 ʔ u ʌ ʔ u kaba v ʔ ʔ fia ny ★ ma ʋ ti ʔ o ʌ.
 run fast but now I NEG-FUT can NEG
 ‘When I was young I could run very fast but now I cannot (anymore).’

However, they do not seem to be fully lexical verbs either because they cannot be predicate-clefted, see for instance example (32) from Pamaka.

- (32) PM *Na man a ʌ n man tya en.
 PRE can he NEG can carry it
 ‘He CANnot carry it.’

Moreover, they cannot be modified by the imperfective marker or any other tense or aspect marker – these markers only modify the main verb. However, they may combine with tense and aspect markers to form complex temporal notions that modify the main verb of the construction (33).

- (33) PM Da i mu man taagi a kode-n ★ m ★. (PM 12)
 then you must can tell DET(sg) telephone-number
 ‘Then you should be able to tell (them) the telephone number.’
 ND Di a pasi tapu ya, a den sisa ná o poy
 when DET(sg) path close here PRE DET(pl) sister NEG FUT can
 waka go anda. (ND 4)
 walk go over.there
 ‘When the path closes here, the women won’t be able to go there anymore.’
 Maxi Ani emi ka n ʔ blo eh ʔ ʔ m ʔ di ʔ bo na sixu
 what you ? HAB make today now COR FUT can
 h ʔ ʔ egb ʔ emit ʔ ʔ ʔ lo ete na?
 hold life your COP upright QP
 ‘What do you usually do to make a living? (Maxi 1)
 Gen e la ke te ʔ u w ʔ d ʔ a.
 he FUT CF can make work DET(sg)
 ‘He would have been able to do the work.’

Based on the available data, it is not clear whether *te ʔ(u)* in Aja and Xwela, *t ʔ n* in Xwla and *s ʔ n ʔ u* in Aja function entirely in the same way as the above elements or whether they have more verbal or marker qualities.

Sa in the maroon creoles behaves much more like an auxiliary than a verb. It cannot be predicate-clefted, the VP following it cannot be deleted and it can only combine with very few T/A markers such as the relative past time marker *be* to express hypothetical possibility or ability (34).

- (34) PM *Na sa i sa pee poku tide.
 PRE can you can play music today

‘You CAN play music today.’

PM A: *Mi sa pee poku tide?* B: **Iya, i sa.*

I can play music today Yes, you can

‘A: Can I play music today? B: Yes, I can.’

ND *Te yu à man daay i konde moo, da den*
when you NEG can turn your country more then they
be sa yeepi i baka. (ND 4)

PAST may help you back

‘When you cannot handle your country any more, then they
would help you out/again.’

It also combines with the imperfective marker *e*. Note, however, that *e* follows *sa* but precedes lexical and modal verbs. This may be taken as a further piece of evidence that *sa* is not a lexical or modal verb but rather auxiliary.

- (35) PM *Efu a M. be de a opu ya, i be sa*
If PRE name PAST COP LOC up.river here you PAST may
e wooko. (PM 12)
IMPF work
‘If it’s M. who was living in the up river [village] here, you could
be working.’

The status of *kpeji/go/ɛu/wu* is not entirely clear. Structurally, it does not seem to be a word but rather a phrase that has the structure in (36).

- (36) $V_{[kpe \text{ ‘reach’}]} \text{---} PRO_{[e \text{ ‘it’}]} / NP \text{---} Postposition_{[e.g. ji \text{ ‘top, summit’}, ewu, eɛu \text{ ‘body’}]}$

In addition, tense and aspect markers typically follow it (37), i.e. they directly precede the main verb, or are marked on *kpe* and the main verb (Waci 19).

- (37) Xwla *u n ma l ɛ be o ye u n kpe wu a*
ba.
he FUT-NEG say that no he NEG can FUT come
‘He will not say that he cannot come.’ (Xwla 4)
Xwla *u n kpe ji le ka zu n ye o.*
NEG can IMPF want hurt them NEG
‘They cannot be wanting to hurt them.’ (Xwla 3)

It seems best to classify it as a phrasal construction that is akin to the ‘make it’ (e.g. Will they make it to the meeting.) construction in English (Aboh p.c. June 2004).

7. The emergence of possibility and ability in the maroon creoles of Suriname

The comparison of the means of expressing ability and possibility in the maroon creoles of Suriname and varieties of Gbe revealed close similarities between the two language

groups suggesting that the Gbe languages had an important impact on this area of grammar in the creoles.¹² The similarities are particularly striking with respect to the expression of ability acquired through special teaching or learning. The most likely explanation would be that speakers of Gbe established an interlingual identity between the Portuguese derived word *sabi* and their native Gbe item *nya* ② etc. in contexts in which *sabi* was used as a main verb selecting an NP complement to express the notion of ‘to know something’ (see 38 below). As a result of this association, the semantic and syntactic properties of Gbe *nya* ② etc. were projected onto *sabi*. *Sabi* thereby came to select not only NP but also sentential and VP complements and to express additional notions such as ‘to know that ...’ and ‘to know an activity ...’ besides ‘to know something’ in the creoles (cf. 2). Given that Portuguese *sabir* expresses similar meanings, it seems likely that both substrate and superstrate influence conspired to give rise to the semantic and syntactic properties of *sabi/sá* in the creoles.

- (38) Gen *Ny ɛ ɛ ny ɛ ɛ mu nya ɛ do na.*
 I (EMPH) I (EMPH) NEG know depth DEM
 ‘Me, I don’t know the depth of that problem.’ (Gen 1)
 PM *Mi sabi a sama.*
 I know DET(sg) person
 ‘I know the person.’

The matter is somewhat less clear in the case of the other elements. The form *sa*, usually represented as *za* or *zal* in the early documents (SN), most likely derives from the first and/or third person singular present form of the Dutch modal auxiliary *zullen*. In Dutch, *zullen* expresses an obligation or a prohibition (39), or a probability when it occurs together with the adverb *wel* ‘surely, certainly’ (40) (ANS).¹³

- (39) Dutch *Je wou het hebben, nou zal je het ook opeten.*
 you want it have now should you it also finish.eat
 ‘You wanted to have it, so now you also have to eat it all.’ (ANS – 53)

 (40) Dutch *Pet zal wel slagen.*
 name should surely succeed
 ‘Pet will probably succeed.’ (ANS – 43a)

In the texts written in the early plantation creole (SN), *sa*, however, conveys future time reference. In combination with adverbs expressing possibility or probability, *sa* conveys uncertain future and epistemic possibility (41) and without such markers it expresses a more definite future time reference (42).

¹²An anonymous reviewer suggested that an important evidence in favor of L1 influence would be that the Gbe and creole elements match up in terms of their semantic and syntactic properties (e.g. categorial status). Note that while such a perfect correspondence would be nice, it is extremely rare, if not impossible to find (cf. Thomason & Kaufman 1988).

¹³Note that it is relatively difficult to provide a handy English equivalent for Dutch *wel*.

(41) SN *Zomtem a za kom jusse na.*
 Maybe he ?? come just now
 ‘He may be back any moment.’
 (Arends & Perl 1995: 146, van Dyk 1765 cited in Goury 2003)

(42) SN *Mi za kry da tem joe go wee.*
 I FUT cry that time you go away
 ‘I’ll cry when you leave.’
 (Arends & Perl 1995, van Dyk 1765 cited in Goury 2003)

Unlike its Gbe counterparts, *sa* never functions as a marker of physical ability, permission or root possibility in the early texts. The few instances of root possibility, permission and ability are expressed by the modal verb *kan* (43-44) (Goury 2003) which is also still widely used in this function in modern Sranan Tongo (cf. Winford 2000a).

(43) SN *Den no kann holli lieki den tarrewan.*
 they NEG can hold like DET(pl) others
 ‘[speaking about pregnant women:] They cannot work like the others.’
 (Arends & Perl 1995, van Dyk 1765 cited in Goury 2003)

(44) SN *Da misi takki offe mastra plessi a kan go lange da*
 that woman say if master please he can go with that
boote.
 boat
 ‘The woman said that if the master wants to, he can go with the boat.’
 (Arends & Perl 1995, van Dyk 1765 cited in Goury 2003)

The currently used definite future marker *o* (< English *go*) (45) does not appear in the texts before the end of the 18th century (Goury 2003).

(45) SN *Effi koure kissi datti, a go pori.*
 if cold get that it FUT spoil
 ‘If it gets cold, it’ll spoil.’ (Schuman 1783 cited in Goury 2003)

Given these early data, one possible scenario would be that *sa* initially emerged as a future-marking element. The most likely scenario would be that native speakers of Gbe established an interlingual identity between *sa* and the native Gbe future marker. As a result, *sa* most likely came to encode notions ranging from a more definite future to an uncertain future. *Sa* then became restricted to expressing potential and uncertain future and epistemic possibility, and (towards the end of the 18th century) definite future came to be encoded by (*g*)*o*, which van den Berg (ms.) argues is derived from a construction involving the imperfective marker *de* and the motion verb *go*. In Sranan Tongo, *sa* still today largely expresses only the former meanings (cf. Winford 2000a&b). However, in the maroon creoles it came to also convey deontic possibility, permission and physical ability, that is, meanings that in the early texts are expressed by *kan* (43-44). Based on the

available evidence, it seems that *sa*'s development into a potential marker in the maroon creoles must have come about due to several processes. First, substrate influence is likely to have played a role. Given that in Gbe epistemic possibility is expressed by the same markers as deontic possibility, permission and physical ability, *sa*'s extension to the latter contexts may have been due to influence from Gbe. Second, it is also likely that *sa*'s extension was reinforced by processes of language-internal change. Third, at least *sa*'s extension to convey permission could have also been due to influence from Dutch *zullen*. At this point, it is not entirely clear what the exact role of these sources were and whether *sa*'s extension to modal contexts occurred only after the emergence of *o* as a definite future marker or whether *sa* already expressed modal meanings (in the maroon creoles) prior to the end of the 18th century. Research on this issue is currently being carried out (cf. Goury & Migge forthcoming).

While there seems to be a nice match between several Gbe varieties (Xwela, Xwla, Aja) and the maroon creoles Ndyuka and Pamaka in that they all use distinct markers to express negative and positive possibility, ability and permission, it is not clear that this match is entirely due to substrate influence. According to early textual evidence examined by Van den Berg (2001), the auxiliary *man* seems to have emerged as a negative physical ability marker due to a process of reanalysis from the noun *man*. Once reanalyzed, it spread to the other contexts of possibility due to a process of extension and replaced *sa* in negative contexts in Pamaka (and Aluku). However, it also seems somewhat unlikely that this would have been entirely an internal development and that the similarities between Gbe and Pamaka and Ndyuka are purely accidental. First, the distribution and function of *man* and the negative deontic possibility, permission and physical ability items in Gbe are very close. Second, there is also a semantic similarity between the original forms. *Man* was reanalyzed from a construction expressing lack of physical strength literally meaning 'he is not a man for X' (46). The items used in negative contexts in Gbe also derive from phrases conveying physical strength (47). This suggests that the Gbe patterns probably spawned the reanalysis of *man*.¹⁴

- (46) SN *Mi no man va hoppo datti.*
 I NEG man for lift that
 'I am not strong enough to lift that (lit.: I am not man for lift that).'
 'I cannot lift that.' (Schumann 1783: 185 cited in van den Berg 2001:249)

- (47) Aja *s ɛ̀-è ʒu*
 be hard/be strong-body
 'be strong'
kpe-é-(e) ʒu-(ci)
 reach-its-body-tree/body
 'be as strong as'
 Xwla/ *kpé-é-ji*
 Waci reach-its-summit/top

¹⁴One reviewer suggested that the creole construction may have also been spawned by the Gbe 'daring construction' which according to Aboh (p.c. 2004) is *Kofi j/ɛ̀ gbeto*. 'Kofi acts (like) a human.' (Gungbe). However, based on the available data, it is not clear whether this construction is widely used in Gbe to express notions such as ability, possibility, etc. More research is necessary on this construction.

Xwela *kpé-e-go*¹⁵
 reach-its-body
 Maxi *kpé-e-ewu*¹⁶
 reach-its-body
 ‘be strong’ (Capo, p.c. 2003/Aboh p.c. 2004)

The case of *poy* in Ndyuka is somewhat less clear. According to Smith (1987: 222) it derives from the third person singular form *pode* of the Portuguese verb *poder* meaning ‘can’.¹⁵ However, *poy* in Ndyuka does not seem to be entirely modelled on the Portuguese element since its distribution does not match up with *pode* in Portuguese. Unlike *pode* but like *man* in Pamaka, *poy* in Ndyuka is employed with all persons and mainly used in negative contexts to express physical ability, deontic possibility and permission. In positive contexts it expresses emphasis and conveys a challenge. The close match in distribution and function between *man* and *poy* suggests that *poy*, like *man*, must have been largely modelled on the Gbe elements that express negative physical ability, possibility and permission (47). It seems that *poy* co-existed with *man* in the early maroon and plantation varieties.¹⁶ Today it is regularly used as a negative potential mood marker by members of the Ndyuka community. Alukus and Pamakas do not readily use it because for them it is largely associated with a Ndyuka ethnic identity.

8. Necessity

Another important similarity between the creoles of Suriname and the varieties of Gbe is that they both use the same form to express positive and negative strong and weak obligation, as illustrated in examples (48-49). Strong obligation refers to the “existence of external, social conditions compelling the agent to complete the predicate action” (Bybee et al., 1994:177) while weak obligation conveys the speaker’s recommendations or advice. In Ndyuka and Pamaka these two senses of obligation are expressed by the form *mu*, Saamaka employs *musu* (< English *must*), and in the Gbe varieties, strong and weak obligation are conveyed by *lɔ* (*l/na*) (*lɔ* < *lɔ* ‘have, possess’, *l/na* < *l/na* ‘future’).¹⁷

- (48) PM *Mi anga yu, a moyti u mu meki a den baka.*
 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.’ (PM 1)
 SM *Yee i kɛ di moni fi i, nou tide ndeti i*
 if you want DET(sg) money for you then today night you
 musu ko a mi.
 must come LOC me

¹⁵Smith argues that the path of development was as follows Portuguese *pode* > *poli* > Ndyuka *poy*.

¹⁶Schumann’s Saamaka dictionary from 1778 lists *poli* (> *poy*) and provides the following sample sentence: *mi no poli va go na matu tide* ‘Today I am not able to go to the forest.’ (Schumann 1778: 97)

¹⁷One anonymous reviewer suggested that *lɔ* (*l/na*) was only employed in Western Gbe varieties and that Eastern Gbe (e.g. Fongbe varieties) used another form but did not suggest a form. My research on Maxigbe and discussions with native speakers of other Eastern Gbe varieties etc. suggests that *lɔ* (*l/na*) is also regularly used as an obligation marker in these languages.

‘If you want your money, you must come to me tonight.’

Maxi *Egb t/ɔ ɛo nanu esi*. (Maxi 2)
human must FUT drink water
‘Humans must drink water.’

(49) PM *I án mu membe taki ná 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(sg)
fesi a e gwe. (PM 1)
face he IMPF go
‘You should not believe that he [European] is doing anything that makes him go backwards, he only moves forwards.’

SM *Di semb d a musu suku muy bifo a*
gaandi.
DET person there he must search woman before he old
‘That man should find a wife before he is old.’

Maxi *O ɛo na kple akw tuwe.*
you must FUT collect money your
‘You should save your money.’

However, if it is necessary to distinguish between the two, a periphrastic construction may be used to augment the degree of obligation in Gbe (50).

(50) Waci ★✓ *hya* ① *b* ★✓ *ɛ★vi* *a* ② *ɛo* ✓ *la* ✓
kpl/ɔ ① *x/ɔ a m ★”*.
it need that child DET must FUT sweep room DET in
‘It is necessary that the child must clean the house.’ (Capo p.c. 2003)

In the creoles, strong(er) obligation may be conveyed by *a(bi) (f)u* (*habi* < English *have*, *fu* < English *for*) in all varieties and by *musu fu* in Ndyuka and Pamaka, and by *musu u* in Saamaka. Compare the examples in (51).

(51) PM *Da ala fasi, a abi fu kon a ini a famii ini.*
then all fashion he have for come LOC in DET(sg) family in
‘[talking about a former avenging spirit:] In any case, he has to come (back) among the family.’ (PM 1)
PM *Di mi be njoni, mi be musu fu kiin a osu.*
when I PAST small I PAST must for clean DET(sg) house
‘When I was small I had to clean the house (and did it).’

In negative sentences, *mu(su)* and *ɛo (l/na)* express admonition or forbidding constrained by moral law (52).

(52) PM *Den lanti án mu koli den foluku fu den.*
DET government NEG must fool DET(pl) people POSS them

Waci PC m ★ ∇ Éó lá flu" a" gbl ★ d ★ t / h ∇
wó ò.

To express an unfulfilled past obligation, the creoles combine *mu* and *musu* with the past time marker (53).

- In some Gbe varieties, such as Gen and Aja, *l/na* is combined with the irrealis or hypothetical-marking element *ke* (54) while in other varieties such as Xwla, Xwela and Maxi the future marker is combined with the perfect marker, *n/ɛ* in Xwla, (55) to express an unfulfilled obligation.

- Mu , $musu$ and $\overline{x}o$ (l/na) are also employed to express probability (56).

- Inferred certainty, however, is expressed by *musu* rather than *mu* in Pamaka and Ndyuka. In Saamaka and Gbe it is also conveyed by *musu* and *Bo* (*l/na*), respectively. In Gbe *Bo* (*l/na*) is generally also combined with a phrase or adverb expressing certainty. Inferred certainty is exemplified in the examples in (57).

- [you see a totally destroyed motorbike at a tree]
 (57) PM A *man musu dede (tuutuu/ye).*
 DET man must dead true-true/assertion
 ‘The man must (surely) be dead.’ (Sanna, p.c. April 2003)
 Waci K ★ & ★ ♦ / ʔ á ʔó lá kú kpò é ʔ
 driver DET must FUT dead sure EMPH
 ‘The driver must surely be dead.’ (Capo, p.c. Nov. 2003)

The literature (e.g. Aboh 2004, Lefebvre 1996, 1998, Lefebvre & Brousseau 2002) suggests that the Gbe varieties also have a subjunctive marker, *ni* in Fon and Gun, *ne* in Gen etc., see Table 2. It conveys a jussive sense, e.g. admonitions etc. (58a), or an optative sense, e.g. a wish or desire (58b).

- (58a) Gun Kòfí ní jì hàn.
 Kofi INJ¹⁸ sing song
 ‘Kofi should sing a song.’ (Aboh 2004: 181)
 Aja N ná gbe yi m / ʔ ✓ yi né vá kp / ʔ ✓ m.
 I give voice her that she SUB come see-me
 ‘I ordered her to come and see me.’
 Waci M ★ ▲ gbl / ʔ n ʔ ✓ - ʔ b ★ ✓ n ★ ✓ kpl / ʔ x / ʔ m ★.
 I tell to-her that INJ-she clean house in
 ‘I told her to clean the house.’
 (58b) Fon Máwu ní c / ʔ ✓ wè.
 God SUB protect 2sg
 ‘May God protect you.’ (Anonymous 1983: V, 4
 in Lefebvre & Brousseau 2002: 93)
 Waci M ★ ji b ★ ✓ n ★ ✓ va ʔ kp / ʔ ✓ - m.
 I want/search that SUB-she come see-me
 ‘I want her to come visit me.’

It seems to also convey a hortative sense in at least some varieties (59), i.e. “the speaker is encouraging or inciting someone to action” (Bybee et al. 1994).

- (59) Waci Mi ʔ n ★ ✓ yi Ku ʔ t / ʔ nu.
 we SUB go Cotonou
 ‘Let us go to Cotonou (lit. We should go to Cotonou.)’

Unlike the Gbe varieties, the maroon creoles do not appear to have a subjunctive marker. The element *fu* or *fi* used in some of these functions in some Caribbean English Creoles (Winford 1985) may not precede the main verb of a clause to convey jussive (60) or optative meanings (61) in the Surinamese Creoles. The former sense is conveyed by *mu(su)* and the latter by *meki*.

¹⁸Aboh (2004) calls *ni* an injunctive marker when it occurs in main clauses and a subjunctive marker when it is used in subordinate clauses. Given the great similarity in meaning, I refer to both as subjunctive.

- (60) PM *A fu boli a nyanyan.
 he fu cook DET(sg) food
 'He should cook the meal.'
- PM A mu boli a nyanyan.
 he fu cook DET(sg) food
 'He should/must cook the meal.'
- (61) PM *Gadu fu luku en.
 god fu look her
 'May god protect her.'
- PM Meki gadu luku en.
 make god look her
 'May god protect her.'

Fu is marginally acceptable in subordinate clauses though informants always indicate that *mu(su)* is preferred (62). It is more appropriately described as a preposition that may also function as a complementizer.

- (62) PM Mi taagi en taki a ?fu/mu boli a nyanyan.
 I tell him that he fu/must cook DET(sg) food
 'I told him that he should/must cook the meal.'
- PM Mi taagi en fu a boli a nyanyan.
 I tell him for he cook DET(sg) food
 'I told him to cook the meal.'

9. The categorial status of the modality elements

The Gbe elements that convey notions of necessity both appear to be auxiliaries because they cannot stand alone but always have to be followed by a main verb (63).

- (63) Fon A : Bàyí ní ~~Ẹ~~à w/ɔ̃ ǎ ? B : *é ní.
 Bayi SUB prepare dough QP she SUB
 'Must Bayi prepare dough? 'She must.'
- (Lefebvre & Brousseau 2002: 102)
- Waci Me ji a yi sukulu voa e ~~Ẹ~~o la *(ji).
 NEG want FUT go school but he must FUT go
 'He does not want to go to school but he must.'

In the maroon Creoles, only *mu* in Ndyuka and Pamaka is a marker. As in the case of its Gbe counterparts, it cannot stand on its own but always has to be followed by the verb it modifies (64).

- (64) PM A: Mi mu kon? B: *Iya i mu *(kon).
 I must come yes you must

‘A: Do I have to come? B: Yes, you must.’

In contrast to *mu*, *musu* seems to be a modal verb because its VP may be omitted (65). It either subcategorizes for a main verb (65) or for complement clause headed by the complementizer *fu* (51).¹⁹

- (65) PM A: *Mi musu taki a toli de.* B: *Iya, i musu.*
 I must talk DET(sg) story there yes you must
 ‘A: I have to talk about this matter. B: Yes, you have to.’

Abi ‘have’ is essentially a main verb that takes on modal meanings when it combines with *fu*.

10. The emergence of Necessity in the creoles of Suriname

The investigation reveals close similarities between the maroon creoles of Suriname and Gbe in the expression of notions of necessity suggesting that Gbe influence also contributed to the emergence of this area of grammar in the creoles of Suriname.

Given the discussion above, it seems most likely that speakers of Gbe associated English phrases expressing strong obligation with equivalent native Gbe phrases and established an interlingual identity between English *must* and *ɛbo* (*l/na*) in Gbe (66).

- (66) English *They must eat.*
 Gen *dɛkita ke le fiye o, fada ke le fiye o*
 doctor REL COP here PL priest REL COP here PL
 o ɛbo la desi phla-gbe alo gɛngbe
 they must FUT know xwla or gen
 ‘The doctors and the priests who are [come] here, they must know
 [learn] Xwla or Gen.’ (Gen-NSF 3)

As a result of this association, the native speakers of Gbe projected the syntactic and semantic properties of their native Gbe element, *ɛbo* (*l/na*), onto the English element, *mus(t)*. In the early texts, for instance, *mus(t)*, generally realized as *mo*, *moes*, *moesi* etc., functions as a marker of strong and weak obligation (67).

- (67) SN *Joe mo krien drie pissi fossi befo ...*
 you must clean three piece first before
 ‘You must first clean three pieces before ...’
 SN *Da dacteren takke joe moesi poeli mi bloede wan*
 DET(sg) doctor talk you must pull my blood one
 trom morre.
 time more
 ‘The doctor says you should bleed me once more.’
 (Arends & Perl 1995, van Dyk, 1765)

¹⁹Note that *fu* is essentially a preposition but it may also function as a complementizer (cf. Winford 1985).

Since *la* in Gbe also conveys weak obligation besides strong obligation (48-49) while English *must* only expresses strong obligation, it seems very likely that the use of *mu(su)* to convey weak obligation emerged exclusively due to Gbe influence. However, the other functions of *mu(su)* – probability, inferred certainty, and admonition – most likely emerged due to both influence from English and Gbe because these meanings are conveyed by both English *must* and Gbe *la* (*l/na*).²⁰

The differentiation between *mu* to mark strong and weak obligation and *musu* to convey inferred certainty in Pamaka and Ndyuka is most likely due to internal change. *Musu* probably shortened to *mu* in the contexts in which it was frequently used and involved little emphasis while the long form *musu* was retained in the less frequently used contexts that also involved emphasis. The use of *musu fu* as a marker of strong obligation is probably also due to an independent development in the creoles but at this point it is not clear which processes were involved. Finally, the marker of strong obligation *a(bi) (f)u* is most likely directly based on English *have to*.

11. Summary and Conclusion

The discussion of the emergence of two subsystems of modality, potential and necessity, in the creoles of Suriname revealed that their structure in the modern creoles is the result of several kinds of processes. The comparative linguistic analysis revealed a number of close semantic and syntactic similarities between the modern maroon creoles and their main substrate, varieties of Gbe, suggesting that the latter played an important role in the emergence of these subsystems of grammar in the creoles of Suriname. Influence from the L1s of the main agents of creole formation cannot, however, account for all the properties of creole grammar since there are also differences between these creoles and the Gbe varieties. A consideration of the relevant superstrate sources (e.g. English, Dutch) showed very clearly that the European languages did not just provide the etymological shapes of creole functional elements but also contributed some of their semantic and syntactic properties. Some of the latter features also coincided with substrate properties suggesting that the two main linguistic sources mutually reinforced each other. A consideration of the available early data suggests that the modality system of the creoles has undergone language-internal and contact-induced changes since its emergence. Some of the modal elements and certain properties of other elements in the modern creoles emerged gradually due to regular processes of language-internal change.

The findings clearly support a model of creole genesis that views creole formation as a multilayer process that shares many similarities with cases of L2 acquisition (cf. Siegel 1999, Winford 2002, Migge 2003). Given the nature of the contact setting (Arends 1995, Migge 2002, 2003), the creators of the plantation varieties came, for the most part, only into contact with (reduced) structures from European languages such as English, Dutch, and Portuguese. When they were able to establish interlingual identifications between European constructions and those in their L1s, they would adopt the former and partially or entirely reinterpret them according to L1 models. As a result of this interlingual association of structures, the ordering of elements and their etymological

²⁰It is not clear whether English *must* would have been used in all these functions in the plantation setting.

shape came to derive mainly from the superstrate varieties while the semantic and syntactic properties emerged either due to L1 influence alone or as the result of both superstrate and substrate influence, as in other cases of extreme L2 acquisition (Thomason & Kaufman 1988, Winford 2003). Once a subsystem of grammar had thus taken its initial shape, it became subject to other processes of contact-induced and language-internal change leading to the emergence of new modality elements (e.g. *man*) and changes in the semantic and syntactic properties of others (*mu*>*musu*).

The results from the investigation then clearly argue against a relexification account of creole genesis as proposed by Lefebvre (1996, 1998). First, the analysis suggests that the process of creole formation was not lexically but structure driven. The creators of the early creole ‘targeted’ and adopted entire structures rather than single lexical items from the superstrate varieties. The lexical elements that became part of the creole emerged from these structures due to the reinterpretation of these constructions according to L1 patterns and principles. Second, the L1s of the creators were only one of the sources for the properties of creole words and the subsystems of grammar they are part of. The syntactic and semantic features of creole items share important features with both their substrate and superstrate sources suggesting that the latter did not just contribute the etymological shapes of words but also played an important role in the emergence of their semantic and syntactic properties. Finally, the study also suggests that various processes of language-internal change, rather than just reanalysis, played a role in creole genesis.

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