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Creole distinctiveness

A dead end

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In his recent column in *Journal of Pidgin and Creole Languages* 29:1 (2014), *Creolistics: Back to square one?* Peter Bakker argues that: “a reduced, simplified contact vernacular that emerged to facilitate communication between different ethnic groups must have preceded the development of the world’s creoles” (Bakker 2014: 177). In this creoles-from-pidgins view, the genesis of creoles explains their distinct phenotype: “they share a SET of features that clearly set them apart from the languages of the world” (p. 198). Bakker (2014) further claims that studies that do not adhere to this view but postulate a uniformitarian formal approach to language change and language creation (M. DeGraff) or adopt an ecological perspective to language evolution including creole languages (E. O. Aboh, U. Ansaldo, S. Mufwene) lack empirical coverage (p. 181–183) or rely on a mere recombination of linguistic features that excludes creativity. As Bakker (2014: 183, 184) concludes:

Several anti-exceptionalists rely on the feature pool idea, and therefore ascribe zero percent creativity to the builders of the creole. For them, creoles combine features from lexifiers and substrates, and nothing else. That is all [...] I really think it is discriminatory to claim that creolizers really could not do anything with the features except (re)combine them. It is an insult to humanity.

In the following paragraphs, I first address Bakker’s creoles-from-pidgins scenario briefly to show that it is inconsistent with the multilingual contexts in which pidgins and creoles emerge. Second, I address Bakker’s (2014: 188) conclusion that creoles form a distinct type, based on findings in Bakker et al. (2011). Third, I answer Bakker’s (2014: 190, 191) five questions to anti-exceptionalists showing that they pose no problem to the competition-and-selection model. Fourth, I reply to Bakker’s claim that the competition-and-selection model denies creativity to the creole creators.

1. Creoles-from-pidgins: The paradox

In introducing his creoles-from-pidgins scenario, Bakker (2014:177–178) endorsed a metaphor he attributed to Bickerton which I'm reproducing here:

People live in a house, but then an earthquake hits the region, and their house collapses. These people survive, but their house does not: only a pile of stones is left. The cement that kept the stones together is all gone (grammatical structures), many of the stones (lexical roots) are still there in the pile, but many bricks are destroyed or damaged. In need of shelter, people use whatever they can find: the stones, roof tiles, iron plates — i.e. usable building materials from other collapsed buildings — for constructing a new house. But the provisional shelter is not enough, and as soon as circumstances allow, they build a fine new house, with partly new materials (especially new cement to keep the stones together, some of it recycled from the shattered bricks), and many old materials. That is creolization: a language collapses, and its users build a new one; the first generations of speakers act as spontaneous architects.

The metaphor suggests that creoles emerge from a process that involves three phases: the collapse of a community language, a reconstruction phase (presumably involving adults with no common language), and L1 acquisition (i.e. first generations). This view makes two basic assumptions that can be easily verified on the basis of documented expanded pidgins. If proved valid, these assumptions can support Bakker's (2014) creoles-from-pidgins scenario:

- The collapse of a community language implies that a significant size of this community has no other language than a pidgin for daily communication.
- Nativization: Acquisition of the pidgin by L1 learners and its expansion must be fairly rapid (one or two generations).

Close scrutiny indicates that Bakker's metaphor is not compatible with socio-historical data on pidgins and creoles. In general, creators of these languages are multilinguals who develop an L2 (e.g. a pidgin) in addition to their L1's. It is commonly accepted that the interaction between the different varieties in contact within a multilingual community sometimes leads to nativization of the newly created L2. Studies on expanded pidgins indicate that the process is typically gradual. Tok Pisin, for instance, developed gradually as L2 over several generations before nativizing (G. Smith 2002, see also Roberts 1998 on Hawaiian Pidgin and Ansaldo 2009 on Bazaar Malay).¹ Because pidgins and creoles gradually emerge and nativize in

1. There is a fundamental difference between Tok Pisin and Hawain that must be factored in the analysis to get a full picture of the emergence of the so-called creoles. It took more than a century for Tok Pisin to nativize, while Hawaiian nativized after a few generations only. This is

lively multilingual societies their development appears to be incompatible with the scenario depicted by Bakker (2014: 178) in which the linguistic system of a whole community collapses, leaving its speakers with “lexical roots” with “no grammatical structure” to hold them together. Unlike victims of earthquakes with no shelters to which Bakker compares creole creators, the latter have multiple full-fledged languages to resort to in their daily life.

Pidgins and creoles nativize not because speakers are restricted to a simplified language that facilitates communication, but rather because the community accepts the pidgin as a legitimate vernacular alongside other community vernaculars (cf. Mufwene 2001, Veenstra 2008, Muysken 2013). In such situations, adult L2 speakers of a pidgin expose their children to the pidgin simultaneously with other languages in their community. In addition, children pick up the new varieties within their peer group (i.e. from early L2 learners). It is therefore this multilingualism, which for various socially determined reasons, allows the new vernacular to compete with other languages of the relevant communities and to gradually become a target for L1 learners. Such a development necessarily involves an interaction between adult L2-speakers, early L2-bilinguals, and simultaneous L1-bilinguals: what DeGraff (1999, 2002) refers to as L2-L1 cascade. Bakker’s metaphor obscures this basic process and suggests incorrectly that pidgins are hastily constructed means of communication in a community whose language is lost or has collapsed.

One may wonder whether Bakker’s metaphor could apply to plantation colonies of the 17th/18th century in which Caribbean creoles emerged. It is often believed that the enslaved Africans deported to the colonies came from such a wide range of diverse ethnic groups that they could not communicate through a common language. This belief is questionable. In the case of Suriname and Haiti, for instance, we know that speakers of Gbe and Kikongo languages form critical masses that allowed them to communicate in their native tongues (cf. Smith 1987, 2006, 2009a, Arends 1989, 1995a, 1995b, 2009, Singler 1996, Aboh 2015a). The same could be said of Berbice Dutch which had a significant number of Ijo speakers. Likewise, recent studies show that Mina Jeje, a language spoken by the Africans in the mining town of Vila Rica (Ouro Petro) in the region of Minas Gerais in the emerging Brazil of the early 18th century is a Gbe language (de Castro 2002). Aboh (2015a) reports several such historical documents indicating that the enslaved Africans indeed spoke their native languages while learning the language of

strong evidence for the Competition-and-Selection model in which the ecology of the speakers (e.g. population factors and socio-economic organization, cf., Mufwene 2008) is very important to understand the genesis of a new vernacular. I thank Tonjes Veenstra for calling these facts to my attention.

their master (see also Mufwene 2008, Smith 2009a, 2009b, Ansaldo 2009).² Many slaves were therefore multilinguals as indicated by the following description of a runaway in colonial Haiti:

1767-02-25 — *Francisque, étampé sur la joue droite V, parlant français, espagnole & anglois, marqué de petite vérole, ayant le nez écrasé, trapu & de moyenne taille, maron depuis la fin de janvier dernier. Ceux qui le reconnoîtront, sont priés de le faire arrêter & d'en donner avis à M. Durse aîné, Capitaine de Navire, au Port-au-Prince, ou à M. Laville, Négociant au Cap. Il y aura récompenses.*³

Francisque, who presumably spoke a creole in addition to his native African language, appears to have command of French, Spanish, and English. Descriptions like this, indirectly suggest that we cannot claim that the languages of the slave populations on the plantations collapsed, leaving them with lexical roots of the lexifiers and substrates with no grammatical structure to put them together. Even though we should acknowledge that not all enslaved Africans were gifted polyglots like Francisque, the null hypothesis is that many Africans on the plantations spoke more than one language: their L1 (e.g. the Bosals), an L2 African language (e.g. the locally born slaves interacting with Bosals), and some version of the colonial koinés: the creole. Aboh (2015a) demonstrates that the creole was spoken by everyone on the plantation, including the White population and their locally born children. Accordingly, Caribbean creoles did not emerge from the collapse of a community language. They developed gradually in lively multilingual colonial societies where the African languages, the European lexifiers, and the nascent creole were spoken natively. This may be an indication of why there is no documented historical evidence for a simplified pidgin ancestor to Caribbean creoles. Because Caribbean creoles did not emerge from the collapse of the lexifier or substrate languages, we cannot hypothesize a pidgin stage followed by a reconstruction phase involving the first generations. Likewise, because pidgins and creoles emerged in different contact zones involving typologically different languages and namely different types of (multilingual) learners (e.g. adult and early L2, 2L1, L1), we cannot

2. Tonjes Veenstra (p.c.) remarks that Malagasy was spoken on Mauritius from the beginning of the colony until at least mid-19th Century. All these point to the fact that even though the substrates eventually fade out from the colonies, they were spoken for daily communication during the formation phase of the creoles. The important question to be answered and which is addressed in great detail in Mufwene (2001) and Aboh (2015a) is why the languages of the enslaved Africans were displaced from the colonies and when they survived only served symbolic functions, such as, religious practices.

3. <http://www.marronnage.info/en/index.html> I thank Michel DeGraff for making this database available to me.

assume *a priori* that learners in these settings all end up creating a structurally unique speech form distinct from the world's languages.

2. Creoles are not distinct

Bakker's (2014: 187) response to this latter objection is that

There is documentation for the pidgin-to-creole cycle on several continents, involving wholly different lexifiers and wholly different substrates. The reduction and expansion processes had a severe impact on the resulting languages. And these creoles-from-pidgins show remarkable structural-typological similarities with creoles-supposedly-without a pidgin, such as Haitian Creole. It would go against the uniformitarianist principle to claim that only where a pidgin stage is documented, there was a pidgin. The parallel results indicate a comparable process.

The implication is that in absence of historical proof, structural parallels that make creoles distinct justify the postulation of a pidgin ancestor. With regard to these structural parallels, Bakker (2014: 181) claims that "we know for a fact that creoles are distinct." "The 2011 article uses massive data to show that creoles are distinctive (p. 189)." The rationale is flawed, though. First, much of Bakker's (2014) characterization of pidgins and creoles is based on a presupposed discontinuity between the creoles and their lexifiers. This is incompatible with the common assumption that creoles emerged from language contact and logically embed a subset of the properties of their source languages. Second, Bakker's (2014) creole distinctiveness based on Bakker et al. (2011) ascribes a number of non-creole properties to some substrate languages that are mistaken. Before getting on to discuss these drawbacks, it is important to note that Bakker et al. (2011) relies on absolute binary values (+) versus (-), thus ignoring an important factor about creoles and their source languages: variation within and across speakers. In addition, the investigated features were essentially taken from a toolbox that served to circumscribe the creole type, thus making the enterprise circular. Given this set up, one does not need to be as shrewd as *Marcellus* to figure out that Bakker's methods and data are problematic, as shown already in the literature by Kouwenberg (2010, 2012), Fon Sing and Leoue (2012), and DeGraff, Bass, and Berwick (2013).

Two of the listed potential substrates, Ewegbe and Yoruba, happen to be within my domain of expertise. I reviewed the values assigned to these languages with regard to the 43 features selected by Bakker et al. (2011) and defined in WALS. In so doing, I consulted with two native speakers and specialists of Ewegbe who also happen to be creolists: James Essegbey (U. Florida) and Felix Ameka (U. Leiden).

I further consulted with two native speakers and specialists of Yoruba: Johnson F. Ilori and Siemeon Olaogun (U. Akungba-Akoko Ondo State Nigeria). The following tables in the appendix show the results. The results in Bakker et al. (2011) are presented in the row labeled (BaL). This row includes two lines: The first presents the results as in Bakker et al. (2011). The second reports the evaluations of my consultants. Mistakes (M) represent erroneous values (i.e. where the value should be “1” according to experts but was registered as “0” in Bakker et al. (2011) and vice versa). “A” represents features for which the information is available but which Bakker et al. (2011) marks as “?” or “0”, a non-trivial decision, as pointed out by Fon Sing and Leoue (2012). The most illustrative case is feature F09 in Yoruba for which Bakker et al. (2011) record a “0” even though WALS presents a Yoruba example instantiating this feature. “V” represents features for which there is variation among speakers, a fact ignored by Bakker et al.’s (2011) binary features. These are illustrated by situations in Yoruba and Ewegbe where Bakker et al. (2011) assigns a categorical “0”, while experts are more nuanced.

Simply counting the M’s, we have 15 mistakes regarding Yoruba: an error rate of 34.88%. The second table shows 17 mistakes regarding Ewe: an error rate of 39.53%. I’m not aware of the amount of data in Bakker et al. (2011) that went corrupt due to careless analysis, but it is clear that no such high error rates are tolerable in science and the authors cannot content themselves with acknowledging that mistakes are possible. I wonder how biologists would feel if it turns out that 34% to 39% of some data on DNA sequencing is flawed! Given such high error rates with regard to two well-studied languages in West Africa, I have serious doubts about the solidity of data on less well documented languages presented in the 2011 paper. Note also that Bakker et al.’s (2011) does not list the reference grammars used to determine the values of the features in the relevant languages (e.g. Ewegbe, Yoruba), a rather unorthodox practice. My findings raise doubts about Bakker’s (2014: 181) claim that “we know for a fact that creoles are distinct, on the basis of Bakker et al. (2011)” and severely weaken his distinctiveness approach.

Indeed, many of the features selected by Bakker (2014) as distinctive of creoles are also found in the relevant substrate languages of Atlantic creoles. Consider the following claim:

There are many, many features in creoles that cannot be related to any of the languages known to have played a role in the genesis of creoles. For instance, the distinction between specific-nonspecific, or the different behavior of stative and non-stative verbs are pervasive in creoles, but absent from European, West African, and Austronesian languages (Bakker 2014: 183).

In fact, there is a wealth of literature on the description and analysis of these features in Benue-Kwa. Aboh (2006) and Aboh and DeGraff (2014) discuss the

specific versus non-specific opposition in Gbe and how it contributed to the emergence of the determiner system in Haitian and the Suriname creoles (see also Aboh 2004, Chapters 3 and 4, Aboh 2015a, Chapter 5, Lefebvre and Brousseau 2002, Ajiboye 2005 and references therein). With regard to aspect licensing and its relation to state and event verbs, this is a classical topic in Benue-Kwa literature and I refer the reader to Aboh (2004, Chapters 5 and 6) and references cited there for the discussion.

Likewise, citing work by Daval-Markussen, we are told that two structural properties only are enough to set all creoles apart from the rest of the languages of the world: (i) the use of numeral 'one' to encode specific indefinites and (ii) the absence of Tense-Aspect inflection. According to Bakker (2014) only 14 non-creole languages of the world exhibit a combination of these two features, and

one does not have to be a genius in statistics to see that this combination is very rare among non-creoles, but ubiquitous among creoles. In other words, if a language has no tense-aspect inflection and if it has an indefinite article from 'one', it is very likely a creole language (p. 189).

This claim is simply wrong. All Gbe languages (presumably more than 14) have this combination: an element equivalent to or derived from numeral one is used to mark specific indefinites and the languages have no TMA inflection. In addition, many Benue-Kwa languages I know (e.g. Yoruba), which also represent the substrates of Atlantic creoles, display this exact combination. Benue-Kwa languages have not yet been stipulated as creoles, as far as I know! Since these features are found in the substrate languages of many creoles, we can hardly claim that creoles are distinct from all their source languages. Let us now look at Bakker's (2014: 190, 191) five questions to anti-exceptionalists.

3. Answering Bakker's five questions to anti-exceptionalists

Question 1: 100% of the Romance languages [...] have a gender distinction between masculine and feminine expressed in the definite and indefinite articles and adjectives, and in agreement [...] 0% of the creoles based on Romance languages have overt gender agreement [...] How can this clear categorical difference be explained if there was the same natural transition from French to Haitian as from Proto-Indo-European to Latin to French?

My answer: Note that Latin has five declensions that allow the expression of its three genders: masculine, feminine and neutral. However, Latin has no article comparable to French articles. So during the said "natural transition from Proto-Indo-European to Latin to French" a lot of morphology has gone down the

drain, and Latin, like the African languages on the plantation faded out, now being used in only symbolic contexts (i.e. in religious practices). Comparing Latin and French, the gender morphology has been significantly reduced but an article system emerged, just like a new deictic marker developed in Haitian though this language could be said to have collapsed French gender into a single class: neuter. Accordingly, the fact that Haitian does not have a gender system comparable to French is nothing uncommon, especially when we realize that some source languages of Haitian (e.g. Gbe) lack grammatical gender altogether. It is therefore reasonable to say that linguistic concepts that explain the development of French (with its relatively poor morphology compared to Latin) should extend to Haitian as well.

In the context of Atlantic creoles in general it is important to note that Benue-Kwa languages have no gender system (that is directly comparable to Romance and Germanic) and the Bantu languages involve noun class systems. Accordingly, all gender systems were lost in this context, not just the one Romance-type Bakker is concerned with. The right question to ask therefore is: What happens when a language with a two- or three-way gender system (e.g. masculine, neutral, feminine) comes in contact concurrently with languages with no gender (e.g. Benue-Kwa) and languages with numerous noun classes? Apparently languages with no gender win the competition. One can further wonder why it is precisely the genderless system which wins. It is apparently the least marked option in this case. These are the kinds of questions that Aboh and Ansaldo (2007) try to address by looking at the typological matrix of contact languages.

Question 2: All lexifiers have some form of pronominal agreement in the verb, in the form of preverbal clitics [...]. None of the creole languages has inherited anything like this.

My answer: This question simply restates the popular claim that creoles generally do not have agreement morphology. This claim is primarily based on considerations regarding the lexifier, overlooking what the substrate languages brought to the feature pool. With regard to Benue-Kwa in general, and Gbe languages in particular, subject-verb agreement with overt segmental material appears a rather rare (if not exceptional) phenomenon. Rather, these languages commonly show agreement phenomena that are sensitive to tone modulations. In the Bantu languages, subject-verb agreement appears sensitive to noun classes. Accordingly, if we accept that the emerging creole developed out of contact and therefore cannot inherit all verbal agreement patterns of all the source languages but only a subset thereof, it seems to me that contact between English, Fongbe, and Kikongo (as in the case of Suriname creoles) will not instantly lead to Sanskrit-type morphology. Nor do we expect a lot of subject-verb agreement to flourish in such a contact language: While English only shows this property with one single morpheme in one

tense form, third person -s in the present tense, Fongbe simply lacks any agreement of the sort, and agreement in Kikongo is based on noun classes.⁴

Question 3: All European lexifiers have definite and indefinite articles, and all creoles also have definite and indefinite articles, but none of the creole forms have been taken over from the article forms of the lexifiers [...]. Why would the European forms systematically get lost in the creoles, and why is the same process of loss rarely encountered in the history or in the dialects of the lexifier languages?

My answer: This question is misleading, as it suggests that the creoles developed an article system similarly to Romance and Germanic but recruited other elements in the lexifier to fulfil this function, hence the loss of the Romance and Germanic articles. Recall from my answer to question 1 that Latin had no article system even though most Romance languages have one. The right question to ask therefore is how the article system of Romance emerged in the first place and whether what we see in creoles could shed some light on such a development in general.

Taking the Suriname creoles and Haitian as test bed again, Aboh (2006, 2015a), Aboh and DeGraff (2014) argue that the article-like elements in the creoles are not directly comparable to Romance or Germanic articles, because they show mixed properties of the source languages and typically encode specificity, similarly to Gbe languages (Aboh 2004). Therefore, in order to understand the development of the article system of Suriname creoles and Haitian, we need to comprehend the expression of specificity in both Romance/Germanic and Gbe. Specificity in Gungbe is expressed by the marker *lɔ* which marks definite specific referents as in (1) (cf. Aboh 2004, 2010a);

- (1) a. Dávè lɔ dɔ àdì xòmè ná mì gbáú.
 man DET have poison stomach PREP 1SG a.lot
 ‘The aforementioned man/the man in question/that man really annoyed me.’
- b. Kpón dávè lɔ é lón gbòn àdó tà.
 look man DET 3SG jump pass wall head
 ‘Look at that man! He jumped over the wall.’

As is obvious from these examples, the specificity marker in Gungbe (1a) can also serve other functions, such as encoding emphasis (1b). This situation is rather common in Benue-Kwa, as suggested by studies in Ajiboye (2005) on Yoruba. In

4. Mufwene (p.c. 22-10-2014) remarks that there are irregularities in the realization of third person singular -s in nonstandard English. Likewise, several studies on nonstandard French show irregularities in the subject-verb agreement system. Bakker’s observation is therefore misinformed, as it assumes the standard varieties of the lexifier only. These were not spoken in the colonial contact settings, as pointed out by Chaudenson (2001) and Mufwene (2001, 2008).

addition to these specificity markers, Kwa languages generally involve distinct distal demonstratives (e.g. *éhè* ‘this’ and *énè* ‘that’ in Gungbe). Interestingly, we can already see from the translations in (1) that specificity or emphasis within the noun phrase is typically marked in Romance and Germanic by demonstratives instead. These languages have no dedicated specificity marker. Once we understand this, it does not seem so striking anymore that the creoles that develop specificity marking (arguably under the influence of the substrate languages, Aboh 2006, 2015a, Aboh and DeGraff 2014) select the demonstrative in the lexifier since the latter plays the same function. Again, the competition-and-selection model offers a simple explanation, provided one thinks harder and digs deeper into the morphosyntax of the languages under study.

Indeed, these findings shed light on the emergence of articles in general. Norval Smith (p.c. 2-10-2014) remarks that the Romance and Germanic indefinite articles are derived from the numeral one (as in most creoles). In Old English there was no real indefinite article. Only in “strong indefinite” contexts, such as ‘a certain man’, was the numeral one used. This corresponds to specificity as described for Gungbe and creoles (cf. Aboh 2006, Aboh and DeGraff 2014). As for the definite article in Old English and other Germanic languages, it could mean ‘the’ or ‘that’. The definite article in Romance, on the other hand, is derived from *ille, illa*, and *illud* ‘that’. This description is reminiscent of the situation in creole languages as discussed in the literature (cf. Bruyn 1995, Baptista and Guéron 2007). The development of articles in the creoles appears to shed light on the development of articles in Romance, Germanic and beyond.

Question 4: All European lexifiers express the concept of ‘being hungry’ with an adjective meaning ‘hungry’, as in English ‘I am hungry’, and others do that with a verb meaning ‘to have’ and a noun ‘hunger’, as in French *j’ai faim*, lit. ‘I have hunger’. [...] Most creoles use constructions completely different from the lexifier, including ‘hunger is on me’ and ‘hunger takes/eats/catches me’.

My answer: Many relevant substrates (e.g. Gbe) behave similarly to the creoles. Example (2) gives Gungbe equivalents of ‘I’m hungry’ in English.

- (2) a. Xòvé hù mì.
 hunger kill 1SG
 ‘I’m hungry.’
 b. Xòvé wlé mì.
 hunger catch 1SG
 ‘I suddenly got hungry.’

In the case of Atlantic creoles, it is reasonable to assume that the creole constructions result from substrate influence. The speakers of Benue-Kwa languages in

Suriname need not have suffered pidginization to produce patterns comparable to those in (2), albeit with English words.

Question 5: None of the lexifiers has grammaticalized overt completive markers. But all creoles have grammaticalized a completive, most often as a preverbal marker or a clause-final particle or serial verb.

My answer: While the lexifiers might not involve these constructions, a quick look at works on the substrate languages (e.g. Da Cruz 1995, Winford 2000, 2006, 2008, Winford and Migge 2007, Durrleman-Tame 2008, and Van den Berg and Aboh 2013) indicates that ‘finish’-related TMA markers developed in the creoles as a consequence of cross-linguistic influence. Some Benue-Kwa languages, for instance, involve perfective constructions with ‘finish’ as illustrated by the Fongbe and Yoruba examples in (3a) and (3b), respectively.

- (3) a. Yé d̀ù làn ́ s̀ v̀ò [Fongbe]
 3SG eat meat DET finish
 ‘They finished eating the meat.’
 ‘They have already eaten the meat.’
- b. Ó ti jẹun tán [Yoruba]
 3SG ASP eat finish
 ‘He has eaten already (or finished eating).’

Bakker, concludes his list of questions stating that

these traits cover the (non)transmission of lexicon, particles, placement of certain elements in sentences and articles, different areas and types of grammatical marking. All of these are ubiquitous in creoles, and they only incidentally occur in non-creoles. This also points to distinct properties of creoles, as a consequence of their exceptional genesis.

Quite to the contrary, we see a lot of transmission from the substrate languages of Atlantic creoles. Because many of the properties singled out by Bakker as distinctive of the creoles are also found in the relevant substrates we cannot claim that creoles are distinct from the world’s non-creole languages.

4. Competition and selection does not exclude creativity

Bakker (2014: 183, 184) claims that the competition-and-selection model excludes creativity. This is obviously a misgiving since this approach implies that creoles involve innovative patterns that are not found in the inputs that their creators were exposed to. Locative expressions across Suriname creoles (4) represent such a case (Aboh 2015b). Patterns 1 to 3 are found across Suriname creoles (cf. Huttar

and Huttar 1994, Bruyn 2003, 2009, van den Berg 2007, Aboh 2010b, Bruyn 2009, Yakpo and Bruyn 2014).

(4) Pattern 1:

Sinsi a komm na hosso inni... (Sranan, Bruyn 2003:32)
 since 3SG come ADP₁ house ADP₂
 ‘Since she entered the house...’

Pattern 2:

Mi kommotto na inni djari (Sranan, Bruyn 2003:35)
 1SG come.out ADP₁ ADP₂ garden
 ‘I’m coming from the garden.’

Pattern 3: involves pattern 2 plus a genitive marker in the order:

P₁>P₂>GEN> GROUND-DP.

A trueh watra na inni vo wan tobbo (Sranan, Bruyn 2003:36)
 3SG throw water ADP₁ ADP₂ of DET tube
 ‘He threw water into a tube.’

Ndyuka developed a fourth pattern involving doubling of the adposition *ini* (Huttar and Huttar 1994:189)

Pattern 4:

Da i e kandi en baka poti a ini sani ini
 CONJ 2SG PROG tip 3SG again put ADP₁ ADP₂ thing ADP₂
 ‘Then you tip it again and pour it into something.’

Thus, the Suriname creoles exhibit the Patterns summarized in (5):

- (5) a. ADP₁> GROUND-Phrase > ADP₂
 b. ADP₁> ADP₂> GROUND-Phrase
 c. ADP₁> ADP₂>GENITIVE> GROUND-Phrase
 d. ADP₁> ADP₂> GROUND-Phrase >ADP₂

Aboh (2010b, 2015b) shows that the first three patterns are found in typologically different languages. Pattern 1 occurs in Gbe languages while pattern 2 is found in Chadic (e.g. Zina Kotoko). Pattern 3 is present in Gbe, Romance, and Germanic. Pattern 4, however, is not typical of the Gbe languages and English, the main source languages of the Suriname creoles. The following table contrasts Sranan to its source languages.

Table 2. Variation of spatial expressions in Gbe, Sranan, and English

| | Pattern 1: ADP₁-GROUND-ADP₂ | Pattern 2: ADP₁-ADP₂-GROUND | Pattern 3: ADP₁-ADP₂-GEN-GROUND |
|---------|--|--|--|
| Gbe | + | – | + (restricted to part-noun phrases) |
| Sranan | + | + | + |
| English | – | + | + |

This table shows that Sranan combines properties of both Gbe and English into a coherent adoption system: Sranan is like Gungbe in displaying pattern 1, but unlike English which excludes this pattern. However, Sranan is similar to English and Gbe in displaying patterns 2 and 3. Accordingly, Sranan is innovative with regard to both Gbe and English. It developed a superset of the morphosyntactic options available in Gbe and English. The creole is therefore not a simple replication of the source languages (cf. Aboh 2015a). Ndyuka goes a step further in developing a fourth related pattern that is not found in any of the source languages. In terms of simplistic complexity metrics (e.g. McWhorter 2001), this would make Suriname creoles more complex than their parent languages. A similar case where in a particular grammatical domain the creole language exceeds the complexity of its source languages is documented in Haitian Creole in Aboh and DeGraff (2014).

As is clear from this discussion, linguistic creativity in the traditional sense refers to the creation of new forms (never heard by the learner) out of old ones. This is a basic property of human learners everywhere: creating new linguistic patterns based on experience. Asserting that creole creators had the same mental capacity acknowledges their humanity. Indeed, while learners are very creative in recombining linguistic primitives in various new UG-compatible ways, they do not invent new linguistic primitives to be added to UG. In evolutionary terms, such a development would have rendered languages un-learnable to subsequent generations.

5. One cannot substitute digits for linguistic analysis

The discussion in previous paragraphs shows that computer-mediated results in Bakker et al. (2011) involve substantial mistakes (Kouwenberg 2010, 2012; Fon Sing and Leoue 2012; DeGraff, Bass, and Berwick 2013). Consequently, Bakker's (2014) subsequent distinctiveness theory and creoles-from-pidgins scenario seems to be trapped in a quicksand of mistakes and misconceptions. The lesson we learn from this is that phylogenetic methods must rely on more informed descriptions based on detailed comparative analyses of the type argued for in Aboh (2015a)

who shows that, far from being simplified superstrates or relexified substrate languages, creole languages generally involve distinct complex recombined patterns that can only be uncovered through adequate descriptions conducted by experts of the relevant source languages.

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Appendix

Nyor (Yoruba)

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| Il | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | F31 | 0 | 0 | 0 | 1 | F32 | 1 | 1 | 0 | 0 | 1 | F33 | 1 | 1 | 0 | 0 | 1 | F34 | 1 | 1 | 0 | 1 | F35 | 1 | 0 | 1 | 1 | F36 | 1 | 1 | 0 | 1 | F37 | 1 | 1 | 0 | 1 | F38 | 1 | 0 | 1 | 1 | F39 | 1 | 0 | 1 | 1 | F40 | 1 | 1 | 0 | 1 | F41 | 0 | 0 | 0 | 1 | F42 | 0 | 0 | 0 | 1 | F43 | 1 | 0 | 0 | 1 | F44 | 0 | 0 | 0 | 1 | F45 | 0 | 0 | 0 | 1 | F46 | 0 | 0 | 0 | 1 | F47 | 1 | 0 | 0 | 1 | F48 | 1 | 0 | 0 | 1 | F49 | 1 | 0 | 0 | 1 | F50 | 0 | 0 | 0 | 1 | F52 | 1 | 0 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Si | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | F31 | 0 | 0 | 0 | 1 | F32 | 1 | 1 | 0 | 0 | 1 | F33 | 1 | 1 | 0 | 0 | 1 | F34 | 1 | 1 | 0 | 1 | F35 | 1 | 0 | 1 | 1 | F36 | 1 | 1 | 0 | 1 | F37 | 1 | 1 | 0 | 1 | F38 | 1 | 0 | 1 | 1 | F39 | 1 | 0 | 1 | 1 | F40 | 1 | 1 | 0 | 1 | F41 | 0 | 0 | 0 | 1 | F42 | 0 | 0 | 0 | 1 | F43 | 1 | 0 | 0 | 1 | F44 | 0 | 0 | 0 | 1 | F45 | 0 | 0 | 0 | 1 | F46 | 0 | 0 | 0 | 1 | F47 | 1 | 0 | 0 | 1 | F48 | 1 | 0 | 0 | 1 | F49 | 1 | 0 | 0 | 1 | F50 | 0 | 0 | 0 | 1 | F52 | 1 | 0 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BaL | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | F31 | 0 | 0 | 0 | 1 | F32 | 1 | 1 | 0 | 0 | 1 | F33 | 1 | 1 | 0 | 0 | 1 | F34 | 1 | 1 | 0 | 1 | F35 | 1 | 0 | 1 | 1 | F36 | 1 | 1 | 0 | 1 | F37 | 1 | 1 | 0 | 1 | F38 | 1 | 0 | 1 | 1 | F39 | 1 | 0 | 1 | 1 | F40 | 1 | 1 | 0 | 1 | F41 | 0 | 0 | 0 | 1 | F42 | 0 | 0 | 0 | 1 | F43 | 1 | 0 | 0 | 1 | F44 | 0 | 0 | 0 | 1 | F45 | 0 | 0 | 0 | 1 | F46 | 0 | 0 | 0 | 1 | F47 | 1 | 0 | 0 | 1 | F48 | 1 | 0 | 0 | 1 | F49 | 1 | 0 | 0 | 1 | F50 | 0 | 0 | 0 | 1 | F52 | 1 | 0 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | | | | | V/A | | | | | | | | | F21 | M | M | M | M | M | F22 | M | M | M | M | M | F23 | M | M | M | M | M | F24 | M | M | M | M | F25 | M | M | M | M | F26 | M | M | M | M | F27 | M | M | M | M | F28 | M | M | M | M | F29 | M | M | M | M | F30 | M | M | M | M | F31 | M | M | M | M | F32 | M | M | M | M | F33 | M | M | M | M | F34 | M | M | M | M | F35 | M | M | M | M | F36 | M | M | M | M | F37 | M | M | M | M | F38 | M | M | M | M | F39 | M | M | M | M | F40 | M | M | M | M | F41 | M | M | M | M | F42 | M | M | M | M | F43 | M | M | M | M | F44 | M | M | M | M | F45 | M | M | M | M | F46 | M | M | M | M | F47 | M | M | M | M | F48 | M | M | M | M | F49 | M | M | M | M | F50 | M | M | M | M | F52 | M | M | M | M |

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| A/E | ? | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | F10 | 0 | 0 | 0 | 0 | 0 | F11 | 0 | 0 | 0 | 0 | 0 | F12 | 0 | 0 | 0 | 0 | 0 | F13 | 0 | 0 | 0 | 0 | F14 | 0 | 0 | 0 | 0 | F15 | 0 | 0 | 0 | 0 | F16 | 0 | 0 | 0 | 0 | F17 | 0 | 0 | 0 | 0 | F18 | 0 | 0 | 0 | 0 | F19 | 0 | 0 | 0 | 0 | F20 | 0 | 0 | 0 | 0 | F21 | 0 | 0 | 0 | 0 | F22 | 0 | 0 | 0 | 0 | F23 | 0 | 0 | 0 | 0 | F24 | 0 | 0 | 0 | 0 | F25 | 0 | 0 | 0 | 0 | F26 | 0 | 0 | 0 | 0 | F27 | 0 | 0 | 0 | 0 | F28 | 0 | 0 | 0 | 0 | F29 | 0 | 0 | 0 | 0 | F30 | 0 | 0 | 0 | 0 | F31 | 0 | 0 | 0 | 0 | F32 | 0 | 0 | 0 | 0 | F33 | 0 | 0 | 0 | 0 | F34 | 0 | 0 | 0 | 0 | F35 | 0 | 0 | 0 | 0 | F36 | 0 | 0 | 0 | 0 | F37 | 0 | 0 | 0 | 0 | F38 | 0 | 0 | 0 | 0 | F39 | 0 | 0 | 0 | 0 | F40 | 0 | 0 | 0 | 0 | F41 | 0 | 0 | 0 | 0 | F42 | 0 | 0 | 0 | 0 | F43 | 0 | 0 | 0 | 0 | F44 | 0 | 0 | 0 | 0 | F45 | 0 | 0 | 0 | 0 | F46 | 0 | 0 | 0 | 0 | F47 | 0 | 0 | 0 | 0 | F48 | 0 | 0 | 0 | 0 | F49 | 0 | 0 | 0 | 0 | F50 | 0 | 0 | 0 | 0 | F52 | 0 | 0 | 0 | 0 |
| BaL | ? | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | F10 | M | M | M | M | M | F11 | M | M | M | M | M | F12 | M | M | M | M | M | F13 | M | M | M | M | F14 | M | M | M | M | F15 | M | M | M | M | F16 | M | M | M | M | F17 | M | M | M | M | F18 | M | M | M | M | F19 | M | M | M | M | F20 | M | M | M | M | F21 | M | M | M | M | F22 | M | M | M | M | F23 | M | M | M | M | F24 | M | M | M | M | F25 | M | M | M | M | F26 | M | M | M | M | F27 | M | M | M | M | F28 | M | M | M | M | F29 | M | M | M | M | F30 | M | M | M | M | F31 | M | M | M | M | F32 | M | M | M | M | F33 | M | M | M | M | F34 | M | M | M | M | F35 | M | M | M | M | F36 | M | M | M | M | F37 | M | M | M | M | F38 | M | M | M | M | F39 | M | M | M | M | F40 | M | M | M | M | F41 | M | M | M | M | F42 | M | M | M | M | F43 | M | M | M | M | F44 | M | M | M | M | F45 | M | M | M | M | F46 | M | M | M | M | F47 | M | M | M | M | F48 | M | M | M | M | F49 | M | M | M | M | F50 | M | M | M | M | F52 | M | M | M | M |

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