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On the presence versus absence of morphological marking in four Romance-based creoles

1. Introduction²

This paper addresses the ongoing debate on the status of morphology in creole languages. The focus will be on the presence versus absence of specific types of morphological marking in four Romance-based creoles: Angolar, Palenquero, Papiamentu, and Seychellois. First of all, we shall discuss the so-called ‘Creole Prototype’ as defined by McWhorter (1998). Then, we will present the morphological inventories of the creole languages under consideration, discussing both inflectional and derivational morphology. These data will be evaluated with reference to McWhorter’s claims about inflectional and derivational morphology in creoles, as well as DeGraff’s (2001) and other scholars’ objections to these. The respective positions taken rely heavily on the canonical classificatory distinction between inflectional and derivational morphology. Therefore, in the last section we will explore whether the results will turn out to be more clear-cut when using a different classification of morphology, namely the distinction between contextual and inherent inflection (Booij 1993), as has been suggested by Kihm (2003).

2. McWhorter’s Creole Prototype

McWhorter (1998, 2001) argues that creole languages form a synchronically definable typological class. In his view, prototypical creoles are distinguishable from non-creole languages in terms of the clustering of the following three traits:

- (i) little or no inflectional affixation,
- (ii) little or no use of tone to lexically contrast monosyllables or encode syntax, and
- (iii) semantically regular derivational affixation.

¹ To our great consternation and regret, Jacques Arends died unexpectedly in August 2005. We are very grateful to have worked under his inspiring coaching. We dedicate this article to his very fond memory.

² We are grateful to two anonymous referees as well as to the editors of this volume for providing us with much needed feedback as well as for saving us from several serious errors. As always, all remaining errors are ours.

McWhorter claims that these traits are the direct result of the severely interrupted transmission of the lexifier language that characterizes the pidgin stage. These traits allegedly reflect low perceptual saliency and low import to basic communication, facilitating rapid and informal second language acquisition. The morphological features under consideration are argued to only develop language-internally as the result of gradual grammaticalization processes over long periods of time. Since the period following the break in transmission has been too short for these processes to leave their mark, creoles differ synchronically from other “older” languages (McWhorter 1998:793).

A language combining the three traits conforms to the “Creole Prototype” (McWhorter 1998:789-799). In this definition, ‘creoleness’ is a matter of degree, in that prototypical creoles exhibit all three of the traits proposed, whereas less prototypical ones depart somewhat from the prototype. Along these lines, McWhorter defines Haitian Creole, exhibiting all three traits, as “the most creole of creoles” (McWhorter 1998:809). A creole like Palenquero, on the other hand, would be less prototypical, given the presence of inflection to mark plural, past, gerund, and participle forms.

3. The study

3.1. Languages and sources

In order to investigate to what degree the traits proposed by McWhorter hold for individual creoles, we have looked at the inventories of inflectional and derivational morphology in four Romance-based creoles. We consider Angolar, Palenquero, Papiamentu, and Seychellois particularly fit to evaluate morphological complexity (in contrast to English-based creoles), since the lexifier languages involved exhibit some nominal and quite extensive verbal morphology. Furthermore, none of the four creoles were included in the set of languages on which the Prototype Hypothesis was originally based. Table 1 lists the sources used for this study.³

Table 1: Sources used for this study

language	sources
Angolar	Lorenzino 1998; Lorenzino <i>forthc.</i> ; Maurer 1995
Palenquero	Lorenzino 2000; Schwegler 1996
Papiamentu	Dijkhoff 1993; Kouwenberg and Murray 1994; Lorenzino 2000; Maurer 1988
Seychellois	Bollée 1977; Corne 1977

³ Note that we have consulted secondary sources only.

3.2. The data

(i) *Inflectional morphology*. Our findings with regard to inflectional morphology are presented in table 2, in which the linguistic features are given on the vertical axis and the languages on the horizontal axis. The main sub-classification concerns the one between the NP and the VP. Within the NP, we looked at nominal and adjectival morphology as well as at articles. For these elements, we determined whether there was any affixal expression of gender, number, and case, as well as person and definiteness. Within the VP, we looked at the presence of affixal expression of tense, mood, aspect, participles, and gerunds, as well as the possible encoding of number and person on the verb. As becomes clear from the key to table 2, we only granted ‘fully-fledged’ pluses to those features that are productively and obligatorily expressed across the entire paradigm under consideration. As shown in table 2, all four creoles exhibit some inflectional morphology, but not all to the same extent.

Table 2: Inflectional morphology in Angolar, Palenquero, Papiamentu and Seychellois^a

linguistic feature			languages				
			Angolar	Palenquero	Papiamentu	Seychellois	
NP	N	gender	-	+	-	+?	
		number	-	+/-	+	-	
		case	-	-	-	-	
	A	gender	-	-	-	+?	
		number	-	-	-	-	
		case	-	-	-	-	
	DET	article	definite	-	-	+	(+)
			indefinite	+	(+)	+	(+)
			gender	-	-	-	-
			number	-	-	-	(+)
		case	-	-	-	-	
VP	person		-	-	-	-	
	number		-	-	-	-	
	TMA	tense	-	-	-	-	
		mood	-	-	-	-	
		aspect	-	-	-	-	
	PP	verbal	-	-	+	-	
		adjectival	+	+	+	-	
		gender (Adj)	-	-	-	-	
		number (Adj)	-	-	-	-	
	GERUND		-	+	+	+	

^a See key below

Key to Tables 2 and 3

symbol	meaning
+	marked
-	unmarked
(+)	not obligatorily marked
?	no information
+?	productivity unclear
+/-	not marked for the entire paradigm

In terms of morphological richness of inflection, Angolar appears to be the least complex creole, with only two features that are expressed by means of an affix. Papiamentu can be located at the opposite side of the scale of complexity, showing morphological expression of six inflectional features. Seychellois and Palenquero are to be located in between Angolar and Papiamentu, with four pluses each. However, although there seems to be a scalar distribution, the differences between the languages are minor.

Let us take a closer look at some of the data. First of all, Angolar lacks inflectional endings on nouns and adjectives but, whereas definiteness is expressed by a bare noun phrase, it does have a distinctive indefinite article, as shown in example (1):

- (1) *N ka tanga uⁿa Toya* Angolar
 1.SG FUT tell IND story
 ‘I will tell a story’ (Lorenzino 1998:133)

In the verbal domain, inflectional morphology is rather scarce: there is an inflected form for the past participle only (when used adjectivally):

- (2) *bisi* → *bisiru* Angolar
 ‘to dress’ ‘dressed’ (Maurer 1995:91)

Continuing with Palenquero, this creole shows a richer morphological paradigm. Nouns appear to be inflected for gender⁴ and a limited number of nouns may also be marked for number, as is shown in (3):

- (3) a. *ndo muhé -re* Palenquero
 ‘two women’
 b. *ndo papé -le*
 ‘two pieces of paper’ (Schwegler 1996:261)

⁴ There are some indications that the *-o/ -a* gender distinction between masculine and feminine (drawn from Spanish) is productive in Palenquero. For example, the diminutive suffix *-ito/-ita* is marked for gender in correspondence with the gender of the noun.

The indefinite article is not obligatorily expressed, since bare NPs can express definite as well as indefinite, and singular as well as plural meanings. As far as the VP is concerned, Palenquero possesses inflected forms for adjectivally used past and present participles ((4) and (5), respectively):

- (4) *a beses suto asé-ba salí empat-ao* Palenquero
 sometimes 1.PL TA leave tie-PTCP (< *empatar*)
 ‘sometimes we tied’ (Schwegler 1996:289,22)
- (5) *pogke suto ta necesit-ando ele* Palenquero
 because 1.PL PROG need-GER 3.PL
 ‘because we are needing them’ (Lorenzino 2000:39)

The third language in our sample, Papiamentu, shows the richest nominal morphology of the four creoles. As far as the NP is concerned, nouns are marked for number by means of the affix *-nan*. Definiteness and indefiniteness are marked on the article. In the verbal domain, Papiamentu possesses both verbally and adjectivally used past participles, which may follow either a ‘Spanish’ (6a) or a ‘Dutch’ (6b) pattern:

- (6) a. *bende* → *bendé* Papiamentu
 ‘to sell’ ‘sold’ (Dijkhoff 1993:88)
- b. *ferf* → *heferf*
 ‘to paint’ ‘painted’ (Kouwenberg and Murray 1994:20)

Like Palenquero, Papiamentu possesses a gerund form, as can be seen in (7):⁵

- (7) a. *sosega* → *sosegando* Papiamentu
 ‘to rest’ ‘resting’
- b. *ferf* → *ferfiendo*
 ‘to paint’ ‘painting’ (Kouwenberg and Murray 1994:21-22)

Finally, Seychellois shows a more moderate morphological paradigm. We find no obligatorily marked inflection in the NP, while at the level of the VP only the gerund carries inflection:⁶

- (8) *i ti komâse â dizâ* Seychellois
 3.SG PST begin PREP saying
 ‘he began by saying’ (Corne 1977:147)

⁵ Notably, in (7a) the gerund-suffix *-ndo* is attached to the Spanish verb stem *sosega*, whereas in (7b) it is combined with the Dutch stem *ferf* (from *verven*, ‘to paint’).

⁶ The long vs. short form contrast in the verb is not mentioned here as an instance of verbal morphology, since we assume with Corne (1977:86) that “e-deletion is primarily a phonological rule”.

(ii) *Tone*. None of the languages under consideration make use of tone to lexically contrast monosyllabic words or to encode syntax. In Papiamentu, however, there are approximately 250 pairs of *disyllabic* words with identical segmental shape and stress, for which tone is the only clue for the difference in category and meaning. Consider *mata* in example (9):

- | | | | |
|-----|---|---|---|
| (9) | <i>mata</i>
(low-high melody)
'to kill' | <i>mata</i>
(high-low melody)
'plant', 'tree' | Papiamentu

(Kouwenberg and Murray 1994:12) |
|-----|---|---|---|

Furthermore, tone interacts with stress in the formation of the past participle in Papiamentu: the application of the tone-stress pattern “high, stressed” results in stress shift for disyllabic verbs with a low-high tonal pattern (Dijkhoff 1993:88).

(iii) *Derivational morphology*. With regard to derivational morphology, the Prototype Hypothesis concerns itself explicitly with the question of semantic transparency, which can be defined as “the possibility of inferring a meaning of complex words from the parts of such a word” (Plag *forthc.*).⁷ According to McWhorter, semantically opaque derivation is absent in creoles, since these languages are too young for the chief factor responsible for opaque morphology to have played a role: long-term semantic shift. Braun and Plag (2003) object, however, that semantic opacity in morphology may also arise through various other mechanisms such as borrowing and metaphorical extension. These authors convincingly show that especially the former mechanism has been active in even the earliest stages of the formation of Sranan, providing ample evidence of semantically opaque derivation in this creole.

Let us see whether the creoles in our sample conform to McWhorter’s trait or if they, like Sranan, exhibit semantically opaque derivation. Since most of our sources only provide information about the degree of productivity of derivational affixation in the four creoles (and not about their degree of transparency), we have adopted the following inference made by Lefebvre as a working hypothesis: “Productive morphology is, by definition, semantically transparent, since affixes have categorical features, meaning, selectional properties, etc” (Lefebvre 2003:72). The inverse of this implication does not seem to hold, i.e. transparent processes are not necessarily always productive.⁸ And even if a process is productive, this does not imply that every derivative is necessarily semantically transparent. We may confidently assume, however, that the derived forms discussed in this paper are indeed transparent. Thus, while all instances of productive derivation in table 3 below reflect morphological transparency (and hence, conform to McWhorter’s trait (iii)), cases of

⁷ That semantic transparency is a gradient notion, rather than an absolute one, can be seen from a definition of the term given by Bauer (1988:189): “Transparency is the extent to which there is a clear match of meaning and form. To the extent that the relationship between the two is obscured, the construction is said to be opaque”.

⁸ Aronoff & Anshen (1998:243) discuss a number of transparent but completely unproductive affixes, one of which is the English nominal suffix *-th* (as in ‘truth’ or ‘growth’). This affix has not been used successfully to form a new word for 400 years, despite valiant attempts at words like ‘coolth’.

As regards Palenquero, unfortunately, our sources provide no information concerning the productivity of derivational processes, except for some comments on suffixation. In example (13), we have two instances of the diminutive suffix, one attached to a Spanish stem (*bak-ita* ‘little cow’, which also shows feminine gender inflection), and one attached to a lexical stem of African origin (*ngombes-ito* ‘small cattle’):

- (13) *ma bak -ita tambié, ma ngombes -ito* Palenquero
 PL cow -DIM.F also PL cattle -DIM.M
 ‘the little cows also, the little cattle’ (Lorenzino 2000:39)

Papiamentu shows productive derivational morphology in all morphological processes listed in Table 3, except prefixation. As for reduplication, a distinction can be made between two types. One is used productively, and the derived word can be interpreted straightforwardly on the basis of the meaning of the non-reduplicated word. The two parts of the reduplication behave phonologically as separate words, such that stress is assigned to both of them. This type of reduplication has several functions, such as intensification (14a) or distributive (14b):

- (14) a. *kayente* → *kayente-kayente* Papiamentu
 ‘hot’ ‘very hot’
 b. *tiki* → *tiki-tiki*
 ‘little’ ‘little by little’ (Dijkhoff 1993:93-94)

The second type of reduplication results in a word which does not have a transparent meaning and in which the two parts, in most cases, are fused into a phonological whole with stress on the penultimate syllable. Some examples are given in (15):

- (15) a. *moli* → *molimoli* Papiamentu
 ‘soft’ ‘plant with small soft fruit’
 b. *kore* → *korekore*
 ‘run’ ‘commotion’ (in a riot)
 c. *kuchú* → *kuchú-kuchú*
 ‘knife’ ‘sharply opposed to one another’s opinions’ (Dijkhoff 1993:94-95)

Papiamentu also has two types of compounding. In the case of endocentric compounds, the meaning of the complex word can be deduced from the fixed relative position of the modifier and the head (16). This type of compounding is productive in Papiamentu.

- (16) a. *angel-wardadó* Papiamentu
 angel-guardian → ‘guardian angel’
 b. *bonchi-korá*
 beans-red → ‘red beans’ (Dijkhoff 1993:100-101)

The second type of compounding (exocentric compounding) on the other hand, does not seem to be very productive (Dijkhoff 1993:66). Crucially, these compounds are not semantically transparent, in the sense that the meaning of the complexes cannot be predicted from their parts:

- (17) a. *sobre-kama* → 'bedcover' Papiamentu
 on-bed
 b. *korta-bus* → 'type of heavy, compact cake' (Dijkhoff 1993:100-102)
 break-stomach

As in Angolar, the two most productive suffixes in Papiamentu are *-mentu* and *-dor*. The examples (18a) (from English 'catch') and (18b) (from Dutch *verven* 'to paint') show that these suffixes of Iberian origin can also be used with words derived from other languages:

- (18) a. *kech* → *kechmentu* Papiamentu
 'to catch' → '(the act of) catching'
 b. *ferf* → *ferfdó*
 'to paint' → 'painter' (Kouwenberg and Murray 1994:27)

Finally, conversion is possible, deriving nouns from verbs (19a), from adjectives (19b), and from adverbs (19c):

- (19) a. *sunchi* → *sunchi* Papiamentu
 'to kiss' → 'a kiss'
 b. *blanku* → *blanku*
 'white' → 'whiteness'
 c. *patras* → *patras*
 'backwards' → 'the back part' (Dijkhoff 1993:96-97)

The fourth creole, Seychellois, shows productive use of reduplication, applied to various word types with a range of meanings:

- (20) a. *marsmarse* Seychellois
 'to walk back and forth' (Corne 1977:79)
 b. *mô mô tu sel ki n fer sa*
 'I alone did it' (Corne 1977:194)
 c. *ê rob ver ver*
 'a greenish dress' (Corne 1977:194)
 d. *liev i apros dusma dusma*
 'the hare comes up very softly' (Corne 1977:195)

words or to encode syntax. Although Papiamentu is generally considered to be a tone language, it does not use tone for these specific functions. In other words, like the three other languages (which do not have tone at all), Papiamentu behaves perfectly in accordance with McWhorter's trait (ii).

As for trait (iii), according to which derivational affixation in creole languages is semantically regular, we found that Papiamentu is not prototypical in this respect. We encountered two types of non-transparent derivation: what was referred to above as the second type of reduplication, and exocentric compounding (see section 3.2 above). For Angolar, Palenquero, and Seychellois, however, no firm conclusions can be drawn with respect to the transparency of derivational morphology.

These findings could easily be interpreted as evidence in favor of the Prototype Hypothesis, in the sense that they support the idea that prototypicality is a matter of degree.⁹ However, alternative interpretations are also possible. These are based on approaches to morphology, both in general and with particular reference to creoles, which differ from the one McWhorter seems to adhere to. In the next section we will take a look at our results from some alternative perspectives.

5. Alternative interpretations

5.1. Critiques of the Prototype Hypothesis

A number of scholars have argued against the existence of a Creole Prototype as defined by McWhorter's three traits. DeGraff (2001), using data from Haitian Creole, states that the belief that creole languages have "no morphology to speak of" is both empirically and conceptually ill founded.

Regarding trait (i) (little or no use of inflectional affixes), DeGraff remarks that in general loss of inflectional distinctions does not appear to be restricted to creolization, since it also occurs in 'regular' instances of language contact, change and acquisition. Furthermore, in DeGraff's view, it is not obvious that stripping of inflections increases the ease of communication, arguing that overt marking of morphosyntactic features and relations could just as well be regarded as 'user-friendly'. In the sections below we will enter a little deeper into the formulation and linguistic interpretation of trait (i).

As for trait (ii) (no contrastive use of tone), DeGraff acknowledges that indeed Haitian Creole does not make use of tone. However, he states that it is unclear why loss of tone should be characteristic of creole formation. In his view, certain phonemic distinctions encoding lexical contrasts in Haitian Creole require much the same subtlety of perception as lexical tone. Still, in contrast to tone, these were not dropped during creolization.

Finally, in relation to trait (iii) (semantically transparent derivational affixation), DeGraff argues that "(...) there is no a priori reason why creole creators and creole speakers should

⁹ Note that the falsifiability of the Prototype Hypothesis may be questioned, since any language could be called prototypical to a certain degree. It remains unclear where the line between creoles and other languages is to be drawn.

be unable to create and store as independent units derivationally complex words with idiosyncratic semantics” (DeGraff 2001:76). In other words, semantic opacity and the ability to deal with it, is intrinsic to human language. More importantly, DeGraff points out that while semantic irregularities in derivation may be the result of a gradual grammaticalization process, they might also have arisen in a “catastrophic” way (DeGraff 2001:77), as a result of unpredictable reanalysis. Finally, he provides several examples that seem to show that a number of derivational devices in Haitian Creole are not consistently transparent.

Plag (forthc.) has identified the same problems with McWhorter’s ideas as DeGraff. He states that, although pidgins and creoles may seem to have less morphology than their lexifiers, both inflectional and derivational morphology are far from absent in those languages. Furthermore, with regard to the supposed avoidance of more marked strategies for morphological encoding, which would include the use of tone, Plag cites two studies that argue that the creoles Saramaccan and Tobagonian do make use of tonal morphology (see Good 2003 and James 2003). Finally, he argues that claims about the absence of non-transparent morphological devices are also not borne out by the facts. As mentioned earlier, this would be because opacity may arise not only as a result of long-term semantic drift, but also through other mechanisms, such as borrowing.

A number of other scholars have addressed some more specific problems related to McWhorter’s ideas. Siegel (2004) observes that McWhorter’s claims regarding the absence of features mentioned in traits (i-iii) rest on the view that these features are not fundamental for basic communication, the function that pidgins are assumed to serve. However, in the development of some creoles, there is no clear evidence of a pre-existing and radically reduced pidgin. Moreover, recent work by Bakker (2003) has shown that on a general note pidgins are in fact morphologically richer than creoles in some respects. As one of the possible explanations for this “unexpected fact” (Bakker 2003:24), Bakker discusses the morphological complexity of the superstrate and substrate languages: Creoles mostly have European lexifier languages, whereas pidgins are not only based on morphologically more complex languages but also involve situations where the creators of the language speak these more complex languages as a first or maybe second language. Other possible factors include the different roles of outsiders and of the nativization process that is presumably involved in creolization, as well as methodological issues (see Bakker 2003 for a more in-depth discussion of these factors). Apart from the fact that pidgins have more morphology than creoles, Bakker shows, like DeGraff and Plag, that creoles do display inflectional and derivational morphology, be it inherited, borrowed, newly developed, or metatypized¹⁰, even though most of the lexifier’s inflection is lost.

Taking into account this criticism of McWhorter’s Prototype Hypothesis, the interpretation of our data becomes less straightforward. Instead of interpreting our findings as supporting McWhorter’s idea of degree of creoleness, they could also be regarded as supporting the objections against this idea (i.e. all four creoles do exhibit inflectional morphology and, judged on the limited basis of our sources, at least Papiamentu shows instances of non-transparent derivation).

¹⁰ This process involves the borrowing of functions of morphological markers in one or more of the languages in contact, without taking over the form of the morpheme itself, and thus using a different form to express the relevant function.

5.2. The definition of inflection

A further problem concerning our interpretation of the data has to do with the fact that McWhorter (as well as DeGraff and other scholars) only considers affixal morphology as instances of inflectional morphology (cf. trait (i) above). Such a definition of inflectional morphology is not uncontroversial. Kihm (2003) argues that inflectional morphology is to be defined as the realization of some functional element. This definition does not necessarily entail that the elements should be realized as affixes: apart from affixes, it also allows for the inclusion of clitics, free forms, and even covert instantiations in the class of inflectional morphemes. For empirical reasons, we do not wish to include non-overt realizations of morphemes in our definition of morphology. We would also like to narrow down the definition given by Kihm in the sense that inflectional morphology should be non-detachable from the stem. Following this definition, elements such as TMA-markers would have to be included in the consideration of inflectional morphology in creole languages: they represent the realization of a functional element, and they are non-detachable from the verb.

With regard to trait (i) there is yet another point to be taken into consideration. Booij (1993) argues against the traditional division between derivation on the one hand, and inflection on the other (i.e. the ‘split morphology hypothesis’ as advocated by Perlmutter 1988). More specifically, he challenges the argument that inflectional morphology is always peripheral to derivational morphology (Anderson 1982), which has been considered as proof that derivational rules are located in the lexicon, while inflectional rules are applied at a higher, syntactic level. As an alternative for the derivation-inflection opposition, Booij proposes that the relevant internal classification of the morphological component of grammar is between what he calls *inherent inflection* on the one hand, and *contextual inflection* on the other. The distinction between these two types of inflection is primarily semantic in nature: “inherent inflection expresses, like derivation, a certain amount of independent information, whereas the information expressed by contextual inflection is redundant, and only reflects certain aspects of the syntactic structure of the sentence” (Booij 1993:30). Observe the following categorization of inflectional features, as presented by Booij:

Table 4: Types of inherent and contextual inflection, organized according to lexical class (source: Booij 1993:30)

lexical class	inherent	contextual
N	number	
A	comparative, superlative	number + gender + definiteness
V	infinitive, participles, tense	number + person

In this definition, inherent inflection denotes extra-linguistic conceptual information, while contextual inflection represents the reflections of this information on other elements in a sentence, by means of agreement.

Although the distinction might not be as clear-cut as is stated by Booij,¹¹ it is particularly interesting for the present discussion, as Kihm concludes that “what creoles appear to be lacking is contextual inflection, i.e. structural case marking of subjects and direct objects (...) and syntactic noun-adjective or verb-argument agreement” (Kihm 2003:358). This observation neatly coincides with Booij’s remark on deflection: the opposition between contextual and inherent inflection corresponds to Kiparsky’s (1972) distinction between *weak* and *strong* inflection, in which *weak* (read: contextual) inflection is argued to be “easily subject to morphological erosion”. Moreover, when inflectional morphology is lost, strong inflectional paradigms are found to be restored more easily than weak inflectional paradigms.

The adoption of the distinction between contextual and inherent inflection, together with the consideration of inflection as being expressed by overt elements that are non-detachable from the stem, leads to the following redefinition of trait (i) of the Creole Prototype:

- (i)’ Prototypical creoles have little or no contextual inflection.

To test whether this holds, let us re-evaluate the data provided above. As can be observed in table 5 below, all instances of morphological expression in the four creoles under investigation, are of an inherent rather than contextual nature. Also, the contrast between inherent and contextual morphology in this respect is strengthened when non-affixal morphology is included in the discussion. In the VP, for example, all languages use morphological means to express tense, aspect, and mood, which are instances of inherent inflection. None show person and number agreement with the subject, which are cases of contextual inflection. Angolar does show number marking on the verb but this is not an instance of contextual inflection since number is only marked by means of the preverbal particle *anelene* (and not on the NP). As for the other domains, none of the languages exhibit any contextual inflection. The data therefore strongly suggest that the distinguishing property of prototypical creoles indeed lies in the absence of contextual inflectional morphology.

¹¹ For example, Kihm (2003) as well as an anonymous reviewer have pointed out that although tense is inherent, there are a number of languages in which the case marker taken by the subject depends on the tense feature of the verb, which thus must be accessible through syntax.

Table 5: Contextual and inherent inflectional morphology in Angolar, Palenquero, Papiamentu and Seychellois^a

linguistic feature		languages				
		Angolar	Palenquero	Papiamentu	Seychellois	
N P	N	gender	-	INH	-	INH
		number	-	-	INH	-
		case	-	-	-	-
	A	gender	-	-	-	?
		number	-	-	-	-
		case	-	-	-	-
	ART	definite	-	-	INH	(INH)
		indefinite	INH	INH	INH	(INH)
		gender	-	-	-	-
		number	-	(INH)	-	(INH)
		case	-	-	-	-
	V P	person		-	-	-
number		INH	-	-	-	
TMA		tense	INH	INH	INH	INH
		mood	INH	INH	INH	-
		aspect	INH	INH	INH	INH
PP		verbal	-	-	INH	-
		adjectival	INH	INH	INH	-
		gender (Adj)	-	-	-	-
		number (Adj)	-	-	-	-
GERUND		-	INH	INH	INH	

^a INH refers to inherent morphology, while (INH) denotes that marking is either not present obligatorily or not present in the entire paradigm; a question mark indicates lack of information.

McWhorter (2001) emphasizes the fact that his approach is continuum-based, rather than forming a prediction involving clear borderlines between creoles and non-creoles in terms of complexity. He states that, if one were to place the languages of the world on a complexity-scale, creoles would figure on the least complex end of the continuum. In view of the data presented in Table 5, however, the question arises if one can indeed speak of a continuum. When we take contextual inflection into consideration all four languages turn out to be rather prototypical in this respect. In fact, it appears that in order to confirm the continuum interpretation of the Prototype Hypothesis (at least according to our revised version of trait (i)) one would have to find evidence for the existence of less prototypical creoles, i.e. creoles with at least some degree of contextual inflection.

6. Discussion and conclusion

Truly conclusive evidence as to the morphological complexity of the four creole languages examined here was found only in the domain of contextual inflection, to the extent that we have presented evidence in favor of a redefined interpretation of trait (i). The fact that none of these four creoles show any contextual inflection is even more striking when we take into account that the lexifier languages involved all possess contextual inflection to a rather large extent. Our findings therefore support Kihm's (2003) claim that the distinguishing property of creole languages appears to be the lack of contextual inflection. Indirect further support for this claim can be found in the fact that all four creoles show instances of both inherent inflection and of derivational morphology: derivational morphology, as well as tone as it is used in Papiamentu, are inherent in nature, in that they fulfill functions that concern the independent meaning of lexical elements. In short, the four cases examined in this study suggest that creole languages may be characterized, in general terms, by the following cluster of properties with regard to their morphology:

- (i) Contextual morphology: no
- (ii) Inherent morphology: yes

On the basis of this finding — which should be interpreted with much care due to our limited array of data — at least two questions present themselves. First, do our findings imply that the Prototype Hypothesis should be revised to the extent that locus of prototypicality should be sought in the domain of inherent morphology? A second and probably more interesting question would be *why* creoles have this particular morphological make-up. In other words, what is it about the process of creole formation that results in creoles *not* showing any contextual morphology while they *do* show both inherent and derivational morphology?

The answer should most probably be sought in the characteristics of the process of agreement, since it is basically agreement that is expressed by contextual inflection. Not only in situations of language contact such as creole formation (cf. Lipski 1985), but also in the process of second language acquisition, (cf. Dewaele and Véronique 2001) and language impairment (cf. Bedore and Leonard 2001) the specific operations responsible for the expression of agreement have been demonstrated to be either lacking or remain impaired. These operations involve the linking of the 'target' to its 'controller' (Corbett 1991) Inherent features are encoded on the latter. As argued above, inherent features express semantic content, while the agreement markers on the targets are merely an echo of these, with the sole function of showing a relationship with or pertinence to the controller. One could argue, along the lines of McWhorter's claims, that in the process of creole creation, speakers 'choose' not to make use of these markers, but rather depend on canonical word order, for reasons of economy and processing ease.

Taking this line of thought a step further, one could think of the following, admittedly rather impressionistic, scenario: in creole formation, linguistic elements are de-attached from their syntactic context, in the sense that individual words are interpreted and acquired in their bare phonological form, without the syntactic features and subcategorization

features that correspond to their lexical entry and carry morphosyntactic information. This process implies that the links (the ‘glue’) that keep the syntactic structures together, which may take the form of agreement relationships, are severed. When the elements are put together again in a new linguistic system, these links have to be re-established; a process that takes some time. Although the underlying assumption of this scenario is comparable to relexification accounts of creole formation, in the sense that the lexical elements of the lexifier language are stripped of their morphosyntactic features, a major difference lies in the fact that there is no relexified language involved that can provide the syntactic structure in which these bare lexical elements can be incorporated (including agreement devices). In this respect, a clear contrast can be observed between creole languages and Bilingual Mixed Languages like *Media Lengua* (e.g. Muysken 1996): in the latter case, the morphosyntactic features of a clearly identifiable relexified language are maintained.

If anything has become clear from the ongoing debate around creole morphology, it would be that things are not as simple as they may have seemed at first sight. Arguably, the actual process underlying the formation of an individual creole language strongly depends on both socio-historical conditions (including factors like the number of substrate languages involved, and the conditions under which the creole arose)¹² and purely linguistic factors, like the morphological complexity and typology of the respective sub- and superstrate languages (as argued by Bakker 2003).

The present study shows that questions of definitions and terminology are of vital importance in the discussion of morphological complexity of creole languages. Furthermore, we believe we can draw the conclusion that 1) non-affixal inflectional morphology should be taken into account when regarding creole morphology, and 2) the distinction between contextual inflection on the one hand and inherent inflection on the other may well be a more useful opposition than the one between derivation and inflection.

Obviously, the next step is to test these claims against data from many more creoles than the four used for this study.

¹² The relative numbers of speakers of each language entering a particular linguistic context at a given time, the question whether the creole originated in a homestead or a plantation setting or elsewhere, etc.

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