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Creoles as interlanguages: inflectional morphology

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1. Introduction[1]

The new millenium has seen a revival of the idea that processes of second language acquisition (SLA) are a crucial ingredient to creole genesis. Traditionally, the fields of SLA and pidgin and creole studies have cross-fertilized each other and there have been different periods in which one of the two fields eagerly looked at the results emerging in the other field in order to find something that might improve the understanding of one's own problems.[2] It is, however, still controversial which kinds of interlanguage processes are relevant, and how much, or which of, a given creole's structure can be attributed to such processes. Furthermore, much of the discussion has centered around the question of transfer, which, as we will see, is an unwarranted narrowing of perspective. Recent volumes such as Kouwenberg & Patrick (2003), Lefebvre et al. (2006), Siegel

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[1] This column draws on material that I presented on various occasions: Conference 'Creole language structure between substrates and superstrates', MPI Leipzig, June 2005; Universität Paderborn, November 2005; University of Toronto, October 2006; and Université de Québec à Montréal, October 2006. I am grateful to these audiences for their critical and encouraging comments. Furthermore, I would like to thank the following colleagues for their commenting on an earlier draft of this article: Sabine Arndt-Lappe, Maria Braun, Ana Luís, John McWhorter, Mareile Schramm, Jeff Siegel, Tonjes Veenstra and Linda Zirkel. Special thanks go to the editor of JPCL, Don Winford, for his detailed suggestions and advice. All errors and follies are mine.

[2] A nice account of the history of the relationship between the two fields can be found in Siegel (2006).

(in press) have shown that new findings from SLA can indeed provide important new insights concerning the properties of creole languages and the nature of creolization.

In this and the following columns I will put forward and discuss a rather bold hypothesis which originates from the SLA-inspired work on creoles. I call this hypothesis the 'interlanguage hypothesis':

(1) **Interlanguage hypothesis**

Creoles are conventionalized interlanguages of an early stage.

This hypothesis is not really new, and may be traced back almost 30 years to Anderson (1980, 1983). More recent approaches seem to converge on the relevance of second language processes especially in the early stages of contact (e.g. Kouwenberg & Patrick 2003: 181, and the papers in that volume), which is in line with my interlanguage hypothesis.

However, it is generally difficult to draw the line between 'early' and 'more advanced' stages of creole development, since for each creole we have an individual sociohistory. In principle, 'early' would refer to the time before the target shift (e.g. Baker 1990), but if this shift occurs very late, more advanced stages of SLA are made possible. Another caveat concerning the interlanguage hypothesis is that we would not expect that *all* properties of present-day creoles result from processes of second language acquisition. We know that many traits of today's creole languages have arisen through language-internal changes, and/or have emerged in diglossic or multilingual situations much after the time of the target shift. A third caveat concerns what I have labeled 'conventionalized' in (1). Interlanguage processes happen at the level of the individual, but creole formation happens at the level of the speech community and at the level of the individual. Thus, in addition to the individual mental processes that generate quite variable outputs, i.e. a pool of variants, we need to acknowledge effects of selection and establishment of particular features from these outputs across speakers, i.e. in the (emergent) speech community (e.g. Siegel 1999, in press, Mufwene 2001, 2002). These effects are generally referred to as mixing and leveling, and are encapsulated by the inclusion of 'conventionalized' into the formulation of the interlanguage hypothesis.

Given my focus on the mental processes involved in the creation of features, I do not discuss mechanisms of selection and conventionalization.

My reason for making the interlanguage hypothesis the central theme of my *JPCL* columns in spite of these caveats is not so much that I think the hypothesis is entirely true. Quite to the contary, I will show that there are a number of creole properties that cannot be explained under this hypothesis.[3] But I also believe that many properties of creole languages can indeed be explained and much better understood if we compare important cross-creole similarities (and differences) to the potentially equivalent structures found in interlanguages.

In three of my four *JPCL* columns I will focus especially on properties that have not yet featured prominently in the discussion of the role of SLA in creolization, morphology and phonology. I will push the hypothesis as far as possible in order to see how much it leaves unaccounted for. It will turn out that this research strategy is very fruitful in discerning those areas that are then amenable to other explanations.

As we will see, the interlanguage hypothesis makes very interesting predictions which can be tested against data from different creoles with different substrates, superstrates and socio-historical situations of emergence. In exploring this new testing ground, I will start with inflectional morphology in this column and deal with syntactic issues in the next column. This will be followed by discussions of lexical morphology (i.e. derivational morphology and compounding) and, finally, of phonological problems in the third and fourth columns, respectively.

Evidence for or against the interlanguage hypothesis will come from developmental parallels and differences between creoles and interlanguages, from the variability within and across creoles and interlanguages, from structural similarities and dissimilarities between interlanguages and creoles, and from transfer effects. As will become clear, the interlanguage approach can help to solve a number of problems students of creole languages still struggle with, such as the following:

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[3] Let me mention just one example: While, as will be shown in this column, the loss of superstrate TMA morphology can be nicely accounted for by the interlanguage hypothesis, the emergence of new preverbal markers cannot be straightforwardly explained by this hypothesis, since such markers are not prevalent in interlanguages (see, for example, Winford 2006c, Mather 2006, Winford and Migge 2007).

- What constrains substrate transfer?
- How can we determine that a given structure is the result of transfer?
- What is the role of universals in creole genesis? What exactly do we mean by 'universals'?
- What determines the differences between creoles with regard to their proximity to superstrate and substrate?
- Are creole languages 'less complex' than other languages, and if so, in what way, and why?
- What constraints on the role of the superstrate input?
- What is the role of internal developments in creole formation?

I will not systematically deal with each of these questions in any of my columns but we will discuss the pertinent questions as we go along. In the present column we focus on the discussion of creole morphology in the light of the interlanguage hypothesis, and this will shed light on the question of universals, proximity to the superstrate, grammatical complexity, and the role of the superstrate.

It has often been implicitly assumed that believing in SLA processes in creolization amounts to more or less the same as believing in substrate transfer. As will become clear, those two issues need to be kept apart. There is transfer without SLA as, for example, in diglossic situations or in bilingual first language acquisition (Kouwenberg 2006, Siegel in press), and there are SLA processes at work in creolization that do not result in transfer, as will become clear shortly.[4]

We will see that creoles can be meaningfully analyzed as conventionalized interlanguages of an early stage. More advanced stages can be explained in terms of language-external factors such as the availability of the superstrate, or the time of the target shift from superstrate to the emergent contact language (e.g. Baker 1990). Furthermore, I will argue that the relative and local simplicity[5] of creole grammars is not so

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[4] Furthermore, many cases of alleged transfer are in fact instantiations of structures that originated under the constraints of limited processing capacities that are universally characteristic of early stages of SLA. This will be shown in detail in my next column.

[5] I use the term 'local simplicity' here to indicate that in certain areas, it can indeed be shown that the creole grammar is simpler than that of its input languages, with 'simpler' being rather crudely defined in

much due to these languages' age (cf. McWhorter 1998, 2000, 2004, 2006), but due to the nature of creoles as conventionalized interlanguages.

I will start the discussion of inflectional morphology and the interlanguage hypothesis in section 2 with a short survey of what is currently known about inflectional morphology in pidgins and creoles (see also the overview in Plag 2005). We will then take a look at inflectional morphology in interlanguages and at interlanguage development in general in section 3, and develop specific predictions for creoles on the basis of the interlanguage hypothesis. In section 4 we will return to the creole structures in more detail and check whether these predictions are borne out by the facts. In section 5 I will summarize the results.

2. Inflectional morphology in pidgins and creoles

Only a few years ago, the heading of this section would have caused raised eyebrows among most creolists because it was widely believed that creoles do not have inflectional morphology. For example, Seuren and Wekker (1986:66) claim that "morphology [is] essentially alien to creole languages". Stolz (1989) already argued against this claim, and in more recent years creole word-formation and inflection has featured more prominently in creolist discussion, as in the papers by DeGraff (2001), Plag (2001, 2005), Siegel (2004a, 2004b, in press), the large-scale studies by Dijkhoff (1993), Braun (2007), or the collections of pertinent studies in Plag (2003a), Plag (2003b), Kouwenberg (2003), Bhatt & Plag (2006). What are the major findings concerning inflectional morphology?

Let us first look briefly at pidgins. In general it is mostly assumed that pidgins are morphologically even more impoverished than creoles (e.g. Siegel 2004a on restricted pidgins), but Bakker (2003) has shown in his typological survey of (mostly more expanded) pidgins that such a view is not entirely correct. His study of a large sample of varieties shows that pidgins tend to have more, rather than less inflectional morphology than creole languages, which is rather surprising. One reason Bakker offers for this

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terms of either markedness, or number of forms, features or morphosyntactic distinctions being expressed. This does not entail any commitment to whether creoles are simpler overall, or to whether such a notion of overall simplicity is meaningful in the first place.

finding is that the typological range of input languages to the pidgins in his investigation is much wider than the range of input languages of the creoles that we know, and that it contains also morphologically richer languages. Thus, it does not seem surprising that a pidgin arising between two closely related morphologically rich languages may also reflect some of the morphology of its input languages (see also McWhorter (2006:150) on this point). In other words, Bakker suggests that the scarcity of inflectional morphology in creoles may be due to a bias in the available samples. While this hypothesis is very appealing, it is hard to substantiate or to refute (at least at present), given that our sample of creole languages is as large as it is, and involves the languages that it does, as a matter of fact.

Let us turn to creoles. Although many of these languages may lack a significant amount of inflectional morphology, there are quite a few creoles that have nominal, verbal or adjectival inflection. Note that I adopt the traditional terminology that takes the terms 'inflection' (or 'inflectional morphology') to refer to bound morphemes expressing grammatical categories. Free grammatical morphemes such as the preverbal TMA markers in many creole languages are thus by definition not instances of 'inflectional morphology'.

The overviews in Holm (1988:95ff), Stolz (1989), Bakker (2003), and Baptista (2003) list numerous cases of inflectional morphology. One can find, for example, plural or definiteness suffixes on nouns in Cape Verdian Creole or Palenquero (Baptista 2003), while some French-based varieties offer long and short verb forms to mark tense or other distinctions (e.g. Veenstra 2003 with further references). Berbice Dutch and Fitzroy Valley Kriol (Australia) have aspectual suffixes (Kouwenberg 1994, Hudson 1983, cited after Siegel, in press: chapter 1), in Tok Pisin and other Pacific varieties the suffixed transitivity marker *-im/-em* (derived from English third singular and plural pronouns *him/'em*) is prominent, as is the superlative suffix *-st* in Negerhollands (Stolz 1989). Most recently, Luís (2007) has provided data from three Indo-Portuguese creoles that have suffixes encoding four tenses and aspects with up to four conjugation classes and interesting stem and suffix allomorphies on top.

If we want to investigate the kinds of morphosyntactic categories involved in creole inflection, it is highly informative to distinguish between two types of inflectional morphology, so-called 'inherent' inflection and so-called 'contextual' inflection. Build-

ing on earlier observations,[6] Booij (1994, 1995, see also Booij 2005: section 5.2 for a synopsis) presents evidence from various languages and different domains (e.g. structural behavior, language change, and language acquisition), arguing for a distinction between those two kinds of inflection. So-called inherent inflection "is 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" (1995:2). In contrast to this, contextual inflection is "dictated by syntax, such as person and number markers on the verbs that agree with the subject and/or objects, agreement markers for adjectives, and structural case markers on nouns" (op. cit.).

Crucially, the inventory of the grammatical categories expressed morphologically in creole languages shows a very strong preference for inherent inflection. This fact has already been observed by Kihm (2003:335), who writes that "creole languages exhibit little or no contextual inflection in comparison with the lexifier or substrate languages". Veenstra (2003:293, footnote 2) makes the stronger claim that "the survival of inherent inflectional morphology seems to be restricted to the nominal domain, e.g. plural marking". The latter is, however, too strong a claim, since, as mentioned above, we find inflectional tense or aspect marking in a number of creoles.

This poses the non-trivial question why creoles should lack almost entirely agreement processes or structural case, but preserve, if anything, inherent inflection. Kihm conceptualizes the preponderance of inherent inflection as the result of the tendency of creoles to have "a minimal, near transparent lexicon-syntax interface" (2003:359), but this does not explain why and how the preponderance of inherent inflection would emerge in the first place. In the following I will put forward the hypothesis that this tendency is best accounted for in psycholinguistic terms as an effect originating in second language processing. The discussion will be framed in a particular theory of second language development, Processability Theory (e.g. Pienemann 1998, 2005), which I will introduce in the next section.[7]

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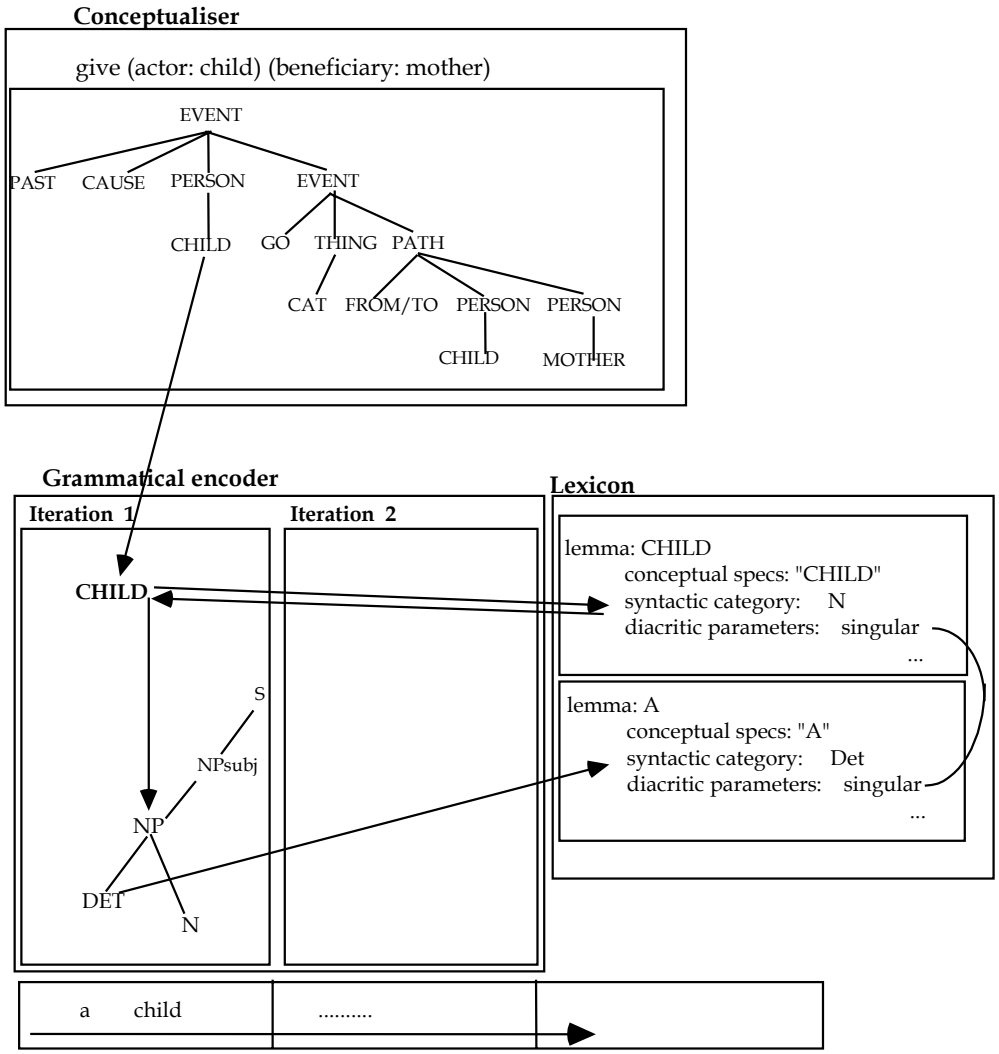
[6] Cf. for example Kuryłowicz (1964:17).

[7] This paper is not the first to bring ideas from processability into creole studies. See Field (2004) for the first attempt in this direction that I am aware of, and Winford (2006a, b).

3. Processability Theory

Processability Theory is a theory that wants to explain one of the fundamental puzzles in SLA research: why do learners follow a well-defined universal path in the morpho-syntactic development of their second language? In order to tackle that problem, the theory makes recourse to psycholinguistic models of speech production as developed by, for example, Levelt (1989), or Kempen and 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. How does that work in detail? For illustration, have a look at the production of a sentence such as 'A child gave her mother a cat', partially illustrated in (2).

(2) Incremental language generation (Pienemann 1998:68)



In order to produce the first NP of this sentence, a preverbal message has to be generated in what Levelt (1989) termed the conceptualizer. The conceptualizer then passes the concept CHILD on to the grammatical encoder, which is responsible for generating the pertinent syntactic structure, in this case an NP. Part of the process of generating a phrasal constituent is that lexical items have to be retrieved from the lexicon. The selection of the lemma CHILD gives us the category N, which in turn triggers the building up of an NP. This involves at least the following tasks:

- providing the syntactic structure in which lexical items can be inserted,
- finding the morphosyntactic features that match the conceptual structure, e.g. [+ indefinite],
- selecting the feature [singular] for the lemma CHILD,

- matching the features of items that may potentially be inserted under the DET node of the NP with that of the lemma just selected to function as the head,
- retrieving the pertinent lemma, i.e. A, from the lexicon, and
- finally passing on the resulting structure to further processing units, such as the phonological encoder and the articulator (cf. Levelt 1989).

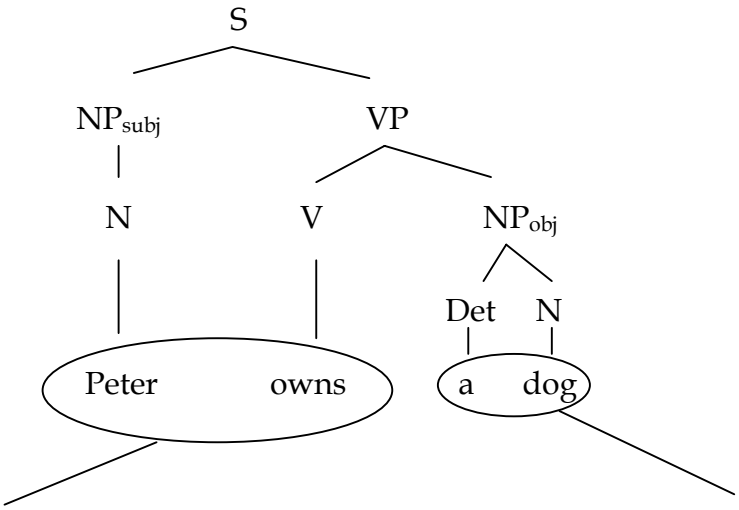
This small example illustrates already a fundamental characteristic of speech production, incrementality. Linguistic structure is gradually built up while conceptualisation is still going on. On top of that we see that subsequent processing procedures often have to work with the still-incomplete output of the previous process, which necessitates that incomplete intermediate output has to be kept available in short-term memory. Language production thus involves substantial parallel processing, high short-term memory costs, and the availability of specialized processing routines for all kinds of linguistic structure. In particular, Pienemann (e.g. 1998:7) posits the following processing procedures and routines:

(3) Processing procedures

1. lemma access
2. the category procedure
3. the phrasal procedure
4. the sentence-procedure (S-procedure)
5. the subordinate clause procedure - if applicable

The workings of the phrasal and S-procedures is illustrated with the example in (4), taken from Pienemann (2000):

(4) Phrasal and S-procedures illustrated



During the phrasal procedure, the morphosyntactic features of the constituents are matched. In other words, this procedure is responsible for the exchange of grammatical information within the phrase. Note that without the previous procedures of lemma access (which provides the lexical material with its diacritic features) and the category procedure (which gives us the syntactic category information that we need to build up further structure) intra- and interphrasal information exchange would be impossible. Looking at the S-procedure we realize that in order to do subject-verb agreement we need the right syntactic configuration that allows us to match the pertinent grammatical information (in this case 3rd person singular). Crucially, it is only the S-procedure that allows us the exchange of grammatical information between phrases, in this case the VP and the subject NP.

The central claim of Processability Theory now is that these processing procedures not only reflect their sequence of activation in language generation but also that the acquisition of these procedures will follow this implicational hierarchy. The table in (5) illustrates the developmental stages of SLA in a hypothetical hierarchy. In the top row t_1 through t_5 are five points in time at which different stages of development can be discerned. Note that empirical evidence shows that a simplified S-procedure is available already at a rather early stage, a point to which I will return shortly.

(5) Hypothetical hierarchy of processing procedures (source: Pienemann 2000:108)

	t_1	t_2	t_3	t_4	t_5
S'-procedure (EmbeddedS)	-	-	-	-	+
S-procedure	-	simplified	simplified	inter-phrasal information exchange	inter-phrasal information exchange
phrasal procedure	-	-	phrasal information exchange	phrasal information exchange	phrasal information exchange
category procedure (lex. categ.)	-	lexical morphemes	lexical morphemes	lexical morphemes	lexical morphemes
word/ lemma access	+	+	+	+	+

At stage t_1 the learner is only able to produce one-word utterances, with unclear category status of the lemmas retrieved from the lexicon. At stage t_2, the learner retrieves lexical morphemes and can form very simple sentences of the type NVN or NNV (corresponding to target SVO or SOV), which is an indication that the lexical morphemes have a category specification at this point. t_3 shows evidence of intra-phrasal information exchange, to the effect that we find NP-internal agreement, but, crucially, not yet subject verb-agreement. At t_4 we have a fully developed S-procedure, and at t_5 sentence embedding is possible.

Before returning to creoles let us further illustrate the processing hierarchy with data from English. It has been observed that second language learners of English follow universally the developmental path depicted schematically in (6):

(6) Developmental stages in English interlanguage syntax (source: Pienemann 2000)

development	structure	example
initial state	One-word utterances	*ball*
↓	Canonical word order	*Bob kick ball* (SVO)
↓	Neg + V	*He no like coffee.*
↓	Adverb Fronting	*Then Bob kick ball*
↓	Topicalization	*That I didn't like.*
↓	Do-Fronting	*Do you like it? Do she like it?*
↓	Yes-no Inversion	*Has he seen you?*
↓	Copula Inversion	*Where is John?*
↓	Particle Verbs	*take the hat off*
↓	Do/Aux 2nd	*Why did he sell that car?* *Where has he gone?*
target	Cancel Inversion	*I wonder why he sold that car*

Starting out with one-word utterances, learners gradually acquire more complex structures in a specific order, with at least some learners ending up with the most complex structure, the canceling of inversion in subordinate interrogative clauses. The table in (7) shows the corresponding processing procedures:

(7) Processing procedures for English (source: Pienemann 2000)

Stage	Processing procedure	L2 processing	morphology	syntax
1	word/ lemma	words	invariant forms	single constituent
2	category procedure	lexical morphemes possessive pronouns	plural on nouns	canonical order
3	phrasal procedure	intra-phrasal information exchange	NP agreement Neg+V	ADV, *do*-fronting topicalization
4	S-procedure/ word order rules	inter-phrasal information exchange		Y/N inversion, copula inversion
5	S-procedure/ word order rules	inter-phrasal information exchange	SV agreement (3sg –*s*)	Aux/*do* 2nd
6	subordinate clause procedure	main and subordinate clauses		cancel inversion

Focusing on the morphology, we see that plural marking on nouns occurs already at stage 2, while NP agreement becomes possible only at stage 3, when intra-phrasal ex-

change of grammatical information has become available. Subject-verb agreement occurs rather late, at stage 5, since inter-phrasal information exchange is not available prior to this stage. Applying the distinction between inherent and contextual inflection to the different stages of interlanguage development, we can see that the complete lack of inflection characterizes stage 1, but may extend into the following stages, depending on which kind of inflection we are looking at. The presence of inherent inflection is found from stage 2 onwards (e.g. with plural marking on bare nouns), while the instantiation of agreement procedures or structural case assignment requires the most advanced processing procedures and occurs therefore only at later stages.

The rather late emergence in SLA even of inherent inflection can also be seen in the development of verbal tense and aspect inflection. According to Bardovi-Harlig (2000: 25ff), SLA learners undergo three stages in their acquisition of verbal morphology. Only on the third of these stages do the learners actually acquire inflectional makers, while on the first stage they use pragmatic means (i.e. discourse principles such as chronological order or scaffolding), and on the second they use lexical means (mostly temporal adverbials and connectives) to mark temporal and aspectual distinctions.

An obvious question is whether the proposed processing procedures and implicational acquisition stages can be set up for any language. Over the past decade, Pienemann and colleagues have tested the rather strong predictions of Processability Theory on a number of different target languages (involving also different L1s) and it is safe to say that there is ample evidence in favor of the processing and developmental hierarchies as posited by Processability Theory (cf. e.g. the papers in Pienemann 2005).

Having explained the workings and assumptions of Processability Theory I will now return to creole languages in order to illustrate how the insights of Processability Theory may help us to understand better the emergence and the typology of inflectional morphology in these languages.

4. Creole morphology is (mostly) interlanguage morphology of an early stage

As stated in section 2, one important explanandum in creole morphology is the skewed distribution of inherent and contextual inflection. The other explanandum is why creoles show so little inflection.

Given the above insights into the nature of the processing of grammatical information in speech production, the difference between contextual and inherent inflection can be conceptualized as one of information exchange being necessary or not. Agreement or structural case assignment involves information exchange either between phrases or within phrases, while inherent inflection does not presuppose information exchange between different constituents. Subject-verb agreement and subject case assignment require, for example, an S-procedure, object or genitive case assignment requires information exchange across a phrasal boundary between head and complement, and number or gender agreement within an NP requires intra-phrasal information exchange.

Turning to creoles, and applying the above processing procedures, we find that these languages seem to display almost exclusively structures for which no information exchange between constituents is necessary. The prevalent kinds of morphosyntactic categories expressed inflectionally in creoles are plural marking on nouns, or tense and aspect marking on verbs. And these are typical cases of inherent inflection. On the assumption that SLA plays an important role in the emergence of creole languages, we should predict that creoles would show characteristics of interlanguages. And this is indeed the case with regard to inflectional morphology. One more interesting generalisation here is that the semantic value expressed by inflectional affixes does not seem to determine their survival.[8] As the Indo-Portuguese creoles and their tense/aspect affixes show, even 'meaningless' inherent features such as conjugation class take precedence over potentially more 'meaningful' contextual features (such as agreement or case assignment). Preservation of inflectional markers seems therefore to be primarily a question of processability rather than a question of semantic transparency or communicative relevance.

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[8] I am grateful to Ana Luìs for pointing this out (personal communication, August 2007).

There are some problematic facts, however, that seem to undermine the elegance of the processability explanation for the survival of inherent, but not of contextual inflection. First of all, there seem to be creole languages that do have certain kinds of contextual inflection. For example, Good (2003) has found that Saramaccan marks certain types of serial verb constructions by high tone sandhi. Similarly, French-based Mauritian Creole has a long-short verb form distinction, with the long form occurring if a transitive verb is used without its object. Melanesian Pidgin features the transitivity marker *–Vm*.[9] It is not entirely clear, though, whether these types of morphology are indeed of the contextual kind. In all these cases, the inflection marks the kind of construction the verb is part of.[10] The classification of this kind of marking may be somewhat controversial, but it seems rather safe to locate it somewhere between the two poles of inherent and contextual inflection. A rather clear case of contextual inflection would be gender agreement in certain kinds of copula clauses, as described in DeGraff's (2001:73-74) - still cursory - analysis of Haitian morphology. This would uncontroversially count as contextual inflection on the level of the S-procedure (speaking in terms of Processability Theory).

How can we account for such counterexamples? First, we have to distinguish earlier from later developments. At least in the case of Saramaccan, it has been shown by Good (2003) that the development of this type of high tone sandhi took place well after the creolization period. In the case of Mauritian Creole and Melanesian Pidgin we also deal with more long-term developments in diglossic situations, in which we can expect the emergence of features that go well beyond those we find in early interlanguages (see also section 5 on this point). In the case of Haitian, we not only find some contextual inflection, but also other features that suggest more advanced stages of SLA, such as the preservation of many French derivational affixes (e.g. DeGraff 2001, Le-

[9] The vowel is variable across the different varieties: /i/ in Tok Pisin, /e/ in Solomon Islands Pidgin, /{e, i, u}/in Bislama.

[10] Based on such counterexamples (whose theoretical status and historical emergence would have to be clarified in more detail), Tonjes Veenstra most recently (personal communication, July 2007) put forward the hypothesis that creoles may have contextual inflection, but only in the verbal domain. Hence the only kind of inflection creoles lack would be contextual inflection in the nominal domain. Future research will have to show whether the few apparent counterexamples to the less restrictive claim put forward in this paper would justify positing a much stronger hypothesis.

febvre 2003), or closer approximation to French syllable structure than, for example, in the case of the Surinamese creoles.

Another potentially problematic point in our explanation for the preponderance of inherent inflection may be structural case assignment, a prototypical instance of contextual inflection. Even if, to my knowledge, no creole marks structural case on full NPs, we know that at least some creole languages distinguish between object and subject pronouns, in at least some environments (e.g. third person singular, as in *hí/í* vs. *àm/òm* in Tobagonian Creole, James 2003:171). Furthermore, research in early interlanguage pronoun usage has shown that learners distinguish subject and object pronouns at very early stages of their interlanguage development. Both facts seem to seriously undermine the interlanguage hypothesis.

A closer look at the pertinent interlanguage research shows, however, that this is not the case. The distinction between two different sets of pronouns (that look like subject and object pronouns) occurs at an interlanguage stage where the learners can only produce sentences with canonical word order, i.e. very simple structures that look like SVO or SOV. This simplified sentence structure is also shown as an early stage in the tables in (5) through (7). To use the terms 'subject' and 'object' (or 'SVO' and 'SOV') to describe these structures is in fact misleading since canonical word order involves a direct mapping of argument roles (agent, patient, etc.) onto the syntactic structures representing the respective participants (see Pienemann et al. 2005 for details). This direct mapping mechanism is known as 'unmarked alignment'. In other words, at a stage where the notions of subject and object are not yet developed, we find interlanguage structures that look like SVO and SOV (the 'canonical word order' stage), with 'S' and 'O' standing here for thematic roles rather than grammatical functions. It is at this stage that one also already finds what looks like a case distinction on pronouns, but it has been shown (on the basis of semantic and word order restrictions) that this distinction is a reflection of unmarked alignment and not comparable to structurally assigned case (see Pienemann 2005 et al. for discussion). What happens in creoles is that these patterns have become grammaticalized and now express a structural distinction between subject and object. The fact that this is the only case distinction that is more wide-spread in creoles together with the fact that it goes together with only SVO and SOV word or-

ders in creoles is a direct reflection of the origin of these structures in the early interlanguages of the creolizers.

An unambiguous case of structural case assignment in creoles would, for example, be exceptional case marking, i.e. structures in which, for example, a subordinate clause subject would receive object case from the matrix verb. At least in Caribbean English-based Creoles such structures are extremely rare, and where they do occur they seem to be late developments. In his survey of sentential complementation Winford (1993:331) comes to the conclusion that exceptional case marking did not exist in the early Caribbean Creoles, and even later developments did not fully establish such structures in most of the languages of his set.[11] This is exactly what the interlanguage hypothesis would have predicted.

There have been claims, however, that exceptional case-marking exists in Saramaccan (Veenstra 1994, 1996, contra Byrne 1987) and in Haitian Creole (e.g. Sterlin 1988, Lefebvre 1998), which would then constitute genuine counterexamples. However, in both cases the respective authors argue for the existence of exceptional case marking on purely syntactic grounds, and crucially not on morphological ones. Thus in cases of putatutive exceptional case marking in Saramaccan, we still find the same pronominal form *a* in embedded subject position that also occurs in the subject position of matrix clauses (Veenstra 1994:60ff).[12] The same holds for Haitian, which has no overt morphological distinction between the subject marked subject pronoun *l* in finite embedded clauses and the putatively exceptionally object case-marked subject pronoun *l* in non-finite embedded clauses (see Lefebvre 1998:273-275 for discussion and examples). The argumentation for the assumption of exceptional case marking in these two languages in spite of the absence of overt case marking follows theory-internally from an analysis of certain types of complements as non-finite. The analyses rest however exclusively on syntactic phenomena (scope and referential properties, passsivization facts etc.) and not on morphological marking, and has therefore no bearing on the problem of inflectional

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[11] See Plag (1993: chapters 6 and 7) for a detailed analysis of the pertinent structures in Early and Modern Sranan, which independently supports Winford's view.

[12] The picture is actually more complicated, since *a* can be analyzed as a clitic, but this is not important for the purposes of our discussion. See Veenstra 1994 for detailed discussion.

morphology discussed in this column. We find no change in the morphological shape of embedded subject pronouns in these languages.

Let us summarize our main points. Creoles behave like interlanguages of an early stage in two respects. First, they largely lack inflectional morphology altogether, and second, if they do have inflection, they show mostly inherent inflection and largely lack contextual inflection. These otherwise strange facts can nicely be accounted for under the assumption that the creole creators made use of the same mental processes as any second language learner does. In sum, the typology of creole inflection arises as the natural consequence of the operation of universal constraints on language processing and language acquistion, and exhibits the pertinent stages of interlanguage development resulting from the operation of these constraints.

5. Discussion: Implications, problems and further predictions

The explanation put forward in the previous section raises a number of important questions and problems, and has serious implications for some hotly debated issues in creole studies. Let us start our discussion with the rather obvious question of whether there is independent evidence for the idea that creoles display features of early interlanguages. In other words, what do we know about creole languages that would support the idea that the creole-creators-as-second-language-learners did not advance any further in their interlanguage development?

The first thing to be mentioned in this respect is that advancement in SLA is dependent on two important factors, motivation and input. It has been pointed out repeatedly that in many creolization situations there was a rather limited access to the superstrate, hence even those substrate speakers who would have been very much willing to learn the superstrate often did not have enough exposure to acquire the language to a more advanced degree. The second important factor that kicks in, and is probably more important than exposure or access to the superstrate, is motivation. Given the socio-historical circumstances of most creolization situations, one can hardly imagine that the creolizers were especially keen on learning the language of their superiors or opressors to perfection. In fact, scholars like Baker (e.g. 1994) have argued repeatedly

that the creolizers did not see the superstrate as the language to be learned but only aimed at the creation of a means of inter-ethnic communication (see also Smith 2006). This process must have necessarily involved the acquisition of lexical material and also some structural properties of the superstrate, but not the acquisition of complexities of a more advanced kind, such as case marking or agreement morphology. Thus, the look at the socio-historical situations in which creolization took place would lead us to expect to find manifestations of early SLA stages rather than of more advanced stages.

A closer analysis of the correlation between the presence of inflectional morphology and the socio-historical circumstances could generate the hypothesis that, as a general tendency, better access to the superstrate, higher motivation to learn the superstrate, or prolonged contact with the superstrate in a diglossic situation, would lead to creole structures that are reminiscent of more advanced interlanguage stages. At present, this is merely a hypothesis, but one that could be tested by a large-scale typological study.

Secondly, given the variability of second language development, we would expect that we find different degrees of presence of inflectional features in different creole languages, depending not only on the socio-historical situation[13] but also on the basis of the languages in contact. From Bakker's (2003) study of (mostly more advanced) pidgins, we can learn, for example, that if the languages in contact are all morphologically rich and closely related to each other, there is a greater chance for the survival of inflection. This could be interpreted as a transfer effect in a Processability Theory approach. Pienemann and colleagues entertain the hypothesis that transfer is developmentally moderated: "Transfer will not appear before the structure to be transferred can be processed by the IL [interlanguage, I. P.] system. However, when structures from the L1 [...] are processable, they may be transferred to the target language, and this may lead to differential patterns of language use in groups of learners with different L1s [...]." (Pienemann and Håkansson in press). On this view, some non-uniformity in the occurrence of inflectional morphology across different pidgins and creoles is to be expected.

Let us turn to a seemingly unrelated issue, for which the account presented in this paper has important implications, namely the alleged simplicity of creole lan-

[13] Bickerton's pidginization index (1984) can be seen as an early attempt to capture this insight.

guages. Most recently, McWhorter (2006) has defended this hypothesis in his review article of Plag (2003a), which is a collection of articles on hitherto understudied phenomena in creole phonology and morphology. In his this paper, McWhorter argues in considerable detail that creoles, "as products of pidgin langages that eschew features unncessary to communication" (2006:144) are simpler than non-creole languages (cf. also McWhorter (2000:106) in which it is assumed that creoles "emerged as radically reduced pidgins"). It is this process of pidginization that is responsible for the loss of morphology, and due to their young age, creoles have not had the time yet to develop the pertinent, more complex, features. How and why inflection would get lost in pidginization remains obscure in McWhorter's approach, or is relegated to rather ill-defined functional considerations, such as 'necessity to communication' (see the above quotation). In his view, inflectional morphology is a rather ornamental feature of language, which takes a long time to develop. Languages that have only existed for a few centuries, such as creoles, can therefore not be expected to have acquired such a feature. McWhorter's simplicity hypothesis has been criticized on various grounds (e.g. Siegel 2004a, Klein 2006a, 2006b) and I do not intend to enter the general debate on its validity here, but I want to restrict myself to two aspects.

First, in spite of McWhorter's efforts to provide one, it still seems to me that there is no general metrics available according to which we can classify languages holistically as 'more simple' or 'less complex'. Second, if we look at linguistic subsystems, such as syllable structure, phoneme inventories, or morphosyntactic categories, it appears that such subsystems can be compared with the subsystems of their lexifier languages in such a way that one could, for example, count the number of distinctions or categories that are grammatically encoded. If we do this, we can see (more often than not) that a given creole has fewer categories, or fewer distinctions, that are grammatically encoded. Overall this point seems to be – rather uncontroversially – true for the morphologically expressed grammatical categories present in creoles and their lexifiers. In other words, it seems true across the board that creoles show less inflectional morphology than their input languages (see also Veenstra 1996, DeGraff 1999, Siegel in press, on his point). The important question is why this should be the case, and this question is left unanswered by the simplicity hypothesis.

Under the interlanguage hypothesis put forward here the loss of inflectional categories and their exponent is the predictable consequence of universal constraints on language processing in early second language acquisition. On the basis of these constraints the interlanguage hypothesis can also explain why certain types of inflection would be more prone to loss than others. Under the simplicity hypothesis both facts remain mysterious. While it cannot be denied that the development of, for example, free morphemes into bound grammatical morphemes takes a lot of time and that therefore creoles may not have acquired inflectional morphology in that way, it still remains unaccounted for why some creoles would have spent their little time on earth developing at least some of it, while most other creoles haven't. Furthermore, it is utterly strange why those creole languages that have developed some inflection, would have consistently preferred one type of inflection over another type. Under the interlaguage hypothesis both problems are explicitly accounted for by independent and well-established psycholinguistic principles. Inflection is largely absent because early interlanguage speakers do not have the processing resources for inflection. Once inflection starts developing in interlanguage, it starts out with inherent inflection, because for this type of inflection fewer and less complex processing prodecures are necessary. More advanced kinds of (superstrate-induced) inflection may develop in more prolonged periods of second language learning, or of diglossia. The interlanguage hypothesis can therefore explain what the simplicity hypothesis leaves open.

6. Conclusion

In this column we have looked at the nature of inflectional morphology in creole languages. We started with the observation that some creoles have more inflectional morphology than previously conceived, but still very little in comparison with highly inflectional languages. Furthermore, a survey of creole morphology revealed that these languages have a strong tendency towards inherent morphology, i.e. the kind of morphology that does not need inter-phrasal exchange of grammatical information.

In the light of recent SLA theory, Processability Theory in particular, the presence or absence of different types of morphology in interlanguage is the consequence of the availability of the necessary processing procedures. The absence of contextual inflection in creoles is therefore readily explained if we assume that creoles are conventionalized interlanguages of an early stage. Creole structures corresponding to more advanced interlanguage stages can be explained in terms of external factors, e.g. the longer availability of the superstrate. Furthermore, this approach allows us to account for the alleged relative simplicity of creole grammars, which is due to the nature of creoles as conventionalized interlanguages.

The interlanguage hypothesis opens up a whole research program, in which the study of the typology of creole languages must be combined with the cross-linguistic study of interlanguage development, and with the careful application of theories that try to explain these developments. In my next column, I will therefore turn to a different level of linguistic description, phrasal and sentential syntax, to see if the predictions of the interlanguage hypothesis are borne out by the facts in this domain. In my third and fourth columns I will discuss creole lexical morphology and phonology along these lines.

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