GUEST COLUMN

Competition and selection in creole genesis

How 'minimalist' languages yield maximal output

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1. Introduction

Becoming a columnist for JPCL has put me in the privileged position to ponder about the past, present and future directions of our field. As a result, my first column (Baptista 2016a) was about the main queries that drive our field and writing it led me to realize that many of the key questions today were already present in the early days of creolistics, when Hugo Schuchardt founded our discipline in the 1880s. Many of these queries concern theories of creole genesis: how do creole languages emerge? How do we weigh inputs from their source languages? Do superstrates play the key role in their genesis or is it instead their substrates or language universals? What processes are involved in their genesis? Are creoles the product of first or second language acquisition?

In my second column (Baptista 2016b), I focused on the latter question and examined the enduring belief in our field that processes of *second* language acquisition (of the superstrate specifically) are generally involved in the formation of pidgin and creole languages. Without denying that such processes may be implicated in the emergence of some creoles due to the sociohistorical circumstances in which they arose (Chaudenson 2001), one of the objectives of my second column was to challenge generalizations that creoles are conventionalized interlanguages. The column addressed this particular issue by drawing a finer line between processes of second language acquisition, second language use, interlanguage features and language creation while showcasing the indisputably diverse range of features observable in creoles, attested in the recently published Atlas of Pidgin and Creole Language Structures (henceforth APiCS).

Questioning the notion that creoles are conventionalized interlanguages, I analyzed Plag's (2008) proposal that creole morphosyntactic properties flag them

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as interlanguages. In so doing, I examined basic word order, *wh*-questions and negation (the same set of interlanguage features Plag selected in his 2008 paper) in a cluster of creoles drawn from APiCS (Michaelis et al. 2013). The assumption I was testing in that analysis was that if creoles were conventionalized interlanguages, one would expect to observe a fairly homogeneous set of features across the board; in this respect, Plag examined creoles that all opted for the SVO order,[1] used sentence-initial *wh*-words as well as preverbal negators, three features that also characterize interlanguages. The objective was to show that Plag's generalizations did not stand up to scrutiny when examining a different set of creoles. I showed that if creoles are indeed interlanguages and therefore share morphosyntactic features, then one would not expect to encounter many of the linguistic properties found in the APiCS languages (Michaelis et al. 2013). These languages display variation in word order (all six possible word orders are attested), in the positions of *wh*-words (initial, fronted *wh*-words, and non-initial *wh*-words are observable) and in the position of negation (preverbal and postverbal particles, negative affixes and bipartite negators are reported). Although Plag's Interlanguage Hypothesis accommodates some variation, it would not allow us to predict such a wide range of positions with respect to these three features.[2]

I concluded that the carefully selected features of word order, *wh*-questions and negation in the limited set of creoles Plag considered were not sufficient evidence for considering creoles as interlanguages. I argued that such findings based on a limited set of features in a small number of creoles had obvious limitations that could only be overcome by covering more systematically a much wider range of grammatical modules across a large number of creoles. This could be done by carefully comparing interlanguage features the way they have been reported in the Second Language Acquisition literature with a broad array of grammatical features in a large variety of creoles.

Another methodological issue that was discussed in the second column was Plag's overemphasis of the role of interlanguage in the early development of creoles at the expense of substrate transfer.[3] The problem is particularly vexing when substrate features happen to be the same as those of interlanguages (like the presumed

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1. It is important to note, however, that although the creoles Plag analyzed all opted for the SVO order, his Interlanguage Hypothesis allows for both the SVO and SOV orders.

2. On this matter, I concur with Sprouse (2009) who calls for more rigorous qualitative and quantitative studies connecting interlanguage and creole genesis while examining typologically distinct substrates (speakers' L1s) and target languages.

3. On this matter, it is important to note that the Interlanguage Hypothesis only accounts for the early stages of creole development and does not apply to features that emerge in later stages; at that point, transfer plays a greater role according to Plag. The challenge remains to identify

SVO word order of interlanguages and of some of the creoles' substrates); in such cases, the two are virtually impossible to tease apart.

The unprecedented depth and breadth of APiCS (2013) have clearly provided evidence of the scale of variation observable in the features of pidgins, creoles and mixed languages. Such variation may encourage us to consider the distinct language ecologies in which individual creoles arise (Mufwene 2001; 2008) while acknowledging that a variety of processes (beyond second language acquisition) may be at work in creole genesis. Such variation is a testimony to the resourcefulness and creativity of these languages and their original creators. If processes of second language acquisition (whereby the lexifier is targeted) cannot be shown to contribute to the formation of every creole,[4] then it may be misguided when comparing creoles to their lexifiers to interpret the absence of the lexifier morphological features in a given creole as evidence of impoverishment, simplification,[5] 'imperfect' or 'incomplete' acquisition of the superstrate language.

In my view, studies like Baker (1994) that highlight the highly creative processes involved in creole genesis as well as studies that examine complex processes involving feature recombinations and innovations, as in Degraff (1999), Mufwene (2001; 2008), Aboh and Smith (2009), Aboh (2009) and Aboh and DeGraff (2014), are closer to revealing the full complexity involved in their formation. The research methodologies found in Schuchardt (1881; 1909), Baker (1994), Aboh (2009; 2015), Aboh and DeGraff (2014) all bring simultaneously a superstratist, substratist, universalist and 'creativity' lens to creole genesis, revealing the full compatibility of such approaches; they also unveil in the process valuable insights on the development and grammatical make-up of particular pidgins and creoles. Aboh (2009; 2015) and Aboh and DeGraff (2014) adopt the framework of competition and selection (Mufwene 2001), which is precisely the model I wish to evaluate in this column, examining its strengths and potential challenges.

This column is organized as follows. In the second section, I examine the notion of competition and selection, as it has been used by scholars of various stripes, including acquisitionists (Bates & MacWhinney, 1987; MacWhinney & Bates, 1989; Roeper 1999), historical linguists (Lightfoot 2006), computational linguists (Yang 2002) and creolists (Mufwene 2001; 2008). This section summarizes

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with any degree of precision which features of a given creole appeared early and which ones appeared later.

4. For an in-depth coverage of which processes of SLA may be involved in creole genesis, see Winford (2014) on creole formation and SLA.

5. I am referring here to the common but erroneous assumption in my view that creoles are simplified, impoverished versions of their lexifiers.

each approach and examines how they complement and differ from each other. Section 3 focuses specifically on the ways creolists have been exploring Mufwene's notion of competition and selection to design a new model of creole genesis. In this section, I introduce recent works by Aboh (2006; 2009; 2015), Aboh and DeGraff (2014) and Baptista (2005; 2006; in preparation) that analyze creole morphosyntax in light of the competition and selection framework. Section 4 provides an overview of the strengths and remaining challenges of this framework and provides a summary of Winford's (2016) own evaluation of Mufwene's model. The last section provides a synthesis and a main conclusion.

2. Competition and selection: A view from acquisitionists, historical linguists, computational linguists and creolists

2.1 Bates and MacWhinney: Language acquisition as language competition

Bates and MacWhinney (1987) are among the first scholars to associate language acquisition with language competition. Their primary goal was to design a model of language acquisition that would fulfill two objectives: 1) Account for both cross-linguistic variation as well as variation between individuals who speak the same language. 2) Examine the constant, universal aspects of language acquisition in combination with its variable, unstable properties.

With these two objectives in mind, they designed the Competition Model, a connectionnist framework that is grounded on the assumption that statistical properties of the input (how frequently a given linguistic feature is used) play a significant role in determining order of acquisition as well as the final state of the language the speaker acquires. This particular model aims at furthering our understanding of the variability underlying the comprehension and production of particular segments, lexical items or syntactic structures. More precisely, their model assumes a dynamic relationship between the mapping of form onto function in comprehension, and the mapping of function onto form in production. To illustrate what they mean, let us consider one of the examples they provide. Imagine being confronted with a brand new word like *mave* for the first time. They note that some individuals would choose to pronounce this word in a way that would rhyme with words like *cave* while others would choose to pronounce it in a way that would rhyme with words like *have*. Following studies like Glushko (1979), Bates and MacWhinney (1987) argue that speakers do not make the decision on how to pronounce a brand new word they encounter for the first time by resorting to an abstract set of phonological rules but do so through a process of analogy, comparing the new word to similar lexical items they already know.

In this particular case, the Competition Model stipulates that when the phonetic string *mave* is encountered for the first time, all known lexical items that partially overlap with *mave* (words like *cave*, *save*, *rave*, *mane*, *mate*, *cane*) are simultaneously activated and enter the competition against potential candidates like *have*. Bates and MacWhinney view frequency as interacting in significant ways with which items will be activated and ultimately win. They state that in the specific case of *mave*, variability in pronouncement (rhyming with a word like *have* or a word like *cave*) may emerge due in part to the high frequency of *have* resulting in that pronunciation occasionally winning out the competition. They observe, however, that as a general rule, the *have* pronunciation tends to lose out to the words with a long [a:] pronunciation, probably due to them being numerically dominant in the English language. They conclude that the decision speakers make when confronted with a new word and the time they take to figure out how to pronounce it depend on which types of words enter the competition pool and the activation weights associated with each type. This idea of 'feature competition' and the differential in weights attributed to distinct features are also echoed to some degree in research like Lightfoot (2006), Roeper (1999), Yang (2002) and Mufwene (2001; 2008), the foci of the next subsections.

2.2 Lightfoot's notion of competing I-grammars: A view from word order

Lightfoot (2006) represents an interesting attempt to account for how the SVO word order that many creoles exhibit may be reflective of competing I-grammars. His perspective on change and the evolution of language is particularly fruitful when trying to explain why the word order of a particular creole may differ from that of its source languages. Let us first provide Lightfoot's working definitions for the notions of I-grammars and E-grammars. For him, 'I' in I-grammar stands for internal and individual, which corresponds to an individual's mental system and the way his/her linguistic range is reflected in the brain (Lightfoot 2006: 7). E-Language in contrast is language in the outside world, reflecting the various grammars that the child is exposed to and how people use these grammars.[6] Crucially, these grammars do not represent a single system (Lightfoot 2006: 12). With a focus on language emergence and change, Lightfoot (2006) develops an elegant cue-based approach to language acquisition and takes a stand against the view that creoles languages opt for an *unmarked* parametric setting (Bickerton

6. Rather than using the term 'grammar', another way of looking at E-grammar is to say that the child is exposed to utterances that originate from distinct grammars and over time, the child is able to reconstruct his/her own grammar (Salikoko Mufwene, p.c).

1981; 1984) and that their preference for SVO[7] signals such unmarkedness. Instead, Lightfoot explores the notion that the selection of the SVO order for creoles whose source languages do not opt for such a word order may reflect competing I-grammars that look for common grounds in matrix clauses. In other words, Lightfoot (2006) postulates that the choice of the SVO word order by a given creole does not signal the unmarked nature of creole grammars but rather coexisting grammars within each speech community and within the brains of some individuals who have multiple competencies. According to Lightfoot, these coexisting grammars 'entail oscillation between certain fixed points, particular I-languages, and not random variation' (Lightfoot 2006: 164), suggesting competing grammars in the process of language acquisition and language emergence.

To provide a concrete example, let us consider the case of Berbice-Dutch which exhibits a SVO word order although its source languages display different word orders. Its superstrate is Dutch, a V2 language and its substrate Ijo, a SOV language. In order to account for how Berbice-Dutch chose a different word order from its source languages, Lightfoot proposes the following analysis. He notes that both Dutch and Ijo display a different word order in matrix and embedded clauses and he proposes that the object-verb word order is underlying but the verb-object word order can surface in matrix clauses due to movement of the verb from V to I or to C (in his framework), leading to the verb second (S)VO word order. Lightfoot proposes that a degree-0 learner[8] 'resolves the verb-order option on the basis of unembedded data that reveal the position of the verb' (Lightfoot, 2006: 146). The sentences in (1) and (2) taken from Lightfoot (2006) illustrate the oscillation in word order (between VO and OV) in Dutch matrix clauses.

Consider the following matrix Dutch sentence in which the verb precedes the object:

VO order

(1) *Jan belt de hoogleraar op*. (Lightfoot 2006: 146)[9]
'John calls the professor up'.

In contrast, there are also matrix clauses that display the OV order:

OV order

(2) *En ik maar fietsen repareren*. (Lightfoot 2006: 146)
'I ended up repairing bycicles'

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7. As already discussed in the introduction, all six word orders are attested in creole languages but there is a prevalence of the SVO word order that many studies have tried to account for.

8. For Lightfoot, a degree-0 learner is a learner who looks for word-order cues in simple structures.

9. These sentences are being reproduced in Lightfoot's (2006) original format, with no gloss.

Ijo is shown to display the same options though it is endowed with the underlying OV order (Kouwenberg 1992). Crucially, Lightfoot's analysis rests on the assumption that in each language, the child is sensitive to the verb-order cue that is found in unembedded domains and if indirect evidence of the underlying word order is obscured in some way (as with separable verbal particles in Dutch), children may not take stock of the underlying OV order and may rely instead on the VO order. He argues that in the unembedded clause in (1), the child knows that the verb 'belt' is derived from the particle verb 'opbellen' and that 'belt' therefore has moved from a position to the right of the particle 'op' to the surface position it occupies in (1). Lightfoot's proposal is that if the indirect evidence for the deleted verb (to the right of 'op') is unclear in any way, then the child may ignore the object verb underlying word order and may instead reset the word order parameter using the cue that is expressed more robustly, in the case that concerns us, the [V XP] cue (Lightfoot 2006: 147). Lightfoot applies this analysis to the case of Berbice-Dutch and proposes that if indirect evidence[10] for the Dutch underlying [XP V] was obscured in any way for the original speakers, then it stands to reason that as 0-degree learners, the original speakers of Berbice-Dutch may have ignored the OV word order found in embedded clauses (made all the more opaque by the contact situation), and favored instead the more robustly expressed VO word order found in simple structures/matrix clauses. On this topic, prior work by Lightfoot (1993) has clearly demonstrated that in matrix clauses, verb second languages still display an overwhelming preponderance of subject-verb order (70% subject verb order in informal conversations (Lightfoot 1993)). Ligthfoot concludes that if one makes the crucial assumption that children seek word-order cues in simple rather than embedded domains, then the emergence of the VO word order in Berbice-Dutch can be easily accounted for without resorting to the notion that creoles are unmarked grammars. This would also explain why in a contact situation, where distinct I-grammars are in competition, a creole may opt for a different word order from the one found in its source languages.

2.3 Roeper (1999) and universal bilingualism

In the acquisitionist literature, the idea of grammar competition can also be found in Roeper (1999). Indeed, Roeper (1999) proposed that every speaker generates a set of mini-grammars in various domains, which makes every speaker universally 'bilingual' or rather 'multilingual'. His basic assumption is that apparent contradictory choices in a given language like optionality versus obligatoriness are

10. Such indirect evidence could be provided for instance by the position of verbal particles but stranded particles could easily be ignored by the first creators of Berbice Dutch.

actually symptomatic of competing grammars. For instance, Roeper (1999: 173) provides the examples of 'seems like a good idea' versus 'it seems like a good idea' as reflective of two grammars, one of them being associated to a more informal social register.

Based on this kind of data, he postulates that there must be two grammars even if they differ only by a single rule (Roeper 1999: 170) and one of them gets gradually eliminated.[11]

2.4 Yang (2002) and competing I-languages

Yang's (2002) approach to language acquisition also supports the idea of competing I-languages. In this respect, Yang notes that there are two broad directions in the acquisitionist literature trying to account for how languages are acquired. They are summarized in (3a) and (3b):

(3a) Child language reflects a unique potential adult language.
(3b) Child language consists of a collection of potential adult languages.

Yang presents (3a) as being the dominant paradigm where the adult language is considered as part of the triggering experience but Yang rejects this position and supports instead (3b), proposing that child language acquisition involves a statistical combination of multiple possible grammars that are all allowed by UG but only some of them are retained by the time children acquire their L1 (Yang 2002: 12).

Faithful to the generative tradition, Yang proposes that there is only a finite number of possible human grammars, defined by UG and which are all available to the learner from the very early stages of language acquisition. The differences among these grammars are based on parametric variation (Yang 2002: 26). Yang offers the following model of language acquisition based on the notion of multiple competing grammars.

> Each grammar G_i is associated with a weight P_i, which reflects the degree of dominance of G_i in the learner's language faculty. Evolving in a linguistic environment E, three factors contribute to determining the weight P_i (E, t) of a given grammar, according to Yang: the learning function L, the linguistic evidence in E, and the time variable t (*t* is the time that has elapsed since language acquisition started).

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11. In the creolistics literature, it has been repeatedly observed that creoles often times keep at their disposal a cluster of variants that are semantically equivalent but morphologically distinct. This is particularly the case of TMA markers that often have forms that emerge at different time periods in the development of the creole but survive and remain in competition (see Baptista 2015). Such markers coexist and survive in creole grammars, seemingly appearing in free variation across speech communities and within idiolects.

Yang postulates that learning is complete when there is no further fluctuation in the weights of all grammars, which means that all grammars are stable and no longer undergo any changes. Yang compares the stabilization stage to a type of critical period. Over a period of time and as learning proceeds, the target grammar gradually eliminates the other grammars. Yang's learning model is schematized as follows:

(4) Upon the presentation of an input datum s, the childa) selects a grammar G_i with the probability Pi
b) analyzes s with G_i
c) –if success, reward G_i by increasing P_i
–Otherwise, punish G_i by decreasing P_i (Yang 2002: 26–27)

The schema in (4) is meant to illustrate that in a set of competing grammars, those that succeed in analyzing a given utterance gain more prominence in a learner's hypothesis space whereas grammars that fail are penalized and are gradually eliminated from the competition.

This schema rests on the assumption that several grammars coexist from the onset but gain or lose prominence in the learner's hypothesis space in the process of being tested. The winning grammars are those that become associated with a higher weight or probability. According to Yang, the learner 'does not make active changes to the selected grammar (as it happens in the triggering model) to reorganize his grammar space, but simply updates the weight of the grammar selected and moves on' (Yang 2002: 28).

2.5 Mufwene (2001; 2008): Competition and selection in the feature pool

There is in creolistics an ever increasingly dominant view that competition also plays a role in the formation of creoles. More precisely, the role of feature competition and selection has been best articulated in Mufwene (2001; 2008)[12] and is particularly relevant in accounting for the emergence of a new language in a multilingual setting. Mufwene's (2001; 2008) concept of 'competition' refers to a feature pool in which linguistic features representative of diverse grammatical domains are competing in the newly emerged language. It is worth clarifying that for Mufwene (2008), there is no competition in the literal sense of the term. What he means by 'competition' is that variants for the same function are treated and valued differently, with some being favored over others by the learners. In his framework, the ecology (which includes speakers/learners) rolls the dice. Crucially for

12. Also see Croft (2000) in which Croft proposes a comparable evolutionary approach to language change.

our purpose, for Mufwene, this 'competition' involves the participation of features from *both* substrates and superstrates to the feature pool. The remaining of this paper is dedicated to examining this particular framework.

2.6 Summary

To summarize this section, Bates' and MacWhinney's Competition Model has implications for both child and adult language acquisition and aims at accounting for variability across languages and within a given language by viewing factors like frequency as an important factor in determining the winning features that are acquired. Yang, Lightfoot, Mufwene and Roeper can also accommodate both child and adult language acquisition and view grammars as competing I-languages in the minds of individual speakers; these studies aim at accounting for how different grammars initially compete until stabilization ensues with a particular grammar being eventually targeted. In addition, Mufwene's approach showcases the role of the linguistic ecology in which creoles emerge, addressing how features of the multiple languages that compete in the environment of early creolophones find their ways in the emerging creole; some of the features survive while others die out.

All these studies have this in common that they are concerned with the role of competing I-grammars in child language acquisition as well as adult acquisition. They are therefore treating on a par both first and second language acquisition. Aboh (2015), like Mufwene (2001; 2008), makes this point clear when stating explicitly that L1 and L2 acquisition are very similar and only differ qualitatively, which leads us to consider how this author applies the competition and selection framework to the genesis of individual creoles.

In the next section, we briefly overview Aboh's work, in addition to Lang (2000), Baptista (2005; 2006; in preparation), Teyssier (1990) and Kihm (1990; 1994) to illustrate how various scholars have resorted to the notion of competition to account for a range of features that emerged over time in the creoles they examined.

3. Competition and selection in the formation of creole grammars

In his work, Aboh (2009; 2015) considers how the semantic and syntactic features of various language types may combine to yield new hybrid structures. Not unlike Yang (2002), Aboh views contact as referring to the *coexistence and competition* between linguistic systems in the mind of the same speaker. As such, he considers both L1 and L2 acquisition as involving contact. Though he agrees that L1 and L2 acquisition processes are qualitatively different, they remain similar in his view on

the grounds that whether a learner is acquiring an L1 or an L2, they are selecting variants from a feature pool to build a new grammatical system. In the case of creole genesis, Aboh argues that creoles remain distinct from the source languages while reflecting some of their properties (Aboh 2015: 5).

Aboh (2015) is based on the hypothesis that the emergence of creole languages involves the recombinations of features that do not replicate the source languages faithfully but still combines syntactic and semantic properties of both their substrates and superstrates (2015: 11). He argues against discounting the lexifier (as substratists do) or the substrates (as superstratists do) and proposes instead a two-stepped process: 1) Uncovering the populations that played key roles in the early development of a plantation, and 2) investigating in parallel the potential contributions of competing I-languages during the early years of a given creole's formation (Aboh 2015: 73).

Aboh (2015) examines language acquisition and change and describes how distinct linguistic subsystems from different languages can give rise to hybrid grammars. Aboh's study draws a complex picture of variation between creoles that depends on the language or language varieties that the African slaves and Europeans alike were targeting. In his view, some slaves were aiming at acquiring the European language whereas others were targeting the emerging creole.[13] Similarly, some Europeans were targeting African vernaculars for management purposes (Aboh 2015: 125) while others learned the creole but in the end, in his view, the reason why the African languages eventually vanished from the linguistic landscape and 'the creole won the competition is because of its socio-economic and political power' (Aboh 2015: 125). All parties involved (colonists and Africans alike) were highly motivated to learn the creole because it was considered the most effective means of communication. This would result in the emergence of several competing targets as speakers were exposed to a continuum of varieties representative of both the substrate and European vernaculars.[14] These could be viewed as

13. Mufwene (p.c) draws to my attention that the situation can be presented slightly differently. It may be more accurate to say that since in many cases, the lexifier did not disappear from the contact setting, the locally born children and Bozal slaves alike were exposed to a continuum of lects, and each wave of newcomers contributed to the selection of features in their own idiolects. Aboh (2006; 2009; 2015) examines the linguistic units to which selection applies by implementing the competition framework proposed in Mufwene (2001; 2008). I refer the reader to Mufwene's foreword in Aboh (2015), for an elaboration on this topic.

14. It is worth noting that it is in relation to this particular situation that Mufwene (2001; 2008) presents the mechanism of 'selection' as resulting from the mutual accommodations that speakers make to each other, leading to the convergence of idiolects toward a particular norm and without necessarily eliminating all the variation. I will revisit this particular point in my next and last column.

competing I-creoles. On this issue, Aboh draws a distinction between I-creole and E-creole. Like Lightfoot Aboh assumes that 'an E-creole is an abstraction of the linguistic codes of a creole community, whereas an I-creole denotes the development in individual speakers' minds/brains of a grammar that shows a certain typological distance from the grammars of the languages in contact' (Aboh 2015: 135).[15]

A number of other creolists have explored the framework of competition and selection by adapting it to various research questions. For instance, Lang (2000) demonstrates how features from source languages get recombined in creoles like Cape Verdean.

In this particular case, Lang observes that Cape Verdean Creole is endowed with a bipartite verbal system that is itself a product of two different kinds of reanalysis, one that occurs at the 'center' (most removed from Portuguese) and the other at the 'periphery' (converging with Portuguese). According to this scenario, during creolization, faced with an unfamiliar linguistic system, slaves reanalyzed many patterns in the light of structures they were familiar with in their own language. The resulting structures are true hybrids (see also Aboh 2015), as they are structurally akin to the original Portuguese but semantically and functionally much closer to the contributing substrates.

Baptista (2005; 2006) use the framework of competition and selection to explore specifically the cognitive process of convergence (also see Baptista, Gelman, & Beck 2015), following Teyssier's (1990) and Kihm's (1990; 1994) analysis of convergence in Guinea-Bissau Creole. In Baptista (2006), I study a set of grammatical morphemes that seem to have survived in Cape Verdean Creole owing to their presence in both the African substrates and the Portuguese superstrate. The grammatical domains I examine include anterior markers, negation, mood markers, copular predicates and reduplication. I consider whether these morphemes and constructions follow a distributional or semantic pattern reminiscent of the contributing African languages and/or of Portuguese or are entirely innovative. Let us consider negation for instance, a classical example of congruence that was first detected by Teyssier (1959; 1990) and Kihm (1990; 1994) in Guinea-Bissau creole and subsequently in Cape Verdean by Baptista (2002). As shown in the example in (5), negative marker *ka* is always preverbal.

(5) *E fla-nu pa du* ***ka*** *toma.* (RS)
CL. told+you for you NEG take
'He told us not to take it'.

15. We will revisit Aboh's work in section 4 when we examine some specific examples of feature recombinations in Haitian Creole.

Following a similar analysis by Kihm (1994) and Teyssier (1990) for Guinea-Bissau Creole, I argue that in the case of Cape Verdean Creole, the Portuguese negative adverbial *nunca* 'never' and substratal morphemes that partially share form and meaning with *nunca* contributed to the emergence of *ka* as a negator in Cape Verdean. I support this analysis by referring to past studies like Santos (1979) which associated *ka* with the Mankang negative morpheme *nkö*, Teyssier (1990) who connected *ka* to Mandinga negative aspectual markers ending in *–ka* or starting in *ka-* (Teyssier 1990: 252), and Kihm (1994: 47) who noted that a number surrounding languages express negation with items involving *ka* (for instance, Mandinka negative tense markers *buka*, *kana* and *kaka*).

This is in keeping with Mufwene's competition and selection framework (2001; 2008) that proposes that creoles select features which are similar in the substrates (African languages) and the lexifier (European language) that contributed to their genesis. Mufwene explicitly views this strategy as 'consistent with the principle of convergence qua congruence' (2001: 93). Baptista (in preparation) is using the framework of competition and selection to examine the role of convergence in shaping linguistic innovations.

Studies like Mufwene (2001; 2008), Baptista (2005; 2006; in preparation), Aboh (2006; 2009; 2015), among others (also see Aboh & Ansaldo 2007; Aboh & DeGraff 2014) all see the value of the competition and selection framework in analyzing linguistic features observable in a variety of creole languages; this framework also explains contact outcomes that occur in particular ecological situations.

There are, however, scholars like Plag (2011) and Winford (2016) who note some gaps in the framework of competition and selection while acknowledging its contributions.

In the next section, I focus on a couple of points in Winford's (2016) critique and briefly examine them in light of Aboh (2015) who uses the competition and selection framework in his study of Haitian and Saramaccan.

4. The strengths and limitations of the competition and selection framework: Winford (2016)

In this section, I focus on two of Winford's main reservations about Mufwene's competition and selection framework: 1) The lack of distinction between internal development and contact-induced change and 2) the lack of a psycholinguistic component in the framework.

Emphasizing Mufwene's lack of a clear line between contact-induced change and language internal developments, Winford quotes Mufwene (2001: 19), as making two assertions: a) He rejects the idea that there is any difference in the

evolutionary processes leading to the emergence of creoles versus non-creoles and b) if there are indeed any differences between the two, such differences 'amount to differences in outputs as determined by variation in the ecological conditions affecting **the same language restructuring equation**' [Winford's emphasis] (Mufwene 2001: 19). Winford rightfully points out that there are of course areas where language internal and contact-induced change do overlap on the surface, as in the case of completive markers, pervasive in creole languages. In many creoles, such markers typically derive from the equivalent of the verb 'to finish' and oftentimes result from contact-induced grammaticalization. However, typologists like Bybee, Perkins and Pagliuca (1994) have observed many languages as following a similar path as part of their internal developments, hence independently of contact (see Winford 2016: 14 for specific examples). Winford challenges Mufwene's lack of distinction between language-internal developments and contact-induced change by actually drawing a clear-cut distinction between the two based on long-term versus spontaneous change. As Winford puts it, 'internally-motivated grammaticalization tends to involve mechanisms that require a long-drawn out process before the innovation becomes established in the grammar. By contrast, contact-induced grammaticalization is an instantaneous process, driven by direct transfer of the grammatical function of an element in the source language to a similar lexeme in the recipient language, based on analogy between the two' (Winford 2016: 14). In Winford's view, one of the clearest diagnostics to distinguishing external versus internal change is the rapid rise of new structures and creative innovations. The presence of an external language is the crucial trigger to such innovations and is the key ingredient that differentiates the evolution of contact languages from that of languages that have had little to no contact (Winford 2016: 15). Taking the example of New Englishes like Colloquial Singapore English, Winford rightfully points out that in this variety, there is clear evidence of structures that resulted from transfer from its Chinese and Malay substrates (John give his boss scold 'John was scolded by this boss' Bao and Wee (1999: 5)). These types of structures have no counterparts in 'transported varieties of English' such as American or Australian English, indicating that different kinds of restructuring occur with different outcomes in different ecological settings.

Mufwene's (2008) reluctance to draw a clear line between contact-induced change and language internal development comes in part from his criticism of how Historical Linguistics has traditionally divided the two and in part from his view that the type of contact that matters is the one that occurs between idiolects (whether native or xenolectal). This means that the feature pool is present in all interactive situations and that restructuring is involved in language acquisition, hence in the development of idiolects. Mufwene argues that the competition and selection continues throughout the lives of speakers, as they keep accommodating

to each other and as they gradually converge toward some communal norms. Consequently, their idiolects also keep changing. In Mufwene (2008), he portrays such systems as emergent patterns, leading him to argue that the opposition between internally and externally-motivated change is artificial, particularly the way it has been described in Historical Linguistics. This leads him to conclude that very few changes are actually internally-motivated. I will revisit this issue in my fourth and last column when I examine some creoles' diachronic texts pointing to both contact-induced and internal change. Let us now turn to Winford's second concern regarding the competition and selection framework: the lack of a psycholinguistic component.

On this matter, Winford (2016) advocates for a comprehensive theory of language contact that should ideally be comprised of a sociolinguistic, linguistic and psycholinguistic component. While acknowledging that the framework of competition and selection is successful in describing the social, ecological context of contact-induced change and the linguistic features that emerge in creole genesis, one of the main concerns Winford expresses is that it does not address the psycholinguistic process that generates the innovations observable in creole languages.

In order to fill this gap, Winford discusses the *restructuring* processes involved in natural SLA and the process of imposition (Van Coetsem 1988) specifically as the psycholinguistic mechanism[16] that is currently missing from Mufwene's framework and that would complement it if addressed. In Winford's view, the process of imposition provides a principled explanation for the actuation of contact-induced change and by actuation, he means the creation of innovations that typically characterize contact languages. He defines 'imposition' as 'a psycholinguistic mechanism that involves simply applying the language production and encoding procedures of a linguistically dominant language to produce a less familiar language' (Winford 2016: 15).

On the topic of 'restructuring', this term may be at the source of much misunderstanding in our field, as it may cover different notions for different linguists. At first sight, Winford's and Mufwene's use of the term may seem at odds with each other. As Winford points out, Mufwene shies away from the label 'acquisition' and instead equates restructuring with the notion of reconstruction. In contrast, Winford adopts the definitions found in the L1 and L2 acquisition literature. In the context of L1 acquisition, he uses the term 'restructuring' to refer to the process whereby old grammars gradually give way to new ones, as they accommodate to new input. In the context of L2 acquisition, he uses the term 'restructuring' to refer to the process that involves the replication of L1 grammatical patterns in

16. More precisely, Winford makes use of the process of imposition as one way of illustrating the psycholinguistic mechanism that underlie the transfer of features from one language to another.

the learners' interlanguage systems. This includes the psycholinguistic mechanism of imposition which applies the language production procedures of one's L1 in producing structures in an emerging L2. Winford advocates for this kind of approach, as it provides principled explanations accounting for innovative restructuring observable in the emergence of contact varieties such as New Englishes. For Mufwene, the term seems on the surface divorced from the acquisition context and refers instead to the successive waves of reorganization a grammatical system undergoes as it moves further away from its early stages of development. Mufwene provides an explicit definition when he states that the 'term restructuring is used […] in the sense of "system reorganization", comparable to "genetic recombinations" in biology' (Mufwene 2001: 27). His stand is that in the course of the development of an I-language, part of the system that interacts with the speech community fluctuates and undergoes successive waves of change that makes it distinct from the early stages of the language or its intended target.

Based on these observations, Mufwene's and Winford's stands could arguably be viewed as different from each other on the surface. However, upon closer inspection, some statements in Mufwene's work seem to suggest that he does not rule out the role of acquisition in his view of language evolution. In Mufwene (2001: 29), he explicitly states that 'a creole is the restructured variety of its lexifier', which could imply that the lexifier may have been originally a target, hence that the restructuring process could have involved at some point in time second language acquisition. Mufwene (1996: 84) also makes it clear that by 'restructuring', he is referring to a 'system reorganization' consisting in the creole's modification of grammatical materials drawn from the original lexifier (or rather European vernacular).[17] On this matter, Mufwene (1996: 84) made it explicit that the reorganization involved by restructuring 'consists in **recombining in a new system features** [my emphasis] which formerly did not belong in the same one…'. When implementing Mufwene's framework of competition and selection, scholars such as Aboh (2009; 2015) have been capitalizing on the notion of feature recombinations to illustrate how a given creole can recombine the syntax and semantics from the same language or distinct sources. Given that he considers some of the features are inherited from the original creolophones' L1 and others from the lexifier (depending on which grammatical module is examined), one could argue that the process of imposition is at work in the feature recombinations analysis Aboh

17. My interpretation of Mufwene's concept of 'restructuring' as involving acquisition is corroborated by my personal correspondence with the author. On this point, he argues that 'the reconstruction is that of the target language under the influence of other languages that one already knows if they are adult. But even the child reconstructs the grammar by inference from the input utterances, which may vary from one speaker to another'. (Mufwene, p.c).

offers. One should note that Aboh's approach is reconcilable with Winford's (p.c), as his feature recombinations analysis would apply to many of the structural features observable in creoles, particularly those that are transferred from substrates to the creole. In this sense, Aboh and Winford share similar views of hybridization in creole formation.

We consider below examples from Aboh (2006) in which he analyzes how features are recombined and transmitted. In his work, Aboh proposes a modular view of feature transmission. According to this view, in some cases, the semantics and syntax of a given feature may originate from the same source but in other cases, the semantics of a feature comes from one source language and the syntax from another. To illustrate the first scenario in which the syntax and semantics of a feature come from a single source, let us consider how specificity is expressed within the Haitian determiner phrase: Haitian makes use of a demonstrative, realized as *a* or *la* to express specificity; such a marker appears to the right of the head noun (6a). As Gungbe fronts the noun phrase to the left of a designated specificity marker within DP (Aboh 2004), as shown in (6b), Aboh proposes that Gungbe is the source of both the specificity feature and of the syntax of the marker (postnominal position) in Haitian Creole. The determiner in Haitian Creole (6a) and in Gungbe (6b) share not only the same syntax but also the same meaning, as referring to shared/known information only. In contrast, the French determiner in (6c) appears in a prenominal position and may refer to shared information *or* to the entity we know of (Aboh 2006: 225).

(6) a. *Pè-**a***
priest-DET(Haitian Creole)
'The aforementioned Priest' (From Sylvain 1976: 55)
* 'The priest that we know of'

b. *Mɔpɛ́lɔ* (Gungbe)
priest-DET
'The aforementioned Priest'
* 'The priest that we know of'

c. ***Le** prêtre* (French)
'the aforementioned Priest'
'The priest that we know of'

Examples like (6) could be viewed as illustrating 'imposition' to use van Coetsem's term in that the original creolophones' dominant language may have produced the semantic and syntactic structures of the emerging language, resulting in that particular property of the Haitian Creole DP today.

Aboh shows elsewhere in his study that Gungbe can also map onto French in other grammatical domains, hence it is not always the case that the speakers'

dominant languages are the ones to impact the development of all features. For instance, both Haitian and French are endowed with prenominal and postnominal adjectives whereas Gungbe displays postnominal adjectives only. This may simply reflect acquisition of the French pattern that was available in the input and which was further reinforced by the type of congruence I describe in Baptista (2006).

To use another specific example, Mufwene (1996) notes that the preposition *for*, which is commonly found in English-based creoles, is used as a purposive and causal preposition (just like in English) and acquired new functions as a modal and complementizer. One could therefore argue that Mufwene's analysis is reconciliable with van Coetsem's and Winford's conceptualization of 'imposition', as the original creolophones 'acquired' some of the functions of English *for*, in addition to creating novel ones.[18] This interpretation of Mufwene's characterization of the role of restructuring in the genesis of creole languages would put his view point on a par with Winford's showing that their two perspectives may not be that far apart on all counts and that their individual interpretation of the term 'restructuring' may have caused the initial divergence of opinion on this matter. If the term 'restructuring' may include for these two authors both acquisition and innovation that may originate from the early creolophones' L1s or lexifiers, then their view points actually share some common ground.

This would point to the usefulness and virtue of working definitions, as reflected in the following quote from Thomason (2008).

> I think it's safe to say that the only thing all pidgin/creole specialists agree on is that we don't agree on much of anything […] This striking divergence of opinion makes it absolutely necessary to provide definitions before embarking on a discussion of issues, so that readers will be at least able to tell whether authors are debating about comparable things. (Thomason 2008: 243)

In the case that concerns us, both Mufwene and Winford have been explicit about their definitions of 'restructuring' and their definition may at first glance seem at odds with each other but comparing the two perspectives highlights the intersections between these two authors' analyses.

In the end, the notions of 'imposition', 'restructuring' and 'feature recombinations' all point to one thing: the capacity of creoles to emerge as minimalist languages that draw craftily upon the resources offered by their source languages, allowing them to ultimately develop into the creative, maximally efficient languages we know them to be.

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18. Winford (p.c) concedes that there may be a case for imposition at work in this particular situation, although more evidence is needed for English-based creoles. Winford also notes that both Lefebvre and Aboh have provided compelling arguments for substrate influence (imposition, in Winford's terms) in the case of Haitian Creole *pu* and Saramaccan *fu* respectively.

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