

## **WHY AND HOW DO LANGUAGES CHANGE? FROM CREOLE TO NON-CREOLE VERNACULARS**

**Salikoko S. Mufwene**  
*University of Chicago*

Since the 19th century, languages have been analogized with organisms in biology. An important justification for this tradition is that they are said to have lives and sometimes to be moribund or die. In Mufwene (2001a), I argue that languages are not organisms but *species* which share a number of properties with parasitic species in biology. It is actually on the model of species that we can speak of their vital signs, which are typically non-uniform from speaker to speaker and from subcommunity to subcommunity, each of them being associated with some lect. In respect to death, a language dies only to the extent that it has no more speakers—thus there are no more idiolects whose ensemble can be identified as that particular language. This is like the death of a species, when it has no more living members, a process that is normally protracted or just gradual, barring cases of genocides, which is also true of languages. The linguistic and biological species differ primarily in the following respects:

- 1) linguistic species do not usually harm their hosts, although I maintain that they are of the parasitic kind (in which respect they are therefore almost like symbionts);
- 2) languages are in fact made by their hosts, through the hosts' communicative acts;
- 3) they are transmitted piecemeal (Meillet 1906) and imperfectly (Lass 1997), with every speaker's grammar being reconstituted based on the kind of E-language they have been exposed to; a language thus changes in part through imperfect recreations; and
- 4) language transmission is essentially horizontal and polyploidic, with every speaker being influenced by a different subset of speakers in their life time (or even during their critical period); when some features are transmitted vertically, the traffic is two-ways, as the features can also go from younger to older speakers.

Otherwise, languages are species in their own right. In fact, they meet the criteria specified by Lewontin (1970) for speaking of *evolution* in a species: a) they exhibit *variation* in the population of idiolects they are ensembles of, b) they are perpetuated through transmission (the counterpart of *heredity* in biology), and c) they exhibit *differential reproduction* in being transmitted variably, thus always producing different idiolects. Of course each species displays some differences in the way it exhibits these features and in the way that it evolves from one shape into another. We could eventually say that a species' evolutionary pattern is in part a function of its ontological structure. In this respect, although languages are *complex adaptive systems*, just like other species in their respective *ecologies*, linguistic multimodular systems have organizational patterns which are not necessarily similar to those of other species. How idiolects and dialects vary from one another and how that variation can therefore influence the evolutionary trajectory of a particular language is partly a function of how their systems are constituted.

In this paper, I capitalize in part on the notion of 'language-internal variation' (among idiolects and among dialects) to highlight the fact that *language evolution* in monolingual communities is as *contact-induced* as in the development of creoles. Although in the latter case emphasis has been on the contact on languages, I espouse Weinreich's (1953) observation that contact takes place in the minds of individual speakers and submit that we should become more and more interested in how typically unconscious negotiations and mutual *accommodations* among speakers produce new varieties whose developmental trajectories can be labeled as "evolutions."

My motivation for espousing the above position lies in part in the fact that a language is transmitted to another group through the mediation of speaking individuals. There is really no language transmission process that is wholesale, on the biological model, whereby the genotype (i.e., genetic makeup) of an individual is transmitted *in toto* and integrated in one bundle, as a blueprint, to the next organism, an offspring in the case of the animals. Instead, a language is transmitted piecemeal, bit by bit as individuals communicate with each other. The notion of transmission itself is actually problematic, because no speaker passes on bits and bits of linguistic features to the next potential and passive speaker until a grammar qua I-

language emerges on its own. Rather, as individuals endeavor to communicate with each other, a child with the caretaker, or a fluent speaker with a less fluent speaker or one that simply can be said not to know the language, the learner infers the system from utterances they manage to process. Unlike genetic transmission in biology, language transmission involves active participation of the learner. It is more of an acquisition qua system-development process in which a learner identifies the units of the target languages and infers the combinatoric principles that regulate their uses in utterances, as well as the pragmatic constraints associated with the contexts of the uses. If I can reformulate things more eclectically combining this ideas this time with insights from both Chomsky (1986), Meillet (1929), and Hagège (1993), language transmission is a process in which the learner builds up their individual I-language from exposure to some E-language as a body of utterances that are associated with a particular language such as English, or Kiswahili, or Gullah. The process involves both inheritance from E-language and recreation in that the principles inferred by the learner usually do not necessarily replicate faithfully those used by the authors of the E-language to which he/she has been exposed.

For instance, the E-language a speaker has been exposed to may not contain all the Latinate and Greek nouns that form their plural by replacing the singular ending *um* or *on* with *a*. They may have heard *phenomenon/phenomena*, *spectrum/spectra*, *continuum/continua*, but they may not have heard *forum/fora*. Once faced with the pluralization of *forum* they may have a dilemma between extending the learned principle they have already inferred and applying the more regular English rule of forming nominal plural by suffixing *s* to the noun. English allows both plurals, but not every speaker uses both (alternately). Sooner or later, the speaker will face the problem with the nouns *coliseum* and *marathon* and perhaps learn only the hard way that they do not behave like *spectrum* and *phenomenon*. These difficulties arise simply because in naturalistic language development, no learner is explicitly told the rules they must follow nor the classes of items to which the rules apply as they develop their competence in the target language. Let me underscore the fact that the whole process proceeds gradually and piecemeal, because I return to it below.

There is another aspect of this particular model that deserves attention. The system underlying an E-

language as a body of utterances (Chomsky 1986) is not a homogeneous one, as it is the product of utterances by different speakers who have not talked about the same topics or produced identical utterances. The relevant speakers do not even have predilections for the same words or identical kinds of constructions. None of the subsets of utterances produced over the period of time relevant to the development of an I-language by any individual need represent a full system in itself. The learner, whose responsibility it is to gradually develop their own system makes their own choices in terms of favorite morphemes, words, constructions, and styles, although none of the selections need be exclusive. We are thus dealing with a polyploidic language development model in which no speaker actually replicates the system that enables every other speaker to communicate, but every speaker has been influenced by inputs from many non-identical speakers. If anything makes sense from this scenario, every speaker develops a system that is capable of generating most of the times sentences that are interpretable successfully by other speakers and can in turn interpret successfully utterances of other speakers. As evidenced by those cases where fluent speakers of a language still can fail to understand each other, the Saussurean assumption that speakers of a language understand each other because they share the same linguistic system is an illusion made possible by our ability to understand one another most of the time in the same speech community. All we need for mutual intelligibility are systems that are individually systematic (for consistency) and capable of interpreting other speakers' systems, just like two brands of computers that operate on similar but non-identical sets of algorithms but are nonetheless capable of translating signals from each other (Mufwene 1989, 1992, 2001a).

A communal language is thus comparable to a biological species in that it is really an ensemble of idiolects that resemble each other because they have evolved from the exposure of their speakers to similar ensembles of E-languages and because, while communicating with each other, many of the speakers have influenced each other through mutual accommodations. What is especially significant is that all the idiolects that make up a communal language select their features from the same pool of variants, except that they do not select identical subsets of features.

The above bears on our accounts of the mechanisms of language evolution. In most cases, the accommodations made to each other do not amount to a change in the communal language, because the only thing that happens is that idiolects lose or acquire new features from within the same pool, so that while the idiolects change the communal language itself does not change. Take, for instance, speakers who vary in their pronunciation of the word *direct*. Some of those who say [dir kt] may shift to [dayr kt] or vice versa, but overall the American English system won't change in this respect unless one of the variants is ousted from the feature pool by the other or another variant is introduced (for instance in the intervocalic [r] or the preconsonantal [k] were omitted). A syntactic counterpart of this may be variation in the position of the complementizer *to* in constructions such as *I told you not to go* versus *I told you to not go*. It will take a generalization of one of the patterns at the expense of the other in order for one to claim that the grammar of American English has changed in this respect. Quite a host of examples can be given to illustrate this point, but this won't be necessary. The bottom line is changes in idiolects or I-languages do not necessarily amount to changes in communal languages qua ensembles of I-languages, just like individual selections in biology do not necessarily amount to group selections. Since I analogize communal languages with biological species (Mufwene 2001a), let me also point out that it really takes changes in the ecology of a communal language to bring about the kinds of changes that have traditionally interested historical linguists, though the changes take place through the communicative acts of individual speakers and gradually, in a non-uniform way.

In Mufwene (2001a), I characterize *language ecology*, on the model of macroecology, as being both internal and external to a language qua species. External ecology involves the ethnographic setting in which a language is used, which determines for instance, whether, one needs more than one PAST tense or more than one PERFECT aspect, or must obliterate the terminological and semantic distinction between the notions of 'sibling' and 'cousin'. It also involves cases where contact with another language affects the structure of the target language (i.e., the language one intends to speak). On the other hand, internal ecology involves essentially the variation which obtains in a particular variety as well as the paradigmatic

relations which obtain among units in a particular system. Examples include alternative strategies for forming relative clauses and their impact on whether prepositions can be pied-piped or must be stranded, as in:

- (1)a. *The girl to whom John spoke.*
- b. *The girl who John spoke to.*
- c. *The girl that John spoke to.*
- d. *\*The girl to that John spoke.*
- e. *The girl John spoke to.*
- f. *\*The girl to John spoke.*

Clearly, relative pronouns and complementizers do not have the same properties, or are not subject to the same combinatoric constraints, in their function as relativizers. Relative pronouns, as WH constituents, behave similarly to interrogative words relative to pied-piping and preposition-stranding.

- (2)a. *Who did John speak to?*
- b. *To whom did John speak?*

The question is what would happen to the grammar of English in a community of speakers where one of the variants was not, or no longer, in usage? This question need not be hypothetical, because interesting facts are there to illustrate the effects of internal-ecological changes on the structure of a language. English creoles do not have pied-piping, either in questions or in relative clauses. The counterparts of the above sentences in Gullah are:

- (3)a. *Da girl (weh) John talk to.*
- b. *\*Da girl to (weh) John talk.*
- (4)a. *Weh/Who John talk to?*
- b. *\*To weh/whom John talk?*

What has affected Gullah is more than just dispensing with pied-piping. One could also argue that *weh* in relative clauses functions more as a complementizer than as a relative pronoun, though the argument

remains inconclusive. If the only evidence for such a reanalysis is the ill-formedness of (3b), one cannot resist pointing out the ill-formedness of (4b), where *weh* remains a pronoun. To be sure, there are also contrasts such as below:

(5)a. *Dat da girl weh I see he/she brother.* ‘That’s the girl whose brother I saw.’

b. *Dat da girl whose brother I see.*

However, an important reason why (5b) is also outside the scope of Gullah grammar, which makes it equivalent to an ill-formed construction, is that the normal interrogative structure is (6a) rather than (6b), when possession is involved:

(6)a. *Who son/chile?* ‘Whose son/child?’

b. *Whose son/chile?*

Other than being a relativizer, the grammatical category of *weh* in relative clauses is unclear, a situation made more difficult for our analysis by the absence of *whose* in the pronominal paradigm. Otherwise, what Chaudenson (1992, 2001) identifies as “building materials” in the Gullah constructions originate in its lexifier, English. The speakers who developed it in the eighteenth-nineteenth centuries just made different selections from those other populations in the North American English colonies who developed different vernaculars from more or less the same feature pools. No speaker recreates the communal grammar of their target language faithfully (without the slightest modifications) and the development of Gullah *weh* as a relativizer of uncertain lexical category is a by-product of this aspect of language transmission.

It is quite tempting to jump to the hasty conclusion that the reason why Gullah has changed things this way is the influence of African languages, especially the non-Bantu languages, in which relative clauses tend to start with a complementizer rather than with a relative pronoun. While not entirely wrong, such an analysis is too simplistic. Most subSaharan African languages do not strand prepositions either. Where the relative noun phrase is the object of a preposition, a resumptive pronoun must be used in the relative clause or be deleted altogether. In questions, either the interrogative form that is the object of a preposition

remains in situ or the preposition is pied-piped with it to the beginning of the sentence. That suggests that we should probably re-examine the internal ecology of English itself to make better sense of what has happened in the development of Gullah and other English creoles.

It is important in this case to remember that English is not a monolithic language. When it comes to relative clauses, WH-relatives occur more typically in educated varieties than in the low-class vernaculars to which the non-Europeans were exposed on the plantations where they appropriated English. Also, spoken English favors preposition-stranding over pied-piping. Regarding relative clauses, English creoles largely reflect strategies that were available in the lexifier when it was targeted and being appropriated as a vernacular by speakers of other languages. One cannot deny with certainty that the substrate languages did indeed have a role to play in the development of such constructions. However, one thing is certain, if, as I argue in Mufwene (2001a), creoles have developed by the same normal restructuring processes that account for the evolution of their lexifiers into other varieties, then one obvious explanation here for why such a change (in the form selection of some specific strategies over other alternatives) is the modification of the ecology of the lexifier. The fact that some of the variants in a particular language were not available, or were statistically insignificant, in the particular varieties that lexified specific creoles predetermined which particular options a creole would select in its system. We have seen this happen again and again, especially with tense-aspect markers and with nominal number.

Regarding language evolution, the following question arises: have similar developments been observed in evolutions that have not resulted in creoles? The answer is “yes.” There is a sense in which one may agree with Thomason & Kaufman (1988) and claim that the evolution of English relative clauses is internally-motivated, independent of the contact of English with Latin and French. The justification, unconvincing as it is to me (Mufwene 2000), lies in examples such as the following cited from Traugott (1972):

(7) *ybutton pone weall is se maesta dic on þæm is iernende se ungefoglesta stream*

‘round that wall is that hugest ditch in which is flowing that most-enormous current’



Old English too had competing relativization strategies: a) one kind of relative clauses headed by the apparently complementizer *þe* (which had grammaticized from a demonstrative, was invariant regarding case, gender, and number, and did not allow pied-piping), and b) a second kind, headed by what may be called a relative pronoun (which had also grammaticized from a distal demonstrative but varied in case, gender, and number and allowed pied-piping). However, Traugott observes that the pronominal option with pied-piping was rare (105).

All these facts must also be seen against the backdrop of the socioeconomic history of England. Although the Germanic tribes who colonized England since the 5th century replaced Roman colonization, they did not drive Latin out. It continued to function as a trade, religious, or scholarly language into the eighteenth century. Moreover, the English were colonized by the Norman French from the eleventh to the thirteenth centuries (the monarchy has not been purely Norman since the 14th century). During the eleventh through the early fourteenth century) Norman French was the language of administration and high society, and it would indeed continue to be taught as a second language in the high class even after the collapse of the Norman French hegemony.

Both Latin and French have a prevalent relativization strategy that uses relative pronouns and pied-piping and preclude preposition-stranding. When English was reinstated as the official language of England in the fourteenth century, it moved into the elite and scholarly circle with an inferiority complex that made it susceptible to influences from Latin and French. From this state of affairs there emerged a social division of labor that has contained relative clauses that use relative pronouns and pied-piping in educated varieties, while low-class and colloquial vernaculars have kept the older tradition since Old English that has favored relative clauses headed by a “complementizer” and disallowed pied-piping. Changes in the political ecology of England has thus caused English to evolve in a way which has made it possible for a disfavored strategy of Old English to gain grounds, though, to be sure, this alternative has not ousted the favorite relativization strategy in Old English with a complementizer. The fact of containing the relativization-with-a-pronoun strategy within specific lects is an important aspect of change that cannot be overlooked, aside

from the fact that the form of the relative pronoun itself has changed, from a demonstrative to a WH-morpheme identical with the interrogative morpheme, just like in Latin and French.

Changes like these led some authors, such as Bailey & Maroldt (1977) to argue that Middle English developed by the creolization of English. Thomason & Kaufman (1988) and Mufwene (2001a), among others, have argued against this interpretation of facts. Aside from the fact that there is no specific global restructuring process that can be identified as *creolization* (Mufwene 1986, 1990, 2001b), the putative process would have made sense if the English people had shifted to Norman French and restructured it during its appropriation, and therefore if creolization had been claimed of French rather than of English. What is nonetheless important and has won Bailey & Maroldt (1977) some sympathizers, including the present author, is that contact, which is an important factor in changing the ecology of a particular language, played an important role in reorganizing the structure and social distribution of relative clause strategies in English.

The study of the development of creoles reveals that there are no across-the-board communal consensuses on how a lexifier evolves into those offspring that have been disfranchised as “creoles”—many of the structural features of creoles are indeed not categorically nor universally/uniformly used in the communities where they serve as vernaculars. This is in fact one of the lessons from the above interpretation of the evolution of relative clauses in English. The facts eventually lead us to addressing the question of how changes settle in the speech community and why they often do not affect every speaker.

In order to answer the above question, we must start again with the observation, my working assumption, that languages as communal systems are species, because they are extrapolations from idiolects. Vernaculars such as creoles did not develop out of concerted efforts of members of a particular group not to replicate a particular target language perfectly or to take it in a different direction (*pace* Baker 1997). They developed out of cumulative normal processes of imperfect replication in settings where the lexifier was gradually becoming more and more different from the original language brought to the colony from the metropole. There must have been moments when their constituent idiolects differed quite a bit

among themselves but this state of affairs is normal during the emergence of any communal system, before it stabilizes it norm. (The stabilization process is part of the competition-and-selection process discussed below.) The sociohistorical contexts of their developments differ from those other cases of language transmission which have not produced separate language varieties (a matter of politics!) in that those communities were less heterogeneous, have more constrained (or well-defined) ranges of variation in which deviations are easily brought back within the normal range (i.e., range accepted by the current norms). Still, those communities are in fact similar to those in which creole vernaculars are spoken today, having stabilized generally two to three centuries since their emergence. Where and when creoles developed, the ecologies of their lexifiers were undergoing changes under new dialect contact conditions while being appropriated by speakers of other languages. That is, their feature pools were augmented with xenolectal features. These were no longer those conditions in traditional communities where a learner, child or adult, is exposed to an E-language consisting only of one dialect.

Overall, European colonies of the seventeenth and eighteenth centuries represent linguistic ecologies in transformation, in which dialects of the same languages came to coexist in novel ways that produced new colonial varieties identified as koinés by several scholars who have ignored the concurrent contacts of the same languages with other languages (e.g., Chaudenson 1992; Montgomery 1995; Mufwene 1997, 2001a). The closest examples of these idealizations are perhaps English on the Falkland Islands and French in Quebec (at least before the twentieth century). Because dialects of the relevant European languages came in novel contact not only among themselves but also with other languages, from the point of view of feature competition and selection, the development of the colonial varieties of these European languages cannot be different in kind from that of creoles, which developed concurrently with them.

One should not even think of invoking break in the transmission of the lexifier (Polomé 1983, Thomason & Kaufman 1988) to explain structural differences between creoles and those other colonial offspring of the same lexifier that have not been disfranchised. Break in transmission would mean no transmission at all and it would be impossible to explain why the vast majority of creoles have retained

over 90% of their lexica from the same lexifier and so many of their grammatical features can be traced to some nonstandard dialect of the same lexifier. The reason why the creoles' systems are not identical (but are just similar) with those of the colonial noncreole nonstandard vernaculars of the same lexifier is that those speakers who developed them (through amplified imperfect replication—population-wise) were exposed to E-languages that contained non-native models too, and they selected their features from pools that contained not only features from the lexifier and other European languages but also from non-European languages. In restructuring their systems under these different ecological conditions, they eventually made selections that were different from those made by those who had been exposed to E-languages that did not contain the non-European element in the feature pool.

INSET TEXT FROM MUFWENE (2001a)

It is too easy to assume now that the kinds of restructuring processes that I have just explained are restricted to colonial settings. One must remember that late-twentieth and early twenty-first century varieties of European languages are different from those spoken in the seventeenth and eighteenth centuries that were exported to the colonies. According to socio-economic historians such as Bailyn (1986) and Fischer (1989), the population movements that brought several Europeans to the colonies were extensions of population reshufflings and contacts that were then taking place in Europe itself. Oliver Cromwell initiated the potato plantation system in Ireland around the same time and its form of colonization shifted from the exploitation kind to the settlement kind. Populations from Northern England and the rest of the British Isles were migrating south in search of jobs ... and some wound up crossing the Atlantic. Buccini (1995) reports similar population movements in Holland, toward the port cities which became important contact centers. According to him the restructuring of Dutch associated with the colonies must have started in those port cities. The same could be said of London and Bristol, from which several subjects of the British Isles left for the colonies. This position is only a geographical counterparts of Chaudenson's (1992, 2001) position that what is observable in French creoles is really an extension of self-regulating principles that are attested in the French lexifier.

Indeed today's varieties of European languages are as new as their colonial counterparts, including the creole vernaculars. It can thus be misguided to measure the "extent of restructuring" of colonial varieties of European languages by comparing them with the varieties that are presently spoken in Europe, because the latter are themselves recent developments too and are consequences of changes in their external and internal ecologies, just like the colonial varieties. (For similar ideas, see Meillet 1906, who invokes "changement social" as a trigger of language change, and more recently DeGraff 1999.) Thus to the extent that there is no structural characterization of the distinction between 'language' and 'dialect', hence no structural way of distinguishing between language contact and dialect contact, virtually the same competition-and-selection principle and the same vernacular shift phenomenon that account for the development of creoles and other colonial vernaculars also account for the evolutions of European languages into their current structures (Mufwene 2001a).

Only ideologies lead us to posit different mechanisms of language evolution for creoles and non-creole vernaculars, or even to claim/suggest, like most creolists, that there are no evolutionary continuities from a lexifier to its creole offspring. Any difference that can be invoked is a matter of degree rather than of kind. I'll address the most common relevant claims individually below:

1) Creoles have been claimed to have originated from erstwhile pidgins. If pidgins remain reduced codes for limited/occasional contacts for restricted communicative functions, such as trade, then we may as well as claim that there was virtually no communication taking place both among non-Europeans and between them and the European colonists (including indentured servants) in European settlement colonies. If pidgins are also caused by societal multilingualism, then I wonder why European colonists did not develop pidgins of their own too. If they are also caused by the sporadic nature of contacts, then we may as well deny the socio-economic histories of the settlement colonies, which started with small homesteads on which the enslaved populations were integrated minorities (Tate 1965) and interacted on a regular basis with the European colonists (despite the discrimination against them that would lead to the worsening of their conditions during and after the shift to the plantation phase of the colonies). Their children acquired

the colonial koiné natively. This observation also disputes the myth that creoles were formed by creole children. History suggests that creole children of non-European descent spoke the colonial koiné as natively as the creole children of European descent and overall, even during the later stages of colonization during which more divergent vernaculars were identified as creoles, children must have slowed down the restructuring and divergence processes rather than contributing to them.<sup>1</sup>

2) Creoles have typically been claimed to have developed faster than their non-creole counterparts. There is no evidence of this difference in North American colonies. Gullah cannot be shown to have developed faster, nor less gradually, than other American English vernaculars. There is no evidence of such differential developments elsewhere.

3) Non-creole vernaculars have been presented as homogeneous systems, in contrast with creoles, which are said to be mixed. History suggests that there is no living language that is not mixed (Hjelmslev 1938), especially the colonial varieties of the same European languages. The history of English since the Old-English days is a history of contacts of people and languages, just like those of the Romance languages and the Indo-European family in general (Martinet 1986; Mufwene 2000, 2001a). Creolists have also argued that present-day non-creole vernaculars are less restructured than their creole counterparts. Such a claim presupposes that there was a common *terminus a quo* for all the relevant vernaculars, aside from the adequacy of the claim that the divergence of a creole from its non-creole kin depends both on the degree of structural homogeneity among the languages in contact with the lexifier and on the extent of structural differences between the lexifier and the other languages. However, these conditions only spell constraints

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<sup>1</sup> Imperfect replication is minimized in their case because of the particular blueprint they follow in developing their linguistic skills, starting with the most central components of a language and consistent with the gradual expansion of their cognitive capacity—basically subject to no substrate influence and to fewer communicative pressures than adults (Mufwene 1999). Adult who develop competence in a second language do not start *tabula rasa*, and their mature cognitive systems exert pressures on them to communicate as soon as possible what they already can express in their mother tongue or vernacular. While adequately identified similarities between the source and target language facilitate the development of competence in the target language, misidentified similarities produce all sorts of deviations from the targeted norm.

that bear on the same competition-and-selection mechanisms mentioned above, regardless of whether the feature pool available to speakers consists only of features peculiar to the lexifying language or also of xenolectal features.

4) Contact thus plays a central role in the restructuring processes that bring about language evolution. In Mufwene (2001a), I argue that eventually there is only one basic kind of language contact that between idiolects, regardless of whether or not they include xenolectal features. Where there are a lot of xenolectal idiolects (i.e., idiolects in which non-native features are in significant proportions) a communal language can diverge into a variety identifiable by separate, often disfranchising name, such as *indigenized English*, *African French*, or *creole*. In these particular examples the basic explanation is that features of adults non-native wind up settling in the communal system as part of the local norm; children who acquire them contribute to perpetuating them (until later changes take place at the communal level).

I am not suggesting that children acquire the language of their social environment perfectly. No native speaker ever replicates the language of their social environment perfectly, because no native speaker is ever exposed to the totality of E-language that would enable them to construct a grammar that captures the full range of variation that is acceptable in their communal I-language (i.e., an extrapolation of idiolects in their language community). Moreover, as with other social skills, speakers have imperfections with some linguistic skills. An important reason why such deviations do not necessarily lead to new varieties is that in most cases new speakers' peculiarities coincide with current ones produced by other current speakers, so that variation nurtures variation. This aspect of language stability is as true of creoles as of non-creole speech communities. DeCamp (1971) and several creolists since then have been correct in acknowledging variation, though misguided in assuming that it was symptomatic of decreolization qua debasilectalization. As in a biological species, evolution works on variation, and it takes changes in the external ecology to increase the range of variation, reduce it, or eliminate it altogether. Stable variation is the unmarked condition. To be sure, individual speakers always produce changes in their idiolects, but, as noted above, these do not always catch up with the community at large. Here we observe that dialectic between

individual and group selection in population genetics, and again we must come back to ecology to explain when a change takes place.

In any case, we must return to the contact of idiolects, and there is much more to it than I have said so far. As observed in Mufwene (2001a), speakers are the unwitting agents of language change through both their inability to replicate each other perfectly and the mutual accommodations they make to each other in their verbal interactions. Although the outcome is subject to probabilistic factors and ecological conditions, there is no language that escapes this basic cause of language change. Even those influences considered external to a language, such as that of Norman French on English, or of Frankish on French, work through the mutual accommodations of speakers to each other. (Copying a form or a structure from another speaker is considered here to be a form of accommodation.)

Speech is of course creative and speakers innovate a number of things in the process. Not all innovations settle and become part of the acceptable norms in a language variety. Such innovations spread also subject to probabilistic factors and through mutual accommodations of speakers to each other.

Even those cases of exaptive responses to communicative needs that are identified as grammaticization are normally initiated by individuals and become conventionalized through mutual accommodations, which account for their spread and stabilization within a community. Grammaticization is an important component of the development of creoles, made more common by the particular circumstances of language appropriation in which they have developed. Bruyn (1996) and Plag (1999) argue that the development of creoles involve no, or very few, normal cases of grammaticization. They argue that most of those cases claimed to involve grammaticization are extensions of processes that had already started in the lexifier. Their position depends thus on the assumption that creoles have developed because there was a break in the transmission of the lexifier. I argued above that there is neither structural nor sociohistorical justification for this assumption. Everything suggests just the opposite and we definitely need not assume that creoles developed by any restructuring processes that are not attested in the normal evolutions of languages into new varieties. There are no structural evolutionary processes or combinations thereof that can be identified



as creolization. The term *creolization* reflects a social identification act of disfranchising particular offspring of some languages and no more than that (Mufwene 2001b). The development of creoles is quite normal and continuous from their lexifier, though the ecologies of the restructuring processes are peculiar to them, albeit as an amplification of the fact that the evolutionary ecology of every language (variety) is unique to it.

Overall, I have tried to turn the tables around by showing that research on the development of creoles can, and perhaps should, prompt us to reassess our beliefs about language evolution in general. Research on the development creoles has made us more aware of at least two factors in language evolution: 1) variation in the *terminus a quo*, the starting point which includes everything in the communicative contexts that made their way into the cumulative feature pool from which speakers selected features of their idiolects; and 2) changes in the ecology that would bring about changes in the structures (and functions) of the communicative system or the target language. The mechanisms and agents of change are otherwise the same for creole and non-creole vernaculars, with the adults having a greater chance of effecting changes than children, though some innovations initiated the latter can certainly spread in a population. Otherwise, the agents are individual speakers, not groups, changes spread through the accommodations that they make to each other.

### References

- Bailey, C.-J. N. & Karl Maroldt. 1977. The French lineage of English. In *Langues en contact/ Languages in contact: Pidgins—creoles*, ed. by Jürgen-Meisel, 21-53. Tübingen: TBL Verlag Gunter Narr.
- Bailyn, Bernard. 1986. *The peopling of British North America: An introduction*. New York: Random House.
- Baker, Philip. 1997. Directionality in pidginization and creolization. In *The structure and status of pidgins and creoles*, ed. by Arthur Spears & Donald Winford, 91-109. Amsterdam: John Benjamins.

- Bruyn, Adrienne. 1996. On identifying instances of grammaticalization in creole languages. In Baker & Sylea, 29-46.
- Buccini, Anthony F. 1995. The dialectal origins of New Netherland Dutch. In *The Berkeley conference on Dutch linguistics 1993*, ed. by Thomas F. Shannon & John Snapper, 211-263. Lanham, MD: University Press of America.
- Chaudenson, Robert. 1992. *Des îles, des hommes, des langues*. Paris: L'Harmattan. Revised with Salikoko S. Mufwene as *Creolization of language and culture*. London: Routledge.
- Chomsky, Noam. 1986. *Knowledge of language: Its nature, origin, and use*. New York: Praeger.
- DeCamp, David. 1971. Toward a generative analysis of a post-creole speech continuum. In *Pidginization and creolization of languages*, ed. by Dell Hymes, 349-70 Cambridge: Cambridge University Press.
- DeGraff, Michel. 1999. Creolization, language change, and language acquisition: A prolegomenon. In *Language creation and language change: Creolization, diachrony, and development*, 1-46. Cambridge, MA: MIT Press.
- Fischer, David Hackett. 1989. *Albion's seed: Four British folkways in America*. New York and Oxford: Oxford University Press.
- Hagège, Claude. 1993. *The language builder: An essay on the human signature in linguistic morphogenesis*. Amsterdam: John Benjamins.
- Hjelmslev, Louis. 1938. Etudes sur la notion de parenté linguistique. *Revue des Etudes Indo-Européennes* 1.271-286.
- Lass, Roger. 1997. *Historical linguistics and language change*. Cambridge: Cambridge University Press.
- Lewontin, Richard C. 1970. The units of selection. *Annual Review of Ecology and Systematics* 1.1-18.
- Martinet, André. 1986. *Des steppes aux océans: l'indo-européen et les "indo-européens"*. Paris: Payot & Rivages.
- Meillet, Antoine. 1906. L'état actuel des études de linguistique générale. Inaugural lecture, Collège de France, Paris. Reprinted in *Linguistique historique et linguistique générale*. vol. 1, 1-18. Paris: Honoré

Champion.

Meillet, Antoine. 1929. Le développement des langues. In *Continu et discontinu*, 119ff. Paris: Bloud & Gay. Reprinted in Meillet 1951:71-83.

Montgomery, Michael. 1995. The koinéization of colonial American English. In *Sociolinguistic Studies and Language Planning: Proceedings of the XVIth Annual Meeting of the Atlantic Provinces Linguistic Association*, ed. by Catherine Philippeau, 309-31. Moncton: NB: Center de Recherche en Linguistique Appliquée.

Mufwene, Salikoko S. 1986. Les langues créoles peuvent-elles être définies sans allusion à leur histoire? *Etudes Créoles* 9.135-150.

Mufwene, Salikoko S. 1989. Equivocal structures in some Gullah complex sentences. *American Speech* 64.304-26.

Mufwene, Salikoko S. 1990. Review of Thomason & Kaufman. *Journal of Pidgin and Creole Languages* 5.143-7.

Mufwene, Salikoko S. 1992. Why grammars are not monolithic." In *The joy of grammar: A festschrift in honor of James D. McCawley*, ed. by Gary Larson et al., 225-50. Amsterdam: John Benjamins.

Mufwene, Salikoko S. 1997. Jargons, pidgins, creoles, and koinés: What are they? In Spears & Winford, eds., 35-70.

Mufwene, Salikoko S. 1999. The language bioprogram hypothesis: Hints from Tazie. In *Creolization, diachrony, and language acquisition*, ed. by Michel DeGraff, 95-127. Cambridge, MA: MIT Press.

Mufwene, Salikoko S. 2000. Population contacts and the evolution of English. *The European English Messenger* 9.9-15.

Mufwene, Salikoko S. 2001a. *The ecology of language evolution*. Cambridge: Cambridge University Press.

Mufwene, Salikoko S. 2001b. Creolization is a social, not a structural, process. In *Degrees of restructuring in creole languages*, ed. by Edgar Schneider and Ingrid Neumann-Holzschuh, 65-84. Amsterdam: John Benjamins.

- Plag, Ingo. 1999. Review of *Changing meanings, changing functions: Papers relating to grammaticalization in language contact*, ed. by Philip Baker & Anand Syya. *Journal of Pidgin and Creole Languages* 14.202-208.
- Polomé, Edgar. 1983. Creolization and language change. In *The social context of creolization*, ed. by Ellen Woolford and William Washabaugh, 126-36. Ann Arbor: Karoma.
- Tate, Thad. 1965. *The Negro in eighteenth-century Williamsburg*. Williamsburg, VA: The Colonial Williamsburg Foundation.
- Thomason, Sarah G. & Terrence Kaufman. 1988. *Language contact, creolization, and genetic linguistics*. Berkeley: University of California Press.
- Traugott, Elizabeth Closs. 1972. *The history of English syntax*. New York: Holt, Rinehart, & Winston.
- Weinreich, Uriel. 1953. *Languages in Contact: Findings and problems*. New York: Linguistic Circle of New York.