

Creoles as interlanguages: word-formation

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1 Introduction¹

The idea that processes of second language acquisition (SLA) are highly relevant to an account of creole genesis is far from new or original (see Plag (2008a) for some discussion and further references). However, it is still controversial which kinds of SLA processes are relevant, and how much of a given creole's structures can be attributed to such processes. In my previous three Columns (Plag 2008a,b, 2009) I discussed a specific hypothesis about the relation of creolization and SLA that I labeled 'interlanguage hypothesis'.

According to this hypothesis, creoles originate as conventionalized interlanguages of an early developmental stage. The interlanguage hypothesis is highly compatible with scenarios that claim that creolization is at least a two-generation process, which involves at least two successive stages of development. For example, Veenstra (2003) argues that during the first stage, adults acquire the superstrate language to variable degrees, with interlanguages of the Basic Variety type (Perdue 1993) chiefly among them. Traditionally, this stage has also been called the pidginization stage, characterized by rudimentary acquisition of the (socially) dominant language. This stage is followed by a second stage, following the so-called target-shift, in which the next generation of speakers acquires the new medium of interethnic communication (cf., e.g., Baker 1994), and no longer the superstrate language. This next generation of speakers may consist of first language learners and second language learners of the new variety, e.g. newly arrived slaves, as in the case of

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the Caribbean plantations. Hence, at this stage, processes of SLA, first language acquisition and dialect levelling may all be going on at the same time.

In my previous columns, I took a closer look at inflectional morphology, syntax and phonology to investigate whether the linguistic patterns encountered in these areas lend themselves to an explanation in terms of SLA processes. It turned out that in all of three domains one can find compelling evidence for the crucial contribution of SLA to creole formation.

In particular, the interlanguage hypothesis can account for the loss of inflectional morphology and the preservation (if any) of primarily inherent inflection.² In the process of acquiring a second language, inflectional morphology, and so-called contextual inflection in particular, develops rather late as the predictable consequence of the limited L2 processing capacities that are characteristic of learners in the early stages of SLA. Under the interlanguage hypothesis, the striking parallelisms between the nature of inflectional morphology as observable in early interlanguages and in creoles are thus convincingly accounted for.

Similar arguments hold for syntax. An analysis of clausal negation, basic word order, and question formation showed that the interlanguage hypothesis can account for the allegedly unmarked nature of many syntactic structures across creoles. The oft-cited 'universal tendencies' in creoles result from limited L2 processing capacities in second language acquisition, and limited processability crucially also constrains transfer in interesting ways.

In the domain of phonology, with segmental inventories and syllable structure in particular, we also find good evidence for the interlanguage hypothesis. Using predictions from current SLA research one can show that the make-up of creole inventories bears witness of developments that are typical of L2 acquisition, most prominently the conflation of phonological categories and the emergence of unmarked structure. Both phenomena result from the interaction of a native language system (including its processing aspects) with a new language system and the processing problems this new system poses for the learner.

The present column turns to yet another domain, word-formation. We will take a look at word-formation in interlanguage and compare it to pertinent phenomena in creole languages. The paper is structured as follows. I will begin in the next section with an overview of the major findings concerning word-formation in SLA that seem relevant for our discussion. I will then take a look at the word-formation facts of a number of different creoles with different superstrates and

² Inherent inflection is the kind of inflection that is not strictly required by the syntax, but has some semantic content and syntactic relevance. Examples are plural marking on nouns, comparative and superlative formation with adjectives, or tense and aspect suffixes on verbs. In contrast to this, contextual inflection is triggered by syntactic rules according to which one element in the sentence requires other elements in the sentence to behave in a particular way. Subject-verb agreement is a case in point, another example would be structural case assignment. See Booij (2005) for detailed discussion of the distinction.

different substrates to see whether insights from SLA research can help to explain the creole patterns. In the last section I will summarize the results.

2 Word-formation in interlanguage: a survey

Although there is a substantial amount of research available on second language learner lexis, it is not so easy to find studies of word-formation in second language acquisition. However, some important insights have emerged from research focusing on communication strategies (e.g. Byalistok 1990, Poullisse 1993, Zimmermann 1987), from the Basic Variety project mentioned above (Broeder et al. 1993 in particular), and from (rather scarce) individual studies of word-formation development, such as Álvarez (2004) or Pavesi (1998).

From a developmental perspective, very early interlanguages are characterized by the absence of affixational morphology, both inflectional and derivational. One reason for this state of affairs is the lack of sufficient input. First, one simply needs very many different words stored in the mental lexicon to be able to start morphological segmentation based on phonological and semantic similarity. Second, morphologically complex words convey more complex, hence more specialized, meanings, with the consequence that morphologically complex words are less frequent in usage than simplex words (see, for example Plag 2003:111). And given that frequency plays a dominant role in lexical acquisition, there are smaller chances of acquiring complex words than acquiring simplex words. Another reason for the absence of especially lexical morphology, i.e. derivation and compounding, is of course that learners do not necessarily need morphologically complex words to communicate. Anything that complex words express, can also be expressed using simplex words. In other words, lexical morphology is optional, both for L1 systems and L2 systems.

The lexical resources of learners at early stages are small, but communicative situations may still place such learners in a position where they have to communicate in spite of their being at a loss for words. In such situations learners resort to a number of different strategies, some of them based on their L1 knowledge, some of them based on their L2 knowledge, and some of them based on their own creativity. Through more frequent use, the expressions used in these situations can even become part of the learner's mental lexicon. What are these strategies?

The most prevalent strategy seems to be to use what has been termed 'circumlocutions', i.e. paraphrases, descriptions or lexical phrases. For example, in her elicitation tasks (picture and process descriptions, story telling and interviews) Álvarez (2004:192) finds that 55 percent of all pertinent contexts show circumlocutions. As pointed out by Zimmermann (1987:409),

circumlocutions presuppose the acquisition of syntax to a certain extent, as they are only possible for learners beyond the stage of two-word or three-word utterances. In his paper he cites, for example, advanced learners trying to refer to a paddle-ball by using circumlocutions (“. . .the guy has a paddle with a ball attached to this . . . with a string that kind of you know . . .”). Notably, in Álvarez’s study, the prevalence of circumlocutions holds across proficiency levels. Learners with limited lexical knowledge in their L2 thus primarily resort to syntactic rather than lexical means to refer to or to label new entities in discourse.

Even though circumlocutions seem to be dominant in SLA data, second language learners also make use of word-formation devices proper, including compounding, suffixation and conversion/multifunctionality³, which we will discuss here. No information on the interlanguage development of prefixation and reduplication was available to me. The absence of any mention of these two kinds of processes in the literature I consulted can, however, be interpreted as a sure sign that these processes did not occur in the data of the pertinent studies, which report on the second language acquisition of English, German, French, Swedish and Dutch by learners of different native languages. Information on the role of other types of word-formation in SLA, such as templatic root-based formations (as in Semitic languages), truncations, blends, or abbreviations was also not available.

Practically all studies of interlanguage word-formation (e.g. Broeder et al. 1993, 1996, Álvarez 2004, Pavesi 1994) agree that of the three word-formation processes mentioned above, compounding is the most frequent process employed by the learners. This also holds for L1 acquisition, where very young learners resort to compounding at a stage where their syntax is still extremely limited (e.g. Clark 1993). Broeder et al. (1993) show that in the interlanguage of their Basic Variety speakers, compounds tend to be used instead of target language derivatives. Across these studies, L2 learners use compounding innovatively as a compensatory strategy, as illustrated by the following examples from English and Dutch interlanguage:

(1)	interlanguage form	target form	target language
	<i>shop-man</i>	<i>manager</i>	English
	<i>bread-man</i>	<i>baker</i>	English
	<i>Nederland-vrouw</i>	<i>Nederlandse</i>	Dutch
	‘Netherlands-woman’	‘Dutch (female)’	

³ I will remain agnostic as to the theoretical status of conversion/zero-affixation/multifunctionality. Given the limited lexical resources of second language learners, which manifests itself also in the lack of syntactic category knowledge, an account along the lines of underspecified, multifunctional items seems to suggest itself. In the present paper, nothing hinges, however, on that particular analysis, and I will use ‘conversion’ or ‘multifunctional(ity)’ interchangeably, as merely descriptive terms.

<i>fiets-baas</i>	<i>fietsenhandelaar</i>	Dutch
'bicycle boss'	'bicycle dealer'	
<i>fiets-kamer</i>	<i>fietsenhok</i>	Dutch
'bicycle room'	'bicycle shed'	

(from Broeder et al. 1993:59f)

<i>paper bird</i>	<i>kite</i>	English
<i>soft maker</i>	<i>softener</i>	English
<i>dry machine</i>	<i>tumble dryer</i>	English
<i>camping house</i>	<i>tent</i>	English

(from Álvarez 2004:184-186)

Across different target and native languages, the formation of noun-noun constructs is the most frequent compounding process. With regard to headedness, one can observe clear transfer effects. In Dutch interlanguage, for example, target-like head-final NN compounds are generally dominant, but, crucially, Arabic learners show structures based on their native language principles. For example, some Arabic-speaking learners of Dutch in the Broeder et al. (1993) study prefer head-initial N-preposition-N structures (which are common in spoken Arabic) where Dutch has head-final NN structures, whereas such head-initial structures are completely absent from the data obtained from the Turkish learners, whose native language is head-final. Similarly, the Spanish learners are the only learners of Swedish in that study who show non-target like sequencing of head and modifier, i.e. head-initial NNs. Head-initial NNs and VNs are also reported for Spanish-English learners (Álvarez 2004:184f), who produce things like *car baby* 'pram' or *open tin* 'tin opener', or *sell ice-cream* 'ice cream man', which are clearly modeled on the basis of analogous Spanish structures. Rüdiger Zimmermann (personal communication, 2008) reports anecdotal data from Persian learners of German who also transfer headedness properties from their L1 into their interlanguage. In their German, they use compounds whose semantic head is final, but assign gender to these compounds on the basis of the initial noun's gender, i.e. the non-head in L1 German, as shown in (2). In Farsi, compounding is head-initial, which means that the grammatical properties of the initial constituent determine the properties of the compound as a whole, as in *rah-e-ahan*, lit. 'road-of-iron', i.e. 'railroad'. Obviously, for these learners the grammatical head of German compounds is also initial.

- (2) *das Eisenbahn*
 DEF-neuter iron (neuter)-train (masc)
 ‘the railroad’
- die Milchtopf*
 DEF-fem milk (fem)-pot (masc)
 ‘the milkpot’
- der Arschloch*
 DEF-masc ass (masc)-hole (neuter)
 ‘the asshole’

Suffixation is much less common in interlanguages. Schmitt and Meara (1997) measured second language learners’ knowledge of eleven derivational (and three inflectional) suffixes over one year and arrived at the result that “the subjects as a group have a rather weak awareness of derivative suffixes and their use, although they also lack convincing mastery of even inflectional suffixes“ (p. 26). In their study of instructed SLA, Schmitt & Zimmerman (2002:163) find that “teachers cannot assume that their students will absorb the derivative forms of a word family automatically from exposure“. Álvarez (2004: chapter 6) only observes 13 percent suffixed forms as against 76 percent compounds (and 11 percent converted items) in her data,⁴ and Broeder et al. (1993:56) find “hardly any trace of productive derivation” in their data. The lack of affixationally derived forms in that study could in part be attributed to the fact that the use of suffixation increases as proficiency increases (see Álvarez 2004:194, Broeder et al 1993:58). This is a remarkable difference from compounding, which remains strong across all proficiency levels. In English interlanguage, agentive *-er* is the most common interlanguage suffix (e.g. Álvarez 2004:131, Broeder et al 1993:58), in spite of its being rivalled by compounds using the word for *man* or *woman* as the head, as shown in the first three examples in (1). There is good evidence that learners may use forms that are morphologically complex in the target language but unanalyzed by the learner (e.g. Broeder et al. 1993:58), but many attested forms also show the productive use of a range of suffixes by learners, especially more advanced ones.⁵ Note that ‘productive use’ does not necessarily mean ‘target-like use’, but simply (and in accordance with standard definitions, cf. Plag 2006) denotes the application of an affix to form new words with that affix. Compare the forms in (3).

⁴ These figures refer to what Álvarez labels ‘L2-based innovations’, i.e. forms that are based on bases and suffixes from the target language. See Álvarez (2004:98) for more detailed discussion.

⁵ Note that for language comprehension, there is some evidence that even less advanced learners are already sensitive to productivity differences in the target language (Lowie 2005, but see Lessard & Levison 2001 for differing findings).

(3) interlanguage form	target form
<i>washer</i>	<i>sink</i>
<i>connector</i>	<i>plug</i>
<i>flying</i>	<i>plane</i>
<i>provement</i>	<i>proof</i>
<i>wearing</i>	<i>dressed</i>
<i>lighten</i>	<i>highlight</i>

(from Alvarez 2004:136ff)

<i>consumation</i>	<i>consumption</i>
<i>cruciality</i>	<i>crucialness</i>
<i>tensious</i>	<i>tense</i>
<i>divorcion</i>	<i>divorce</i>
<i>cowardness</i>	<i>cowardice</i>
<i>derivate</i>	<i>derive</i>

(from Callies & Szczesniak 2007)

<i>cruelism</i>	<i>cruelty</i>
<i>cowardish</i>	<i>cowardly</i>
<i>unsmell</i>	<i>air out (to remove the smell)</i>
<i>nocent</i>	<i>guilty</i>

(from Nemser 1991: 348, 357)

These data show that overgeneralizations and paradigmatic formations (e.g. back-formations) play an important role at advanced stages of second language acquisition. Thus, *-ism* is used as a general abstract noun-forming suffix, *-ion/-ation* is generalized to cases where stem allomorphy or conversion applies in L1, and *derivate* and *nocent* are back-formed on the basis of the more complex, paradigmatically related forms *derivation* and *innocent*, respectively.

Let us finally turn to conversion. The findings on the role of conversion in SLA are extremely rare, and differ significantly. While Álvarez (2004:146) finds only 11 percent of all morphologically complex forms⁶ in her English interlanguage data being converted items, Pavesi (1998) counts 43 percent such words in her corpus. Examples are *a press* ‘the action of pressing’, *breaks* ‘what is left after breaking something’ (from Pavesi 1998:220), or *your walk* ‘your way’, *the cook* ‘the food’ (from Álvarez 2004:149, 152). For Italian interlanguage, Dotti (1992) found 50 percent, Bozzone Costa (1994) only 15.4 percent conversion. All of the studies mentioned agree,

⁶ The term ‘morphologically complex’ only refers to lexical morphology, excluding inflection.

however, that the use of conversion decreases remarkably after the initial stages. For example, in Bozzone Costa's study, the initial learners produced 40.8 percent of the converted items. Pavesi even claims that conversion is "the most productive word-formation process, or most productive, when learners begin to coin complex words." Notably, in English interlanguage, the productivity of conversion "extends to later stages with denominal verbs actually being most productive in more competent L2 speakers" (Pavesi 1998:223).

Which types of conversion can be found? With regard to the distribution of different kinds of word-class changes it has been frequently observed (e.g. Odlin 1983, 1986, Pavesi 1998) that conversion (from mostly verbs) into nouns of action and result is most frequent (see again the examples in the preceding paragraph). Deriving agent, instrument and place nouns is rare, and so is the creation of verbs from nouns (unlike in English target language). Deadjectival verbs are much more common. Another interesting observation has been made by both Pavesi (1998) and Álvarez (2004) concerning the semantics of the process in interlanguage. On the basis of their respective data sets they independently conclude that conversion is favored with cases of transposition, i.e. in those cases where the meaning difference between the two words is minimal (e.g. *explain* 'explanation', *perform* 'performance'). This would not only account for the preponderance of action and result nominals derived from verbs among all cases of conversion, but would also speak in favor of a theoretical analysis of the phenomenon as one involving multifunctionality of underspecified items rather than of one involving a directed process of conversion or zero-affixation. If lexical entries are underspecified, one would generally expect the emergence of items of different word classes whose meaning is very close to each other, while a process of conversion or zero-affixation should typically involve the addition of a more or less clearly discernible meaning component (such as causative or ornative) that increases the semantic distance between the derived word and its base.

An additional argument for an underspecification analysis is the fact that conversion is most robustly attested with initial learners. It can be assumed that word-class knowledge is not well entrenched (if at all represented) at initial stages of acquisition, such that flexible syntactic usage of known forms (with a known, but still underspecified meaning) is a convenient way to fill lexical gaps, especially for beginning learners of the language.

In the following section we will take a look at some creoles to see how word-formation in these languages compares to the SLA situation. If creoles are conventionalized interlanguages, we would expect to find word-formation systems with the following properties:

- frequent use of circumlocutions

- very little affixation in comparison to the lexifier
- in cases of affixation, overgeneralizations and innovative use of inherited affixes
- very productive compounding, with transfer effects concerning headedness
- productive multifunctionality

3 Word-formation in creoles

Until recently, work on word-formation in creole languages was rather scarce, probably due to the ill-conceived idea that “morphology [is] essentially alien to creole languages” (Seuren and Wekker 1986:66).⁷ Pioneering work in that area was provided by Mühlhäusler (1979, 1983) and Hancock (1979), but more recently there have been quite a few studies that have dealt with word-formation in various creoles. To mention but a few: Dijkhoff (1993) on Spanish/Portuguese-based Papiamentu, Brousseau (1984), Brousseau et al. (1989), Degraff (2001) and Lefebvre (2003) on French-based Haitian, Koefoed/Tarenskeen (1996), Plag (2001), Braun/Plag (2003) and Braun (2009) on English-based Sranan, Prescod (2008) on English-based Vincentian Creole, Steinkrüger (2003) on Spanish-based Philippine Creole. All these studies have provided substantial evidence for the existence of lexical morphology in creole languages.⁸ In the following I will discuss the findings of these (and other) studies in the light of the insights from second language acquisition research.

3.1. Circumlocutions

Mühlhäusler (1979, 1983) collected an impressive amount of expressions in Tok Pisin that fall into that category. These expressions include on the one hand rather lengthy explanations which presumably do not have the status of lexical entries (e.g. the oft-cited piano paraphrase *big fellow box, white fellow master fight him plenty too much, he cry*, Mühlhäusler 1983:468),⁹ but more condensed phrases that have lexicalized status are readily available. A large set of expressions uses

⁷ Cf. also Thomason’s comment in her textbook on contact languages that “[m]ost pidgins and creoles either lack morphology entirely or have very limited morphological resources compared with those of the lexifier and other input languages.” (Thomason 2001:168).

⁸ For instance, Koefoed/Tarenskeen (1996:120) count 36 percent complex words in a word list of Modern Sranan, Braun/Plag (2003) arrive at 41 percent complex words in Schumann’s (1783) dictionary of 18th century Sranan.

⁹ Jeff Siegel (personal communication, 2009) points out that there is no evidence that the paraphrase was a lexical item rather than an initial description (if it ever occurred at all outside colonial folklore).

the general preposition *bilong*, as in *man bilong save* ‘expert’ (lit. ‘man of know’) or *man bilong stil* ‘thief’ (lit. ‘man of steal’), other phrase-level items describe states (as in *bel i hevi* ‘be sad’, lit. ‘belly he heavy’, *bel i gut* ‘be contented’, lit. ‘belly he good’) or refer to specific events with the use of a light verb *mekim* (*mekim hos* ‘to saddle’, lit. ‘make horse’, or *mekim siga* ‘to smoke’, lit. ‘make cigar’).

Such productive patterns raise, however, the theoretical issue whether they should still be regarded as circumlocutions or rather as compounds. For example, in the preceding section I discussed the problem of headedness with data from Broeder et al. (1993), who treat N-preposition-N structures of their Arabic speakers as compounds. The status of such constructs as either compounds or lexicalized phrases (and thus circumlocutions) is, however, debatable. For example, many authors regard certain phrasal expressions such as French *salle à manger* ‘dining room’ as compounds, a view contested by others (see, for example, Booij 2007:83). To solve the terminological problem, Booij (op. cit.) introduces the category of ‘constructional idiom’ for fixed syntactic patterns that serve to create new lexical expressions and in which “some positions may be filled by all kinds of words of the right category, whereas other positions are filled by specific morphemes or words”. We will treat constructional idioms as cases of circumlocutions in this paper, but nothing really hinges on this decision. Clearly, constructional idioms are both lexical and syntactic in nature, and what is important for our discussion is that this lexico-syntactic way of enriching the lexicon is, as we will see, fairly well exploited in creole languages. The status of constructional idioms in interlanguages is largely unclear, although the data presented in Broeder et al. (1993) strongly suggest that constructional idioms also play a role there.

Papiamentu features such constructional idioms in abundance. In her rather comprehensive treatment of Papiamentu word-formation Dijkhoff (1993) lists hundreds of left-headed complex nominal expressions with the preposition *di* ‘of’ in her appendix, as in *hòmber di fishi* ‘expert’ (lit. ‘man-of-trade’), *kabes di karpachi* ‘skull’ (lit. ‘head-of-skull’),¹⁰ *kuminda di atardi* ‘dinner’ (lit. ‘food-of-afternoon’), about three dozens involving the preposition *pa* ‘for’ (e.g. *kama pa bebi* ‘cradle’, lit. ‘bed-for-baby’, *rèki pa buki* ‘book-shelves’, lit. ‘rack-for-book’, *awa pa baña kuné* ‘bath-water’, lit. ‘water-for-shower-with it’), and a few involving the prepositions *den* ‘in’ or *na* ‘at/in’ (e.g. *karni den gargante* ‘tonsil’, lit. ‘flesh-at-throat’, *panlevi na suku* ‘sweet’, lit. ‘soft cookies-at-sugar’). The number of multi-word lexemes listed that are not part of patterns of constructional idioms, is much lower. Slightly more than 20 of these are given by Dijkhoff, the majority of which are names of plants (e.g. *amor sin fin* ‘love without end’ or *kòfi ku lechi* ‘coffee and milk’).

In Sranan, we also find some lexicalized circumlocutions and constructional idioms, but they are much less numerous than constructional idioms in Papiamentu. In her study of a number of early texts and dictionaries, Braun (2009) comes up with a number of complex phrases that are very similar in structure to the ones mentioned for Tok Pisin and Papiamentu.

(4) phrase	glosses	translation
<i>njam dótti</i>	‘eat-dirt’	‘a type of disease’
<i>tîn na dri</i>	‘ten-and-three’	‘thirteen’
<i>jâgi man-na-dóro</i>	‘drive away-man-to-door’	‘banana mush’
<i>watra va hai</i>	‘water-of-eye’	‘tear(s)’
<i>kassi fo klossi</i>	‘case-for-clothes’	‘wardrobe’
<i>blakka va hai</i>	‘black-of-eye’	‘eyeball’
<i>blakka vo tappo</i>	‘black-of-top/heaven’	‘clouds’
<i>feya fo Gado</i>	‘fire-of-God’	‘lightning’
<i>fienga foe fóetoe</i>	‘finger-of-foot/leg’	‘toes’
<i>hai foe fóetoe</i>	‘eye-of-foot/leg’	‘ankle(s)’

Braun also observes that almost all Early Sranan *X-fo-X* items correspond to simplexes or compounds in Modern Sranan, which seems to support Mühlhäusler’s contention that circumlocutions occur at early stages of pidgin/creole development. But, contra Mühlhäusler (1997:137), they are not generally restricted to the jargon stage.

In sum, we can say on the basis of data from three different creole languages with different lexifiers and substrates that all of them show clear evidence of circumlocutions and of constructional idioms as devices to enrich the lexicon in situations where limited lexical resources are available, as is typically the case in early SLA. The degree to which circumlocutions and constructional idioms is exploited differs, however, remarkably across creole languages. While in some creoles constructional idioms are very important (e.g. in Papiamentu), compounding is the preferred strategy in others (e.g. Sranan or Haitian), as we will see in the following section.

¹⁰ Many thanks to Silvia Kouwenberg and Yolanda Rivera Castillo for their help in providing glosses for the Papiamentu words I was unable to find in the sources available to me.

3.2. Compounding

Compounding (especially noun-noun compounding) seems to be the most important and most productive word-formation process across creole languages. (5a-c) illustrates creole compounding with data from Early Sranan, Papiamentu and Haitian, respectively.

(5)	phrase	glosses	translation
a.	<i>bótro-wátra</i>	‘butter-water’	‘buttermilk’
	<i>fóetoe-tapoe</i>	‘foot/leg-top’	‘lap’
	<i>zoute bali</i>	‘salt-barrel’	‘salt shaker’
	<i>muffe neti</i>	‘mouth-night’	‘dusk’
	<i>watra-muffe</i>	‘water-mouth’	‘saliva’
			(Sranan, Braun 2009, section 7.2.6.)
b.	<i>angel wadadó</i>	‘angel-guardian’	‘guardian angel’
	<i>kamber patras</i>	‘room-back’	‘back-room’
	<i>pan bati</i>	‘bread whipped’	‘a special kind of pancake’
	<i>dams seńorita</i>	‘lady virgin’	‘unmarried older woman’
			(Papiamentu, Dijkhoff 1993:100f)
c.	<i>po-bouch</i>	‘skin-mouth’	‘lip’
	<i>kalbas-tèt</i>	‘calabash-head’	‘skull’
	<i>tèt-di</i>	‘head-strong’	‘stubborn(ness)’
	<i>melon-dlo</i>	‘melon-water’	‘watermelon’
			(Haitian, Lefebvre 1998:335ff)

There are some interesting parallels and differences between compounding in SLA and creoles. First, there is the general preponderance of compounding (especially noun-noun) in interlanguage and many creoles. However, there seem to be creoles where noun-noun compounding is not very productive, e.g. Papiamentu (Dijkhoff 1993:166), but such statements are highly dependent on the kind of analysis one favors. If, for example, the preposition in the N-P-N naming units mentioned in the previous section is analyzed as a linking element (see, for example, Steinkrüger (1993) for such an analysis), the situation changes dramatically and we get highly productive nominal compounding even in Papiamentu, and in Spanish-based Philippine Creole (Steinkrüger 1993).

Second, the headedness facts are very similar, and I consider this to be a decisive argument in favor of the role of SLA in the emergence of creole word-formation. Practically all studies show

that the order of head and modifier in creole compounds is the same as in the lexifier, analogous to what is found in SLA, irrespective of L1. There is, however, an important difference between creoles and interlanguages concerning the few cases where the order of head and modifier deviates from that of the lexifier. In contrast to interlanguages, attested cases of deviating headedness in creoles are not straightforwardly explainable by substratum influence, since in the substrate languages one does not find corresponding compounds with the same kind of headedness. For example, in Sranan the few exceptionally left-headed compounds have right-headed counterparts in the substrates. Compare left-headed *watra-hai* ‘tears’, (lit. ‘water-eye’) with right-headed *ni-sú* (lit. eye-water) ‘tears’ from Twi, or Sranan *horrowatra* ‘waterhole’ (lit. ‘hole-water’) with Ewe *tsi-dõ* (lit. ‘water-hole’) (Braun 2009: 7.2.6. for similar cases in Sranan). Based on distributional evidence Braun convincingly suggests that the left-headed structures probably arose from constructional idioms involving the preposition *fo*, as in (5). For instance, *watra-hai* has an attested competing form *watra va hai*.

Third, creoles have developed new productive patterns that are not found (or not productively found) in the lexifier. For example, V-N compounds are found in Berbice Dutch (Kouwenberg 1995: 239), Vincentian (Prescod 2008), Papiamentu (Dijkhoff 1993: 138), Tok Pisin (Mühlhäusler 1979: 383, 388, 392), Jamaican (Farquharson 2007), and Early Sranan Braun 2009:7.2.8.), although this pattern is not very productive in at least two of the lexifiers involved (i.e. English and Dutch). Innovative use of nominal compounding is also attested in interlanguages, but the extent of this phenomenon seems to be quite limited in SLA and much more prevalent in creoles.

Fourth, there is another phenomenon to be found in creole and SLA compounding, but it is unclear how widespread it is in SLA. In-depth studies such as Brousseau (1984) or Braun (2009) have shown that large sets of creole compounds follow semantic patterns taken over from the substrate languages. For example, in Ewe as well as in Sranan, the word for *water* is used in compounds to denote all kinds of liquids (e.g. *kokronoto-watra*, lit. ‘coconut-water’ = ‘coconut milk’, *bobbiwatra*, lit. ‘breast-water’ = ‘mother’s milk’).¹¹ In addition there are numerous compounds whose make-up and semantics is clearly modeled after certain compounds from the substrate (e.g. *hai-buba* lit. ‘eye-skin’ = ‘eyelid’, see Braun 2009: section 7.2.6). In interlanguages, similar kinds of patterns can be found. Nemser (1991) labels such forms ‘loan translations’ and cites numerous pertinent compounds produced by German learners of English, such as *side-jump* ‘extramarital adventure’ < German *Seitensprung*, *ill-car* ‘ambulance’ < German *Krankenwagen*, or *lecture-free* ‘without classes’ < German *vorlesungsfrei*.

¹¹ Similar facts hold for Haitian and Fongbe (see Brousseau 1989, Lefebvre 1998).

To summarize, the comparison of compounding in creoles and interlanguages has shown that large parts of creole compounding can be accounted for along the lines of SLA. In both SLA and creoles, compounding is the most important word-formation device, headedness is determined by the superstrate/target language, and loan translations of L1 compounds can be found.

There are, however, also two properties where creoles and interlanguages seem to differ. Violations of dominant head direction in creoles and SLA seem to warrant different explanations, namely transfer in SLA, and internal developments (from constructional idiom to compound) in creoles. Furthermore, the development of innovative patterns is much more pronounced in creoles, probably due to the fact that an advanced lexical development in SLA usually goes together with a better acquisition of existing, i.e. target-like and thus non-innovative, word-formation patterns (e.g. Morin 2003). Overall, the differences between SLA compounding and creole compounding can receive explanations that do not seriously challenge the general idea that creole compounding largely results from SLA.

3.3. Affixation¹²

Creoles show vast differences with regard to the degrees and kinds of derivational affixation they possess. On the one hand there are creoles that have adopted hardly any of the affixes of the lexifier, while other creoles have a whole range of superstrate affixes. For example, Sranan has developed its own rather limited set of affixes, usually on the basis of free morphemes from the lexifier, and is devoid of any English lexical affixes (e.g. Plag 2001, Braun & Plag 2003, Braun 2009), Berbice Dutch does not manifest any Dutch derivational affix (Kouwenberg 1994:229ff). Haitian, on the other hand, has been claimed to have about 70 derivational suffixes by Hall (1953), but applying strict criteria, Brousseau et al. (1989) arrive at only six productive affixes (five of which originated in French affixes).¹³ Papiamentu (see Dijkhoff 1993: section 3.2) also has dozens of non-productive suffixes, but only three fully productive ones: *-mentu* (< Spanish *-miento*), *-dó* (< Spanish *-dor*) and *-shon* (< Spanish *-ción*). Vincentian Creole has twelve productive nominalizing suffixes of English origin (Prescod 2008). Notably, in cases where lexifier affixes have made it into the creole as productive affixes, often slight to severe changes in the meaning and selectional properties of these affixes can be observed.

¹² I use the term affixation in this paper only for overt bound morphemes. Zero-affixation/conversion is dealt with separately in the section to follow.

¹³ Lefebvre (1998, 2002) counts nine productive affixes, but some of them are homophones, which at least partly explains the discrepancy. Degraff (2001) counts and discusses 16 affixes in Haitian.

In (6) I list some data from Sranan and Haitian that illustrate creole affixes which have emerged from free lexifier morphemes, (7) gives instances of creole affixes taken over from the lexifier (from Papiamentu, Vincentian, and Haitian), and (8) exemplifies creole affixes that are adopted from the substratum (from Philippine Spanish Creole and Berbice Dutch).

(6) a. (Early) Sranan¹⁴

person suffix -man (< Engl. *man*)

bótomán (boat-*man*) ‘oarsman’

lésiman (lazy-*man*) ‘lazybones’

hóntiman (hunt-*man*) ‘hunter’

gender prefix *man-* and *uman-* (< Engl. *man/woman*)

mann-doksi (*man*-duck) ‘drake’

uman doksi (*uman*-duck) ‘duck’

abstract noun suffixes -sanni and -fasi (< Engl. *something/fashion*)

korisanni (deceive-*sanni*) ‘deceit’

laufasi (stupid-*fasi*) ‘stupidity’

(Braun 2009, Braun & Plag 2003)

b. Haitian

diminutive prefix *ti-* (< French *petit*)

ti-chat (*ti*-cat) ‘kitten’

ti-mounn (*ti*-person) ‘child’

ti-dlo (*ti*-water) ‘pond’

(Brousseau et al. 1989, Lefebvre 1998)

(7) a. Papiamentu

agent/place suffix -dó (< Spanish *-dor*, as in *contador* ‘accountant’)

bringa-dó (fight-*dó*) ‘fighter’

mira-dó (watch-*dó*) ‘observation-post’

action noun suffix -mentu (< Spanish *-miento*, as in *birth*)

papia-mentu (talk-*mentu*) ‘Papiamentu language’

kome-mentu (eat-*mentu*) ‘dinner-party’

(Dijkhoff 1993)

¹⁴ The status of the three formatives as suffixes (instead of compound constituents) is based on the usual distributional and semantic arguments (cf. Plag 2003: 72f), i.e. the suffixes show slightly different semantics from their free counterparts. Wilner (2007) also lists *-man* as a suffix, but not *fasi* ‘way, manner, quality’, although his many entries with words in *-fasi* (e.g. *bigifasi* ‘haughtiness’, *gridifasi* ‘greed’, *kruktufasi* ‘unrighteousness’, *matifasi* ‘friendship’) would suggest the same analysis.

b. Vincentian

action noun suffix -ri (< English *-ery*, as in *slavery*)

tiif-ri (thieve-ri) ‘theft’

reip-ri (rape-ri) ‘rape’

agent/instrument noun suffix -ii (< English *-ee*, as in *employee*)

chap-ii (chop-ii) ‘cutlass’

wach-ii (watch-ii) ‘watchman’

chrein-ii (train-ii) ‘bra’

(Prescod 2008)

c. Haitian

attributive suffix -è (< French *-eur*, as in *compteur* ‘counter’)

langaj-è (language-è) ‘chatterbox’

odyans-è (joke-è) ‘joker’

nominalizing suffix -ay (< French *-age*, as in *chauffage* ‘heating’)

kontr-ay (oppose-ay) ‘opposition’

kapon-ay (intimidate-ay) ‘intimidation’

(Brousseau et al. 1989, Lefebvre 1998)

(8) a. Philippine Spanish Creole

adjectival prefix *ma-* (< Hiligaynon *ma-*)

ma-pyédra (*ma*-stone) ‘stony, full of stones’

abstract noun prefix *paka-* (< Hiligaynon *pagka-*)

paka-alísto (*paka*-alert) ‘talent’

(Steinkrüger 2003:257)

b. Berbice Dutch

nominalizing suffix -jɛ (< Eastern Ijo *-yé* ‘thing, one’)

doto-jɛ (dead-*jɛ*) ‘dead one’

jerma-jɛ (woman-*jɛ*) ‘woman type’

fɛtɛ-jɛ (fat-*jɛ*) ‘fat one’

(Kouwenberg 1994:232ff, Arends et al. 1995:105)

If we want to generalize over this rather heterogeneous set of languages and their diverse derivational morphologies, the following points emerge. First, creoles have much less derivational

affixation than the richest of its input languages.¹⁵ For example, in a rather comprehensive study of the productivity of English affixation Hay and Baayen (2002) investigate 80 affixes, and Plag (2004) includes 75 affixes in his study. Compared to these figures, even more than a dozen affixes (as in Vincentian Creole) constitute a small quantity. Or consider French against Haitian: for the former, scholars (e.g. Dubois 1962, Brousseau & Nikiema 2001) have also postulated more than 80 suffixes, compared to the ten to 16 for Haitian assumed in the recent literature (see above).¹⁶ This massive reduction in the number of affixes is parallel to what we see happening in interlanguages. Second, creoles that arose under conditions of very limited access to the superstrate, such as Sranan or Saramaccan, generally show an even greater reduction of superstratal affixes, up to the complete lack thereof. This effect of limited access is expected under an SLA approach to creoles and creolization, since more limited access precludes more advanced stages of acquisition, hence leads to even less affixational morphology. Third, we often find in creoles the development of novel derivational categories that recycle lexifier or substrate morphemes (either bound or free) for new purposes. While sporadic overgeneralizations and innovations are also attested for interlanguages, the systematic emergence of new derivational processes has not been reported in the literature on interlanguage derivation. The situation concerning innovations is thus very similar in nature to that in compounding, and the same explanation can be evoked: More advanced lexical development in SLA usually goes together with more target-like, and thus non-innovative, word-formation patterns, while creolization involves the creation of a new language with its own word-formation resources.

3.4. Conversion

Multifunctionality in creoles has attracted a lot of attention in creole studies (see, for example, Lefebvre 2001, Braun 2009 for an overview and further references). The proportion of multifunctional items in creole languages is very hard to determine, but researchers agree that - across creoles - conversion is an important means of enriching the lexicon.¹⁷ With regard to which

¹⁵ This generalization entails that a creole may end up having more affixation than one of its input languages. Such a case is, for example, French-based Haitian Creole, which has more derivational affixation than its major substrate language Fongbe, but crucially much less than French.

¹⁶ In this context, it is also instructive to look at vocabulary sizes and word frequency distributions. In a recent study of Tok Pisin and English parallel texts, Robinson (2008) showed that Tok Pisin has a significantly smaller vocabulary than English. If we now take into account that lexical richness largely depends on the number morphologically derived words (e.g. Chitashvili and Baayen 1993, Plag et al. 1999), it can be safely assumed that the smaller lexicon of Tok Pisin (vis-à-vis English) is the natural consequence of a more limited set of derivational affixes.

¹⁷ Braun (2009: chapter 6), for example, counts approximately 35 percent multifunctional items among the morphologically simplex words in Schumann's (1783) dictionary. Lefebvre mentions that, in Valdman's et al. (1981) Haitian dictionary, more than three hundred lexical items are identified as having more than one function. Most

kinds of conversions are to be found, there is considerable variation across creole languages (see Dijkhoff 1993:96ff for a discussion of the differences between Tok Pisin, Papiamentu, Haitian and Sranan), with certain restrictions applying in some creoles, but not in others. For example, while verbs in Sranan or Papiamentu may be used transitively or intransitively without overt marking, Tok Pisin necessitates an overt suffix (*-im*, < English *him*) for transitivizing stems. Braun (2009: chapter 6) gives an impressive list of attested multifunctionalities in Early Sranan, shown in (9), which exemplifies the versatility of the process.^{18, 19}

(9)	N	V									<i>(drinki</i> ‘drink, to drink’)
	N	V	A								<i>(krien</i> ‘light, to clean, clean’)
		V	A								<i>(ripe</i> ‘to ripen, ripe’)
		V	A	Adv							<i>(róntoe</i> ‘to surround, round, around’)
	N	V	A	Adv							<i>(krukkuutu</i> ‘injustice, be wrong, crooked, wrong’)
	N		A		Prep						<i>(middri</i> ‘middle, middle, among’)
	N		A	Adv	Prep						<i>(bakka</i> ‘back, last, back, behind’)
	N	V				Conj					<i>(takki</i> ‘talk, to say, that’)
		V			Prep	Conj					<i>(leki</i> ‘to resemble, like, than/as/like’)
		V		Adv		Conj					<i>(kaba</i> ‘to finish, already, but’)
				Adv	Prep	Conj					<i>(te</i> ‘much, until, until’)
						Conj	Det	Pron			<i>(dissi</i> ‘who, this, when’)
							Det	Pron	Num		<i>(wan,</i> ‘one’)

A comparison with conversion in SLA yields the following results. Both in SLA and in creoles, conversion is used to enrich the lexicon by employing apparently semantically and syntactically underspecified forms in different syntactic environments. The same holds, incidentally, also in first language acquisition (Clark 1993: 116–117). Braun (2009) notes that those multifunctionalities are

recently, Mühlhäusler (2008) has shown that in Pijin Norf’k conversion is much less important than in other creoles, Tok Pisin in particular. He explains this as the consequence of the rather restricted domains and functions of this creole.
¹⁸ Note that neither Braun nor I claim that all of these multifunctionalities necessarily have arisen through processes of word-formation. Especially the multifunctionalities involving function words (such as conjunctions and determiners) may well be the product of grammaticalization or relexification (see, for example, Bruyn 1996, Plag 2002 for discussion). Thanks to Anne-Marie Brousseau for raising this point.

¹⁹ N = ‘noun’, V = ‘verb’, A = ‘adjective’, Adv = ‘adverb’, Prep = ‘preposition’, Conj = ‘conjunction’, Det = ‘determiner’, Pron = ‘pronoun’, Num = ‘numeral’.

especially abundant where the meaning of the related forms are especially close to each other, which mirrors the situation described by Álvarez (2004) or Pavesi (1998) for SLA.

3.5. Reduplication

Judging only from the number of studies devoted to this set of processes, one could get the impression that reduplication is the most important word-formation process in creolization (see, e.g., the papers in Kouwenberg 2003). The pertinent studies show a wide range of reduplication processes across a wide range of creoles with a wide range of lexifiers and substrates. A detailed survey of these studies is, however, not necessary for our purposes, since, as already mentioned above, in the SLA literature reduplication plays no role whatsoever. The absence of reduplication from the SLA literature is probably an artefact of sampling of the languages investigated. Available SLA studies focus on largely reduplication-free Indo-European target languages with native languages that also have hardly any reduplication. The lack of reduplication in both target and native languages may explain why the second language learners of these languages do not use this process at all. The situation is different for creoles, where most creoles that do have reduplication also have substrates with reduplication, which can be interpreted as general evidence for transfer, hence indirectly as evidence for SLA.

3.6. Other processes

The literature on creole word-formation also sometimes mentions processes that use non-concatenative means of derivation, such as stress or tone shift. For example, Papiamentu regularly forms past participles by stress shift. Stress shift also occurs (though less systematically) in the derivation of nouns from verbs (*kórta* ‘to cut - *kòrtá* ‘a cut’). Pairs of nouns and verbs can also be derived via tone shift, with complex restrictions being at work concerning the phonology of eligible bases (e.g. HL *awa* ‘water’ - LH *awa* ‘to rinse with water’, HL *anker* ‘anchor’ - LH *anker* ‘to anchor’, Dijkhoff 1993:88ff).

Such instances of prosodic word-formation are absent from the studies of interlanguage word-formation and seem to constitute a development of its own kind.

4 Conclusion

In this column I reviewed the question whether the word-formation patterns we find in creole languages are likely to have emerged through SLA. It turned out that there are striking similarities between the creole data and the SLA data, but we also found some differences. Overall, one has to state that creole word-formation draws its resources from all kinds of lexicon-enriching devices, and these devices show many properties that are attributable to SLA.

The most important SLA-related property of creole word-formation systems is the fact that the derivational morphology found in creoles is heavily reduced in comparison to what can be found in the input languages of the respective creoles. The reason for this state of affairs is that interlanguage learners lack both the necessary input and the processing resources to detect and acquire morphological structure. A second parallel is that more advanced interlanguages show more affixation, just like creoles with longer contact with the superstrate have preserved more affixes from the lexifier than those creoles with very little contact. Third, compounding is the most important word-formation strategy in both SLA and creoles, with interesting parallels in headedness and structural-semantic transfer.

There is, however, also a significant difference to be observed between all creoles on the one hand, and interlanguages on the other. While more advanced second language learners approximate the word-formation system of the target language, creoles (no matter how close to the superstrate) adopt some word-formation strategies that are newly created on the basis of different kinds of material from their input languages. Some of them may come from internal developments (such as headedness violations due to reduction of constructional idioms), others are due to substrate transfer (such as certain compounding patterns). Yet others do not lend themselves easily to an explanation in terms of L2 acquisition, a situation which is reminiscent of the emergence of tense-mood-aspect marking in creoles, which is also without a straightforward parallel in SLA. So, where do these innovations come from?

Siegel (e.g. 2004, 2008) has argued that, instead of second languages *acquisition*, innovative structures (morphological and syntactic) may come about through second language *use*. Under this view, L2 *acquisition* concerns the learning of the L2 grammar, while in L2 *use* learners employ their existing, and limited, L2 knowledge when trying to communicate in the new language. Siegel claims that elaboration of structure, as it can be typically found in the development of tense-mood-aspect markers, but also in some of the innovations in word-formation as discussed in the present

article, are chiefly the result of L2 use. If so, it would strengthen the general idea that interlanguage processes (be they acquisitional or usage-related) are central to creolization.²⁰

In this Column, and the three preceding ones, I have focused my attention on acquisition and some pertinent processing issues (instead of on L2 use), and it seems that in all four subsystems under investigation, i.e. inflection, syntax, phonology and word-formation, we find specific and compelling evidence for L2 acquisition being at work in creole formation. SLA manifests itself in creole formation not only in the form of substrate transfer, but crucially also in the development of certain structures due to the limited processing capacities typical of early stages of L2 acquisition. Unsurprisingly, it became clear along the way that there are also phenomena that do not lend themselves to a simple explanation in terms of SLA. It was shown, however, that pushing the interlanguage hypothesis to its limits is a very fruitful research strategy in order to discern those areas that are then amenable to other explanations. Overall, I hope that my detailed survey of the parallels and differences between creole formation and more usual cases of L2 acquisition has demonstrated that the interlanguage approach can give us a better handle on many phenomena whose emergence has been a matter of controversy in the past.

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²⁰ Note that the distinction between acquisition and use is not always clear-cut, especially so in the realm of word-formation. If, for example, in a given communicative situation a learner uses a lexical strategy to create and produce a new word, this new word may also be considered to some extent acquired (especially if the learner uses the word subsequently more often). In this case, L2 use and L2 acquisition co-occur and are not easy to tell apart. That the new word may not be target-like is not at issue, since non-target-like productions are part and parcel of both L2 acquisition and L2 use.

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