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Creolization and admixture

Typology, feature pools, and second language acquisition*

Ingo Plag
Universität Siegen

Proponents of a ‘feature pool’ approach to creolization (e.g. Mufwene 2001, Aboh & Ansaldo 2006) have claimed that the emergence of the new grammar is driven by the syntax-discourse prominence, markedness, and frequency of available features, with typological similarity or dissimilarity of the languages involved playing a crucial role in the competition and selection process. This paper takes a closer look at the predictions of a feature pool-based approach to creolization and tests whether these predictions are borne out by the facts. Three case studies from the Surinamese creoles and Sri Lanka Malay show that the feature pool approach suffers from a number of conceptual, theoretical, and empirical problems. The typology alone of the languages involved in the contact is not a good predictor for the outcome of language contact. The feature pool approach neglects processing constraints: one can only select from what one can process. ‘Creolization’, as in the case of the emergence of the Surinamese Creoles, is not ‘exceptional’, but happens in contact situations in which second language acquisition plays a significant role. The processing restrictions inherent in second language acquisition play an important role in shaping the structural outcome. ‘Admixture’, as in the case of Sri Lanka Malay, is not ‘exceptional’ either, but happens in different situations and shows different processes at work. And these processes allow structural outcomes that are very different from those found under the conditions of second language acquisition.

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1. Introduction

In recent years the idea has gained ground that creolization is a special kind of second language acquisition (SLA), or, at least, that SLA plays a crucial role in creolization (see, e.g., the recent columns by Plag 2008a,b, 2009a,b in this journal, or publications such as Lefebvre et al. 2006, Siegel 2008). An alternative to the SLA approach is one that makes reference to the notion of ‘feature pool’ and views different kinds of language creation in general as emerging from a process of selection from such a ‘feature pool’ (e.g. Mufwene 2001). Under this approach, ‘[t]he composition of the feature pool determines the extent to which xenolectal elements influence the structure of the new, outcome system.’ (Mufwene no date). This approach has important implications for the problem of the role of typology in language creation and for the question whether it is useful to distinguish between different types of language creation, such as creolization and admixture. The following two quotations from Aboh & Ansaldo (2006) illustrate these implications.

If we have sufficient information about the *typological input* in a contact environment, we are in a position to *explain the structural output* by looking at how features of the input varieties are *selected, discarded and exapted* into the new grammar. [...] [S]ections 3 and 4 present data from two different contact environments, which, in the literature, would be assigned to different exceptional phenomena, namely creolization and admixture, respectively. As we show, these labels are not useful in suggesting evolutionary processes, as *the same principles apply to both cases* of typologies in contact. (Aboh & Ansaldo 2006: 39, italics mine)

[...] We are therefore led to conclude that the phenotype of creole [...] cannot be said to derive from processes such as acquisition/restructuring and loss/reconstruction but rather from a *general recombination of the linguistic features* from the competing language that made it to the F[eature] P[ool]. (Aboh & Ansaldo 2006: 50, emphasis mine)

This paper takes issue with these claims. I will test the usefulness of a feature-pool-based approach with the help of some case studies and contrast the feature pool approach with an SLA-based approach.¹ I will show that processes of SLA must be taken into account in those settings where SLA plays an important role, and creolization is one of them. These individual-level processes of SLA can help to explain the emergence of certain structures in particular creoles as well as certain facts that cross-linguistically seem to hold in creole languages, irrespective of the

1. Most recently, Clements (2009) has provided a differential account of the emergence of an array of contact languages based on Portuguese and/or Spanish, in which he combines ideas from the feature-pool approach with insights from SLA. A more detailed discussion of such an integrated approach is beyond the scope of the present article.

typologies of the languages involved. The discussion will also show that it is useful to distinguish different contact environments, since different individual-level processes may prevail in different settings. Finally, it will be shown that typology plays a less pronounced role than authors like Aboh & Ansaldo (2006) would have it. Typological information does not suffice to understand the emergence of new structure.

The paper is structured as follows. The next section looks in more detail at the concept of feature pool and the mechanisms of selection. Section 3 sketches in more detail some basic tenets of Processability Theory and its implications for an understanding of an SLA-based account of the phenomena to be investigated. In Sections 4 and 5 I present an analysis of the data illustrated in Aboh & Ansaldo (2006), comparing the feature pool approach with an SLA-based approach. A final discussion is presented in the concluding section.

2. The feature pool and selection

In this section I will first take a closer look at the notions of feature pool and selection in order to understand the underpinnings of this approach. What is meant by ‘feature pool’? Mufwene defines the feature pool as ‘the “arena” where features associated with the same or similar grammatical functions came to compete with each other. While interacting with each other, speakers contribute features to a pool’ (Mufwene 2001:4). The feature pool ‘is analogous to a gene pool in population genetics. ... Regardless of their origin the features compete with each other’ (Mufwene 2001: 30f). With regard to the nature of the entities represented in the feature pool, Aboh & Ansaldo give the following clarification: ‘[A] feature pool can be taken to represent the population of utterances OR features available to speakers in a contact environment’ (Aboh & Ansaldo 2006:44). This is an important remark because it stresses the fact that the notion of ‘feature’ presupposes the analysis of the available linguistic signals at an abstract level. In other words, processing must play a crucial role in determining what is available to the speakers. I use ‘processing’ here in the very broad sense of what psycholinguists call speech perception and speech production. These involve, among other things, the segmentation of the speech signal into meaningful units, the development of lexical and grammatical representations and their application in perception and production, the development and application of morphosyntactic procedures of parsing and production, to mention just a few pertinent mechanisms. Entities that are part of the speech signal but cannot be processed cannot participate in any selection process. Given the necessary processing resources, the feature pool may contain variants from all language varieties involved, i.e. from all first languages

(superstrate, substrate, adstrate etc.), all interlanguages (at all levels), and all L1 learner varieties (at all levels).

How does selection work? The term ‘selection’ may refer to two different, but related processes. First, it can mean the adoption of a particular variant into the idiolect of a speaker. This is the so-called ‘individual’ level. The choices at this level are determined by constraints on language acquisition, on processing and on the resulting representations. Selection may, however, also happen at the level of the speech community, i.e. at the so-called ‘population level’. In this case, selection means the adoption of a particular variant into the new variety, as determined by sociolinguistic pressures such as accommodation and prestige. The problem is that the two levels are very hard to distinguish, with the individual being the major locus at both levels, since sociolinguistic factors also need to work in the individual. This problem has been acknowledged also by authors like Mufwene, who, as a consequence, focus on the idiolect (cf., e.g., Mufwene 2001: 26).

The interesting question is of course, which features make it into the new variety and why it is these features that are selected and not other ones. According to Mufwene, not all features are created equal: ‘The term *competition* refers to the condition of inequality that obtains among variants in a feature pool, with some factors of their internal or external ecologies (dis)favoring some of them for dominance’ (Mufwene 2005). The factors involved are listed in (1).

- (1) Factors at work in competition and selection (e.g. Mufwene 2001: 57, Aboh & Ansaldo 2006: 44):
 - a. syntax-discourse prominence
 - b. markedness/transparency
 - c. frequency
 - d. salience
 - e. typological (dis-)similarity

It should be noted that the factors (1a)–(1d) are all factors that work at the level of the individual because they imply certain kinds of phonological, morphological, syntactic, semantic, and lexical processing by the speaker. Presumably this also holds for the factor in (1e) since typological distance between two languages A and B would probably either hinder or foster the processing of certain patterns of language A by a speaker of language B.

3. Processability in SLA and creoles (e.g. Pienemann 1998, 2005)

Processability Theory is a theory of interlanguage development that builds on psycholinguistic models of speech production as developed by, for example, Levelt

(1989), or Kempen & Hoenkamp (1987). According to the theory, there is a universal, implicational hierarchy of processing procedures derived from the general architecture of the language processor. In addition and related to that, there are specific procedural skills needed for the production of utterances in the language to be learned, the target language. Based on these assumptions, predictions can be made for second language development which can be tested empirically. Research in this paradigm has shown, for example, that, irrespective of the native and target languages involved, the morphosyntax of interlanguages develops in certain implicational stages that reflect the processing procedures available to the learner at a given time. The morphosyntactic phenomena that are relevant in the context of the present paper are listed in (2) and discussed below. They are all characteristic of early stages of interlanguage development.

- (2) Morphosyntactic traits of early interlanguages
- a. Loss of inflection, contextual inflection in particular
 - b. Presence of possessive pronouns
 - c. Simplified sentence structure:
 - i. SVO or SOV
 - ii. Loss of case marking (i.e. contextual inflection) on full NPs
 - iii. 'Subject'/'Object'-distinction on pronouns
 - iv. Unmarked alignment of position, thematic roles, and syntactic functions (i.e. no structural case assignment)

Interlanguages of an early stage largely lack inflectional morphology. Starting out with one-word utterances, learners gradually acquire more complex structures in a specific order. The first type of inflection that emerges is inherent inflection, i.e. 'the kind of inflection that is not required by the syntax but has syntactic relevance. Examples are the category number for nouns, comparative and superlative degree of the adjective, and tense and aspect for verbs' (Booij 1995:2). Of these, number on nouns is the first to be observed in English interlanguage. Notably, inherent inflection can work without access to complex phrasal structures and therefore precedes the development of so-called 'contextual inflection' in acquisition. In contrast to inherent inflection, contextual inflection is 'dictated by syntax, such as person and number markers on the verbs that agree with the subject and/or object(s), agreement markers for adjectives, and structural case markers on nouns' (op. cit.). In SLA this type of inflection is acquired rather late, which is why we, for example, find subject-verb agreement morphology only much later, i.e. at more advanced stages.

Let us turn to the syntactic development. The first stage beyond the one-word stage is characterized by a simplified sentence procedure which shows either SOV or SVO order, with no case marking on full NPs, but already with a 'Subject'/'Object'-distinction on pronouns. The inverted commas are used to

indicate that at this stage the notions of subject and object are not yet developed but are merely used as convenient symbols for what Pienemann calls ‘unmarked alignment’. Unmarked alignment is the one-to-one mapping of position, thematic roles and syntactic functions by the learner at this stage of development (see Pienemann et al. (2005:229) for detailed discussion).

Plag (2008a, 2008b) applied Processability Theory to creoles, comparing the universal stages of second language development to the structures that typically occur in creole languages. He found that the scarcity of inherent inflection, the general lack of contextual inflection, and the prevalent presence of unmarked syntactic structures in creole languages (i.e. in basic word order, question formation, and negation) closely match the corresponding traits of early interlanguages. Plag argues that the emergence of the said creole structures can be explained as resulting from the processing constraints known to be at work in SLA. Evidence from the domains of phonology and word-formation, as discussed in Plag (2009a,b), seems to corroborate this conclusion.

In the following sections we will test how such a processing-based SLA approach compares to the feature pool approach. We start with the NP in the Surinamese Creoles.

4. Case study 1: The NP in the Surinamese Creoles

In this case study I will compare Aboh & Ansaldo’s (2006) account of the emergence of certain properties of the NP in the Surinamese Creoles² with an SLA-based account that makes use of the concepts and insights described in the preceding section. The properties at issue are the encoding of definiteness and specificity, plural marking, possessive marking, and case marking on pronouns.

4.1 Definiteness and specificity

Table 1, taken from Aboh & Ansaldo (2006:49), summarizes the pertinent properties of the NP in the three languages involved. Note that the authors of that study are well aware that the concentration on only three languages involved is a simplification, since there were obviously more than just two languages (and their respective varieties) contributing to the feature pool. For the purposes of their paper, as well as for this one, we take it that this simplification is unharmful.

2. Aboh & Ansaldo (2006:47) use ‘Surinamese Creoles’ as a cover term for Sranan and Saramaccan, two English-based creoles which are very similar to each other with regard to the phenomena under discussion.

Table 1. General properties of the NP in English, Gbe and the Surinamese Creoles (SCs), from Aboh & Ansaldo (2006: 49)

	1	2	3	4	5	6	7
	noun marked as definite	generic bare nouns	(in)-defi- nite bare nouns	discourse deixis	pre-nom- inal DET	post- nominal DET	demon- strative reinforcer
English	yes	yes	yes	yes (<i>this/that</i>)	yes	no	yes (<i>this man here</i>)
Gbe	no	yes	yes	yes	no	yes	no
SCs	no	yes	yes	yes	yes	no	Yes

For our discussion it is important to focus on the parallels and mismatches between the languages. The Surinamese Creoles and Gbe encode definiteness in much the same way, as can be seen in columns 1 and 3. However, the Surinamese Creoles behave unlike Gbe, but similar to English with regard to word order (cf. columns 5–6). For the kind of selection shown in Table 1 Aboh & Ansaldo (2006: 49f) offer the following explanations:

[T]he syntax and the function of functional categories are subject to different constraints in a situation of competition. [...] [T]he syntax and the semantics of functional categories are disassembled and reassembled in various ways that do not necessarily match the combinations found in the source languages [...] This creates a noun system [...] that has the semantic properties of noun phrases in Gbe, but the syntax of English noun phrases (see Aboh 2004b, 2006a). We are therefore led to conclude that the phenotype of creole [...] cannot be said to derive from processes such as acquisition/restructuring and loss/reconstruction but rather from a general recombination of the linguistic features from the competing languages that made it to the F[eature] P[ool].

This raises a number of questions. First, it is left unspecified why the mixed properties of the Surinamese NP cannot derive from acquisition processes. No evidence or argument is provided for this claim. Second, which principles would govern the alternative processes of ‘resemblage’ and ‘general recombination’, and how would that work? The reader is not told. A third problem is the analysis of the systems itself, since Table 1 (columns 1 and 3) gives an undercomplex impression about the encoding of definiteness across the different languages. Taking into account the morphosyntactic properties and the way they are encoded in the three languages, we arrive at Table 2, in which Gungbe and Sranan represent Gbe and the Surinamese Creoles, respectively.

Table 2. Feature combinations and determiner expression in Gungbe, English, and Sranan, based on Aboh & Ansaldo (2006:50)

row	D-features	Gungbe	English	Sranan
1	[+specific, +definite, +plural]	ló lé	the	den
2	[+specific, +definite, -plural]	ló	the	na
3	[+specific, -definite, +plural]	dé lé	some/certain	Ø/wantu
4	[+specific, -definite, -plural]	dé	a	wan
5	[-specific, +definite, +plural]	lé	the	den
6	[-specific, -definite, +plural]	Ø	Ø	Ø
7	[-specific, +definite, -plural]	Ø	the	Ø
8	[-specific, -definite, -plural]	Ø	a	Ø

If we look at the similarities and differences we can again state that there are two kinds of similarities. First, those involving only the Surinamese Creoles and Gbe, and second, those that involve all three languages. The Surinamese Creoles and Gbe encode non-specific singulars in the same way, namely by zero marking, which leads to a definiteness syncretism (cf. Table 2, rows 7 and 8). Specific definites are also encoded by the same means, namely with two different forms for singular and plural (as against a single syncretic form in English, cf. Table 2 below, rows 1 and 2). In contrast, all three languages have the same kinds of marking for specific singulars (differential marking, cf. Table 2, rows 2 and 4), non-specific plurals (zero for indefinites, determiners for definites, cf. Table 2, rows 5 and 6), and specific plurals (differential marking, cf. Table 2, rows 1 and 3). In sum, we get a much more intricate picture of similarities and dissimilarities when looking more closely at one of the properties, definiteness. This in turn calls into question Aboh & Ansaldo's analysis that we are dealing with 'a noun system that has the semantic properties of noun phrases in Gbe, but the syntax [i.e. word order, IP] of English noun phrases' (Aboh & Ansaldo 2006:50). It is completely unclear how the feature pool can account for these intricacies.

In an SLA-based account, we would expect the acquisition of the word order of determiner and noun of English, with some substratum influence on the interpretation of the pertinent forms. It has to be admitted, however, that no theory can successfully explain, let alone predict, the array of similarities and dissimilarities discussed in this section.

4.2 Plural marking

Let us consider the marking of plural. Aboh & Ansaldo (2006:52) summarize the facts as in Table 3.

Table 3. Number marking in the NP in English, Gbe, and the SCs, from Aboh & Ansaldo (2006: 52)

	1	2	3	4	5	6	7
	number on definite DET	number on deictic DET	number on noun	pre-N deictic + number	post-N deictic + number	number on DET and N	number on DET only
English	no	yes (<i>these/those</i>)	yes	yes	yes	no	no
Gbe	no	no	no	no	yes	no	yes
SCs	no	yes	no	yes	no	no	yes

Again we concentrate on the parallels and mismatches between the languages. Unlike English, the Surinamese Creoles and Gbe have no inflection on the noun, and no number agreement inside the NP (Table 3, columns 3 and 6). Unlike Gbe, however, English and the Surinamese Creoles mark number on the deictic determiner and have the same order of determiner and noun (cf. Table 3, columns 2 and 4).

To explain these patterns, Aboh & Ansaldo (2006) in general evoke the mechanisms shown in (1), but at least three of these mechanisms work on the level of the individual, and not on the population level. The authors maintain, however, that their account works on the population level (Aboh & Ansaldo 2006: 45). But let us look at their discussion of salience and the other mechanisms they mention.

With regard to salience, one could assume that lack of salience may have led to the loss of plural inflections. However, Aboh & Ansaldo (2006: 52) dismiss this on the grounds that collective nouns like *shoes* or *news* (*susu* and *nynsu* in Sranan) have preserved the plural morpheme. These authors attribute the loss of plural inflection to semantic markedness instead. They write that ‘plural inflection on the noun was lost because it is semantically vacuous and because a pre-nominal deictic determiner *den* could express plurality [...] only semantically active inflection is visible for selection in a situation of language contact’ (Aboh & Ansaldo 2006: 53). This explanation is both ad hoc and unclear. Why should plural inflection be considered ‘semantically vacuous’? It is a prime example of inherent inflection, hence of a type of inflection that does carry meaning and not only serves configurational purposes. And why would only ‘semantically active’ inflection be ‘visible’ in a situation of language contact? What would be the underlying principle for this? As an alternative, a processing account in terms of SLA is readily available. Inflections get lost in early second language acquisition due to the limited L2 processing capacities of the learners, to the effect that the loss of plural markings across the board is typical of early stages of SLA. Note that SLA can also account for the fact that some *pluralia tanta* (such as *njusu* <E. *news*) and some

plural forms of plural-dominant words (such as *susu* <E. *shoes*) made it into the Surinamese Creoles. These words were adopted as unanalyzed forms, i.e. as monomorphemic words. The reason for the non-adoption of many more words with an English plural *-s* is rather trivial. Most nouns are heavily singular-dominant (with much lower frequencies for their plural forms), and frequency is a crucial factor in the learning (or adoption) of non-native words.

4.3 Possessive marking

We start again with Aboh & Ansaldo's table, given here as Table 4. The Surinamese Creoles and Gbe are similar in that they (unlike English) have no inflectional marking of possession (see Table 4, columns 1 and 2), while the Surinamese Creoles and English share the same word order, which is different from that of Gbe (see columns 2, 5, and 6). A reanalysis of non-inflectional genitive marking, systematizing different word orders, as shown in Table 5, reveals, however, more similarities than differences between the different languages. Column 1 of Table 5 shows that all languages have a possessor-initial structure in which the possessor is followed by a genitive marker and the possessee. Column 2 shows that all languages have possessee-initial structures with English and the creoles sharing the same order of genitive marker and possessor. Finally, in column 3 one can see that all languages have a genitive construction without overt marking, with again the same word order in English and in the creoles. We can thus see that, if we disregard word order differences, all constructions shared by the two input varieties survive, preserving the English word order.

How can these facts be accounted for under the feature pool approach? Aboh & Ansaldo (2006: 54) again evoke their idea of 'semantically active inflection': 'We take the loss of genitive inflection in the Surinamese Creoles to be additional evidence that only semantically active inflectional morphology is visible and (maybe) subject to transfer in a situation of language contact'. This raises similar questions as above. Why should inflectional possession marking be semantically not 'active'? What is the principled basis for the role or non-role of semantics? When is something 'semantically active', when not? And why is the English word order 'selected'?

In contrast, a processing account in terms of SLA seems readily available. As shown by Pienemann, possessive pronouns are processable at an early stage in SLA (see column 3 in Table 5), while English genitive inflection is contextual inflection, hence only processable in very advanced stages of acquisition, hence prone to loss.³

3. Even with advanced learners, who have acquired the inflectional genitive, there is still a remarkable quantitative preference for the analytic genitive construction in their interlanguage production, cf. Fischbach (2007).

Table 4. Possessive marking in English, Gbe and the SCs, based on Aboh & Ansaldo (2006: 54)

	1	2	3	4	5	6
	POSSor- GEN-POSSee	POSSee-PREP- POSSor	POSSor-POSSee	POSSee-PREP- POSSor-GEN	POSSor-PRO-POSSee	POSSee-POSSor-GEN
English	yes <i>John's book</i>	yes <i>a friend of John</i>	yes <i>a horse leg, my leg</i>	yes <i>a friend of John's</i>	yes <i>for Jesus Christ his sake</i>	no
Gbe	yes <i>Jan sín wémà</i> John OBJ book	no	yes <i>sò fò^a</i>	no	no/?	yes <i>wémà Jan ton</i> book John GEN <i>wémà cé</i> book my
SCs	no	yes <i>(n)a buku fu mi</i> DET book for 1sg	yes <i>datra oso,</i> doctor house, <i>mi oso</i> 1sgROSS house	no	yes <i>a moy frigi</i> DET nice kite <i>en tere</i> 3sgROSS tail	no

^a I have added glosses to the Gbe and SCs examples in rows 1 through 5, but was unable to find the English translations of *sò* and *fò* in row 3.

Table 5. Possessive marking in English, Gbe and the SCs, disregarding word order and inflection

	1	2	3
	POSSor-GEN- POSSee	POSSee-[GEN-POSSor] POSSee-[POSSor-GEN]	POSSor-POSSee POSSee-POSSor
English	yes <i>for Jesus his sake</i>	yes <i>a friend of John</i>	yes <i>a horse leg, my leg</i>
Gbe	yes <i>Jan sín wémà</i> John OBJ book	yes <i>wémà Jan ton</i> book John GEN	yes <i>sò fò</i> <i>wémà cé</i> book my
SCs	yes <i>a moy frigi</i> DET nice kite <i>en tere</i> 3sg.POSS tail	yes <i>(n)a buku fu mi</i> DET book for 1sg	yes <i>datra oso,</i> doctor house, <i>mi oso</i> my house

4.4 Case marking on pronouns

Let us now turn to the case marking on pronouns. Given the fact that all languages involved in the contact situation under discussion are morphologically rather poor, Aboh & Ansaldo (2006: 54) predict ‘that contact between these languages is not likely to produce a new language that has extensive case morphology’. In this respect, the predictions of feature pool approach and the SLA approach are basically the same. It is nevertheless interesting to look at the details. Aboh & Ansaldo (2006: 55) provide the summary given in Tables 6 and 7 for weak and strong personal pronouns,⁴ respectively.

One can see that all subject/object distinctions on the weak pronouns get lost on the way from the input languages to the creoles, no matter from which language. The only exception is the third person singular, where the subject/object distinction is present.⁵ Notably, none of the languages involved has a subject/object distinction with strong pronouns, and it does not surprise one that the resulting

4. In the Surinamese Creoles, weak pronouns occur only in (unstressed) subject position and have been argued to be clitics (e.g. Veenstra 1996: 30ff). Strong pronouns occur in object position, or emphatically in subject position, or as possessive pronouns.

5. For the sake of completeness, let me mention that there is one interesting phenomenon that is not shown in the table, and which is not discussed by Aboh & Ansaldo, and which will therefore not be discussed here, namely the pronoun *unu*. This pronoun instantiates a syncretism of the first and second person plural and survives in the Surinamese Creoles through direct borrowing of this form. It is unclear how this case can be accommodated under any approach.

Table 6. Subject–object case marking distinction, personal pronouns, based on Aboh & Ansaldo (2006: 55)

	person	English	Gungbe	SCs
singular	1	yes	yes	no
	2	no	yes	no
	3	yes/yes/no	yes	yes
plural	1	yes	no	no
	2	no	no	no
	3	yes	no	no

Table 7. Subject–object case marking distinction, strong personal pronouns, based on Aboh & Ansaldo (2006: 55)

	person	English	Gungbe	SCs
singular	1	no	no	no
	2	no	no	no
	3	no	no	no
plural	1	no	no	no
	2	no	no	no
	3	no	no	no

creoles do not have it either. Aboh & Ansaldo (2006: 56) claim that the absence of distinctions in the strong forms of either language

[...] leads us to conclude that the loss of inflection is not related to language acquisition but instead to the nature of inflection itself. When inflection simply reflects a syntactic configuration, such as subject–verb or verb–object configuration, it may not be *competitive enough* in a situation of language contact to *participate in the F[eature] P[ool]* from which the emerging language derives viable combinatories. However, when inflection has some semantics (e.g. intricate relation between nominative case and topicality), it may participate in the competition and selection process and emerge in the new language.’ (my emphasis)

Again, this explanation raises a number of problems similar to the ones discussed above. First, the connection between strong form case syncretism, acquisition and ‘the nature of inflection itself’ is unclear. Is there a threshold for the feature pool (‘not competitive enough to participate’)? If so, what is this threshold? Second, what is the basis for the role or non-role of semantics? Why are not all distinctions in the weak pronouns lost? Does third person masculine have ‘some semantics’

while all other persons have none? There is no answer to such questions in Aboh & Ansaldo's paper.

Under a processing-based SLA account, the facts can be nicely accommodated. Case marking is contextual inflection and therefore absent from early interlanguages. The pronominal subject–object distinction is, however, processable at an early stage ('unmarked alignment', see Pienemann et al. (2005)), with a frequency effect concerning lexical learning for the third singular masculine pronoun.⁶

4.5 Summary: The NP in the Surinamese Creoles

In the preceding subsections we have seen that the feature pool approach leaves many open questions and cannot adequately account for the emergence of particular structures in the Surinamese Creoles. In particular, we saw that the composition of the feature pool is problematic. Features can be selected if, and only if, processing allows their perception and integration. An abstract feature can become only part of the feature pool if the speakers are able to process it. Otherwise, the speech signal contains no features, but is simply noise. In a contact situation with many non-native speakers of the pertinent varieties involved, one has to take into account that the processing of the available signal is severely constrained. These processing constraints directly contribute to the emergence of the structures under discussion. L2 processing thus provides a principled explanation for feature selection and feature mixing, preferable to the ad hoc mechanisms evoked by Aboh & Ansaldo (2006). Furthermore, it seems that SLA plays the key role in the emergence of the languages under discussion, not the typological characteristics of their input languages. Any feature pool account would have to incorporate insights concerning the role of processing in order to explain feature selection and creation of new structure.

In the next section we will turn from creolization to another type of language emergence, exemplified by Sri Lanka Malay, in order to see how the two approaches can explain such cases. We focus on the structure of the NP again, for reasons of comparability.

6. Note that the account presented here adopts Aboh & Ansaldo's assumption that the distinctions between the pronouns are one of case. However, as one reviewer points out, the distinction may, much more adequately in fact, be analyzed as a difference between clitic vs. tonic pronoun (see again Veenstra 1996). A processing-based SLA account seems to fare better also under this alternative analysis of the pronoun distinctions, since it relates the adoption of pronouns to a subject/object distinction independently of case morphology.

5. Case study 2: The NP in Sri Lanka Malay

Sri Lanka Malay is a very interesting contact language, since it

presents us with a rare case of morphologization, development of morphological material, as opposed to the more commonly observed reduction of it in contact environments. Moreover, SLM [Sri Lanka Malay] is a rare case in terms of genesis, as it offers us a case study of a language that retains original lexical items but completely shifts in grammar (Thomason & Kaufman (1988)). Both apparently rare aspects of this language find however logical explanation through a FP[feature pool]-based analysis: by looking at the composition of the FP and considering the principles of competition and selection, we can explain how such a development can take place (Aboh & Ansaldo (2006: 57)).

Before taking a look at the emergence of Sri Lanka Malay, let us briefly review the morphological properties of the three major languages involved in the contact, Malay, Sinhala/Tamil⁷ and Sri Lanka Malay. This is shown in Table 8.

Table 8. Morphology in Malay, Sinhala/Tamil and Sri Lanka Malay, based on Aboh & Ansaldo (2006: 57f).

	Malay	Sinhala/Tamil	Sri Lanka Malay
morphology	isolating, some agglutination	agglutinative, some fusion	agglutinative, incipient fusion
case-marking on full NPs	no	yes	yes

The Sri Lanka Malay lexicon is of generic Malay origin, and the case markers used in Sri Lanka Malay are based on Malay free morphemes. A rough comparison of the case system that is at issue here is given in Table 9.

The table shows that Sri Lanka Malay displays a case system that is overall very similar to that of its adstrates. Where there are differences between adstrates, Sri Lanka Malay either chooses one of the options and/or new features may emerge. For example, in Tamil but not in Sinhala, definiteness plays a special role in accusative marking, and so it does in Sri Lanka Malay. Sri Lanka Malay, however, also uses accusative marking to show emphasis, which is not attested in the adstrates. In essence, Aboh & Ansaldo (2006: 59–62) demonstrate that total congruence of the adstrates results in the same patterns in Sri Lanka Malay, while ‘lack of congruence [...] seems to leave more room to the new grammar to adopt a pattern from

7. Sinhala is an Indo-Aryan language, Tamil is a Dravidian language. ‘Both languages show agglutinative morphology with fusional tendencies. Moreover, because of over a millenium of intense contact, Sinhala and Tamil have converged typologically an show substantial similarities’ (Aboh & Ansaldo 2006: 57).

Table 9. Case onto thematic role-mapping in Sinhala/Tamil, based on Aboh & Ansaldo (2006: 59).

Case	Thematic role	Sinhala	Tamil	Sri Lanka Malay
NOM	Agent	yes	yes	yes
DAT	Patient	yes	yes	yes
ACC	Experiencer	yes	yes	yes
	Goal	yes	yes	yes
POSS	Possession	yes	yes and Location	yes
LOC	Location	no	no	yes
INSTR	Instrument	yes	yes	yes
	Source	yes	no	yes

the competing languages (presumably the one that scores higher on parameters such as discourse saliency, semantic transparency). Alternatively, the emerging language may develop a hybrid system, combining various aspects of the competing features, thus creating novel structures' (p. 62).

Does this kind of situation present a problem for an SLA-based account of creolization? In view of these facts, it is clear that such a system cannot develop in situations where participants remain at early stages of SLA, but in situations characterized by advanced L2 acquisition, so that there is fluent bilingualism on a large scale. Only if speakers have sufficient resources for processing the available case system can they adopt traits of one system into another system. In other words, these developments require a good command of the languages involved by advanced bilinguals. A look into the literature shows that this is exactly the situation in which Sri Lanka Malay came into existence:

Surely the Malays *did not create SLM by trying to acquire Tamil or Sinhala*, because if that were the case we would not have a predominantly Malay lexicon. Nor would there have been any plausible reason for Tamils/Sinhalese to restructure their own varieties in acquiring SLM; they were, after all, speakers of larger, socially more prestigious languages in which the SLM speakers would have been quite competent. Thus, what we do have is language acquisition in an informal context with *high degree of bi/multilingualism*; there is no evidence nor reason to postulate a break in transmission, an imperfect acquisition process or any other construct typical of creole ideology (Ansaldo 2008, my emphasis).

This brings us back to the question of whether it is useful to assign the emergence of the Surinamese Creoles and Sri Lanka Malay to 'different exceptional phenomena, namely creolization and admixture respectively.' (Aboh & Ansaldo 2006: 39). Our investigation has shown that the facts from Surinamese Creoles and Sri Lanka

Malay need not be accounted for with reference to some notion of exceptionality, but by a careful examination of the contact situation. In situations where SLA plays a role, outcomes can be expected that are different from those in a situation with prevalent fluent bilingualism. Features can be selected if processing allows their integration. This shows that it is indeed useful to distinguish between different kinds of contact situations.

6. Case study 3: The syllable in the Surinamese Creoles and the role of typology

Aboh & Ansaldo put forward two explicit hypotheses concerning the role of typology, based on the cases of Sri Lanka Malay and the Surinamese Creoles.

- (3) Typological predictions, from Aboh & Ansaldo (2006: 41):
 - a. Prediction 1 (based on the Surinamese Creoles):
Typological homogeneity of the source languages leads to innovation and mixing.
 - b. Prediction 2 (based on Sri Lanka Malay):
Typological non-homogeneity and dominance lead to a radical typological shift, transfer of the L2/L3 feature is heavy, innovation more limited.

We have seen, however, that it is not the typology of the languages involved that can explain the selection of certain properties in an emerging language. Rather, we saw that the ‘innovation and mixing’ observed with the Surinamese Creoles is the result of SLA, while the Sri Lanka Malay facts result from language contact in a setting with a high degree of advanced bilingualism. To further investigate the role of typology, and the correctness of the predictions in (3-a) and (3-b) we will now test Aboh & Ansaldo’s predictions with a different kind of phenomenon, the syllable structure as found in the Surinamese Creoles. We will concentrate on one language, Sranan, because the syllable structure facts are best described for this language. The facts are very similar for the other varieties, though.

In Sranan, as well as in the other Surinamese Creoles one can find a massive restructuring of the syllabic make-up of lexifier words, involving epenthesis, deletion, and metathesis. The examples in Table 10 illustrate the three processes.

A complete account of the different restructuring processes and the complex condition under which they apply can be found in Alber & Plag (2001). Table 11 summarizes the similarities and differences between the languages involved. In addition to the major substrate Gbe, the minor substrates Twi and Kikongo are also included.

Table 10. Syllabic restructuring in Sranan.

English		Sranan
a. Epenthesis		
because	>	bikasi
top	>	tapu
walk	>	waka
call	>	kari
strong	>	tranga
b. Deletion		
speak	>	piki
stand	>	tan
doctor	>	datra
nasty	>	nasi
field	>	firi
c. Metathesis		
burn	>	bron
court	>	krutu
over	>	abra

Table 11. Syllable structure in Kikongo, Twi, Gbe, English and SCs, based on Alber & Plag (2001), Plag & Schramm (2006).

Structure		Kikongo	Twi	Gbe	English	SCs
coda	nasal coda	no	yes	yes	yes	yes
	obstruent coda	no	no	no	yes	no
	coda cluster	no	no	no	yes	no
onset	obstruent-sonorant onset	yes	yes	yes	yes	yes
	obstruent-onstruent onset	no	no	yes	yes	no
	sonority violations	no	no	yes	yes	no

First we have to clarify which of the two above predictions is pertinent. We can reasonably assume that superstrate and substrate are non-homogeneous, because the substrates have rather simplex syllable structures while the superstrate has very complex syllable structures. Given that there is also a typological dominance of the substrates, this should lead to a radical typological shift (see (3-b) above). However, there is a problem in classifying the outcome. Are the new syllable types and constraints (e.g. no obstruent coda, no violation of sonority principles, the possibility of having the cluster /r.k/ in word-internal syllable contact,

as in *ar.ki* ‘listen’) ‘innovations and mixing’ (prediction 1), or rather ‘more limited innovation’ (prediction 2)? It is also not entirely clear what exactly is meant by ‘typological dominance’, and how it can be determined. Finally, it is unclear, how the specific kinds of repair strategies (epenthesis and deletion in different environments) would be explained by selection from the feature pool.

If we view the problem of syllable restructuring from an SLA angle these problems disappear. We can say that, yes, there is a typological shift (from complex superstrate syllables to unmarked creole structures), but this shift is clearly the result of SLA. The kinds of syllabic restructuring observed in SLA exactly parallel those attested in creoles. In SLA, syllabic restructuring takes place only if the learner’s L1 has tighter syllable structure constraints than L2 (e.g. Eckman 1981, Hancin-Bhatt & Bhatt 1997, Broselow et al 1998). The restructuring observable in SLA is very similar to that in loan word adaptation (e.g., Silverman et al. 1992, Yip 1993, Itô & Mester 1995a,b, Paradis 1996, Paradis & Lacharité 1997, Uffmann 2001, 2006, Boersma & Hamann 2009), in that epenthesis is the preferred repair strategy in SLA and loanword adaptation (*modulo* intervening constraints referring to, e.g., prosodic size, contiguity etc.) In psycholinguistically inspired studies it was shown that perception, i.e. processing based on L1 cues, is the key to an understanding of second language phonological development and loanword adaptation (Boersma & Hamann 2009, Hallé 2008, Strange & Shafer 2008). To summarize, the many similarities between creole languages and interlanguages with regard to syllable structure and the processes involved in its restructuring, strongly suggest that the key to an understanding of the emergence of creole structures in the realm of the syllable lies in the processes known from SLA. In contrast, the applicability of feature pool approach is unclear, and so are the nature and specificity of its typological predictions.

7. Conclusion

In this paper we have looked at three case studies in order to closer investigate the explanatory power of two rival approaches to language creation in contact situation. It was shown that the feature pool approach suffers from a number of conceptual, theoretical, and empirical problems. It was shown that this approach cannot adequately account for different outcomes of different language contact situations. The typology alone of the languages involved in the contact is not a good predictor for the outcome of language contact. The feature pool approach neglects processing constraints: one can only select from what one can process. Interlanguage processing plays a crucial role in many contact situations and differential outcomes of language contact can be attributed to its presence or absence in the contact

situation. ‘Creolization’, as in the case of the emergence of the Surinamese Creoles, is therefore not ‘exceptional’, but happens in contact situations in which SLA plays a significant role. The processing restrictions inherent in early stages of SLA play an important role in shaping the structural outcome. ‘Admixture’, as in the case of Sri Lanka Malay, is not ‘exceptional’ either, but happens in different situations characterized by fluent bilingualism, and shows different processes at work. And these processes allow structural outcomes that are very different from those found under the conditions of SLA.

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