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THE FOUNDER PRINCIPLE IN CREOLE GENESIS*

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1. *Introduction*

In this paper I analogize 'language' to 'population' in population genetics, hoping to account more adequately for some aspects of language restructuring (see next paragraph!) in contact situations, especially those associated with the varieties called 'creoles'.[1] I focus on those lexified by European languages, particularly those spoken in the New World and the Indian Ocean, which the literature has presented as (proto)typical. However, nothing precludes the main thesis of this paper (stated two paragraphs below!) from applying to other contact-induced language varieties, especially those which have been lexified by non-European languages but have also been called pidgins or creoles, disputably (Mufwene, in press). What matters first in all such cases is the contact origin of the varieties. The specific social histories of their developments account for variation in the outcomes of the restructuring of the same lexifier (Le Page & Tabouret-Keller 1985), as I argue below, invoking ethnographic ecology.

I use the term *vernacular* in its original meaning as the language variety of the home, the basic form used for day-to-day communication. As for the term *restructuring*, I use it here in the sense of "system reorganization", which makes a creole different from its lexifier. The latter was primarily the colonial variety which was spoken by the European colonists and was itself developing from the contact of diverse metropolitan dialects. Consistent with the position proposed below on creole genesis, this reorganization often consists in modi-

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[1] As noted by Gilman (1993), biological metaphors have been used in studies of creole genesis for quite some time now, starting with Whinnom's (1971) hybridization theory, if not earlier. An important difference from that tradition is my comparison of 'language' with 'population' in biology. I assume that language is just a useful construct over individual idiolects of a speech community, which vary among them, in more or less the same ways as do individual members of populations.

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fying grammatical features selected into a creole's system from the lexifier, the language that was being appropriated by foreign populations and undergoing some changes. For instance, the English form *for* participated in the restructuring of its lexifier because, in addition to being selected into English creoles as a purposive and causal preposition, it was also extended to modal and complementizer functions. The reorganization also consists in recombining in a new system features which formerly did not belong in the same one, as may be determined by the diverse origins (dialect and language-wise) of several features of any creole. Such is the case with the collapsing of the ASSOCIATIVE PLURAL function expressed in most SubSaharan African languages with the typical PLURAL function of nonstandard English *dem* in the same system. (The notion of 'modification' invoked here may be analogized with 'adaptation' in population genetics, relative to a particular ecology, as discussed below.)

The term *Founder Principle*, also identified as *Founder Effect* (Harrison et al. 1988), is used here, along with *founder population*, to explain how structural features of creoles have been predetermined to a large extent (but not exclusively!) by characteristics of the vernaculars spoken by the populations that founded the colonies in which they developed. European colonies often started with large proportions of indentured servants and other low-class employees of colonial companies, thus by speakers of nonstandard varieties of the creoles' lexifiers. This fact generally explains the 17th- and 18th-century nonstandard origin of several features of creoles. I also argue that some features which might be considered disadvantageous — because they are rare, not dominant, and/or used by a minority — in the metropolitan varieties of the lexifiers may well have become advantageous in the speech of the colonies' founder populations. Examples include the progressive construction with *après* + Infinitive and the future construction with *pour* + Infinitive in nonstandard French, or locative-progressive constructions such as *be up(on)* V-*ing* in earlier varieties of English (now also attested as *be* a-V-*in* in some nonstandard varieties). For any subset of the reasons discussed below, they have been selected into the systems of some creoles, although not necessarily with the same distribution as in the lexifier (as observed by Boretzky 1993 in relation to substrate influence).

The typical population-genetics kinds of explanations for the dominance of such disadvantageous features in a (colony's) population are: 1) such features may have been reintroduced by mutation; 2) they may have been favored by new ecological conditions in the colony; or 3) the colony may have received significant proportions of carriers of the features/genes, a situation which maximized the chances for their successful reproduction. I argue below that in creole genesis the second and third reasons account largely for the restructuring

of the lexifier. True mutations are rare, though there are plenty of adaptations. And I wish to discuss the developments of creoles as instances of natural adaptations of languages qua populations to changing ecological conditions. In every colony, selection of the lexifier for large-scale communication in an ethnographic ecology that differed from the metropolitan setting called for adaptations that resulted in a new language variety.

Although the notion of 'ecology' remains to be exacted — concurrently with progress in this research agenda — it may be conceived of as the ethnographic setting in which the lexifier (the displaced population) has come into contact with diverse languages (other populations) whose structural features (genes) enter into competition with its own features. Because several geographically distant metropolitan varieties of the lexifier came into contact with each other in the colony (Le Page 1960, Le Page & Tabouret-Keller 1985, Algeo 1991), many features that distinguish them from each other were likewise engaged in the feature competition. Their selection often depended on convergence with features of some substrate languages, as I show below. The notion of 'ecology' proposed here (as in Mufwene 1996a) helps us determine which factors in individual contact arenas favored the selection of advantageous features into creoles' systems. Mufwene's (1989, 1991a) ecology-sensitive model of markedness was designed to answer some of the questions regarding this selection protocol.

As the ecological conditions changed over time (Section 2), new features may have prevailed over some older ones which may in turn have become disadvantageous. For instance, the habitual marker [dəz] in Gullah and its counterpart [dɔz] in Guyanese Creole may have developed under conditions of labor recruitment which appear to have been subsequent to those of the founder populations which had come from Barbados. The later recruits would have brought with them conditions more favorable to the prevalence and adaptation (perhaps not so extensive) of the English emphatic-habitual, or empty periphrastic, *does* (pronounced [dəz] in the weaker form) as a habitual marker. The Barbadian basilectal creole texts (those that are structurally the most different from the more accepted varieties of English) studied by Fields (1992) and Rickford & Handler (1994) reveal no attestations of such a habitual construction. Jamaican Creole, which developed earlier and also has some historical connection with Barbadian (Le Page & Tabouret-Keller 1985), has no such habitual construction either. Neither does Saramaccan, which also has older

genetic ties with Barbadian colonial English speech. May there have been more users of periphrastic *do* among speakers of the lexifier in these later colonies?[2]

Some new features may also have prevailed without eliminating any previous ones, with alternatives coexisting peacefully in the developing creole's system, providing stable variation as in other populations. For instance, in Belizean Creole, the new ANTERIOR construction with *was* (Escure 1984) has not displaced the original one with [mɛ], the counterpart of *bin/ben* in other Caribbean English creoles. In such historical scenarios marked by continuous population contacts, how a developing vernacular is affected by new contacts depends in part on the makeup of the current system and in part on the new alternatives brought over by the new populations. For instance, did the new populations bring with them systems that are different from, or largely similar to, those of the local or target vernaculars? Factors such as regularity, semantic transparency, and perceptual salience discussed in Mufwene (1989, 1991a) also continue to bear, sometimes in conflicting ways, on what features get selected into a creole's system. Ethnographic factors such as the demographic proportion of the newcomers relative to the local populations, their attitudes toward each other, and their social status bear also on how the systems in contact emerge from the competition.

In this population-genetics approach to creole genesis, speakers are the agents of the selection processes invoked here. It is through them that selective advantage was conferred to some structural features over competing alternatives. Their role as agents was made possible by the fact that they are the actual loci of language contact Weinreich (1953), thus the arenas of the feature competition discussed here. The plantations count as settings of contact at a second level, at which features not uniformly selected by individual speakers competed with each other. Factors such as frequency, which determine markedness values and influence feature selection (Mufwene 1989, 1991a), may prevail at this level, unlike structural factors. This distinction is important because, like in population genetics, the features/genes that gain selective advantage at the level of individuals need not prevail at the level of populations. It also allows variation within a population, which is typical of creole vernaculars.

Consequently, language contact is a more complex situation than has been assumed in the literature on creole genesis. Any language as an exponential

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[2] These observations are not in themselves evidence that *does* + Verb did not occur in earlier colonial Barbadian English speech to denote habits with especially nonstative verbs. They just show that ecological conditions here, as in Jamaica and Suriname, were not favorable to its selection for the habitual grammatical function in their respective basilectal creole varieties. In Guyana and coastal South Carolina, such favorable conditions seem to have obtained. The question is to determine what the differential ecological conditions were.

construct from idiolects exists because speakers using systems that are not necessarily identical interact with each other. In the process they accommodate each other in their speech habits. While still maintaining some idiosyncrasies of their own, they achieve what Le Page & Tabouret-Keller (1985) call 'focussing'. Creoles have developed both from individual speakers' attempts to speak the lexifier and through their mutual accommodations in the contact settings.[3] For convenience, we simplify this more complex picture of contact by focusing on the language level. However, we should not continue ignoring the level of idiolect contact, at which each speaker participating in a different network develops their own variety. Recognizing individual speakers as agents of restructuring enables us to account for variation within the community.

2. *Creole Genesis: What the histories of individual colonies suggest*

The purpose of this section is to dispel several assumptions in studies of creole genesis that seem unwarranted. I also propose some justified alternatives that are critical to understanding how the Founder Principle works. I will start by showing why we need not subscribe to any of the dominant hypotheses to explain how creoles and other contact-induced vernaculars developed.

Over the past two decades, discussions of the origins of grammatical features of especially Atlantic creoles have been polarized between substratist and universalist hypotheses, as well captured by the title of Muysken & Smith (1986): *Substrata versus universals in creole genesis.* According to substratists (e.g., Alleyne 1980, 1986, 1993; Holm 1988, 1993; Lefebvre 1986, 1993), these creoles owe most of their structural features to the influence of the languages previously spoken by the African slaves, who were the overwhelming majority on New World plantations, at the critical formative stages of these new vernaculars. According to universalists, they owe their features to the language bioprogram, which has innovated them through children remedying the deficiencies of their parents' pidgins which they acquired as their mother

[3] I assume that creoles developed not because the people brought together on plantations and similar settings wanted 'to *create* a medium for interethnic communication' (Baker 1994:65, author's emphasis). Rather, they *emerged by accident*, as the populations in contact attempted to communicate in languages that a large proportion of them did not apparently command well. Such usage entailed restructuring the lexifier one way or another. Even for those who commanded well one or another variety of the lexifier, the competition of alternatives in such contact settings called for mutual accommodations, hence selection of features roughly associated with *restructuring* in the literature. Thus the new vernaculars emerged generally as byproducts of this mode of language appropriation by foreign groups. Thomason (1981:246) captured it well in observing: 'A new language (...) will emerge only as a response to new communicative needs, and *it will emerge out of the communicative process*' (my emphasis).

tongues (Bickerton 1981, 1984, 1988, 1992), or they owe them to universal principles of (second) language acquisition, with adults being the agents of vernacularization (Thomason 1980, Sankoff 1984).[4]

Although quite strong from the 1920s to the 1960s, the view that the colonial varieties of the European languages have played a critical role not only in determining the vocabularies of the creole vernaculars but also their grammars has generally been overlooked since the 1970s. The legacy of Krapp (1924), Kurath (1928), Johnson (1930), Faine (1937), Hall (1958, 1966), and Valkhoff (1966), among others, has been barely noticeable in the context of Atlantic creoles, except for D'Eloia (1973) and Schneider (1981, 1983, 1989) regarding African-American vernacular English (AAVE) and Chaudenson (1979, 1989, 1992) in the case of mostly Indian Ocean French creoles.[5]

Overall, superstratists claim that creoles have typically extrapolated structural alternatives that were already present in both metropolitan and colonial varieties of the lexifiers. The new vernaculars did not innovate much in the sense advocated by Bickerton (1984, 1988, 1992), nor did they accept much substrate influence that did not have some model, however limited in extent, in their lexifiers. Both Chaudenson (1979, 1989, 1992) and Baker (1990, not a superstratist!) take these lexifiers to be approximations of colonial European speech by slaves of the homestead phase, i.e., varieties that were not significantly restructured compared to European colonial speech. According to the superstratist hypothesis, as represented by Chaudenson (1992) and Hazaël-Massieux (1993), exclusive substrate influence may be primarily lexical, which is minimal compared to the large proportion of lexical items from the lexifier, and the influence is confined to some cognitive domains on which the substrate populations had more knowledge.

In the last decade, I have contributed to what is identified in Mufwene (1993b), after the title of Mufwene (1986a), as the 'complementary hypothe-

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[4] The term 'vernacularization' is translated here from Chaudenson (1989), in the sense of "usage as a vernacular" or "becoming a vernacular". We consider this process, rather than nativization, the primary factor that helps the new vernacular develop its own norm, autonomous from, though related to, the lexifier. This process, which Chaudenson calls 'normalization', may be equated with 'stabilization' in much of the creolistic literature. It does not entail elimination of variation.

[5] On the other hand, the substratist hypothesis has been more of a haunting ghost than a real contender in the case of Indian Ocean creoles, on which superstratists and universalists monopolized the debate until Baker (1994), which favors a creativity standpoint. Even though some allowance was made for substrate influence, much of the dominant substrate influence claimed for Atlantic creoles has been disputed by both universalists and superstratists when similar structural features were identified in the Indian Ocean.

sis'.[6] In my particular version of it, as presented in, for instance, Mufwene (1991a, 1991b, 1993a, 1996a), the only influences in competition are structures of the lexifier and of the substrate languages; the language bioprogram or Universal Grammar, which need not be conceived of as operating exclusively in children, regulates the selection of structural features from among the options in competition among the language varieties in contact. I have proposed a markedness model for which the values are predetermined by diverse factors, such as regularity or invariance of form, frequency, generality, semantic transparency, and perceptual salience, among other factors that matter variably in specific ethnographic ecologies (Mufwene 1989, 1991a). This paper is consistent with this particular position.

Along with Le Page & Tabouret-Keller (1985) and Chaudenson (1992; see also Mufwene 1983), I criticize a shortcoming common in most studies, viz., the comparison of creoles' structural features with those of the standard varieties of their lexifiers rather than of their nonstandard varieties. The illusion that the Europeans with whom the non-Europeans interacted on the plantations spoke the standard varieties of their lexifiers is not consistent with sociohistorical information available at the beginning of the colonies. Some 17th-century letters addressed to, for instance, the West Indian Company, the Virginia Company, the [Dutch] West India Company, or their other European counterparts reveal that their authors were typically low-ranking employees who had been sent on difficult ground-breaking missions in the colonies. They are consistent with studies of Ship English, such as Bailey & Ross (1988:196-197), which argues that 'most of the sailors were illiterate, including many of the captains and masters'. According to this literature, the varieties spoken aboard the ships must have been more nonstandard than the ship logs indicate, especially as the written medium may have skewed the samples in the direction of the standard variety.

These observations converge with historical accounts according to which large proportions of the immigrant European populations consisted of defector soldiers and sailors, of destitute farmers, of indentured labor, and sometimes of convicts. That is, the vast majority of the (early) colonists came from the lower strata of European societies. As much of their correspondence also indicates (e.g., Eliason 1956), they spoke nonstandard varieties, inherited by the

[6] The complementary hypothesis has also been associated with such names as Baker & Corne (1986), Baker (1993), and Hancock (1986, 1993), although we do not articulate our positions in quite the same way, especially as to how we see the bioprogram operating. For instance, both Baker and Hancock saw the bioprogram in competition with substrate and superstrate influences, whereas Mufwene (1990b) did not. Baker then believed much in the role of children, but he no longer does now (Baker 1994).

vernaculars of several rural and low-income whites in, for instance, the Piedmont, Appalachian, and Ozark mountains. The same may be said of French varieties spoken on the Caribbean islands of, e.g., St. Barths and St. Thomas.

It has often been argued against the non-relexificationist version of the substrate hypothesis (represented by Alleyne and Holm) that the Africans could not influence the structures of the emerging creoles because of their extensively diverse linguistic backgrounds. However, as noted above, several metropolitan varieties of the lexifiers were also brought into contact with each other in the colonies. Consistent with the contact hypothesis, no European colonial varieties of the lexifiers are exclusive matches of specific metropolitan varieties. Unless these European colonial varieties too were produced by the language bioprogram, we have everything to gain in investigating how features from the metropolitan varieties were selected into the colonial ones.

What has also been overlooked regarding both the European and non-European elements in the new vernaculars is the demographic significance of diverse ethnolinguistic groups and how it varied from one period to another during the development of these communities. This factor greatly complicates the language contact formula regarding when a particular language variety was likely or unlikely to influence the development of a new vernacular. I return to this in Section 3.

Hancock (1969), Dillard (1972, 1985), and McCrum et al. (1986) also emphasize the likely contribution of an antecedent maritime, or nautical, English jargon to the development of the new colonial varieties. Like Le Page (1960) and Le Page & Tabouret-Keller (1985), Dillard (1985, 1992) invokes the high proportion of nautical terms to support this position. On the other hand, Buccini (1994) argues that the making of colonial varieties of European languages may have started in Europe. He presents port cities such as Amsterdam and Utrecht as contact settings where speakers of diverse Dutch dialects met before they sailed for the colonies. New varieties putatively developed in these cities, triggering 'leveling' (i.e., restructuring) processes which would continue up to the colonies. It is not clear yet what part such diachronic processes, which must have taken place in other metropolitan port cities, played in the development of nautical varieties. On the other hand, since most immigrants were not sailors, one cannot deny the likely direct influence of these then emerging varieties on the ones that would develop in the colonies. In any case, there is no reason for assuming that these new metropolitan varieties would have crystallized or normalized already before the colonists emigrated, nor that these are the only or dominant varieties that were brought from Europe. What Buccini's observation suggests is that the restructuring of the lexi-

fiers started before they reached the colonies, where it would continue subject to new ecological conditions.

All the above observations show that there was independent ground for feature selection among the European colonists themselves, as proved by the noncreole New World varieties of European languages, such as Québécois French and white North American varieties of English. The need for selection was intensified by the presence not only of Africans on the plantations but also of other Europeans who did not speak the lexifier natively. Kulikoff (1991a, b) and Menard (1991) indicate that non-English-speaking Europeans, especially Germans, counted among the early indentured servants. Taking into account the following observations on how the colonies developed from homestead to plantation societies, it seems more and more plausible to assume that the creoles' lexifiers were not the metropolitan varieties but some already restructured varieties, and/or some in the process of development, which were spoken by the founder populations (including Europeans and non-Europeans!) of the homestead phase (Chaudenson 1979, 1989, 1992; Baker 1990). Le Page & Tabouret-Keller (1985:26) suggest something similar in claiming that the development of most creoles could not escape the influence of previous lingua francas used before the development of New World communities and the like.

Most scholars of creole genesis have taken it for granted that prototypic creoles, those of the New World and the Indian Ocean, developed 'abruptly', within a human generation (around 25 years), after an initial phase during which a pidgin was putatively spoken by an almost exclusively adult non-European population. One develops from such literature the wrong impression that the plantations developed overnight, so to speak, with all their peak population aggregates in place from the beginning of the colonies, with all the relevant African languages represented, and with their features competing concurrently with each other. Several important historical sources investigated recently by, e.g., Baker (1990, 1993), Singler (1993, 1994), Migge (1993), and Mufwene (1992, 1993c) confirm Chaudenson's position that the colonies developed gradually into plantation economic systems, although not at necessarily the same speed (see below).

Baker (to appear) argues that the homestead stage lasted less long in Mauritius than in Réunion. A consequence of this is that Mauritian Creole would have developed quite early in the history of Mauritius and in a setting where, given the much smaller proportion of a founder population speaking colonial French, features converging with those of non-European languages had a greater chance of being favored. The same may actually also be inferred from Le Page & Tabouret-Keller's (1985) history of Caribbean colonies (see also

Williams 1985). For instance, Jamaica went into the sugar cane plantation system about twenty years faster than Barbados. Its non-European population grew even faster. By 1690, 35 years after the British took Jamaica from the Spaniards in 1655 (Le Page 1960, Le Page & Tabouret-Keller 1985), the African population in Jamaica had grown to three times that of the European population: 30,000 vs. 10,000 (Williams 1985:31). The same year, Barbados, which had been colonized since 1627, had 50,000 Africans against 18,000 Europeans, at a ratio of less than 3 to 1 in 63 years (Williams 1985:31). By the mid-18th century the proportion was over 10 Africans to 1 European in Jamaica, whereas it did not exceed 2 to 1 in Barbados despite the continuous dwindling of the European population (Le Page & Tabouret-Keller (1985:39-47). Note also that in Barbados, the African population remained a minority for the first 30 years, whereas in Jamaica it surpassed the European population within the first 20 years. (More on demographic developments below.)

The historical observations also reveal that Africans from different regions and language families — often coinciding with different typological groups — became critical to the development of Atlantic creoles at different stages of their developments. Starting with Curtin's (1969) general demographic estimates in Table 1 (subject to conventional reservations on his estimates), the proportion of Africans from the Windward Coast (speaking Mande, Kru, and Western Kwa languages) was significant mostly during the homestead phases of several colonies, e.g., South Carolina and Jamaica. However, it became significant during the plantation phases of several others, e.g., Barbados and Suriname. Africans from the Gold Coast and the Bight of Benin (also speaking Kwa languages) became demographically significant during the early 18th century, the period when the basilectalization (i.e., consolidation of basilectal features into a distinct sociolect) of several Atlantic creoles was underway. Features of the lexifiers which were Kwa-like were likely to gain selective advantage, barring other factors which may have influenced the restructuring differently (Mufwene 1989, 1991a).

By the time the Central Africans (speaking Bantu languages) became demographically conspicuous, during the second half of the 18th century, most of the creoles must have already developed the greatest and/or more fundamental parts of their structures and norms. Since such demographic significance did not obtain overnight, it was generally more cost-effective for subsequent generations of immigrants (free, enslaved, and indentured) to learn the emerging local vernaculars than to develop new ones from scratch.

We must remember, however, that the mortality rate was very high among the plantation labor, although this population continued to grow up to the 19th

TABLE 36

THE ENGLISH SLAVE TRADE, 1680–1800, BY AFRICAN REGION OF ORIGIN, EXPRESSED IN PERCENTAGES OF VARYING SAMPLES

Period	Senegambia	Sierra Leone	Windward Coast	Gold Coast	Bight of Benin	Bight of Biafra	Central Africa	Other
1. 1680–85	12.0		27.3	20.9	15.7	6.7	12.0	5.4
2. 1688	12.0		38.0	18.4	12.3	5.2	11.3	2.8
3. 1713	14.6	4.2	10.4	31.2	39.6	—	—	—
4. 1724	6.4	10.6	5.3	38.3	21.3	3.2	14.9	—
5. 1752	7.0		32.0		5.2	40.4	12.7	2.6
6. 1771	7.0	25.4		16.0	49.5		2.1	—
7. 1771	6.7	2.0	31.0	13.1	3.0	44.2	—	—
8. 1788	0.9	4.7	5.4	13.5	16.8	29.0	29.7	—
9. 1798		6.2		6.8	3.0	38.2	45.8	—
10. 1799	0.3	9.8		9.7	1.0	44.8	34.4	—

Sources: Data from Davies, *Royal African Company*, pp. 225, 233, 363; Le Page, "Jamaican Creole," pp. 61–65; Donnan, *Documents*, 2:308–9, 454–56, 598; Edwards, *British West Indies*, 2:56. See also text, pp. 130–32.

Table 1: *The English slave trade, 1680-1800, by African region of origin, expressed in percentages of varying samples, from Philip Curtin (1969:129).*

century. This trend of rapid population replacement and growth (compared to communities growing by birth) favored continual restructuring of the extant non-European vernaculars. Even though the most drastic restructuring may have taken place during the initial and critical transition to the plantation phase in every colony, I expect the process to have continued probably up to the end of the abolition of slavery in the 19th century. Having proved adaptive several times before, the features selected in earlier phases of plantation development still stood a good chance of being selected for one reason or another during every round of the competition.[7]

The few exceptions to the above selective advantage of Kwa-like features include Palenquero (Maurer 1987), São Tomense, and Principense (Ferraz 1979), whose initial creators (i.e., founder populations during the formative stages) included significant proportions of Bantu speakers. Consequently, they reflect influence suspected to be Bantu. Le Page and Tabouret-Keller (1985) suggest that São Tomense must have formed about the mid-17th century (almost 150 years after the first Bantu slaves had been imported from the Kongo Kingdom). That is, after many Portuguese planters had left for Brazil, Portugal stopped sending convicts, and the population disproportion increased dramatically, as the sugar cane plantation industry grew and São Tome continued to be an important slave depot.

On the other hand, the developmental demographics of Suriname suggest that the restructuring of English into the present basilects of Saramaccan, Sranan, and its other creoles may have been quite advanced by the year 1700. This conjecture is supported by the settlement history of the colony as summarized below. Table 2 shows that by 1700 the plantation phase must have been well underway. The disproportion between European and African populations was so great that, in addition to the departure of most English native speakers, the restructuring of the local vernacular was inevitable, consistent with the scenario presented above.

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[7] Le Page & Tabouret-Keller (1985:47) suggest something similar to the above about the emergence of Jamaican Creole. They divide the development of the colony into two major periods in the eighteenth century: the first half, marked by the prevalence of West African, Kwa-speaking populations, especially Twi and Ewe; and the second half, marked by a significant Bantu presence. (See also Le Page 1960:74-75 for more details.) If we ignore that Bantu morphosyntax is not exclusively agglutinating (Mufwene 1994a), the early Kwa prevalence would suffice to account for the selective advantage gained by the Kwa-like morphosyntactic features, most of them converging (partially) with patterns of some varieties of the lexifier, e.g., the periphrastic marking of tense and nominal PLURAL, the introduction of relative clauses with a complementizer (including) rather than with a relative pronoun, and the large presence of serial verb constructions.

Years	*Europeans*	*Africans*	*Amerindians*	*Total*
1652	200	200	90	490
1665	1,500	3,000	400	4,900
1680	438	1,010	50	1,498
1700	745	8,926	-	9,671
1715	838	11,664	-	12,502
1730	1,085	18,190	-	19,275
1744	1,217	25,135	-	26,352
1754	1,441	33,423	-	34,864

Table 2: *The population of Suriname, 1652-1754 (from Migge 1993:28)*

Table 3 highlights the likely demographic prevalence of Kwa-speakers from the Slave Coast (Benin and Southern Nigeria), which would have favored periphrastic morphosyntax in the emerging local vernacular. Consistent with Mufwene (1989, 1991a), Kwa-like features prevailed not only because of the numerical dominance of the Kwa-speakers but also because several of the same features, which converged with alternatives in the lexifier, are attested disjunctively in, for instance, the Mande languages and, in some cases even, the Bantu languages (Mufwene 1994a), as shown in Section 3.2.

Years	*Ivory Coast*	*Gold Coast*	*Slave Coast*	*Bight of Biafra*	*Loango*	*Total*	*Unknown Origin*
1658–1674	2,270 (7.6%)	5,453 (18%)	12,154 (40.8%)	2,581 (8.6%)	7,337 (25%)	29,796	22,883 (43%)
1675–1682	379 (2.3%)	1,121 (6.7%)	8,414 (50.5%)	748 (4.5%)	6,009 (36%)	16,670	7,627 (31%)

Table 3: *Regional origins of slaves in the Dutch slave trade, 1658-1689 (from Migge 1993:33)*

Table 4 underscores the role of the Founder Principle, suggesting that the later numerical significance of Bantu-speakers probably had little effect on the general developmental course of Surinamese vernaculars as started in the late 17th century. The fact that demographic dominance did not shift overnight may account for the closer structural proximity of Surinamese creoles to Kwa-like structures than to Bantu-like structures, i.e., for the greater impact of Kwa-like features on the selection of materials used in the restructuring of the lexifier.

Several structural factors that determine markedness values would have favored those kinds of features independently, for instance, salience, semantic transparency, and regularity (Mufwene 1989, 1991a).

Years	*Gold Coast*	*Slave Coast*	*Loango*	*Guinea General*	*Total*	*Unknown Origin*
1739-1759	8,332 (17%)	530 (1%)	15,895 (33%)	23,692 (49%)	48,807	67,300 (58%)
1760-1774	5,043 (7%)	380 (0.5%)	28,424 (39%)	39,702 (53.5%)	73,551	11,415 (13%)

Table 4: *Regional origins of slaves in the Dutch slave trade, 1739-1774 (from Migge 1993:41)*

The demographics of coastal South Carolina (Table 5) suggest that the essence of Gullah's basilect may have formed during the first half of the 18th century, i.e., while the colony was switching to the plantation industry as its most important economic activity and the slave population was growing rapidly, especially after the institutionalization of race segregation in 1720. This reduced the amount of interaction between Europeans and Africans, making allowance for divergence between the colonial varieties spoken by descendants of Africans and Europeans. What Table 5 does not show is the fact that on the coast, where the rice fields and Gullah developed, the African population often rose to ten times that of the European population during the 18th century.

Year	1685	1700	1715	1730	1745	1760	1775	1790
White	1,400	3,800	5,500	9,800	20,300	38,600	71,600	140,200
Black	500	2,800	8,600	21,600	40,600	57,900	107,300	108,900

Table 5: *Excerpts from Peter Wood's (1989:38) "Estimated southern population by race and by region, 1685-1790 ... 'South Carolina (east of the mountains)"*

Taking into account structural facts, Table 6 suggests that the Bantu presence in coastal South Carolina became significant (about 70% of the African population) perhaps toward the end of this basilectalization phase.[8] This may explain why there is no identifiable Bantu influence in Gullah's grammatical system (except of course for features which converged with those of other lan-

[8] Charleston in Table 6 stands for the arrival and distribution point of the nonindigenous populations throughout almost the entire first half of the 18th century.

	FROM ANGOLA				FROM GAMBIA				FROM ELSEWHERE IN AFRICA				FROM THE WEST INDIES				TOTALS			
Periods	*Shipmnts*	*Over age 10*	*Under age 10*	*Total*	*Shipmnts*	*Over age 10*	*Under age 10*	*Total*	*Shipments*	*Over age 10*	*Under age 10*	*Total*	*Shipmnts*	*Over age 10*	*Under age 10*	*Total*	*Est. no. ship*	*Over age 10*	*Under age 10*	*No. slav*
1735-36	6	1858	171	2029	—	—	—	—	4	569	43	612	3	4	6	10	13	2431	220	2651
1736-37	12	2474	417	2891	2	163	25	188	1	196	28	224	3	22	1	23	18	2855	471	3326
1737-38	5	789	38	827	—	—	—	—	1	194	34	228	4	7	0	7	10	990	72	1062
1738-39	6	1276	330	1606	3	291	23	314	3	453	122	575	1	12	0	12	13	2032	475	2507
1739-40	2	590	102	692	2	178	25	203	5	894	186	1080	3	33	8	41	12	1695	321	2016
5-yr Total	*31*	*6987*	*1058*	*8045*	*7*	*632*	*73*	*705*	*14*	*2306*	*413*	*2719*	*14*	*78*	*15*	*93*	*66*	*10003*	*1559*	*11562*
% *Slav*	*69.6*				*6.1*				*23.5*				*0.8*				*100*			
Aver size ship	260				101				194				7				175			
%10+	*86.9*				*89.7*				*84.8*				*83.9*				*86.5*			
% 10-	*13.1*				*10.3*				*15.2*				*16.1*				*13.5*			

Table 6 (adapted from Wood 1974:340-341): *Africans arriving in Charleston, South Carolina, March 1735-March 1740, by year, by origin of shipment, and by age group ("over age 10" vs. "under age 10"). The "Totals" columns represent the estimated number of shipments, the totals by age group, and the total numbers of slaves. The bottom three rows represent, according to region and by age group, the percentages of slaves imported and the average size of shipment.*

guages). It is also possible that the basilectalization was still in process and that the nature of the linguistic feature competition compounded with the short duration of the Bantu prevalence and with the non-negligible presence of West Africans speaking non-agglutinating languages (especially Mande and Kwa) during the second half of the 18th century simply offset any possible dominant influence from Bantu languages. Rawley (1981:335) observes that during 1733–1807 the South Carolinian colonists "secured about one-fifth of their slaves from Senegambia, one-sixth from the Windward Coast, and two-fifths from Angola." He also suggests that throughout the history of colonial South Carolina, "Guinea (from Gold Coast to Calabar)" — the Kwa-speaking area — remained a constant important source of slaves (441), which must have played an important role in giving selective advantage to Kwa-like periphrastic morphosyntax. The fact that Bantu languages do not totally lack periphrastic morphosyntax, as noted above, may have encouraged the offset.

Overall, in some colonies, such as South Carolina, Virginia, and Réunion, the Africans remained minorities for the first 30–50 years, whereas in some others such as Suriname, Mauritius (Baker, to appear), Jamaica, and apparently Guyana (Winford, p.c. 1994), the plantation phase came about rather rapidly bringing along an early slave majority.[9] In the particular case of Suriname, founded by the English in 1651 with an equal proportion of Europeans and Africans (apparently 200 of each group), the proportion of Africans doubled by 1665 (3,000 against 1,500 Europeans, in 14 years), and reached almost 12 to 1 by 1700 (8,926 Africans against 745 Europeans of mixed composition in about 50 years). In 1667 the Dutch took over and by 1670 (19 years after the foundation of the colony) almost all the English planters left, taking with them more than 2,000 slaves. This change reduced drastically (by two thirds) the proportion of speakers of various approximations of English, while the local vernacular that was then developing from it was retained. (It was certainly already restructured and variable, but it is not clear to what extent it was structurally similar to today's Surinamese creoles.) Along with Arends

[9] The generalization in terms of homestead and plantation phases oversimplifies things somewhat. The kind of labor used on the plantations was also an important factor. For instance, in a way partly reminiscent of Barbados, Virginia, colonized in 1607, switched early to the tobacco plantation system, within 20 years of its foundation. However, most of the planters used primarily indentured servants up to about 1680 (Kulikoff 1986, Perkins 1988). They accepted more African labor only after indentured servants became reluctant and expensive. The first Africans were introduced in Virginia in 1619 but they remained a small minority, hardly exceeded 30 percent of the total population, and most of them worked on small farms. By 1770, they reached 38 percent of the population in Virginia, Maryland, and North Carolina combined, whereas in South Carolina "they [then] outnumbered whites by roughly 50 percent" (Perkins 1988:98-99).

(1986, 1989) and Plag (1993), I suspect that this local vernacular was gradually restructured further away from its lexifier with subsequent importations of slaves, although the essence of the basilects may have been in place by the end of the 17th century.[10]

As for South Carolina, the first colonists, who arrived from Barbados in 1670, started with small farms and deer skin trade. They tended to live in homesteads until the dawn of the 18th century, when the rice fields, which became the primary form of economic activity by the middle of the century, started. As indicated above, the Africans did not become the colonial majority, with about 90% of them living on or along the coast, until about 1715. The institutionalization of race segregation must have expedited the basilectalization process.

The development of the Guyana colony is partly reminiscent of that of plantations in the Suriname interior, except that, unlike the Portuguese-speaking Jewish planters in Suriname, the British ultimately gained the political rule of Guyana. According to Holm (1989:462), the first English planters settled illegally on the Demerara River, between the Essequibo and Berbice Rivers (which were colonized by the Dutch) in the 1740s. "By 1760 the British outnumbered the Dutch in Demerara; in 1774 the colony established its own administrative capital, Stabroek", the antecedent of Georgetown. As the British won the rivalry, there was "a great influx of slaves from the British West Indies and West Africa that quadrupled the slave population in the British Guiana colonies before the slave trade was declared illegal". There is little in this scenario that suggests a different pattern of plantation and language development in Guyana. The fact that the Dutch did not impose their own language, except on the Berbice River plantations (where Berbice Dutch developed), prevented a Dutch-based creole from developing in the rest of present-day Guyana. The gradual dominance of the British in this colony favored the development of Guyanese English Creole. The continued presence of the British throughout the colonial period explains why this vernacular did not develop as far away from its lexifier as did Saramaccan (in a setting where native speakers of the

[10] The removal of the Europeans' varieties of English from Suriname is one of the most significant factors accounting for why basilectal Saramaccan is the most different from colonial varieties of English, a fact observed by Alleyne (1980) and Bickerton (1984). The former characterizes it as the creole the most influenced by African substrate languages and the latter as the most radical creole. The reality is that the new ecology, after the Dutch took over Suriname, made a lot of room for restructuring away from the lexifier, under the influence of other languages, including the Portuguese-based vernacular brought from Brazil (see below).

lexifier left early and the new vernacular came into intimate contact with a Portuguese-based vernacular, as explained above).

Without demographic data, I cannot determine how different the development scenario proposed here for Guyanese Creole is from that of Gullah in coastal South Carolina. In the North American colony, the evidence suggests that among Africans the local vernacular started to basilectalize perhaps fifty years after its foundation, regardless of whether or not some of the original slaves may have spoken a basilectal variety on leaving Barbados. During the homestead period those who came speaking a basilectal variety had no reason for preserving it, as well recognized by Winford (1993) in the context of the development of AAVE.

Overall, it appears that during the initial, homestead phase of each colony's development, most of the slaves lived on small farms or at trade posts, rather than on the handful of burgeoning plantations then. It is very unlikely that anything close to today's creoles was then developing on a large scale, even if subsystems close to those of today's creoles may have been shaping up on the plantations or in the speech of some individuals. Rather, approximations of European speech are likely to have then been the trend among the non-Europeans living fairly closely with the European colonists. There is no reason why normal people (which the non-European labor generally were) living intimately with speakers of the lexifier would of necessity have developed creoles instead of closer approximations of the lexifiers.

After the colonies switched to the second, agricultural-economy phase, the sugar cane plantations claimed 80-90 percent of the slave populations. As this economic system needed intensive labor to prosper, this period is marked by a general increase in slave imports, which led to a typically overwhelming slave majority on the plantations, on many of which they easily constituted the 80% of the population stipulated by Bickerton (1981) as a condition for the development of creoles.[11] The increased importations of slaves to meet the labor

[11] If one sticks to the overall populations, this stipulation is hardly ever met in some colonies such as South Carolina and Georgia. Discussing their new vernaculars as creoles is contingent on focusing on the plantations alone as a special contact ecology. On the other hand, the main thesis of this essay does not depend on whether the new vernacular qualifies as a creole, because the Founder Principle may apply to the development of any language. Besides, I argue in Mufwene (in press) that the 80%-20% population disproportion, perhaps more typical of the Caribbean plantations, is not a necessary condition for calling a language a creole. In most cases the name was prompted by the language variety's being a colonial phenomenon, its being associated with a creole population (born in the colonies from non indigenous parents), and its being appropriated by a non-European population (Chaudenson 1993, Mufwene 1994b). Although it is significant that mostly some types of plantations, such as those which specialized for sugar cane and rice, produced creoles (whereas tobacco and

demands on plantations also brought with them the fear of a "black majority" (Wood 1974) and the concomitant institutionalization of racial segregation. As the working conditions on the plantations became harsher, life expectancy dropped, and the mortality rate (even among children) increased. Consequently, the plantation populations increased more by importation of new labor both from Africa and Europe than by birth.[12] This rapid rate of population replacement bore on the structures of the labor's vernaculars.

The above post-homestead situation entailed several things:

1) outside work time, the African slaves had limited contacts with even the European indentured servants who worked with them;
2) the newly arrived Africans learned the colonial vernacular mostly from the creole and 'seasoned' slaves, as noted by both Baker and Chaudenson;
3) after the creole populations became the minorities on the plantations (Baker & Corne 1986), continually restructured varieties often became the models for some of the newcomers — this restructuring process led to the basilectalization of the colonial vernacular, i.e., the emergence of sociolects with the highest density of features said to be basilectal, being more noticeably different from (the standard varieties of) the lexifiers;[13]
4) the basilectalization process, whose social concomitant was the disfranchising of the new varieties as creoles, was typically gradual after the initial criti-

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cotton plantations in North America did not), it is also noteworthy that some sugar cane plantations in Iberian America did not produce creoles. The Founder Principle will be invoked to account for this difference.

[12] Even though several censuses reveal the presence of several children (up to 14 years of age) on the plantations, note also that especially during the second half of the 18th century more and more children in the same age group were imported from particularly the Bantu-speaking Central Africa (Lovejoy 1989). Though some might see this situation as providing fuel for the language bioprogram hypothesis, it suggests quite a different alternative, viz., the children learned the local colonial speech (with the relevant variation), restructuring it the least and perpetuating the founder or preceding population's varieties. Children may be considered more appropriately as a stabilizing factor, slowing down the continuous restructuring of the local vernacular, rather than as agents of creolization.

[13] I maintain, as in Mufwene (1987), that the basilect is a working construct. Basilectalization is hypothesized here to suggest that basilectal features (some of which, based on Baker 1995, go back to the earliest contact varieties) must have started to show up densely in the speech of many, though not of all the slaves. The proportion of basilectal speakers may have never been higher than today, in part because basilectalization did not entail generalized shifts in speech patterns for all slaves. Consistent with history, the evidence collected by, e.g., Brasch (1981), Rickford (1987), and Lalla & D'Costa (1990) suggests that the creole speech continuum dates probably, and naturally, from the early colonial days. My guess is that the mesolects must have always been the dominant varieties everywhere.

cal phase of drastic restructuring, lasting probably until after the last non-European indentured labor were imported, well after the abolition of slavery;[14]

5) in the history of each creole, there is a particular period during which the most significant part of basilectalization must have taken place under the dominant influence of speakers of some languages, typically those speaking Kwa languages in the case of Atlantic creoles;[15]

6) basilectalization must have halted about the end of the plantation economic systems, during the second half of the 19th century, and with the stabilization and growth of populations of African descent by birth; and

7) increased post-formative cross-plantation contacts may have allowed (more) mutual influence of creoles on each other, perhaps leaving fewer differences among vernaculars which in the main developed independently, even in parallel and similar, though not identical, fashions.[16]

The last statement makes it normal for creoles that developed on different plantations and in different colonies to differ from each other, which they normally do. On the other hand, it also makes it surprising that they do not differ more than they do, which has prompted Bickerton (1981, 1984, 1988, 1992) among others and, before them, Coelho (1880–1888), to invoke a language

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[14] Current research on the development of AAVE suggests the kind of conclusion proposed here. Especially relevant to this conclusion is the fact that African Nova Scotian English and the system inferable from the Ex-Slave Narratives and Recordings are closer to white nonstandard speech than they are to creoles (Poplack & Tagliamonte 1989, 1991; Schneider 1989; Tagliamonte, in press).

[15] This observation should not be interpreted to lend particular support to the Lefebvre relexification hypothesis, because we continue to take into account the fact that several of the features selected into creoles were often shared by the lexifier and several substrate languages. The Kwa group is often singled out because they present the highest combinations of matches with features of Atlantic creoles, not necessarily because they were the only driving force behind the selection of those particular features. Undoubtedly, the presence of speakers of Kwa languages in the plantation settings must have given the Kwa-like features greater selective advantage. However, a close examination of creoles such as Mauritian, in whose development Kwa speakers do not seem to have played a central role, suggests that the lexifier remains an important critical factor in the selection of features (see below). Several of the same features would have been selected even if the Kwa languages were not present in many settings, because linguistic structural factors could have favored them anyway, according to the Mufwene (1989, 1991a) markedness model. Demographics are only one of several factors bearing on the selection of features.

[16] Here, I am ignoring population movements which may have contributed elements from already formed creoles to new ones, for instance, the role putatively played by varieties of (creole?) English spoken in Barbados in the development of Gullah (Cassidy 1980, 1986; disputed by Hancock 1980), of AAVE (Winford 1992, 1993), and of Jamaican and Guyanese Creoles (Le Page & Tabouret-Keller 1985). The position is less disputable as presented in Le Page & Tabouret-Keller in terms of no new creole really starting from scratch.

(-acquisition)-universal account.[17] This is by no means the only explanation. First of all, there is no compelling reason for downplaying differences in favor of similarities (Alleyne 1980, 1986); both are all equally significant.

Second, as noted by Sankoff & Brown (1976), Muysken (1983), Thomason (1983), Sankoff (1984), Mufwene (1986a), and Singler (1988), typological similarities among the languages in contact are equally significant. No (major) restructuring of some subsystems of the lexifier was necessary if these were (partially) shared with most of the substrate languages. Thus the overlap in function between distal demonstratives and definite articles accounts for the common choice of the former when the definite article system was not familiar to substrate speakers and was not selected. Likewise, crosslinguistic similarities in the meanings of PERFECT explain why a verb meaning 'finish' (which is true of *done* in English) has typically been selected to mark its function when, for one reason or another, the more idiomatic morphosyntactic convention available in the lexifier (*have* + Past Participle in English) was not selected.

When the substrate languages were largely of the same typology, their common features have often prevailed over alternatives provided in the lexifier. Sankoff & Brown (1976) show it well with the bracketing of the relative clause with the demonstrative *ia* (< English *here*) in Tok Pisin. The same explanation applies to the fact that Melanesian English pidgins have a DUAL/PLURAL distinction in the noun phrase, an INCLUSIVE/EXCLUSIVE distinction for nonsingular first-person pronouns, and a transitive marker on the verb, as these distinctions are shared by most of the substrate languages (Keesing 1988).

In learning an umpteenth language speakers typically apply the least-effort principle, trying to identify things that are the same in the lexifier and the languages they speak already, or settling for things that cause no communication problems and/or satisfy their traditional communicative needs. When there was more typological diversity, competition of features was more likely to be determined by factors other than convergence, e.g., salience or regularity of a particular marker, such as in marking nominal PLURAL with *dem* in Atlantic English creoles. (The role of the lexifier or some of the substrate languages is never to be overlooked!) Variation often followed from such typological diversity, because mutual accommodation among speakers does not entail elimination thereof, although it is likely to reduce the number of alternatives. One way

[17] I do not wish to suggest that the question of cross-creole similarities has not been addressed by other accounts such as common substratum, common lexifier, and monogenesis. The reason for singling out the language bioprogram hypothesis here is that, unlike its competitors, it has focused more on the similarities than on structural differences among creoles.

or another, typological kinship or lack thereof bore on the development of the new vernaculars.

Given the role now assigned to the pre-plantation phase of the colonies in the development of creoles, typological similarities among the European languages (Thomason 1980, 1983) are especially significant, because several shared features of the European early colonial speech were likely to be selected by the slave founder populations in similar ethnographic ecologies. As the founder populations' speech became the target of subsequent arrivals of slaves, some, if not several, of the same features were likely to be passed on through successive selections and adaptations marking the gradual developments of the new vernaculars.

Without suggesting complete chaos, the contact scenario advocated here is one in which individual speakers' strategies of communication competed with each other, with those which appeared less marked (according to Mufwene 1989, 1991a) prevailing over others. Except in cases where the newcomers had significant linguistic homogeneity and where, almost overnight, they prevailed demographically over the creole and seasoned populations, several of the features already in place had a greater selective advantage over new features. (This scenario would not have prevented some of the new features to be retained as alternatives and perhaps eventually to replace some of the older ones.) As observed above, most basilectal features date from the early days of the new vernaculars. The basilectalization I advocate amounts to the consolidation of basilectal features into clearly identifiable sociolects, without ruling out the gradual introduction and integration of new alternatives. Also, the building blocks were not new; they have just been put into new construction types, according to principles that often were extensions of models available in the lexifier, consistent with patterns in any of the other languages it came into contact with.

On the other hand, as much as we have been haunted by the 'Cafeteria Principle', neither the building blocks nor the principles for using them need have been selected from the same sources. Assuming that creole vernaculars developed by the normal process of language change in contact ecologies, some heterogeneity in the sources of structural features must be allowed both from within the lexifier and from the substrate languages. The challenge we cannot continue dodging is coming up with adequate explanations for this recombination of features, just like recombinations of genes in population genetics. Note that there is no empirical reason for expecting creoles to be any more homogeneous than noncreole languages are (Hjelmslev 1938).

There are additional reasons for pursuing alternatives to the traditional hypotheses on creole genesis. I favor the approach presented here because it is more consistent with the settlement histories of the different colonies. Mufwene's (1991a) markedness model, which regulates the selection of features from among the available alternatives, complements it in applying at any time that there are elements in competition, consistent with the gradual development hypothesis. The markedness model also allows variation, which is possible especially when factors determining markedness values are in conflict and none is more heavily weighted than the alternative(s). Thus, more than one morphosyntactic strategy may have been selected in a creole for more or less the same function. For instance, Gullah has retained the progressive construction [də] + Verb along with the typically copula-less Verb-*in* alternative. Sometimes it combines them both as [də] + Verb-*in*. Likewise, Jamaican Creole has the alternative future constructions *gwayn* + Verb, *a go* + Verb, and *wi* + Verb. The proposed account is consistent with ethnographic accounts in terms of language shift and mutual accommodations, such as in Thomason & Kaufman (1988).

My approach is also consistent with the literature on grammaticization, in which there is no special reference to the possible privileged agency of children advocated especially by Bickerton (1981). This literature shows that speakers, irrespective of age, simply generalize morphosyntactic strategies which have been available to them. As shown by several papers in Traugott & Heine (1991), especially those by Hopper and by Lichtenberk, grammaticization (a form of restructuring) is a concomitant of shift in patterns of usage. The model presented here argues, as shown below, that the mutation-like processes which have produced creoles consist largely of several almost concurrent extensions of, or shifts in, the syntactic distribution of morphemes according to principles similar to those discussed in the literature on grammaticization.

Some brief examples will suffice here in which emphasis lies more on Chaudenson's 'matériaux de construction' than on how the selected materials were adapted to the new vernaculars' systems. (Mufwene, to appear, discusses the selection aspect of grammaticization in creoles.) For instance, in several English creoles, the general PERFECT-marker *done* may easily be derived both in function and in meaning from constructions such as *I'm done* "I have finished" and from its clearly PERFECT function in *you've done broke it now.* (Tagliamonte, in press, is particularly informative on models of PERFECT available in the lexifier which were likely to gain selective advantage with very little adaptation only.)

Likewise, the habitual marker [dəz] in Gullah and [dɔz] in Guyanese may not only be derived etymologically from English *does* [dʌz, dəz] (frequently used nonemphatically in some nonstandard varieties) but also be related to its function as an emphatic Habitual marker with nonstative verbs, as in *Mary does say those kinds of things*. (On the other hand, Ihalainen [1991:148] documents nonemphatic periphrastic *do* constructions with a Generic/Habitual meaning in East Somerset, Southern England, and observes that "[a]lthough the periphrastic use of *do* is a provincialism today, it was common in Standard English until the end of the 18th century").

In the same vein, taking into account the consequence of loss of verbal inflections, serial verb constructions in creoles show some etymological connection with Verb + Verb sequences such as *go/come get, went 'n got*, and *go fishing* in English or *aller/venir prendre* in French. Substrate influence notwithstanding, the presence of constructions such as [*take* NP *and* Verb] and [Verb NP *and give*] in the lexifier is not entirely irrelevant to the development of 'instrumental' and 'dative' serial verb constructions. (More on this syntactic construction below.)

An important difference with the literature on grammaticization (perhaps not empirically valid) is that in the case of creoles the sources of the 'matériaux de construction' need not be the same as those where the principles for using them originated, which allows substrate influence to coexist with patterns from the lexifier. This explains, for instance, the postnominal use of *dem* in Jamaican Creole, in combination with a prenominal definite article, as in the *di bway dem* "the boy-s", a pattern that is different from nonstandard English *dem boys*. Note also in almost all Atlantic English creoles the post-nominal usage of *dem* with proper names for ASSOCIATIVE PLURAL, as in *Kate (an) dem* "Kate and company".

There is no reason either for expecting all the grammaticized morphemes to have been selected from the same dialect of the metropolitan ancestor of the lexifier. The contact settings brought together speakers of different dialects (Le Page 1960, Le Page & Tabouret-Keller 1985, Algeo 1991, Mufwene 1996b), thus their features competed with each other. The new restructured varieties spoken by the European colonists themselves brought together features from different dialects; the resultant combination has made it impossible to associate the features of any particular creole consistently and exclusively with a particular metropolitan dialect of the lexifier, even where the restructuring seems to have been less extensive, as in Réunionnais or AAVE.

The mixing of grammatical features suggested above falls out happily from the natural selection of features advocated by the ecology-sensitive model of

markedness proposed in Mufwene (1991a). In a nutshell, markedness values are not predetermined in Universal Grammar, but rather by several factors, some structural and some others nonstructural, which give selective advantage to one or another of the competing forms or structures. For instance, at the ethnographic level of competing languages, the one associated with the group in power more typically (though not always) had a selective advantage over other alternatives, as explained below. Consequently most of the lexical 'matériaux de construction' were selected from the lexifier, the target mistakenly denied by some creolists. As the latter was truly a set-theory union of competing varieties, typically the more common/frequent, the more salient, more regular, or more transparent alternatives were favored over the less transparent, the less regular, or the opaque alternatives in the disjunctive pool of morphosyntactic features.

Assuming the above factors, we can explain selections which might otherwise be surprising. For instance the verbs *leave* and *die* may have been heard more in the forms *lef(t)* and *dead* than in the base forms; this state of affairs apparently led to the selection of *lef* and *dead* as the base forms in several English creoles. Thus it is quite normal in most of them to say *wi go lef/dead* "we will leave/die". Sometimes functional specialization followed from equally frequent alternatives, such as *do* and *done*, with only the latter used in English creoles for "finish" and PERFECT. Another example is the pair *go/gone*, in which case only *go* was grammaticized as a FUTURE marker and *gone* (pronounced [gaan] in West Indian varieties) is typically used in completive constructions without a stated GOAL argument, as in *im gaan* "he has gone, he (has) left".

To summarize the main aspects of this section, I have argued that the histories of the colonies in which creoles developed suggest that no language-development processes were involved that were unique to these new vernaculars, just the same ones usually assumed in historical linguistics, except for the emphasis on language contact. Since in each case the lexifier was being appropriated by nonnative speakers who spoke diverse languages, we cannot deny that it was influenced by these other languages, just like several noncreole languages have been influenced by others in their histories. This was part of the restructuring process.

In investigating the developments of these new vernaculars, we must remember that their lexifiers were nonstandard. This fact should enable us to gauge more accurately to what extent they have been restructured after being appropriated by foreign groups. We must also remember that these lexifiers were not communally monolithic but consisted instead of varieties that devel-

oped out of contacts of several metropolitan varieties which for many European speakers occurred (regularly) for the first time only in the colonies. This observation was probably true, despite Buccini's (1944) otherwise plausible remark that the restructuring of the lexifiers probably started in the metropolitan port cities and despite the existence of nautical varieties which undoubtedly also influenced the development of colonial varieties. The nature of the lexifier is also complicated by the presence in the colonies of large proportions of indentured Europeans who were not native speakers. It is debatable to what extent non-Europeans could distinguish (consistently) native from nonnative speakers of the lexifiers among the Europeans.

The colonies also shifted gradually to the plantation economy. This shift was marked not only by segregation between Europeans and non-Europeans but also by rapid population replacements which facilitated continual restructuring of the local vernaculars, consistent with the increasing attrition of proficient speakers. A concomitant of the socio-economic change was the basilectalization of the local vernaculars appropriated by non-Europeans. However, because the rapid population replacement proceeded incrementally, most features of every preceding population's vernacular had selective advantage accorded them by the simple fact that the local vernacular was being targeted. This explains the Founder Principle, according to which a large proportion of today's creoles' structural features were determined by those that were produced by the founder populations.

The latter concept is adopted here rather loosely, to underscore the influence of earlier populations in every colony, not always those who founded the colony. In this connection, while the earlier varieties spoken during the homestead phases count a lot, so also do the varieties which developed during the critical periods of the transition into the plantation phases (similar to the critical period in ontogenetic language development). I surmise that the rest of the gradual restructuring which must have continued up to the end of the plantation economic systems was only minimal.

The histories of these colonies also suggest that their ethnographic ecologies relative to the same lexifiers (at least by name) did not replicate each other, despite their similarities, which accounts for cross-territorial variation among the creole vernaculars which developed. An important factor to bear in mind in all such settings is the typological kinship of the language varieties that came into contact. In the next section, I focus on some preliminary details of the Founder Principle.

3. *Evidence for the Founder Principle*

The evidence for the Founder Principle is twofold: ethnographic and structural. This section is accordingly organized into two subsections in order to highlight this aspect of creole genesis more informatively. Each one remains programmatic, leaving it up to future research to flesh out some details of the hypothesis. What follows should, however, suffice to validate the main tenets of the approach advocated here.

3.1 *Ethnographic considerations*

Ethnographic evidence for the Founder Principle comes in many ways, starting at the macro-level of language (qua population) contact and with the European:non-European founder population ratios. Cross-territorial differences in the proportions of speakers of the lexifiers and of the substrate languages within the founder populations account for a large amount of variation from one creole to another. This alone may account for some differences between Bajan and other Caribbean English creoles, between Réunionnais and Mauritian, between Martiniquais and Haitian, between Gullah and Jamaican, and between Gullah and AAVE. Greater European:non-European population disproportions obtained (faster) in Mauritius than in Réunion, in Haiti than in Martinique, in Jamaica, Guyana, and Coastal South Carolina than in Barbados (more in Jamaica and Guyana than in South Carolina), and in Coastal South Carolina and Georgia than in Virginia and the American hinterlands. This variation explains why in each pair of the vernaculars listed above the first is relatively less restructured than the second.

Differences in the duration of the initial European-majority phase is also an important factor bearing on cross-creole variation. The initial European majority lasted longer in Barbados and Virginia than in Jamaica, Guyana, and Coastal South Carolina. In fact, it was never reversed in Virginia. In coastal South Carolina, rice fields reached and held much higher African:European population disproportions than the cotton plantations of the American Southeastern hinterlands. There were also many more small farms maintained in the hinterlands than on the coast. These factors explain why Gullah is confined to the coastal area. (For South Carolina, see Wood 1974; for Georgia, see Coleman 1975; and for Virginia, see Kulikoff 1986.)

The duration of the initial, homestead phase — with an African demographic minority before the transition to the plantation economic system — is significant also in a second way. The longer the initial phase lasted, the larger creole slave populations obtained whose speech was targeted by those non-Europeans who came during the critical periods of the restructuring of the lexifiers into creole vernaculars (see, e.g., Chaudenson 1989, 1992 and Baker

1990 on the nature of the target). The larger the creole slave population speaking less-restructured approximations of the lexifier in a colony, the longer it took before the non-creole slaves became the majority and developed a new norm, despite the rapid plantation population turnover discussed above. Had all strictly linguistic considerations been equal, these factors alone would account for regional variation among creoles lexified by the same European languages.

Chaudenson (1992) invokes differences in the duration of the homestead societies to account for lack of Spanish creoles (as associated with extensive restructuring of the lexifier) in Latin America. For instance, Cuba stayed for about 150 years in the homestead phase before getting into the sugar cane plantation industry. More intimate interracial relations, which accounts for the Hispanic ethnic phenomenon, putatively explains why Cuban Spanish has been treated as a closer analog of the white North American varieties of French and English than of the African-American varieties. To be sure, places like Brazil make variation in the nature of interracial interaction a relevant factor. The more interaction there was between Europeans and non-Europeans during the formative periods of the vernaculars, the less restructuring there was.

However, the overall situation was more complex. For example, the fact that a lot of French planters left Haiti from the beginning of the 19th-century affects the proposed parallelism between the relation of Réunionnais to Mauritian and that of Martiniquais to Haitian. Likewise, the fact that the British planters left Suriname while its English-lexicon creoles were still developing and being retained despite the change in acrolectal language (i.e., from English to Dutch) accounts in part for differences between these vernaculars and their counterparts in Anglophone territories.[18] Thus every creole vernacular has to some extent a unique development history, despite similarities with other situations (Le Page & Tabouret-Keller 1985:23).

An important macro-level difference which the Founder Principle may also help explain is associated with the composition of non-European populations in different colonies. For instance, as Ferraz (1979) and Maurer (1987) point out, some structural differences among Iberian creoles may be attributed to the composition of the slave populations during the critical stages of the development of these vernaculars. A case in point is the sentence-final position of the

[18] Jacques Arends (p.c., 16 March 1995) reminds me that European languages other than Dutch were spoken in Suriname after the British left. As noted above, European societal multilingualism obtained in almost all colonies. This makes more interesting the fact that the language of the colony's political rulers typically prevailed as the lexifier of European creoles, unless the rulers made ethnographic concessions as in Suriname and in the Netherlands Antilles.

negator in Principense, São Tomense, and Palenquero. It apparently has to do with the heavier presence of Bantu speakers among those who developed these vernaculars.[19] As in the case of Kituba and Lingala, which emerged out of the contact of primarily Bantu languages (Mufwene 1994a), those who developed these Iberian creoles selected a strategy patterned on the salient, free, sentence-final negative correlative in several Bantu languages over the preverbal clitic marker.

The Founder Principle also helps determine what particular members of the founder population participated more in, rather than witnessed, the development of the new vernaculars. This view suggests that speakers of the lexifiers must typically not have been passive by-standers with a role limited to making their language available for appropriation by non-Europeans. As they brought with them diverse metropolitan varieties, they accommodated each other and produced new colonial varieties. As already suggested by Schuchardt (1909) for Lingua Franca, the Europeans also accommodated non-Europeans and thus helped them restructure the lexifier, though not necessarily in the way claimed by proponents of the baby talk hypothesis, such as Vinson (1882, 1888) and Adam (1883).

The role of speakers of the lexifier must also be seen in relation to the attitude of those holding political power. In this context, the Dutch colonies of Suriname and the Netherlands Antilles deserve being discussed briefly. Starting with the latter territories, it is unlikely that Papiamentu developed during the earlier rule of Curaçao by the Spaniards (1499/1527-1634).[20] Three reasons particularly justify this inference: 1) no Atlantic creoles developed that early in time; 2) very few creoles lexified by Spanish have developed in the New World, in great contrast with the large number of territories which the Spaniards colonized; and 3) no plantations or big mines were exploited in Curaçao, which was initially a rest station — according to Goodman (1982:55), 'very few slaves had been introduced [to Curaçao] before the fall of Brazil, perhaps not even before 1657'.[21] Goodman (1982), Maurer (1988), and Holm

[19] History actually suggests that in the case of São Tomense the present variety may have started at the time the Bantu presence became more significant and the Portuguese were emigrating massively from São Tome to Brazil (Ferraz 1979). This is one of those cases where changes in the ecology makes room for new developments in communication strategies.

[20] According to Maurer (1988:2), Papiamentu developed on Curaçao and was exported to Aruba and Bonaire, the other two Netherlands Antilles islands. This explains why this discussion focuses on Curaçao.

[21] The Dutch used the island primarily as a slave depot from which they could supply Suriname or sell to other colonies. Goodman (1982:56) observes that the Brazilian Jews 'were the first private citizens in Curaçao permitted to buy slaves, probably because of their agricultural experience in Brazil' (see below). It is thus likely that the development of

(1989) all claim that Papiamentu developed during the Dutch rule (since 1634), which was marked by immigrations of Portuguese-speaking Dutch and their slaves from Brazil, from which they had been expelled by the Portuguese in 1654. Along with these populations also came several Portuguese-speaking Sephardic Jews and their slaves. Either a restructured Portuguese vernacular — perhaps corresponding to Chaudenson's less restructured 'approximation of the lexifier', if not to a creole — was imported with these immigrants (especially with the slaves) or one developed locally. Having been adopted as the local vernacular, this ancestor of today's Papiamentu was certainly further restructured by new slaves brought from Africa and seems to have been affected in a different way by increased trade with Spanish-speaking mainlanders of South America (Goodman 1982, Holm 1989). As in Suriname, the Dutch welcomed this new vernacular.

The linguistic parallelism between Curaçao and Suriname is enhanced by the development of Saramaccan, which contains a more prominent Portuguese element than, for example, Sranan, even though they both were lexified first and primarily by English. Unlike Sranan, which has a stronger Dutch element, Saramaccan developed in the Surinamese interior, where most of the Portuguese Sephardic Jews coming ultimately from Brazil developed their plantations. Here in the interior, the Jews constituted three fourths of the white population in the late 17th century (Price 1976:37-38, cited by Goodman 1982:58). This situation favored retentions from their Portuguese-based vernacular. According to Goodman (1982:59), "[t]he English Creole gradually supplanted the Portuguese influence one on the plantations, but the latter survived among the Saramaccans".

Goodman's hypothesis is not in conflict with assuming that, with the selection of restructured English as the vernacular among slaves in the Dutch colony (a confirmation of the Founder Principle), the coexistence of English-speaking and Portuguese-speaking slaves on several plantations led variably to the Saramaccan phenomenon. Because speakers of restructured Portuguese were demographically significant in Surinam's interior, the presence of the Portuguese element was bound to be more evident there, unlike in Paramaribo and on the coast, where there were more Dutch speakers and the Dutch element was bound to become more conspicuous, as in Sranan. Contrary to several claims in the literature, maroonage may thus not be a primary sociohistorical factor in the development of Saramaccan, although it may have fostered further restructuring in the direction of basilectalization. The early departure of native

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Papiamentu did not start before the arrival of the Jews and their slaves, two decades or more after the beginning of the Dutch rule.

speakers of the lexifier was in itself significant enough to account for why basilectal Saramaccan is the most different from English, compared to other English creoles.

Overall, the situation in the Dutch colonies must have been favored by the Dutch disposition to adopt the local lingua franca where one was already developing or had already developed, contrary to the claim that they deliberately kept Dutch as "a 'caste' language which slaves were not allowed to know" (Voorhoeve 1964:236, quoted by Holm 1989:435; see also Holm 1989:313). Even though there may be some partial justification for this claim, note that where the Dutch were involved in the original contacts, as in the Virgin Islands and on the Berbice River (in today's Guyana), Dutch creoles developed.

The case of Berbice actually brings additional supportive evidence for the Founder Principle. According to Robertson (1993:300), the Ijos constituted the dominant African majority in the Berbice colony during the second half of the 18th century. Their incontrovertible influence on Berbice Dutch lies in several structural features, such as tense suffixes, sentence-final negative markers, and postpositions. This is one of the rare cases where substrate influence is evident even in the form of grammatical morphemes. (For more information, see Kouwenberg 1991.)

In connection with the above, Louisiana Creole also turns up as an interesting illustration of the Founder Principle considered ethnographically. The French colonization of Louisiana, which then included plantations at and near the Mississippi River Delta, as well as trade posts in a corridor extending from the Delta to the Canadian border, between the Appalachian and the Rocky Mountains (excluding Texas), was interrupted by four decades of Spanish rule (at least in its southern, coastal part). The Spanish rule lasted from 1769 to 1803, after which the French sold the colony to the Americans. However, colonial French and the creole then developing from it were maintained as the primary local vernaculars, which continued to be spoken in present-day Louisiana long after the 'Louisiana Purchase'. The development of AAVE in the area did not amount to a relexification of the (restructured) French varieties spoken before English replaced French as the official language and the vernacular spoken by large proportions of subsequent immigrants and their descendants. Thus, in present-day Louisiana, changes in political and economic realities have been slow to affect the legacy of the founder populations. To date, the state continues to bear French cultural elements. Similar observations may be made about the survival of French creoles in Dominica, St. Lucia, and Trinidad, although there is ecological variation which explains some differences in the ways these vernaculars have survived.

3.2 *Structural considerations*

At the structural level, the greatest counter-argument to the Founder Principle might be misconstrued from grammatical features selected by creoles lexified by European languages. The fact that most creoles share an important proportion of these features has indeed prompted competing genetic explanations, identified nowadays roughly as the substratist, superstratist, and universalist hypotheses, as summarized at the outset of Section 2 (above). To begin with, the Founder Principle is intended to replace none of these hypotheses. I have argued since Mufwene (1990a) that the best of substratist and superstratist accounts for features of individual creoles can coexist happily, assuming at the same time that the language bioprogram qua Universal Grammar is the body of principles which have regulated how elements from the different language varieties in contact got selected and recombined into these new vernaculars' systems. This paper is intended to enrich this basic position of the complementary hypothesis.

With the Founder Principle, I simply intend to show that several, if not most, of the elements that are central to the systems are most likely to have come from the founder populations. A useful starting point is the makeup of the lexifier, which typically consisted of a set-theory union of diverse nonstandard dialects which may not even have coexisted locally or regionally in the metropolis. As noted above, these varieties were likely to be represented on the same plantations in the colonies. A concomitant of the situation with the lexifier is the mixed ethnolinguistic makeup of the slave population during the critical stage(s) of the formation of a creole. Together, all the colonial varieties of the lexifier and the diverse languages spoken by the slaves constituted new, disjunctive pools of features competing for selection into the developing creoles' systems.

I argue that there is little new in these systems — in the form or distribution of morphemes — which did not have a model in the language varieties represented in the contact settings (the new ecologies for the lexifiers). However, this is not to claim that the form and function of each such morpheme was preserved intact. As Boretzky (1993) shows, after a construction had been selected into the emerging language variety, there was room for innovations in the traditional sense of the term *innovation* in historical linguistics. It is after all in this sense that the development of creoles' grammatical patterns may be related to various processes of grammaticization (Mufwene, to appear). I show below that several of the morphosyntactic strategies invoked to support diverse positions on creole genesis have a lot to do with the Founder Principle.

3.2.1 Serial verb constructions (henceforth: SVC) in Atlantic creoles are a convenient starting point for demonstrating my thesis. Substratists have used the presence of SVCs in several African languages, especially those of the Kwa group, in contrast with the putative absence of SVCs in European languages, to argue that creoles owe the constructions to substrate influence. The significant demographic presence of Kwa speakers in several plantation colonies during the critical stages of the development of the new vernaculars has been used to justify their position. In some cases, more specific claims for the dominant influence of particular groups have been made, for instance, for Fongbe influence in Haitian Creole (e.g., Lefebvre 1993, based historically on Singler 1986, 1993) and for Twi influence in Jamaican Creole (Alleyne 1993).

On the other hand, advocates of the language bioprogram hypothesis have invoked the putative absence of such constructions in, for instance, the Bantu languages, whose speakers were often in proportions higher than, or (almost) equal to, those of Kwa languages on the plantations, to argue that SVCs in creoles must have been innovated by children. They argue that if a construction was not shared by all African languages in the contact setting, there was so much the more room for the bioprogram to kick in and produce this supposedly more basic and less marked structural alternative, relative to options specified in Universal Grammar.

All the above positions call for some corrections, especially if a close correlation is sustained between changes in ethnographic-ecological conditions and the restructuring of the lexifier which resulted in the creole vernaculars. The building blocks involved in the restructuring were, however, present in the founder populations' speech. Insofar as English creoles are concerned, as shown by Pullum (1990), colloquial English has serial-like constructions such as in *let's go get the book* and *every day I come get the paper.* Although these are restricted to combinations with *go* or *come* as heads and to forms that are infinitival or homophonous with them, they are frequent enough to consider their presence in the nonstandard varieties that lexified these creoles relevant to their development.[22]

Regarding French creoles, we should not take too rigidly Seuren's (1990) observation that SVCs are not attested in French and should not be confused with constructions with infinitival complements, such as *va chercher ton couteau* "go get your cutlass", which he prefers to call 'pseudocomplements' and

[22] An important difference between English serial-like constructions and those of African languages lies in how many verbs individual languages allow to function as heads. Even African languages show as much variation in this regard as Atlantic and Indian Ocean creoles among themselves.

derives by Predicate Raising. Whichever way SVCs are syntactically derived, the French constructions share some superficial similarity with them in terms of Verb + Verb sequences, just as do English constructions such as *go fishing*, which Seuren, like most other creolists, rules out justifiably from the category of SVCs. As inflections were generally not selected into the creoles' systems, the distinction between SVCs and pseudocomplements was likely to turn into a moot matter of details which were insignificant to speakers developing the new vernaculars.

As for the Bantu languages it is not accurate to deny flatly the existence of SVCs in them. Varieties of ethnic Kikongo have serial-like constructions in the historical present, which have survived in the narrative tense in Kituba (Mufwene 1988:41), as illustrated below:

(1) a. Kikongo:
María ú+bák+a mbeele, ú+lwek+a bákála di+ándi
Mary AGR+take+TA cutlass AGR+cut+TA husband AGR+her[23]
A. "Mary took a cutlass and hit her husband."
B. "Mary hit her husband with a cutlass."
b. Kituba:
María báka mbelé búla yakála na yándi.
Mary take cutlass hit husband CONN her
A. "Mary took a cutlass and hit her husband."
B. "Mary hit her husband with a machete."

Thus, almost all the language varieties in contact seem to have conspired in favoring the selection and variable development of SVCs in Atlantic and other creoles. According to Mufwene (1989, 1991a), during the development of creoles, speakers tended to select options which were identified as less marked for any number of reasons, including crosslinguistic convergence, semantic transparency, salience, and frequency. More or less the same factors seem to have favored the development of SVCs, not *ex nihilo*, in Kituba as in Atlantic creoles. While invoking such factors argues that the role of Universal Grammar should not be overlooked in the development of creoles, the point of invoking the Founder Principle here is to show that for whatever reason SVCs became so conspicuous in creoles' systems (unlike in AAVE), there was no scarcity of models in the language varieties that came into contact on the plantations of the New World and Indian Ocean. No children need be invoked as a *deus ex-machina* to account for the presence of this syntactic construction in almost all creoles. The role of Universal Grammar in this particular case may have been

[23] The abbreviations stand as follows: AGReement, Tense-Aspect, CONNective.

limited to constraining the selection of particular grammatical strategies, on account of the alternatives which competed with each other.[24]

The relation between creoles' SVCs and their possible sources is complicated by constructions in which a serial verb meaning "give" alternates with, or is used instead of, a dative prepositional construction. This serial pattern, which is used only in some creoles (such as Haitian and Saramaccan), is not attested in the European lexifiers; nor is it used in all serializing African languages. Such variation underscores the need to examine the genesis of every creole separately, in its specific contact ecology, though not so isolated in sociohistorical context from related creole developments.

3.2.2 The structure of negative constructions is another interesting structural feature to look into. In all the relevant creoles, neither the form of the negator(s) nor its/their position is novel. In the case of Atlantic English creoles, the negator and its position are generally from the lexifier, aided undoubtedly by the pre-predicate position of the negator in several African languages. Note that although several Bantu languages of the Congo-Angola region have a free clause-final negative marker, many of them also have a negative verbal prefix, which cooccurs with the former but may also be used alone (i.e., without the sentence-final correlate) in some languages. Although the dynamics of the developments of Kituba and Lingala out of the contact of primarily Bantu languages favored the selection of a free clause-final negative morpheme, nothing would have made it too difficult for speakers of such languages to adjust to one single pre-predicate negator during the development of the English (and French) creoles' systems. With regard to Bantu speakers, it appears that different ecologies led to different selections out of the preverbal and sentence-final alternatives.

The particular selections made into English creoles, regarding form and position, underscore the significance of what forms and strategies were competing in the lexifier. All the creoles' negators, viz., *no*, *don* [dõ], *ain* [ɛ̃], and *neba* "never" are from English. The main difference is that in creoles these negators have syntactic distributions and semantic functions which are sometimes not identical with those of their etyma. For instance, *no* is no longer limited to noun phrases (narrow scope) or to elliptical/anaphoric contexts in which the speaker chooses not to repeat the whole sentence. It also occurs freely be-

[24] We also know now that no Atlantic creole actually ever selected an exclusively SVC subsystem over prepositional alternatives. Byrne (1987) shows that in Saramaccan, the showcase for both Alleyne (1980) and Bickerton (1981, 1984), 'dative and instrumental SVCs' alternate with preposition-less dative and prepositional instrumental constructions, respectively, just like in Kituba (Mufwene 1991a).

fore the predicate in Caribbean English creoles, as in *im no (ben) kom* "'he/she did not come". In Gullah, *ain* is used not just before non-verbal predicates and as an alternative to *have not/do not have* but also in completive constructions, before a verb stem, as in *he ain come* "he/she has/did not come". Likewise, *don* typically functions as a Habitual negator, as in *he don come* "he does not come", in addition to where it is used in other varieties of English. Even these extensions show undeniable connections to the lexifier, as *ain* also alternates with *hasn't and haven't* in some British nonstandard dialects (Cheshire 1991) and may conceivably have been extended from *hasn't/haven't come,* given the time reference ambiguity of the Perfect construction (Tagliamonte, in press). Likewise, *do not* is Habitual with nonstative verbs in almost all dialects of English. The challenging questions are: why these particular selections and why they vary from creole to creole?

Note that with regard to selecting from competing strategies in the lexifier, the situation in Kituba, Lingala, and English is not quite different from that of French creoles, even though, as noted in Mufwene (1991c), French offers a seemingly variable system in which the more common negator *pas* of colloquial French (typically used without *ne*) follows finite and present participial verbs but precedes infinitival and past participial verbs, for example, *je (ne) viens pas* "I am not coming" and *ne travaillant pas* "not working" vs. *pas fini* "not finished" and *elle (ne) peut pas venir* "she cannot come". The regularization of its pre-predicate position in French creoles is obviously not entirely independent of French itself (Hazaël-Massieux 1993, Spears 1993), although the convergent influence of several African languages following this pattern cannot be totally discounted. Loss of inflections and selection of verbal forms which are not clearly distinct from the infinitive and the past participle seem consistent with the selected preverbal position of the negator *pa* in creoles. Not only did the morpheme for negation come from the lexifier but also the model for its syntactic distribution. Even forms that might appear to be exceptional may be traced to French, e.g., *te pas la* (formerly a variant of the today's regularized *pa te la*) "was not there" and *ve pa* "don't want" are frozen retentions from *(n') était pas là* and *veux pas* with the same meanings (Hazaël-Massieux 1993). (For more details on how negation works in Haitian Creole and may have developed, see DeGraff 1995.)

On the other hand, São Tomense and Palenquero (discussed above) followed the Kituba and Lingala option under ecology-specific conditions of dominant Bantu influence (Ferraz 1979, Maurer 1987), contrary to the preverbal position of the negator in other Iberian creoles. These facts converge with those of French creoles in suggesting that specific ethnographic and linguistic

dynamics of the founder populations more or less determined the directions of the restructuring of the lexifiers into diverse creoles.

3.2.3 The role of the INDIVIDUATED/NONINDIVIDUATED distinction in the noun phrase of most creoles (Bickerton 1981, 1984; Dijkhoff 1983; Mufwene 1981, 1986b) has been invoked to support the language bioprogram hypothesis (Bickerton 1981, 1984).[25] Taken together with the absence of (definite) articles and the phrase-final position of the deictic marker *la* in Haitian and other French creoles, this delimitative system has been adduced also to support African substrate influence (Alleyne 1980). However, a closer examination of facts reveals that the INDIVIDUATED/NONINDIVIDUATED distinction is inherent in both English and French, as well as in several other languages. English has constructions such as *go to church, beware of falling rock,* and *boy meets girl,* which are not irrelevant to the selection of nonindividuated noun phrases in creoles for MASS uses of nouns and for GENERIC reference. This may be illustrated doubly with the Jamaican Creole proverb *daag no nyam daag* "[a] dog_1 does not eat dog_2 [meat]" ($GENERIC_1$ ... $MASS_2$).

As different as French may seem from English in this respect, it also has constructions which may have influenced the development of an INDIVIDUATED/NONINDIVIDUATED system in French creoles. Constructions such as *crime de passion* 'crime of passion' and *avoir faim* 'be hungry', in which the object of the preposition or verb is nonindividuated and used without an article, are relevant. Valli (1994) uncovers inconsistencies in the uses and omissions of articles in fifteenth-century French texts, as shown below, a practice that he justifiably suspects may have obtained in colonial French:

(2)a. *Les princes ont charge politique.*
"The princes are in charge of politics."

b. *... Dieu vous y a deja donné bon commencement*
"... God has already given you a good start."

All the above facts highlight the role of the founder population's language in the development of creoles' systems. Facts on French creoles' deictic marker *la* speak even louder in support of this position. This marker is extensively used in nonstandard French, making the definite article superfluous in constructions such as *l'homme là* "the/that man". It is also more salient, being

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[25] The terms 'individuated' and 'nonindividuated' are Mufwene's. Bickerton and Dijkhoff discuss basically the same thing under a 'specific'/'nonspecific' distinction, as stated earlier in Stewart (1974). Dijkhoff (1987) rejects the Bickerton-Stewart model, arguing that Mufwene's distinction accounts more adequately for complex nominals and compound nouns in Papiamentu.

normally stressed in its phrase-final position. In addition, almost all African languages do not have an article system. They mark definiteness by extending the use of a distal demonstrative to this function. At least among the Bantu languages, the marker typically has a phrase-final position, like the distal demonstrative *là* in French. All these factors combined to favor the selection of French NP-final *là* over the definite article as a marker of definiteness in Haitian Creole.

Again features of the founder populations' linguistic systems have determined the alternatives selected into the creoles which developed out of their linguistic contacts. Innovations *ex nihilo* are an exaggerated account, whereas innovations as traditionally invoked in historical linguistics are consistent with the Founder Principle.

3.2.4 The STATIVE/NONSTATIVE distinction, which is useful in explaining the differing interpretations of predicates used in the nondurative and nonanterior — as in *im come* "he came/he has come" and *im laik fi/fu/fə sing* "he/she likes to sing" in English creoles — has also often been invoked to support the language bioprogram hypothesis. The reason is putatively that in the European lexifiers and several substrate languages the interpretation of time reference does not depend as much on this lexical aspect (Aktionsart) opposition.

The observation is unfortunately not so accurate regarding the lexifiers. For instance, in English, the temporal interpretation of *Paul likes wrestling* is not the same as that of *Paul works here*; the difference follows from the fact that *like* is a stative verb, whereas *work* is nonstative. The same is true of the French translations *Paul aime la lutte* and *Paul travaille ici*. The main difference between the relevant constructions in these languages and their counterparts in the creoles they lexified lies in the preferred interpretation of the constructions in the absence of adverbials. In an English creole *im come* "he/ she came/has come" is typically assigned a completive interpretation (referring to the past) in such cases, whereas *im laik* "he/she likes" receives a concomitant interpretation (typically referring to the present).

If we take the general absence of inflections in creoles into account, things fall out neatly, consistent with a distinction which is available in the lexifiers, even in the case of French creoles. In most of the language varieties that came into contact (with the exception of standard French, if it matters at all), a nonstative verb must be in the progressive in order to refer to the present. The construction *être après de* + Infinitive was attested in nonstandard French for basically the same progressive function its adaptation *ap(e)* + Verb Stem serves in French creoles. Such a requirement for morphosyntactic delimitation is not the case for stative verbs. Since nonstative verbs are typically not used without

an aspectual marker to refer to the present, with the loss of inflections, bare verbal forms are interpreted as referring to the past. Common usage of the Historical Present in spoken language may very well have been an important factor. The application of a similar grammatical system in several West-African (not just Kwa) languages would have favored selection of nonstative verb stems for completive reference over other alternatives. The reason why this development is different from, for instance, Kituba (Mufwene 1990b) and Lingala is that the latter developed in ethnographic ecologies in which they were bound to be heavily influenced by Bantu morphosyntax.

Thus, much of what was innovated in Atlantic and Indian Ocean creoles was inspired by several of the languages spoken by the populations in contact, including the lexifiers, during the critical phases of their developments. If we take into account the fact that Bantu-speakers were likely to exert a significant influence on the development of Mauritian (Baker 1994), then it looks as though the lexifiers themselves may have played a greater role in the development of creoles than is often suggested in the literature. Creoles selected alternatives which turned out to be less marked for one reason or another.[26]

3.2.5 Almost any grammatical feature of creoles lexified by European languages may be given the kind of account sketched above, which is essentially in the traditional spirit of historical linguistics taken to intersect with language contact. In many ways, the features may not be faithful copies of their etyma or models, just like innovations in the historical linguistic, rather than the Bickertonian, sense of the word (Boretzky 1993). This conclusion should not be shocking, because there is really no particular reason why the developments of creoles should not be treated as consequences of normal linguistic interactions in specific ecological conditions of linguistic contacts involving not only speakers (as in any monolingual speech community, Hagège 1993:128-129[27])

[26] We may note here that the fusion of articles with some nouns such as *dible* "wheat" (in contrast with *ble* "blue") in Mauritian, and less so in Atlantic French creoles, owes the new nominal forms in part to what was actually spoken in French. The new forms are patterned from forms/constructions which actually occur in French, for example partitive construction *du blé* "wheat", even though in some cases, e.g., *zanfan* "child", only part of the article was kept. Still, note the significance of liaison from French *les enfants* [lɛzãfã] "children". This explanation does not contradict Baker's (1984, 1994) correct invocation of Bantu influence in the selection of the solution used here to avoid several homonyms that otherwise would have followed from the loss of prefixed articles and merger of some vowels, e.g., that of front rounded and unrounded vowels in *blé* [ble] "wheat" and *bleu* [blö] "blue". I just want to underscore the partial contribution of French 'matériaux de construction' to this development.

[27] According to Hagège, speakers both inherit and reshape the language [variety] they speak. I add that what distinguishes creole language varieties from others, according to this view, is the ratio of inheritance and reshaping. In creoles, reshaping (typically referred to as restruc-

but also different language varieties. If anything, creoles should prompt us to rethink some established assumptions about language change and the role of ecology as defined in Section 1 of this paper.

4. *Conclusions*

An important reminder to start with is that the Founder Principle is not a theory of creole genesis, at least not in the same way that the universalist, substrate, superstrate, and complementary hypotheses have been claimed to be. Like Mufwene's (1989, 1991a) markedness model, which has often been invoked in this discussion, it is one of several principles which must be considered as we try to account for the development of creole vernaculars.

One of the most common flaws of research on creole genesis is comparison of creoles' structural features with those of the standard varieties of their lexifiers. The social history of the relevant colonies suggests that the varieties to which the makers of creoles were exposed and which they restructured were nonstandard. Thus it is with them that comparison must be made to develop an adequate picture of what was restructured and how.

I have also argued that several structural features of creoles' systems are not the kinds of innovations claimed by the language bioprogram hypothesis, though they involve innovations in the traditional historical linguistic sense of extension to new uses. Many such innovations have been extended from strategies which were already available in the lexifier or in any of the language varieties whose features competed with its own during the development of the new vernacular. Structural convergence (often only partial) between the lexifier and the substrate languages was often an important factor, but it may not have applied in all cases nor independently of other factors. In emphasizing that models of many of creoles's structural features were attested in the speech of the founder populations, the Founder Principle shows that creole genesis may be explained with the same kinds of principles generally invoked in historical linguistics and studies of language contact. It just makes sure to interpret every set of restructuring processes that resulted in a creole within the relevant ethnographic ecology.

The Founder Principle does not preclude later influence as the ethnographic conditions of the contact setting changed during the gradual and protracted development of the new vernacular, especially during its basilectalization in the sense defined above. However, during such new feature-competitions, fea-

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turing) exceeds the normal ratio in other languages. However, as in other languages, the building blocks come from the language varieties in contact, articulated more accurately at the level of interindividual communication.

tures of the founder variety often had selective advantage. A partial explanation for this is that populations did not double or triple overnight; growth was achieved by installments, each of which generally brought a group which was a minority relative to the local creole and already seasoned slave population. Under such circumstances, it must have been more cost-effective to try to speak the local vernacular as such, often perhaps not so successfully, rather than to try to modify or replace it. In situations such as the development of Saramaccan, the new group consisting of slaves speaking restructured Portuguese varieties influenced significantly the development of what had started from an English lexifier. Such situations are, however, not common. The survival of French creoles in territories which the French colonial system lost, e.g., Mauritius, Dominica, and St. Lucia, is explained in part by the Founder Principle: the extant local vernacular just prevailed. The Principle may also be invoked to account for the presence of a French creole in Trinidad, though an interpretation more sensitive to the beginning of the British colonial regime is required here to make sense. According to Holm (1989), there was massive immigration of planters and their slaves from neighboring francophone islands in 1763. One wonders whether the francophones were not integrated with the anglophones, at least for a significant while.

It should perhaps also be emphasized that structural features need not have been selected into a creole with forms or functions intact (Boretzky 1993). Chaudenson's trope of 'matériau de construction' is particularly apt because it does not preclude modification/adaptation for the purposes of meeting communicative needs in the new vernacular. For instance, loss of the copula in several syntactic environments and of inflections in the emerging creole vernaculars was bound to affect the selection of some constructions from the lexifiers for tense-aspect. Thus French *être après de* + Infinitive was adapted to the copula-less *ap(e)* + Verb Stem in Haitian Creole. Likewise, whatever the reason why English *there* + Verb-*in* was selected as the model for the progressive construction in several English creoles, the final form has become *də/dɛ* + Verb Stem (with Gullah still shǒwing alternation with (*də*) + V-*in*).

Regarding function, the reinterpretation of the STATIVE/NONSTATIVE distinction is noteworthy. As habits are expressed either with specific adverbials or special preverbal markers, the distinction has been reassigned to interpreting time reference for predicates in the absence of inflections and any other indicators of time. In the domain of nominal number, the absence of an Indefinite Plural in most of these new vernaculars has caused NONINDIVIDUATED to subsume generic reference too. Other noteworthy developments include the clause-introducer *sɛ* (< English *say*) in English creoles, which, while retaining its

quotative function, has also acquired a complementizer function (Mufwene, to appear). Likewise, *fi/fu/fə* has not only retained the basic prepositional functions of *for* in English but also developed modal and complementizer functions from partial models in English itself (Mufwene, to appear). The same principles which apply in the context of grammaticization seems to have also applied in the genesis of creoles, to meet the communicative needs of their speakers. As noted above, the development of each creole seems to have involved several concurrent grammaticization processes.

If, along with Hjelmslev (1938), Hall (1958), and Posner (1985), we do not mind treating creoles as dialects of their lexifiers, the structures of these vernaculars may be interpreted as having resulted in part from several concurrent processes of grammaticization. Grammaticization is of course not the full story, since other changes took place, starting with the simple selection and integration into one system of forms, structures, and principles which did not use to form one system even in the lexifier itself. Sylvain (1936), which could well be interpreted as one of the best defenses for combined superstrate and substrate influence (contrary to how the work is seen in the literature),[28] shows clearly from how many diverse varieties of nonstandard French several Haitian Creole's forms and structures were selected. For instance, Sylvain relates *ki-šoy* "what (thing)" to Norman *qui chose* [ki šoz] (p.53), *yo* "they, them" directly to Gascony and Auvergne *yo* rather than the standard French *eux* "they, them" (p.65), *yõ* "one" to Norman *yon* (74), the anterior marker *te* to Picardy *té* (past participle of *être* "be") (p.138), and the PERFECT marker *fin* to similar uses of *fini* in central France dialects (p.139).[29]

I have proposed the Founder Principle, like the ecology-based model of markedness, also to articulate more explicitly what is involved in the genesis of creoles according to the complementary hypothesis as characterized in Section 2 (above). In my version of this position, substrate and superstrate elements are the only ones involved in the competition of features, especially insofar as structural principles are involved. The language bioprogram interpreted as Universal Grammar functions a body of principles regulating the selection of features into creoles' systems, like into those of noncreole language varieties. The relation of the markedness principles to Universal Grammar is discussed in Mufwene (1991a), in which it is argued that markedness values are deter-

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[28] Unfortunately Sylvain is remembered more for the last sentence of her book, which claims unjustifiably a relexification hypothesis, than for the rich substance of her account of the sources of features of Haitian Creole, which suggests the complementary hypothesis.

[29] It is of course useful to explain how the selection of these particular forms proceeded, but this does not concern us immediately here.

mined relative to the ecology of restructuring by diverse factors which sometimes yield different selections in different contact settings. Sometimes they also conflict naturally with each other in the same ecology. In such cases the more heavily weighted factor may prevail; but the competing alternatives may be retained, producing normal variation in the system. Neither the weighting nor the values are determined in Universal Grammar, although the factors determining the values may be identifiable by it. The Founder Principle is likewise external to Universal Grammar, but it works concurrently with it in constraining the restructuring which results in a creole or any other restructured language variety. In relation to the complementary hypothesis, the Founder Principle helps define the pool of competing features from among which a subset is selected into a creole's system.

In this context, we may also examine the question of whether restructured varieties of European languages previously spoken in Africa, e.g., Guinea Coast Creole English (GCCE), may have served as the basis from which English Atlantic creoles of the New World would have been developed.[30] Several kinds of questions arise which can be formulated but not answered here. First, what was the form of GCCE? Second, were its speakers among the founder populations of English colonies? Third, what proportion did they represent of subsequent populations during the basilectalization phase of the creoles? Fourth, did GCCE have any chance of being preserved almost intact during the homestead phase of the development of the colonies? Are there any particular ethnographic-ecological reasons why it would have prevailed in its form and, as a founder variety, it would have influenced the development of particular creoles? These questions are not at odds with Le Page & Tabouret-Keller's (1985:26) position that the development of most creoles could not escape the influence of previous lingua francas used before the development of New World communities and the like. They just recommend that we determine under what conditions such influence was possible and how.

The Founder Principle thus offers us some ways of addressing this important genetic question of the possible critical role of GCCE in an enlightening fashion. Similar questions could be raised about the role of varieties used in contacts between the Indians and the Europeans in the New World before the Africans became the primary component of the labor populations (Emmanuel Drechsel, p.c. 1994; Baker, to appear).

To close, the Founder Principle offers a useful perspective from which we may address various, though not all, aspects of the complex question of the genesis of creoles as mixed languages with features coming from diverse

[30] This hypothesis of Hancock (1980) is now being rekindled in McWhorter (to appear).

sources and possibly at different stages of their gradual and protracted development. It enriches the complementary hypothesis in providing it more solid grounding in history and in directing attention to specific critical periods even if these may not involve founder populations.

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SUMMARY

In this paper, the author discusses one of the aspects of creole genesis from a population genetics perspective, analogizing 'language' with 'population' (rather than 'organism', the tradition in linguistics) and 'linguistic feature' with 'gene'. With language contact analogized to population contact, individual speakers are given a greater role than traditionally accorded them in the literature and variation within language is made more natural. Like genes, linguistic features are shown as competing with each other for selection into creoles' systems, in the different, though similar, ecologies of individual language contacts. It is argued here that the founder populations, including speakers of both lexifiers and substrate languages, played greater roles than hitherto considered in determining which specific features received selective advantage over their competitors during the formation of creoles. The Founder Principle explains why some European languages in their nonstandard forms became the principal lexifiers when others could have and why some specific features prevailed in the new systems. The competition-of-features perspective allows deterministic influences of both the lexifiers and substrate languages, thanks to convergence and other markedness principles, with the bioprogram qua Universal Grammar serving as the body of principles regulating the development of the new vernaculars.

RÉSUMÉ

Dans cet article l'auteur discute un des aspects de la genèse des créoles du point de vue de la génétique des populations. Il y compare la notion de 'langue' à celle de 'population' (plutôt qu'à celle d''organisme', la tradition en linguistique) et celle de 'trait linguistique' à celle de 'gène'. Cette comparaison du contact de langues à celui de populations accorde aux locuteurs un rôle plus

grand qu'il n'est de coutume dans la littérature; la variation dans la langue se montre ainsi plus naturelle. Comme les gènes, les traits linguistiques se présentent en compétition mutuelle pour être sélectionnés dans les systèmes des créoles, dans des écologies différentes, bien que semblables, des contacts langagiers individuels. Selon mon hypothèse, la population fondatrice, y compris les locuteurs autant des langues lexificatrices que des langues substrates, ont joué des rôles plus importants qu'on leur reconnaît à présent en déterminant quels traits spécifiques ont eu un avantage sélectif par rapport à leurs alternatives pendant la formation des créoles. Le Principe Fondateur explique pourquoi quelques langues européennes dans leurs formes non standard sont devenues les principales lexificatrices, plutôt que d'autres langues qui auraient pu faire autant, et pourqoi quelques traits spécifiques se sont imposés dans les nouveaux systèmes. La perspective de la compétition des traits rend possible des influences déterministes à la fois des langues lexificatrices que des langues substrates, étant donné la convergence de certains de leurs traits et grace à d'autres principes sur lesquels est basé l'opposition marqué/non marqué. La Grammaire Universelle fonctionne dans mon hypothèse comme un corps de principes régissant le développement des nouveaux vernaculaires.

ZUSAMMENFASSUNG

Im vorliegende Beitrag diskutiert der Autor einen Aspekt der Genese von Kreolsprachen aus der Sicht einer Bevölkerungsgenetik, dabei eine Analogie zwischen 'Sprache' und 'Population' (anstelle von 'Organismus', wie es in der Linguistik Tradition ist) und zwischen 'sprachlicher Erscheinung' und 'Gen' herstellend. Wenn Sprachkontakt mit Populationskontakt in Analogie gesetzt wird, erhalten die Einzelprecher eine größere Rolle als ihnen gewöhnlich in der Forschung zuerkannt werden, und Variation innerhalb einer Sprache wird auf diese Weise ein weit natürlicherer Vorgang. Genen vergleichbar, konkurrieren linguistische Eigenschaften untereinander um die Auswahl für das System einer Kreolsprache innerhalb der verschiedenen, wenngleich ähnlichen, 'Ökologien' individueller Sprachkontakte. Es wird hier die Behauptung aufgestellt, daß die 'Gründungspopulationen', inklusive der Sprecher von sowohl lexifizierenden als auch Substratsprachen, größere Rollen spielen als man bisher bei der Bestimmung berücksichtigt hat, welche besondere Eigenschaften selektive Vorteile gegenüber anderen bei der Herausbildung von Kreolsprachen erhalten haben. Das 'Gründerprinzip' erklärt, weshalb einige europäische Sprachen in ihren nicht-standardisierten Formen die hauptsächlichen Lieferanten von Wortstrukturen geworden sind, wenn andere es hätten werden können, und weshalb gewisse Eigenschaften in diesen neuem System die Oberhand gewannen. Der Gesichtspunkt eines Wettkampfs zwischen Eigenschaften ermöglicht bestimmbare Einflüsse auf sowohl von lexifizierenden als auch Substratsprachen, und zwar dank einer Konvergenz und anderer Merkmalprinzipien, wobei ein 'Bioprogramm' oder eine Universaliengrammatik als die Grundlage dazu dient, die Entwicklung neuer Volkssprachen zu regulieren.