

SYLLABLE RESTRUCTURING IN ENGLISH PIDGINS AND CREOLES: THE ROLE OF SUBSTRATE LANGUAGES

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Abstract: The paper looks into the role of substrate languages in syllable restructuring in four English-lexifier pidgins and creoles: Sranan, Ghanaian Pidgin English, Yoruba Nigerian Pidgin English and Tok Pisin. The findings suggest that the relationship between the phonologies of substrate languages and that of English pidgins and creoles is less straightforward than sometimes assumed in the literature.

Keywords: epenthesis, paragoge, English pidgins, English creoles, substrate.

1. INTRODUCTION

The present paper compares the repair strategies used in syllable restructuring by four English-lexifier pidgins and creoles, on the one hand, and by their substrate languages, on the other hand. The focus is on repair strategies involving intrusive vowels, i.e. epenthesis into illegitimate onset clusters and paragoge to resolve illicit codas. It is shown that the relation between the phonologies of the substrate languages and those of the English-lexifier pidgins and creoles is less straightforward than sometimes assumed in the literature (e.g. Boretzky 1983, Wise 1990, Singler 1996).

The English-lexifier pidgins and creoles considered consist of three Atlantic varieties – Sranan, Yoruba Nigerian Pidgin English, Ghanaian Pidgin English, and one Pacific variety – Tok Pisin.

The paper is organized as follows. Section 2 is concerned with paragoge in Sranan and in its major substrate languages – Gbe, Kikongo, Akan and Yoruba. Section 3 focuses on epenthesis and paragoge in Ghanaian Pidgin English and in Akan, its substrate language. Section 4 deals with epenthesis and paragoge in Yoruba Nigerian Pidgin English and Yoruba. Section 5 discusses epenthesis in Tok Pisin and in Tolai, considered to be its major substrate language.

All examples are reproduced in the system of transcription or the orthography used in the sources. The following abbreviations are used in the examples: D = Dutch; E = English; F = French; P = Portuguese.

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2. PARAGOGE IN EARLY SRANAN, GBE, KIKONGO, YORUBA, AND AKAN

2.1. Sranan

This section builds on previous work by Smith (1987), Plag & Uffmann (2000), Alber & Plag (2001), Avram (2004, 2005b), and Smith (2015b). The corpus of sources for early Sranan consists of Herlein (1718), van Dyk (ca. 1765), Nepveu (1770, in Arends & Perl 1995), Stedman (1777), Schumann (1781, in Bruyn 1995), Schumann (1783), and the textual attestations in van den Berg (2000).

There exists a consensus in the literature (Smith 1987, Arends 1995, Parkvall 2000, Plag & Uffmann 2000, Migge 2003, Schramm 2015, Smith 2015a, 2015b) that the major substrate languages of Sranan are Gbe and Kikongo. In addition to these, Smith (1987: 347) mentions Yoruba, but not Akan², while Plag & Uffmann (2000: 328) list Akan, but not Yoruba.

As is well known, several types of paragoge are attested in early Sranan. Plag & Uffmann's (2000: 322) findings with respect to the mechanisms determining the quality of the paragogic vowel in early Sranan are set out in Table 1 below:

Table 1: Paragogic vowels in early Sranan (adapted from Plag and Uffmann 2000: 322)

	Herlein 1718	van Dyk 1765	Nepveu 1770	Stedman 1777
default vowel	[e]	[i] and [e]	[i]	[i]
stem vowel effect	—	/i/, /e/, /a/→[i] /o/, /u/→[e]	vowel copying	[± back] vowel harmony
place of articulation effect	—	—	/a/ and dorsal C→[a]	—
manner of articulation effect	+	+	+	—

According to Plag & Uffmann (2000: 322), “the earliest two sources [i.e. Herlein 1718 and van Dyk ca. 1765] show no evidence of vowel copying effects, whereas in the later sources vowel copying plays a significant role”. Plag & Uffmann (2000: 320) further write that in Nepveu (1770), “the occurrence of the paragogic vowels /a/, /o/ and /u/ can be interpreted as instances of vowel copying: /a/ only occurs after stem /a/, paragogic /u/ occurs almost exclusively after stem /u/, and /o/ almost exclusively occurs after /o/”. Finally, Plag & Uffmann (2000: 320–321) conclude that “the occurrence of /a/, /u/ and /o/ cannot be predicted (solely) on the basis of the stem vowel”; [u] is the “majority choice” if the /u/ stem also ends in a liquid or stop, [a] is preferred if the stem containing /a/ also ends in a dorsal or labial consonant, while [o] is selected only if the stem, in addition to the stem vowel /o/, also ends in a fricative or a liquid.

² Also known as Twi.

However, *contra* Plag and Uffmann (2000), vowel copying is attested (at least) as early as 1745 (Avram 2005b: 176–177), that is some 25 years before Nepveu (1770). Consider the following examples from van den Berg (2000), dated 1745–1762:

- (1) a. *kom oppo* (< E *come, up*) ‘to come from’
 b. *soetoe*³ (< E *shoot*) ‘to shoot’
 c. *rommotto* (< E *round about*) ‘to surround’
 d. *goedoe* (< E *good*) ‘good’
 e. *voeloe*⁴ (< E *full*) ‘full, many’
 f. *voeroe* (< E *for*) ‘to’
 g. *loekoe* (< E *look*) ‘to watch’
 h. *tongo* (< E *tongue*) ‘tongue’

As also shown in Avram (2005b: 177), in three forms, *kom oppo* (1a), *rommotto* (1c) and *tongo* (1h), vowel copying occurs even though the etymological final consonant – /p/, /t/ or /ŋ/, respectively – is a stop, not a fricative or a liquid. This shows that vowel copying is less restricted than stated by Plag & Uffmann (2000: 320–321).

Also, Plag & Uffmann (2000) do not mention rounding vowel harmony. However, this type of vowel harmony is attested in Schumann (1783). As can be seen in the examples below, a [LABIAL] stem vowel enforces the selection of [u] as the paragogic vowel:

- (2) a. *boutu* (< D *bout* ‘leg of mutton’) ‘fat leg’
 b. *goudu* (< D *goud*) ‘gold’
 c. *dokku* (< D *duik-* ‘root of *duiken*’) ‘to dive’

To conclude, the following types of paragoge are attested in early in Sranan: of the default vowels [i] or [e]; with vowel copying; with [± back] vowel harmony; with rounding vowel harmony.

2.2. Gbe

Three types of paragoge occur in Gbe (Capo 1991, Plag & Uffmann 2000: 329, Wornyo 2016). These are: paragoge of default [i], as in (3a), or [e], as in (3b); with rounding vowel harmony, as in (4); with labial attraction, as in (5), the [LABIAL] consonant determines the selection of [u] as the paragogic vowel.

- (3) a. *laglasi* (< F *la glace*) ‘ice cream’
 b. *bele* (< E *bed*) ‘bed’
 (4) *bolu* (< E *ball*) ‘ball’
 (5) *glevu* (< F *grève*) ‘strike’

³ Where <oe> represents [u] in accordance with Dutch spelling conventions.

⁴ Where <v> represents [f] in accordance with Dutch spelling conventions.

2.3. Kikongo

According to Plag & Uffmann 2000: 328–329), in Kikongo there is “a preponderance of paragogic /-i/”, as in (6); paragogic [a], as in (7), or a copy of the vowel to the left, as in (8), also occur:

- (6) *saki* (< F *sac*) ‘bag’
- (7) *palasola* (< P *parasol*) ‘umbrella’
- (8) *buku* (< E *book*) ‘soup’

Other relevant forms are recorded in Seidel & Struyf (1910), Dereau (1957), Bal (1964), and Spa (1994).

However, forms listed in Leman (1936) and Swartenbroeckx (1973) show that two other paragogic vowels are found. The examples under (9) illustrate the occurrence of default [e]:

- (9) a. *imaze* (< F *image*) ‘image’
- b. *vwatire* (< F *voiture*) ‘car’

The next set of examples attest to the occurrence of [o] as a paragogic vowel:

- (10) a. *lopitalo* (< F *hôpital*) ‘hospital’
- b. *paradiso* (< F *paradis*) ‘paradise’

Mention should be made that both paragogic [a] and [o] are rare and their occurrence in Kikongo is unexpected.

2.4. Yoruba

Carter (1987: 238) states that in Yoruba, etymological “final consonants are either omitted [...] or, more often, followed by –V”, but does not discuss the quality of this paragogic vowel. According to Weinberger (1997: 292), “the most frequent syllable simplification strategy is vowel epenthesis”⁵ and “the vowel used to repair the borrowed words’ syllable structure is /i/”. On this analysis, Yoruba resorts to the default paragogic vowel [i] exclusively, as in the examples below:

- (11) a. *birikì* (< E *brick*) ‘brick’
- b. *géesì* (< P *inglés*) ‘English’

Actually, *contra* Weinberger (1997), Yoruba exhibits three other types of paragoge. Consider the following examples from (Ufomata 1991, Bamisaye & Ojo 2015, and Sanusi et al. 2016) which illustrate paragoge with vowel copying (12), with rounding vowel harmony (13), and with labial attraction (14), respectively:

⁵ Weinberger (1997) uses “epenthesis” as a cover term for both epenthesis and paragoge.

- (12) *síkíulul/sukuru* (< E *school*) ‘school’
 (13) *góolu* (< E *gold*) ‘gold’
 (14) *ǰimú* (< E *film*) ‘film’

2.5. Akan

Plag & Uffmann (2000: 329–330) mention with respect to Akan only two types of paragoge: of the default vowels [i], as in (15a-b), or [e], as in (15c), and with “occasional vowel copying”, illustrated in (16):

- (15) a. [deeti] (< E *date*) ‘date’
 b. [ǰeki] (< E *shake*) ‘shake’
 c. *ǰirase* (< E *glass*) ‘glass’
 (16) [bu:ku] (< E *book*) ‘book’

The picture that emerges from a closer inspection, however, is more complex. Forms from Schachter & Fromkin (1968), Dolphyne (1988), Adomako (2008) show that rounding vowel harmony, as in (17), and labial attraction, as in (18), also occur:

- (17) [ko:ku] (< E *coke*) ‘coke’
 (18) [káápǒ] (< E *cup*) ‘cup’

2.6. Concluding remarks

The findings of this section are set out in Table 2:

Table 2: Paragoge in Sranan and its substrate languages

Language	Type of paragoge; First attestations in Sranan			
	Default	Vowel copying	Rounding vowel harmony	Labial attraction
Sranan	[i], [e] 1718	1745	1783	1781
Kikongo	[i]	+	–	–
Gbe	[i], [e]	–	+	+
Yoruba	[i]	+	+	+
Akan	[i], [e]	+	+	+

Plag & Uffmann (2000: 330) rightly note “the [...] facts strongly speak for substratal transfer effects and are “the result of dialect mixing and leveling”.

As can be seen, [i] is a/the default vowel in all major substrate languages of Sranan, while [e] is recorded in three of the substrate languages. This may account both for paragogic [i] and for the absence of paragogic [a] from Sranan.

Vowel copying is not attested in Gbe and rounding vowel harmony does not occur in Kikongo, but both occur in Yoruba and Akan. Therefore, paragoge in Sranan appears to owe more to Yoruba and Akan than to Gbe and Kikongo (see also Avram 2005b: 218).

The influence of Akan may have been the decisive factor in the emergence of paragoge with vowel copying, with rounding vowel harmony and with labial attraction: these types of paragoge are first recorded at a later stage in the history of Sranan, after ca. 1720, when “Twi speakers occurred in significant numbers” (Plag & Uffmann 2000: 328).

3. EPENTHESIS AND PARAGOGE IN GHANAIAAN PIDGIN ENGLISH AND AKAN

3.1. Ghanaian Pidgin English

According to Huber (1999), there are two sub-varieties of Ghanaian Pidgin English: “Minimal” Ghanaian Pidgin English⁶ and “Basilectal” Ghanaian Pidgin English. Both varieties exhibit epenthesis and paragoge.

Consider first epenthesis. “Minimal” Ghanaian Pidgin English employs exclusively the default vowel [i]:

- (19) *pilante* (< E *plenty*) ‘a lot’

With respect to the quality of the epenthetic vowel in “Basilectal” Ghanaian Pidgin English, Huber (1999: 174) writes that “the tone-bearing vowel of the syllable containing the cluster is copied and inserted between two consonants”. Three relevant examples are reproduced below:

- (20) a. [p^hles] (< E *place*) ‘place’
 b. [t^hru] (< E *true*) ‘true’
 c. [k^hlof] (< E *cloth*) ‘cloth’

Consider next paragoge. Huber (1999: 281) writes that in “Minimal” Ghanaian Pidgin English “a large number of words show the presence of paragogic vowels” but does not address the issue of their quality. Forms such as those in (22) show that the paragogic vowel is default [i]:

- (21) a. *wati* (< E *what*) ‘what’
 b. *laiki* (< E *like*) ‘like’

In “Basilectal” Ghanaian Pidgin English the paragogic vowel is default [ɛ], with shorter duration, as illustrated by the following forms:

- (22) a. [fait^ɛ] (< E *fight*) ‘to fight’
 b. [gaid^ɛ] (< E *guide*) ‘guide’
 c. [mek^ɛ] (< E *make*) ‘to make’

⁶ Also known as “Broken” or “Jargonized” Ghanaian Pidgin English.

3.2. Akan

The main substrate language of Ghanaian Pidgin English is Akan (Huber 1999). Four types of epenthesis and paragoge, respectively, have been reported in the literature (Schachter & Fromkin 1968, Dolphyne 1988, Adomako 2008, Apenteng & Amfo 2014): with the default vowels [i], as in (23a), or [e], as in (23b); vowel copying, as in (24); rounding vowel harmony, as in (25); labial attraction, as in (26). Consider the forms below, illustrative of these types of epenthesis:

- (23) a. [bírúu] (< E *blue*) ‘blue’
 b. *gírase* (< E *glass*) ‘glass’
 (24) *faransié* (< F *français*) ‘French’
 (25) a. [dòróóm] (< E *drum*) ‘drum’
 b. [kòlòku] (< E *clock*) ‘clock’
 (26) *bureki* (< E *brake*) ‘brake’

The same holds for paragoge, for which the reader is referred to the examples given in section 2.5.

3.3. Concluding remarks

“Minimal” Ghanaian Pidgin English and “Basilectal” Ghanaian Pidgin English have developed their own norms for the selection of the intrusive vowel, and therefore differ from of Akan, the major substrate language (Avram 2005b: 219).

In epenthesis, “Minimal” Ghanaian Pidgin English employs exclusively the default vowel [i], whereas “Basilectal” Ghanaian Pidgin English resorts exclusively to vowel copying.

In paragoge, both “Basilectal” and “Minimal”/“Broken”/“Jargonized” Ghanaian Pidgin English select a default vowel exclusively, which is [e] in the former, but [i] in the latter.

4. EPENTHESIS AND PARAGOGE IN YORUBA NIGERIAN PIDGIN ENGLISH AND YORUBA

4.1. Yoruba Nigerian Pidgin English

Yoruba Nigerian Pidgin English is the variety of Nigerian Pidgin English used by speakers whose mother tongue is Yoruba.

According to Barbag-Stoll (1983), in Yoruba Nigerian Pidgin English obstruent + liquid onset clusters are disallowed and are subject to vowel epenthesis. Barbag-Stoll (1983) does not discuss the quality of the epenthetic vowel. As shown in (Avram 2005b: 142), two types of epenthesis occur: of default [i] and with rounding vowel harmony. These are illustrated by the forms under (27) and (28), respectively:

- (27) a. /filag/ (< E *flag*) ‘flag’
 b. /firem/ (< E *frame*) ‘frame’
 (28) a. /bulod/ (< E *blood*) ‘blood’
 b. /bulɔ/ (< E *blow*) ‘blow’
 c. /okulok/ (< E *o’clock*) ‘clock’

Consider next paragoge. Barbag-Stoll (1983: 65–66) identifies just two types of paragoge. One type consists of the “addition of a vowel at the end of the word, copying the preceding root vowel” (Barbag-Stoll 1983: 65). All other instances of paragoge are lumped together under the heading “addition of a vowel which does not copy the root vowel”, but “there seems to be no regular pattern for the epenthetic vowel” (Barbag-Stoll 1983: 66). More specifically, the following relationships between the “root vowel” and the “epenthetic vowel” are established (Barbag-Stoll 1983: 66):

- | | | |
|------|------------|-------------------|
| (29) | root vowel | epenthetic vowel |
| | /i/ | → /i/ |
| | /e/ | → /i/ or /e/ |
| | /ʌ/ | → /a/, /u/ or /i/ |
| | /ɔ/, /o/ | → /u/ or /i/ |
| | /a/ | → /u/ |

Given the diversity of paragogic vowels, Barbag-Stoll (1983: 67) proposes that “the nature of this process can be explained in two ways”. Her first proposal runs as follows: “assuming an incompletely specified V, which is subjected to various phonological rules in order to reach the various surface structure forms in which the vowel may appear”. However, none of the phonological rules mentioned is formulated. The alternative account would reside in “choosing one of the actually occurring vowels as the underlying forms of the epenthetic vowel and deriving all the other forms from this [vowel]” (Barbag-Stoll 1983: 67). Note, first, the arbitrariness in the selection of one paragogic vowel as underlying since no reasons for the choice of a particular vowel are given. Second, the derivation of “all other forms from this [vowel]” is not even outlined. Barbag-Stoll’s (1983) analysis focusses exclusively on what the author calls the “root vowel”. This makes it possible for her to correctly identify only one type of paragoge, namely vowel copying. However, the effect of the related phenomenon of vowel harmony goes unnoticed by her. In addition, the potential influence of the word-final consonant in the etyma is not even considered.

In light of the forms found in Barbag-Stoll (1983), it can be safely concluded that Yoruba Nigerian Pidgin English exhibits four types of paragoge (Avram 2005a, Avram 2005b: 193–196): with default [i], with vowel copying, with rounding vowel harmony, and with labial attraction. These are all illustrated in (30), (31), (32) and (33), respectively:

- (30) /keki/ (< E *cake*) ‘cake’
 (31) /rutu/ (< E *root*) ‘root’
 (32) /lɔdu/ (< E *load*) ‘load’
 (33) /afu/ (< E *half*) ‘half’

4.2. Yoruba

The data in Carter (1987), Ufomata (1991), Bamisaye & Ojo (2015), Sanusi et al. (2016) show that in Yoruba epenthesis comes in three types: of the default vowel [i], as in (34); with vowel copying, as in (35); with labial attraction, as in (36).

- (34) a. [tírai] (< E try) ‘to try’
 b. [kílaasi] (< E class) ‘class’
- (35) a. *búlúu* (< E blue) ‘blue’
 b. *tàrɔ́sà* (< E trousers) ‘trousers’
- (36) a. *búrèeki* (< E brake) ‘brake’
 b. *elikópúta* (< E helicopter) ‘helicopter’

As for paragoge, it has already been discussed in section 2.4., to which the reader is referred.

4.3. Concluding remarks

Yoruba Nigerian Pidgin English has developed adjustment norms independently of those of Yoruba, its substrate language (see also Avram 2005a, 2005b: 220).

Of the three repair strategies employed by Yoruba for the resolution via epenthesis of illicit onset clusters, only two – i.e. the selection of the default epenthetic vowel [i] and rounding vowel harmony – are attested in Yoruba Nigerian Pidgin English.

In both Yoruba Nigerian Pidgin English and in Yoruba, paragoge is four types: with the default vowel [i]; with vowel copying; with vowel harmony; with labial attraction. However, Yoruba Nigerian Pidgin English restricts paragoge to etymological [–nasal] codas, whereas Yoruba resorts to paragoge across the board.

5. EPENTHESIS INTO OBSTRUENT + LIQUID ONSET CLUSTERS IN TOK PISIN AND TOLAI

5.1. Tok Pisin

Mihalic (1957: xviii) states that the epenthetic vowel of Tok Pisin “is not constant, varying from i to a (and e) according to the region and the speaker”.

Actually, *contra* Mihalic (1957), variation appears to be reducible to two main repair strategies: epenthesis of default [i] and vowel copying. A third strategy, labial attraction, is only sporadically attested. Consider the following examples from Mihalic (1957), Pawley (1975), Hunter (1986), Smith (2002), Avram (2005b), illustrating epenthesis of default [i], in (37), vowel copying, in (38), and labial attraction, in (39):

- (37) a. *pilai* (< E play) ‘to play’
 b. *giraun* (< E ground) ‘ground’
 c. *filak* (< E flag) ‘to fly’

- (38) a. *peles* (< E *place*) ‘village’
 b. *barata* (< E *brother*) ‘brother’
 c. *туру* (< E *true*) ‘true’
 d. *koros* (< E *cross*) ‘to be angry, to get angry’
 e. *galas* (< E *glass*) ‘glass’
 (39) *poret* (< E *afraid*) ‘afraid’

5.2. Tolai

Tolai is considered to be the major substrate language of Tok Pisin (Mosel 1980). According to Mosel (1980: 18), in Tolai “consonant clusters in English [...] loanwords are even more consequently [sic] reduced than in (present-day) Tok Pisin”.

As shown by Mosel (1980: 18), “Tolai allows [no] consonant clusters in word-initial [...] position”. Consider the examples below:

- (40) a. *pelet* (< E *plate*) ‘plate’
 b. *taraute* (< E *trousers*) ‘trousers’
 c. *galat* (< E *glass*) ‘glass’

As can be seen, Tolai resorts to vowel copying exclusively for the resolution of illicit onset clusters.

5.3. Concluding remarks

Tok Pisin appears to have developed its own norms for selecting the epenthetic vowel, independently of those of Tolai, its main substrate language (Avram 2005b: 221).

Mosel (1980: 19) writes that Tok Pisin forms with onset clusters “have certainly developed from earlier forms which showed a syllable structure similar to that of Tolai”. This is indeed confirmed by early Tok Pisin forms, such as those analyzed in Avram (2005b: 150–152). According to Mosel (1980: 19), “the fact that both in Tok Pisin and Tolai consonant clusters are reduced is not sufficient to prove direct substratum influence from Tolai”, given that “this [...] is a common Melanesian feature”. A strong argument lending support to this conclusion, not noticed by Mosel, is that Tolai and Tok Pisin differ in the quality of epenthetic vowels.

6. CONCLUSIONS

The findings of the present paper can be summarized below.

Paragoge in early Sranan can readily be accounted for in terms of Mufwene’s (1990a, 1990b, 1991, 2000: 56–57) “weighted markedness”. Vowel copying, rounding vowel harmony and labial attraction became entrenched as repair strategies only after significant numbers of speakers of Akan (Twi) became part of the language contact situation, whereby these three repair strategies at issue reached “threshold levels”.

While English-lexifier pidgins and creoles become more similar to their substrate languages in terms of the phonotactic constraints on syllable structure, the repair strategies employed by the former may differ from those used by the latter.

As for complexity, as manifested in the types of epenthesis or paragoge used, a variety of outcomes have emerged, which are outlined in what follows. Sranan is more complex than two of its substrate languages – Gbe and Kikongo, on the one hand, and as complex as two others – Yoruba and Akan. Both Basilectal Ghanaian Pidgin English and “Minimal” Ghanaian Pidgin English use just one type of epenthesis and of paragoge, respectively, and are therefore simpler than Akan, their main substrate language, which employs four types. Yoruba Nigerian Pidgin English resorts in epenthesis to just two strategies and is consequently simpler than Yoruba, its substrate language, which makes use of three strategies. Finally, Tok Pisin employs three types of epenthesis in the resolution of illicit obstruent + liquid onset clusters and is therefore more complex than Tolai, its main substrate language, which only uses one type.

Diachronically, epenthetic and paragogic vowels have no lexical feature specifications. Therefore, epenthetic and vowels tend to be in most languages minimally marked or underspecified segments. Featurally unmarked vowels such as [i], [e] or [ɛ] are cross-linguistically selected in epenthesis and paragoge. Not surprisingly, these vowels occur in both the English-lexifier pidgins and creoles considered and in their substrate languages. However, as also shown in Avram (2005b: 206), since epenthetic vowels lack an input, they may also be contextually coloured, i.e. subject to various sorts of assimilation e.g. vowel copying, rounding vowel harmony, labial attraction.

Mufwene’s (1990a, 1990b, 1991, 2000: 56–57) argues, within the framework of his “ecology-sensitive model of markedness”, that markedness values are not predetermined by Universal Grammar, but by structural and non-structural factors. Therefore, markedness is not an absolute, but rather a context-relative value, which can only be determined relative to other alternatives it is competing with in a given context. The factors which determine markedness vary from one context to another and give a selective advantage to one of the competing features, forms or structures (see also Uffmann 2009, Schramm 2015). The occurrence of both default epenthetic and paragogic vowels and of assimilatory effects, including less frequent ones, is consistent with this approach to markedness (Avram 2005b: 206). Epenthesis with labial attraction, for instance, is universally marked, but it was less so if a majority of the languages in the contact situation resorted to it.

REFERENCES

- Adomako, K., 2008, Vowel Epenthesis and Consonant Deletion in Loanwords: A Study of Akan. MA thesis, University of Tromsø.
- Alber B., I. Plag, 2001, “Epenthesis, deletion and the emergence of the optimal syllable in creole: The case of Sranan”, *Lingua*, 111, 811–840.
- Apenteng, M. A., N. A. A. Amfo, 2014, “The form and function of English loanwords in Akan”, *Nordic Journal of African Studies*, 23, 4, 219–240.
- Arends, J., 1995. “Demographic factors in the formation of Sranan”, in J. Arends (ed.), *The Early Stages of Creolization*, Amsterdam/Philadelphia, John Benjamins, 233–285.
- Avram, A. A. 2004. “Paragoge in the creoles of Surinam”, *Bucharest Working Papers in Linguistics*, VI, 1, 139–149.
- Avram, A. A., 2005a, “Paragoge in Yoruba Nigerian Pidgin English”, in M. Luburici, V. Ionașcu, N. Neacșu, I. Ionescu, Ș. Olteanu (eds), “Ștefan cel Mare și Sfânt” – a XIII-a Sesiune Științifică Internațională Comemorativă, 28-29 May, “Dimitrie Cantemir” Christian University, Bucharest, vol. 3, Bucharest, Sylvi, 274–280.

- Avram, A. A., 2005b, *On the Syllable Structure of English Pidgins and Creoles*, București, Editura Universității din București.
- Bal, W., 1964, “Les emprunts romans en kiNtandu, dialecte kiKongo”, in J. Renson, M. Tyssens (eds), *Mélanges de linguistique romane et de philologie médiévale offerts à M. Maurice Delbouille*, Gembloux, Ducolot, 47–64.
- Bamisyaye, T., G. A. Ojo, 2015. “Phonotactic adjustments in Yoruba adaptation of English syllable structures”, *Open Journal of Modern Linguistics* 5, 379–388.
- Barbag-Stoll, A., 1983, *Social and Linguistic History of Nigerian Pidgin English as Spoken by the Yoruba with Special Reference to the English Derived Lexicon*, Tübingen, Stauffenberg.
- Boretzky, N., 1983, *Kreolsprachen, Substrate und Sprachwandel*, Wiesbaden, Otto Harrassowitz.
- Bruyn, A., 1995, *Grammaticalization in Creoles: The Development of Determiners and Relative Clauses in Sranan*, Amsterdam, IFOTT.
- Capo, H. B. C., 1991, *A Comparative Phonology of Gbe*, Berlin · New York, De Gruyter.
- Carter, H., 1987, “Suprasegmentals in Jamaican: Some African comparisons”, in G. G. Gilbert (ed.), *Pidgin and Creole Languages: Essays in Memory of John E. Reinecke*, Honolulu, University Press of Hawaii, 213–263.
- Dereau, L. 1957. *Lexique kikôngo-français français-kikôngo. D’après le dictionnaire de K. E. Laman*, Namur, Ad. Wesmael-Charlier.
- Dolphyne, F. A., 1988, *The Akan (Twi-Fante) Language. Its Sound Systems and Tonal Structure*, Accra, Ghana University Press.
- van Dyk, P., ca. 1765, *Nieuwe en nooit bevoorens geziene onderwyzinge in het Bastert Engels of Neeger Engels. Zoo als het zelve in de Hollandse Colonien gebruikt word*, Amsterdam, Gedrukt bij de Erven de Weduwe Jacobus van Egmont.
- Herlein, J. D., 1718, *Beschryvinge van de volk-plantinge Zuriname*, Leeuwarden, Meindert Injema.
- Huber, M., 1999, *Ghanaian Pidgin in its West African Context*, Amsterdam/Philadelphia, John Benjamins.
- Hunter, J., 1986, *Papua New Guinea Pidgin Phrasebook*, Hawthorn, Lonely Planet Publications.
- Laman, K. E., 1936, *Dictionnaire Kikongo-français avec un étude phonétique décrivant les dialectes les plus importants de la langue dite Kikongo*, Bruxelles, Mém. Inst. Royal Colonial Belge.
- Migge, B., 2003, *Creole Formation as Language Contact. The Case of the Suriname Creoles*, Amsterdam/Philadelphia, John Benjamins.
- Mihalic, F., 1957, *Grammar and Dictionary of Neo-Melanesian*, Westmead, Mission Press.
- Mosel, U., 1980, *Tolai and Tok Pisin: The Influence of the Substratum on the Development of New Guinea Pidgin*, Canberra, The Australian National University.
- Mufwene, S. S., 1990a, “Transfer and the Substrate Hypothesis in creolistics”, *Studies in Second Language Acquisition*, 12, 1, 1–23.
- Mufwene, S. S., 1990b, “Creoles and Universal Grammar”, *Linguistics*, 28, 783–807.
- Mufwene, S. S., 1991, “Pidgins, creoles, typology and markedness”, in F. Byrne, T. Huebner (eds), *Development and Structures of Creole Languages: Essays in Honour of Derek Bickerton*, Amsterdam/Philadelphia, John Benjamins, 123–141.
- Mufwene, S. S., 2001, *The Ecology of Language Evolution*, Cambridge, Cambridge University Press.
- Nepveu, J., 1770 [1995], *Annotatien op de Surinaamsche beschrijvinge van A° 1718*, in J. Arends, M. Perl (eds), *Early Suriname Creole texts. A collection of 18th-century Sranan and Saramaccan documents*, Frankfurt/Madrid, Vervuert, 77–91.
- Parkvall, M., 2000, *Out of Africa. African Influences in Atlantic Creoles*, London, Battlebridge Publications.
- Pawley, A., 1975, “On epenthetic vowels in New Guinea Pidgin”, in K. A. McElhanon (ed.), *Kivung Special Publication, no. 1, Tok Pisin I Go we? Proceedings of a Conference Held at the University of Papua New Guinea, Port Moresby, PNG, 18-21 September, 1973*, 215–228.
- Plag, I., C. Uffmann, 2000, “Phonological restructuring in Creole: The development of paragoge in Sranan”, in I. Neumann-Holzschuh, E. W. Schneider (eds), *Degrees of Restructuring in Creole Languages*, Amsterdam/Philadelphia, John Benjamins, 309–335.

- Sanusi, I. O., K. Rafiu, M. E. Oyinloe, 2016, "A constraint-based analysis of English loanwords in Yoruba", *ALÔRE: Ilorin Journal of the Humanities*, 25, 208–228.
- Schachter, P., V. Fromkin, 1968, *A Phonology of Akan: Akuapen, Asante, Fante*, Los Angeles, CA, University of California.
- Schramm, M., 2015, *The Emergence of Creole Syllable Structure. A Cross-linguistic Study*, Berlin/Munich/Boston, De Gruyter.
- Schumann, C. L., 1783, *Neger-Englisches Wörterbuch*. <http://suriname-languages.sil.org/Schumann/National/SchumannGerDict.html>.
- Seidel, A., I. Struyf, 1910, *La langue congolaise: Grammaire, vocabulaire systématique, phrases graduées et lectures*, Heidelberg, Groos.
- Singler, J. V. 1996, "An OT account of Pidgin phonology: Coda consonants in Vernacular Liberian English", in J. Johnson, M. L. Juge, J. L. Moxley (eds.), *Proceedings of the Twenty-Second Annual Meeting of the Berkeley Linguistics Society* 22, Berkeley, CA, Berkeley Linguistics Society, 375–386.
- Smith, G. P., 2002, *Growing up with Tok Pisin. Contact, Creolization and Change in Papua New Guinea's National Language*, London, Battlebridge.
- Smith, N., 1987, *The Genesis of the Creole Languages of Surinam*, PhD dissertation, University of Amsterdam.
- Smith, N., 2015a, "The early history of Surinam: Why is Surinam different?", in P. Muysken & N. Smith (eds), *Surviving the Middle Passage. The West Africa-Surinam Sprachbund*, Berlin/Boston, De Gruyter Mouton, 17–42.
- Smith, N. 2015b, "Substrate phonology, superstrate phonology and adstrate phonology in creole languages", in P. Muysken, N. Smith (eds), *Surviving the Middle Passage. The West Africa-Surinam Sprachbund*, Berlin/Boston, De Gruyter Mouton, 261–322.
- Spa, J. J., 1994, "Les emprunts français en Kikongo", in: *L'emprunt*. Aix-en-Provence: Centre des Sciences du Langage, Université de Provence, 63–78.
- Swartenbroeckx, P., 1973., *Dictionnaire kikongo et kituba-français; vocabulaire comparé des langages kongo traditionnels et véhiculaires*, Bandundu [Zaire], Ceeba.
- Uffmann, C., 2009, "Vowel epenthesis and Creole syllable structure", in S. Michaelis (ed.), *Roots of Creole Structures: Weighing the Contribution of Substrates and Superstrates*, Amsterdam/Philadelphia, John Benjamins, 123–152.
- Ufomata, T., 1991, "Englishization of Yoruba phonology", *World Englishes*, 10, 33–51.
- Weinberger, S. H., 1997, "Minimal segments in second language phonology", in A. James, J. Leather (eds), *Second-Language Speech. Structure and Process*, Berlin – New York, Mouton de Gruyter, 263–311.
- Wise, H., 1990, "L'apport génétique dans la formation des langues créoles: quelques indices phonologiques", *Études Créoles*, 1, 57–66.
- Wornyo, A. A., 2016, "English loanwords in Ewe: A phonological analysis", *Journal of Literature, Languages and Linguistics*, 22, 42–51.

