WANTED: A DEBATE IN PIDGIN/CREOLE PHONOLOGY

Rajendra Singh and Pieter Muysken
Université de Montréal and Universiteit van Amsterdam

The substratist/universalist debate in pidgin/creole studies (cf. Muysken & Smith, 1986; Mufwene, 1993) may have let what we shall refer to as component asymmetry survive unexamined. Whereas syntactic matters have been actively debated, phonological and morphological matters have been given less careful attention. The literature, as a result, sometimes seems to make unwarranted concessions, like the universalist concession which allows unconstrained postulation — unconstrained vis-à-vis what might be called universal phonology — of substrate influence in phonology. Though the concession has served the substratist well, it has also encouraged a lack of reflection from both sides. We are, we believe, entitled to ask the universalist:

“How could the various components of grammar behave so differently?”

and to ask the substratist:

“What reason is there to suppose that the phonological developments attested in pidgins and creoles are constrained only by the etymological resources of underlying representations?”

Now it is entirely possible that the different components of grammar do behave differently, but they must be shown to do so (rather than just assumed to do so). Developments in Universal Phonology (or just phonology for short), both of the natural and the generative kind, lead us to believe that a...
debate needs to be conducted just as vigorously about non-etymological phonological matters as it does about syntactic matters.\textsuperscript{2}

We shall focus on phonology here, and show that just as the syntactic analysis of pidgins and creoles has benefited from the substrata/universals debate, pidgin/creole phonology will too. The universalists seem, as we have said, to concede phonology to substratists almost in toto, and the latter seem not too anxious to look at this gift-horse in the mouth, to the detriment, we believe, of both. We would like to suggest that similar sorts of questions are involved. The universalists cannot just concede phonology without answering the question:

“How can that be?”

and the substratists cannot just use any old phonological process attested in a pidgin/creole as a substratum-driven process without showing that it could not be a universals-driven one.

In our conclusion we shall return to the issue of why different components seem to behave differently, and to the position of the lexicon in language change.

*Explanation in Pidgin and Creole Phonology*

The question “How can that be?” was, in fact, raised by Bender (1987, p. 42) within the context of Bickerton’s (1981) bioprogram. It is, Bender argued, “impossible to believe that this [the bioprogram] does not apply to phonology as well.” He pleaded for the construction of a set of phonological universals of creoles and actually provided a list of six tentative creole universals, given below:

\textbf{#1} simple consonant systems: no fortis-lenis or emphatic-plain contrasts; no affricates

\textbf{#2} a close to universal list of consonant phonemes: p, t, k, b, d, g, f, s, m, n, l–r, w, y

\textbf{#3} no initial or final consonant clusters or geminates

\textbf{#4} a simple vowel system: i, u, e, o, a; or possibly these five plus an additional i or o

\textbf{#5} no use of tone, stress, or intonation in lexical or morphological contrasts

\textsuperscript{2}) As there is no comparable theory of morphology on the horizon — itself an interesting fact — it is not entirely clear as to what shape that debate could take in pidgin/creole morphology.
no morphophonemics aside from automatic variation such as assimilation of a nasal to a following stop. We will not discuss the issue here to what extent this list is correct or exhaustive. It does point to the need to think of creole phonology in terms of universals (as well as, possibly, substrate features).

To understand what is involved in the needed debate, consider nasalization. Tinelli’s (1981) contention that Haitian could be called a Romance language needs to be counterpointed against Alleyne’s (1980) presentation of the phonological changes in English creoles as non-Germanic or African-based. It is interesting to note that whereas Tinelli (1981, p. 64) explicitly acknowledges that it “is not clear” whether the nasality of Haitian, described by him as in (1) below, is “due to a Northern Romance evolutive latency or to a contribution of African structures,” Alleyne (1980, p. 177) assumes that the comparable nasality of the dialects studied by him is a Niger-Congo continuity:

(1) [+ syllabic] \rightarrow [+ nasal] / __ + (#) [+ nasal]

Our point is not that it is not a Niger-Congo continuity in Alleyne’s cases, nor that it cannot be, but simply that it has not been established that it could not be what Tinelli calls an “evolutive latency,” guided, presumably, by universal phonology, except in cases of hyper-correction.

Consider, as another example, consonant cluster reduction in pidgins and creoles, arguably a consequence of Bender’s universal #3. The ways in which it is accomplished, deletion and epenthesis, have analogues both in acquisition (cf. Aitchinson, 1983) and diachrony (cf. Wright, 1905). The attribution of consonant deletion and epenthesis to substrate influence would, thus, seem to be suspect. Their repeated appearance in creole after creole, irrespective of the dominant substrate or of the lexifying language (cf. Hall, 1966) and in both first and second language acquisition (cf. Singh, 1985), would seem to suggest that they are actually universals-driven “latent tendencies” and not necessarily substratum-driven adaptation processes. The absence of such clusters in the relevant substratum languages no doubt helps, but the Hegelian dialectic between the universal and the individual is hard to resolve here in favor of the individual.

The difficulty can also be illustrated with word-final devoicing. Given the fact that even speakers of languages such as English that maintain a [± voice] contrast in word-final position devoice their word-final voiced
obstruents in casual speech, it is hard to argue that Dutch and German speakers devoice word-final voiced obstruents in English because they are native speakers of Dutch or German. They do because everybody does, including those who are neither supposed to nor allowed to (English-speakers), and those whose languages don't have any obstruents, voiced or unvoiced, in that position (Mandarin and Japanese speakers, for example).

Those speakers of Japanese and Mandarin who do not devoice English word-final voiced obstruents preserve their voicing, but only by adding a paragogic vowel after word-final obstruents. English /tæg/ is, thus, pronounced by them as /tægə/. Now, whereas epenthesis is attested in primary languages (cf. English rose/roses), diachrony (simple non-contact induced historical change), and mother-tongue acquisition (cf. the work by Aitchinson, 1983, and Neil Smith, 1973, for example), paragoge, the insertion of a vowel at the end of a word, is not. Sanders (1979) actually claims that paragoge is not a possible process within a language. His argument is that since word-final vowels are deleted in language after language, its opposite is in principle ruled out as a possibility. Otherwise we would have plausible derivations that exhibit an infinite loop of deletion/insertion/deletion. His theoretical, conceptual argument, derived from the logic of his equational grammar, is supported by the fact that primary languages seem not to need such a vowel. The results that could be described as (2) below, in other words, are not attested in any primary language.

\[ (2) \quad \emptyset \rightarrow V / [+\text{obs}] \] 

Rule (2), above, clearly has a very different status from (3), below, a process seen not only in mother tongue acquisition and diachrony, but also in primary language phonology and adaptation phonology (cf. Singh, 1985):

\[ (3) \quad \emptyset \rightarrow V / C \]

Pidgins and creoles whose phonologies we have examined seem to divide into two categories (see below): (i) those that exhibit only results like (3), and (ii) those that exhibit both (2) and (3), i.e., both epenthetic and paragogic vowels.

We would like to argue that a preference for simple systems alone is sufficient to account for the existence of epenthetic vowels, but not for paragoge. It can only explain why half of the patterns one finds in pidgins and creoles belong to this category. The other half is hard to explain because the simple thing to do would be to get rid of the final obstruent.
Notice that the universals-driven preference for the simple systems explanation is viable not only for epenthesis but also for devoicing. The argument that the voicing contrast must be maintained, with paragoge being used to do so, cannot be correct because the contrast is often not maintained, presumably because universal phonology allows and even encourages its abandonment.

Paragoge obtains, Eckman (1984) argues, because of the distance between the representations of the target language and the phonotactic constraints of the native language. Paragogic vowel insertion, in other words, is — according to him — necessarily a result of contact. Inasmuch as it is, it provides evidence for a substratum. It provides evidence not only of a substratum, but also of a contact of two very specific types of phonological systems: one that has word-final obstruents and the other with a constraint against them.³

Epenthesis in Berbice Dutch Creole

We will illustrate the mechanism of paragoge by citing examples from Berbice Dutch Creole (BD), as studied by Kouwenberg (1994). BD is still spoken by a few people along the Berbice River in Guyana. It emerged in the 17th century out of the contact primarily between Eastern Ijo and colonial Dutch.

Kouwenberg (1994, p. 294) notes that although BD shows the creole preference for open syllables at word end, the preferred syllable word-medially is closed, i.e., a syllable with a filled coda. We find word-final closed syllables only in the following cases:

(i) words may end in a nasal consonant, as in *strom* ‘stream’, *furstan* ‘understand’, *tin* ‘ten’;
(ii) informants from the Berbice River will sometimes have *pil* rather than *pili* ‘arrow’ and *birbish* rather than *birbishi* ‘river’;
(iii) *ganggang* ‘grandmother’ (with an underlying word-final /g/).

When we examine the extensive vocabulary presented in Kouwenberg (1994), however, a more complex picture emerges. First, in (4), we illustrate a number of cases where paragoge has obtained.

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³ It will not escape the attention of the reader that here as well as elsewhere in the paper, we avoid the expression "(phonological) rule." The reasons for this are sketched out in Singh (1985, 1987, and elsewhere).
The nature of the paragogic vowel depends both on the preceding consonant and on the preceding vowel, it seems.

In (5), cases where paragoge has not applied are illustrated:

(5)  No paragoge

<table>
<thead>
<tr>
<th>BD</th>
<th>DUTCH</th>
<th>ENGLISH GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>pap</td>
<td>pap</td>
<td>porridge</td>
</tr>
<tr>
<td>pruf</td>
<td>proeven</td>
<td>taste</td>
</tr>
<tr>
<td>neks</td>
<td>niks</td>
<td>nothing</td>
</tr>
<tr>
<td>lek</td>
<td>leggen</td>
<td>put</td>
</tr>
<tr>
<td>hupl</td>
<td>hoepel</td>
<td>iron ring</td>
</tr>
</tbody>
</table>

Contexts in which paragoge does and does not apply are various; below we will examine them quantitatively in more detail.

List (6) gives examples of cases where paragoge appears to be optional:

(6)  Paragoge optional

<table>
<thead>
<tr>
<th>BD</th>
<th>DUTCH</th>
<th>ENGLISH GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>tafl, taflu</td>
<td>tafel</td>
<td>table</td>
</tr>
<tr>
<td>brur, bluru</td>
<td>broer</td>
<td>brother</td>
</tr>
<tr>
<td>bital, bitali</td>
<td>betalen</td>
<td>pay</td>
</tr>
</tbody>
</table>
In some cases the occurrence of paragoge is coupled with lexical disambiguation:

(7) BD DUTCH ENGLISH GLOSS
    skop schop shave, spade
    (skopu schoppen kick)
    trap trappen step on
    (trapu trap stairs)

Before going on, it should be made clear that in Ijo, one of the contributing languages, there is a general prohibition of closed syllables: they only occur in a few loans, interjections, and ideophones. This includes nasals in syllable-final position, although nasalization is common in the language (Williamson, 1965, pp. 16, 20). In a strictly contrastive approach, we would expect paragogic vowels across the board.

We went through Kouwenberg’s word list in some detail (excluding the more recent Guyanese English Creole-derived words) to see what constrains paragoge in BD. The results are given in Tables 1 through 4. A general description of the BD facts of the matter is given Table 1. We notice that in all contexts but nasals, paragoge is almost categorical. The exceptional position of nasals is expected, given the sonority hierarchy.

It is also interesting to look a bit more closely at the behavior of individual members of a natural class such as obstruents. These have been the subject of considerable interest in contemporary studies of strength hierarchies (cf. Foley, 1976; Vennemann, 1988). Table 2 below provides a fine-grained distributional picture of the adaptation of Dutch word-final obstruents in Berbice.

Table 1. Overall Distribution of Paragogic Vowels in Berbice Dutch Creole

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>% paragoge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clusters</td>
<td>136</td>
<td>91</td>
</tr>
<tr>
<td>Single obstruents</td>
<td>186</td>
<td>94</td>
</tr>
<tr>
<td>Single non-obstruents</td>
<td>58</td>
<td>98</td>
</tr>
<tr>
<td>Single liquids</td>
<td>85</td>
<td>98</td>
</tr>
<tr>
<td>Single Nasals</td>
<td>73</td>
<td>23</td>
</tr>
</tbody>
</table>
Table 2. *The Nature of the Preceding Consonant: Obstruents*

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>% paragoge</th>
</tr>
</thead>
<tbody>
<tr>
<td>p/b</td>
<td>33</td>
<td>75</td>
</tr>
<tr>
<td>t/d</td>
<td>78</td>
<td>100</td>
</tr>
<tr>
<td>k/g</td>
<td>80</td>
<td>96</td>
</tr>
</tbody>
</table>

The above table would seem to suggest the obstruent-internal hierarchy \( p>k>t \), attested in a rather large number of cases.

Similar internal strength differentials seem to be involved in the case of nasals, as Table 3 shows. The fact that final \( m \) does not require the paragogic vowel would seem to suggest that it is perhaps not perceived as illegal. The split behavior of \( n \) may be a consequence of its status both in Ijọ and in the forms of Dutch Ijọ speakers must have encountered. For BD, at any rate, \( m \) must be seen as more vocalic than \( n \).

Table 3. *The Nature of the Preceding Consonant: Nasals*

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>% paragoge</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>39</td>
<td>41</td>
</tr>
<tr>
<td>m</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>ng</td>
<td>1</td>
<td>100</td>
</tr>
</tbody>
</table>

The final clusters vary in their complexity, particularly vis-à-vis the sonority hierarchy (contrast French /kalm/ with French /étr/, for example). We provide a summary of their behavior in Table 4 below. Under “ambiguous,” we have classified clusters whose members are adjacent on the sonority hierarchy.

Table 4. *Number of Cases of Paragoge after Consonant Clusters*

<table>
<thead>
<tr>
<th></th>
<th>Paragoge</th>
<th>No paragoge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respecting the Sonority Hierarchy</td>
<td>70 (17)</td>
<td>–</td>
</tr>
<tr>
<td>Ambiguous</td>
<td>8 (1)</td>
<td>–</td>
</tr>
<tr>
<td>Violating the Sonority Hierarchy</td>
<td>45 (19)</td>
<td>12 (7)</td>
</tr>
</tbody>
</table>

*Note.* The number of cluster types involved appears in parentheses.
In contrast with the results from Tables 1–3, there is no clear effect from the sonority hierarchy: paragoge is not primarily employed to break up clusters that violate the hierarchy. We should point out that among the codas that violate the sonority hierarchy [obstruent + l] occurs but [obstruent + r] does not.

Notice that BD does not have any problems with intervocalic biconsonantal “clusters.” Actually, it is fairly regular in its syncopation of Dutch forms and its creation of such “clusters,” as in, for example, BD alma ‘altogether’ (< D all³maal), dalki ‘soon’ (< D dal³k), bitmo ‘outside’ (< D buït³n), hagli ‘hail’ (< D hagel), watri ‘water’ (< D water), respectively. It doesn’t, however, seem to allow tri-consonantal clusters in that position, presumably because the substrate language doesn’t allow final clusters and initial clusters more complex than [obstruent + liquid].

Paragogic Vowels in Creole Languages: An Overview

The facts about paragogic vowels in pidgin and creole languages can be roughly summarized as follows (Mühlhäusler, 1986; Holm, 1988)4:
(a) They are characteristic of the Atlantic pidgins and creoles, much more so than of the Pacific ones;
(b) They occur in English-derived, Ibero-Romance derived, and Dutch-derived pidgins and creoles, but not in French-derived ones5;
(c) Within each group, there are some with a great many instances of paragoge (BD, Sranan, Fa d’Ambu) and some with few instances (Negerhollands, Jamaican).

Observation (a) can be explained, we think, in line with the general thrust of this paper, namely that paragoge is a substrate phenomenon characteristic of creoles with West-African substrates. Observations (b) and (c) have been accounted for by appealing to the effects of posterior decreolizing approxima-

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5) Lalla (1984) and Norval Smith (personal communication) do not think that the paragogic vowel in English or Dutch creoles is as pervasive as it is commonly portrayed to be. Even so, we are concerned not with its pervasiveness, but with its very existence. Whether it was there only in a handful of words in the English creoles or progressively weeded out later as a result of the pull towards English is another kettle of fish. Their presence must, however, be taken with caution, as some of them may actually be either dialectal or merely reflexes of r-less forms in English. Furthermore, we have documented its pervasiveness in Berbice Dutch above.
tion to the colonial languages (Alleyne, 1980, p. 30). This is plausible, but cannot be the full explanation. First, creoles for which early stages are well-documented, such as Negerhollands, do not show a greater amount of paragogic vowels in the early stages. Second, we feel that the explanation given for the French cases could only explain, if it were correct at all, why there are few cases of paragoge, not why they are absent altogether. For French a separate explanation is needed.

From the fact that epenthetic vowels exist in a great many pidgins and creoles with quite varied potential substrata we can safely conclude that epenthesis requires the proverbial pinch of salt, whereas paragoge does not. Although it is possible to look at paragoge as epenthetic vowel insertion between the final obstruent and the word boundary, it is not really svara bhakti par excellence because there is really only one svara involved. It is there to keep the syllable open, but only because there is another system that requires that it be kept open that way (and not, for example, by deleting the offending obstruent).

Contact-specific Phenomena

It is interesting to note that whereas creole universals of the type proposed by Bender, universals Muysken (1994) refers to as constitutive universals, are universals of the form pertaining to primary languages, creoles and interlanguages can legitimately be said to be governed by processes some of which never seem to surface in primary languages. Following Eckman (1984), we have argued that these uniquely creole/interlanguage processes may very well be contact induced.

It is, we believe, safe to say that whereas processes such as nasalization, palatalization, and epenthesis do not provide any compelling evidence for the substratist position, contact-induced processes like paragoge do, for it is only the latter that seem to require an appeal to the non-universal.6 It is ironic that,

6) The only possible exceptions we know of are Angutimri (cf. Smith, 1984), South Dravidian (cf. Tirumalesh, 1989), and possibly Aztec (Boretzky, personal communication). As far as Angutimri is concerned, Smith presents it as different from Awngtim chiefly by virtue of allowing a paragogic vowel to save its final consonants from the consequence of its abandonment of CVC structures. Although Smith does not commit himself to treating the more frequent deletion of the final consonant as an unmarked option, we believe that the attempt to save the consonant with the help of a paragogic vowel is in fact a highly marked process. In the case of Angutimri, we do not know the cause(s) that add this option to its grammar. We would like to suggest that perhaps the synchronic alternation Ø and (paragogic) V in Angutimri is a result of
in the final analysis, perhaps phonology will provide the evidence universalists have been asking substratists for. Moreover, that evidence must come, of necessity, from highly marked, unnatural processes (cf. Muysken & Smith, 1986, p. 4). Within the group which includes deletion, epenthesis, and paragoge, only the last process can play a role in the debate. In this invitation to a debate, we take no position, except the one that implies that once the criteria for establishing a substratum feature are well defined in all components of grammar, it won’t be necessary to take one.

Consider now the question of componential asymmetry again. What makes paragoge so special and highly marked as a process — if it must be considered as such — is that it involves structural specifications to which lexical items must conform (phonotactic restrictions), from one language coupled with lexical items from another. In general, that is the form which phonological substrate influence will take: patterns from language A linked to shapes from language B. That is also what makes this type of substrate influence so convincing.

In morphosyntax, the equivalent would be general features of classes of lexical items (lexical redundancy rules) from language A coupled with the sound/meaning combinations from language B. Some creole morphosyntactic phenomena fit this bill: an example from Saramaccan would be the use of European adjectives as stative verbs and the reduplication of these forms to form true adjectives. However, it is by no means clear that all the syntactic phenomena that have been claimed to be due to substrate influence can be formulated in terms of lexical redundancy rules. What is worse, the relation between the lexicon and the syntax is far from clear in contemporary linguistic theory: some propose that differences between languages must be accounted for through parameter settings (independent of the lexicon), while others claim that differences between languages ultimately reduce to lexical differences. This confusion leads to the componential asymmetry noted.

the same sorts of factors that produce it in the creoles discussed here. If contemporary cases of paragoge are taken as an index, that change in its phonotactic possibilities is highly unlikely to have been a development without external motivation. It is also interesting to note that although Boretzky draws our attention to the possibility that Aztec may have a paragogic vowel, he confirms that “there seem to be no cases of this process in normal, internal sound change.” In the Aztec cases, it is not clear why only some suffixes take on a paragogic vowel when added to consonant final stems. The vowel in question is arguably morphological. South Dravidian seems to be the clearest prima facie case for paragoge as a regular, internal sound change. If it is in fact the only case, it obviously needs to be studied very carefully. We shall, however, assume that paragoge is indeed highly marked as a sound change.
REFERENCES


