

## THE ROLE OF CORE GRAMMAR IN PIDGIN DEVELOPMENT

Donaldo P. Macedo  
University of Massachusetts at Boston

Traditionally, researchers in the field of pidgin and creole languages have supported the simplification theory which regards a pidgin as a simplified version of the colonizers language. This paper examines the process of pidgin development within the context of Government and Binding theory as proposed by Chomsky (1981). Empirical evidence given in this paper from Capeverdean creole (and others) indicates that the linguistic phenomenon generally labelled pidginization, creolization, decreolization, etc. can be explained as follows. The contact of various languages may produce a new experience which subsequently fixes the parameters of Universal Grammar, providing a pidgin core grammar. This core is guided by a preference of structure imposed by the markedness theory allowing the learnability condition to operate. The resultant core grammar can later incorporate a marked periphery. The addition of this marked periphery is what had been viewed in the past as creolization. If one of the donor languages is characterized by structures which meet the learnability criterion, the incorporation of the marked periphery will be targeted toward that language. The directionality of the pidgin periphery may then be predicted. However, if none of the languages meets the learnability condition, the pidgin periphery may develop independently of the peripheries of the donor languages.

## THE ROLE OF CORE GRAMMAR IN PIDGIN DEVELOPMENT<sup>1</sup>

Traditionally, researchers in the field of pidgin and creole languages have celebrated the simplification theory, which views a pidgin development as being a simplified version of the colonizer's language. Research by Coelho (1880), Robert Hall (1966), Naro (1971 and elsewhere), and Bickerton (1977), for instance, cite the lack of number and gender marking, and a noninflected verbal system, among other examples, as evidence supporting the simplification hypothesis. The absence of these "marked features" is often used as a kind of yardstick to substantiate the notion that a pidgin is a reduced, "hybridized and unstable linguistic system."

<sup>1</sup>I thank Haj Ross, Ken Hale, Bruce Fraser, Jack Kimball, Dale Koike and Franco D'Introno for their insightful comments and suggestions in the development of this paper.

420

272

This theoretical position emphasizes a top-to-bottom mode of analysis with the colonial language at the top, and removes the native language from any meaningful participation in either the construction or the development of the pidgin. The simplification model is very limited in nature since it fails to fully capture the dynamics of languages in contact: that is, it dogmatizes the reductionist view by taking the "upper-language"<sup>2</sup> as a point of reference and analyzing the omission of the "upper-language" in pidgin surface features. Moreover, linguists have been unable to differentiate the factors that are purely socio-cultural in nature from those that are specifically linguistic, given that social definitions of these processes often misinterpret the phenomenon of pidginization. The controversy and the ongoing debate in the field highlight the different ideologies which have kept pidgin specialists from agreeing on even the basic definitions of the linguistic phenomena under study. In this paper, I treat the pidgin and creole systems as interpenetrating realms of the same linguistic development phenomenon. My aim is not to add more fuel to the present debate which, in my opinion, has given rise to conceptual gaps and obfuscated the true nature of the linguistic system known as pidgin. My main goal is to situate my analysis of the pidginization process within a linguistic theory, particularly the Government and Binding theoretical framework advanced by Chomsky (1981). I will argue that 1) what appears to be *merely* a reduction of forms of the "upper-language" is, in fact, the application of higher principles of grammar which govern such linguistic realizations; and, 2) pidgin development is governed by universal principles which must meet at least one fundamental condition: maximal learnability. (I am not attempting to treat learnability here with the same theoretical status as discussed in Wexler and Culicover (1980) or Pinker (1984). Learnability should be taken to mean merely "accessibility.")

The hypothesis that pidgin development is governed by universal principles is not a novel idea in the field. It had been advanced in research studies as early as 1880 by Coelho and, subsequently, by Naro (1971), Kay and Sankoff (1974), and Bickerton (1981), among others. However, some of these studies only treated the universal connection in passing, and others failed to fully explore the explanatory power of Universal Grammar (UG)

<sup>2</sup>"Upper-language" is used in pidgin and creole literature to refer to the language spoken by the dominant group, such as the Continental Europeans (English, French, Portuguese, Spanish), and is distinguished from the African languages spoken by the slaves which are regarded as "lower-languages."

with respect to pidgin developments. I should mention that Bickerton has become increasingly more preoccupied with the role of universal grammar in pidgin and creole developments as I will cite more extensively later.

Chomsky (1981) proposes an idealized theory of language acquisition whereby the learner:

approaches the task equipped with UG and an associated theory of markedness that serves two functions: it imposes a preference structure on the parameters of UG, and it permits the extension of core grammar to a marked periphery. Experience is necessary to fix the values of parameters of the core grammar (p. 8).

The theory of markedness and the preference of structure are of extreme importance to my learnability hypothesis. Chomsky's proposal claims that each parameter would have an unmarked setting as well as one or more marked settings. The grammars of most pidgins and creoles contain most or all of the unmarked settings of the parameterized universal grammar (Bickerton, 1984).

Examples from pidgins provide important insights into Chomsky's language acquisition model in two respects: 1) Language learners often acquire a language on the basis of little direct evidence, even in highly homogeneous language contexts. In the case of pidgin where the linguistic input is highly heterogeneous, the direct evidence is practically nonexistent. Hence, the learner must rely mainly on innate mechanisms which are part of the UG. 2) The creation of novel structures by the learner may have little to do with the input data. In fact, findings from empirical studies in language acquisition and pidgin development clearly show that these novel structures are only slightly influenced by the input data. The question that remains to be answered is what motivated these novel structures in defiance of positive evidence?

To better understand the creative nature of pidgin development, we must attempt to distinguish between core grammar and periphery as clearly as possible. Chomsky (1981) is vague in this respect when he says that "each actual language will incorporate a periphery of borrowings, historical residues, inventions, and so on, which we can hardly expect to—and indeed would not want to—incorporate within a principled theory of UG." The lack of a clear distinction between the core grammar and periphery has led D'Introno (1982) to identify three flaws in Chomsky's model: 1) Chomsky fails to define precisely what a parameter is or classify the possible types of parameters; 2) he does not clearly distinguish core grammar from

periphery; and 3) since both rules and principles can be parameters, the theory has too much power and flexibility. The issues which D'Introno raises need to be addressed if Chomsky's model is to achieve the desired explicatory power and, at the same time, remain restrictive enough to limit the range of possible grammars. According to Bickerton (1984), the current situation of parameters is similar to that of phrase structure rules prior to the development of X-bar theory. "Just as one could propose any kind of relationship between two or more rules, subject only to general considerations of redundancy, contradiction, etc., so one can nowadays propose any kind of parameter, subject to fairly general consideration." While the above points 1 and 3 are pertinent, they are beyond the scope of this paper.

D'Introno (forthcoming) redefines periphery by assigning it its own independent structure. That is, he contends that the periphery is developed by fixing parameters that are specific to the periphery domain, although these parameters may be inherently related to the core grammar parameters: "In the periphery we find idiosyncratic and marked constructions and forms that, in most cases, are obtained by fixing parameters of the periphery. These parameters are distinct from those of the core grammar." Even though it is desirable to assign the periphery its own structure, I do not believe it appropriate to make it autonomous from the core. In my opinion, when parameters are fixed, a core is produced (SVO order, fixing a parameter of core grammar). The incorporation of a specified and marked periphery such as irregular verbs, would then be the assignment of different values to the already fixed parameters of the core grammar. In this view, the marked periphery is subordinate and derived from the general principles found at the core grammar by fixing parameters. For example, the various marked relative forms found in languages such as Portuguese and Spanish are derived from a more general principle; call it "relativization." The relativization parameter-fixing generates an abstract structure, represented (roughly) in labelled bracketing as in

(1) NP [[COMP]... VP...]<sup>1</sup>

which assigns grammatical relations to the relative pronoun that will fill the

<sup>1</sup>I treat this structure as the threshold separating the core grammar from the periphery. We would expect and indeed we would want to find more abstract structures which characterize the nature of COMP. For further discussion on this topic, see Chomsky and Lasnik (1977) and Chomsky (1981).

empty slot COMP. Then, we would expect the less restrictive form *que* to mirror the core grammar more closely, while the more specific and environmentally restricted forms such as *quien*, *cuyo*, etc. would be considered the property of the periphery. To the extent that I am correct, when a parameter is fixed at the core grammar, i.e., fix R, it can be extended to the periphery by assigning different values to R, thus producing forms R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>. The latter forms are part of and governed by the more general principle, fix R, in the core grammar. Different experiences serve to assign values in the periphery. We would then expect to find more similarities in the core grammars of different languages while their periphery will more radically differ, depending on the nature of value assignment and experience.

Due to the preference of structure, every grammar has the option of fixing parameters in one way or another, choosing a grammar by making a series of choices along the way. Experience is obviously necessary to fix them. Once a parameter is fixed, it can incorporate a specified and marked periphery by the assignment of different values. The value assignment is also guided by the preference of structure and the experience which serves to fix it. The resultant marked forms are part of a hierarchical structure characterized by a gradation which ranges from the least marked at one end of the scale (closest to the core), as in example (2), to the more marked forms on the opposite end of the scale. Clauses (3) through (6) are examples of Portuguese with marked relatives (*de quem*, *sobre quem*, *do qual*, *cujo*)

- (2) Este rapaz *que* me vendeu a casa hoje  
(This guy that sold me a house today)
- (3) Este rapaz *de quem* me falaram hoje  
(This guy of whom they talked to me today)
- (4) Este rapaz *sobre quem* me falaram hoje  
(This guy about whom they talked to me today)
- (5) Este rapaz *do qual* me falaram hoje  
(This guy of which they talk to me today)
- (6) Este rapaz *cujo* filho foi assassinado  
(This guy whose son was assassinated)

The least marked form in (2) more closely reflects the general principles that are inherent in the UG devices with which the learner approaches language acquisition. The more marked samples, (3) through (6), are associated with the periphery and have to be learned. The actual learning is dependent on positive direct evidence as well as negative direct evidence from the input data to which the learner is exposed.

How do core grammar and periphery relate to the learnability hypothesis? By way of a possible explanation for how the pidgin grammar does not accurately reflect the rules of the donor languages in contact, *let's assume that donor language peripheries are only indirectly connected to the development of the pidgin grammar and that core grammar is as central to pidgin development as it is to child language acquisition.* This kind of process was characterized by Hale (1973) as the development of "an optimal grammar which is capable of generating... a grammar whose rules are maximally general" (p. 403). Hale further states that "children tend to construct rules whose generality greatly exceeds that of corresponding rules in the grammar of older speakers. Thus, where the adult standard has a rule with a number of exceptions, the child may construct a rule without exceptions... children show rather clearly that the strategy of rule generalization is used not only in defiance of simple evidence from adult standard but also in defiance of evidence available in linguistic forms a child has already acquired" (pp. 403-404). The generalization of rules in child language acquisition is amply documented in empirical studies.

Familiar plurals can be temporarily changed by overgeneralization of new patterns. The English irregular past tense marker is learned early, but when the regular past tense suffix is acquired it is readily extended to them (Hale 1973: 404).

Similar processes are also observed in pidgin developments. In the Capeverdean case, some Portuguese irregular verbs were introduced early in its history, perhaps due to the high statistical frequency of occurrence in the input data, as in (7). But, when the imperfect tense marker "ba" was introduced into the language, it was attached to the irregular form *ser* as in (8).

(7) Dudu cre ser homi

(Dudu wants to be a man)

(8) Dudu cre serba homi

(Dudu wants to be (+ imperfect marker) a man)

If Hale's hypothesis of the defiance of evidence is correct, the UG innate devices in the construction of novel structures in child language, as well as in pidgin development, are the central focus of language acquisition. The question remains as to why a close similarity exists between the overgeneralization of rules in child language acquisition and the tendency toward regularity of forms and over-regularization in pidgins? This linguistic phenomenon is not well understood but, in my opinion, it may be intimately related to UG devices and an associated theory of markedness.

The role of markedness has been argued as unnecessary in the theoretical framework of UG. Also, as Bickerton (1984) indicates, "Markedness, though it has proven useful in phonology, has always been problematic in syntax, due to the lack of clear objective criteria by which values could be determined (there is no syntactic analogue of the distinctive feature system, for example)." However, data from pidgins and creoles support the claim that parameters have unmarked values. According to Chomsky (1981), "experience is necessary to fix the values of parameters of core grammar. In the absence to the contrary, unmarked options are selected" (p. 8). In the case of pidgins where the input data is highly heterogeneous and unstable at best, we would expect to find a tendency toward the selection of unmarked options. In fact, this is unquestionably true since pidgins, as well as creoles, are characterized by an over-abundance of unmarked structures. Hence, it is plausible to assume that pidginization involves a process governed by principles of UG, guided by a preference of structure and its implicational relations with an associated theory of markedness. This process may be characterized by a movement toward the core grammar, while eliminating the marked peripheries of the donor languages. In Bickerton's terms, "the [pidgin learner] is equipped with the set of unmarked settings of UG and retains those settings unless and until positive evidence from input shows the learner that the unmarked setting cannot be the appropriate setting for the language that s/he is destined to learn."

Accordingly, a language has at least two possibilities: a marked option and an unmarked option. To take a concrete case, examples (2) through (6) show the range of possibilities in Portuguese relativization. I take (2) to be the unmarked form while (3) through (6) represent the marked cases. The presence of (3) through (6) implies the presence of (2) but the reverse cannot be true. The hierarchy of markedness in (3) to (6) is closely connected to my learnability hypothesis. That is, the least marked form (2) is more easily learnable, or acquired, and the more marked forms, (3) through (6), present more learning difficulty.

In the pidginization process I predict that the unmarked forms will be selected while the marked forms will be eliminated. Indeed, empirical evidence from the Capeverdean language seems to support this hypothesis. If the learnability model is correct, we would expect the pidginization of Capeverdean to defy the Portuguese relativization processes (3) through (6) and produce an unmarked form, as seen in (3') through (6').

(3) Este rapaz *de que* me falaram hoje

- (3') Es rapaz *qui* es papia'n d'el huje  
(This guy that they talked to me about (him) today)
- (4) Este rapaz *sobre quem* me falaram hoje
- (4') Es rapaz *qui* es papia'n d'el huje  
(This guy that they talked to me about (him) today)
- (5) Este rapaz *do qual* me falaram hoje
- (5') Es rapaz *qui* es papia'n d'el huje  
(This guy that they talked to me about (him) today)
- (6) Este rapaz *cujo* filho foi assassinado
- (6') Es rapaz *qui* es mata se fidjo  
(This guy whose son was assassinated)

In addition, learners have two options when setting the relativization parameter: The gap strategy which involves movement (given in (9)), and the resumptive pronoun strategy as seen in (10).

- (9) O homem<sub>i</sub> [[com quem<sub>i</sub>]<sub>j</sub> eu falei t<sub>j</sub>]  
(The man with whom I spoke)
- (10) O homem<sub>i</sub> [[qui] 'n papia co el]  
(The man with whom I spoke)

The question that remains is why they choose the resumptive pronoun strategy in defiance of the input data given in examples (3) to (6). At this point I can only suggest that the gap strategy involves a co-indexing process which produces a double chain operation as in (9) while the resumptive pronoun strategy involves only one chain co-indexing process. The latter is perhaps more accessible to learners. If we take the resumptive strategy to be the unmarked setting with respect to the marked gap strategy, and if the theory of UG incorporating markedness is correct, "then the [learner] has direct access to a set of unmarked parameter settings and requires only some kind of minimal triggering to activate that set, thereby yielding a language something like a creole language... Unmarked settings will be retained except where conflicting evidence is met" (Bickerton, 1984). In the case of pidgin and creoles where the input data is highly heterogeneous and unstable at best, we predict that the unmarked settings will predominate.

The examples given so far suggest that both the preference of structures and its implicational relations with an associated theory of markedness are critical factors in the construction of the pidgin grammar. If the preference of structure imposes the selection of unmarked structures, which I am assuming are more accessible, the pidginization model proposed in (11) is suggested.



In other words, the model depicted in (11) predicts that when two or more different languages are in contact, and there is an immediate need to communicate, a pidgin linguistic system may develop. The heterogeneous input data provides a new experience. This experience serves to fix the parameters of the pidgin core grammar. However, the fixing of parameters is guided by the preference of structure which maximizes learnability. The preference of structure and the learnability factors function as a sifter which eliminates the irregular and idiosyncratic structures of the marked peripheries of the languages in contact, yielding a pidgin core grammar. This core grammar has the option to develop its own periphery. The resultant pidgin grammar would be characterized by forms which are largely unmarked and show a systematic tendency toward regularity and overgeneralization of structure. Also, these forms more closely reflect those general principles of core grammar. Empirical evidence seems to support this close correlation between the general principles of core grammar and the unmarked characterization of the pidgin and creole grammars. The data given in (12) shows that the highly marked Portuguese verbal system is reduced to one unmarked base form in Capeverdean. Even the radically irregular forms are regularized.

(12)	AR	ER	IR	OR
Portuguese	Amava	Comia	Vestia	Punha
Capeverdean	Amaba	Comeba	Bestiba	Poba

If language A and B are in a contact situation and A is characterized by structures that meet the learnability criterion, that is, language A shows a tendency toward structures which are maximally general and unmarked, the resultant pidgin grammar will largely mirror the properties of language A.

In the Capeverdean situation, there is a predominance of African structures which substantiate the above assumption. Vestiges of some West African languages, believed to be present in the contact situation with Portuguese, seem to indicate a closer relationship between Capeverdean structures and African forms. Ironically, these same forms served to substantiate the phenomenon labelled as the simplification of Portuguese. The following examples describe some of the parallels between African structures and Capeverdean forms:

(13) *Gender*

<i>Capeverdean</i>	<i>Portuguese</i>	<i>Mandinka</i>
a) minino (child)	d) crianca	g) di
b) minino <i>matcho</i> (male child)	e) menino	h) dinke

- c) minino *femea* (female child) f) menina i) di *muso*  
 (14) *Non-inflected verbs*

<i>Capeverdean</i>	<i>Portuguese</i>	<i>Fante</i>
a) 'n proximâ (I approach)	f) Eu aproximo	me ben
b) bo proximâ (you approach)	g) tu aproximas	e, ben
c) el proximâ (he approaches)	h) ele aproxima	o, ben
d) no proximâ (we approach)	i) nós aproximamos	ye, ben
e) es proximâ (they approach)	j) eles aproximam	wo, ben

Examples (13) and (14) further illustrate the notion that the pidgin core grammar and the subsequent incorporation of a periphery is targeted toward the donor language(s) in the contact situation with which it shares more of the general principles we have discussed. This may explain why certain creoles have undergone decreolization, as in the case of Jamaican and Hawaiian creole<sup>4</sup>, and others, such as Haitian and Capeverdean, do not seem to undergo a post-creole continuum. This lack of movement toward French, in the case of Haitian, and Portuguese, in the case of Capeverdean, may be due to the radical difference between these two creoles and their respective European donor languages.

Finally, the linguistic phenomenon which traditionally has been labelled pidginization, creolization, decreolization, post-creole continuum (to mention only a few terms), can be better viewed as follows: the contact of various languages may produce a new experience which in turn seems to fix the parameters of UG, providing a pidgin core grammar. This core grammar is guided by a preference of structure imposed by the markedness theory allowing the learnability condition to operate. The resultant core grammar can later incorporate a marked periphery. The addition of a marked periphery is what had been viewed in the past as creolization.

If one of the donor languages is characterized by structures which meet the learnability criterion, the incorporation of the marked periphery will be targeted toward that language. The directionality of the pidgin periphery may then be predicted. However, if none of the languages merits the learnability condition, the pidgin periphery may develop independently of the peripheries of the donor languages.

<sup>4</sup>Both Jamaican and Hawaiian creoles are based on English, a language with which they share many of the features characterized as pidgin and creole. Some linguists have suggested that English had undergone a similar pidginization process as the result of its contact with Old Norse and Norman French. (Charles-James N. Bailey, 1974, *Some suggestions for Greater Consensus in Creole Terminology*. In *Pidgins and Creoles: Current Trends and Prospects*, ed. David DeCamp and Ian F. Hancock, Washington, D.C.: Georgetown University Press.)

## REFERENCES

- Bickerton, Derek. 1977. Pidginization and creolization: language acquisition and universals. In *Pidgin and Creole Linguistics*, ed. Albert Valdman. Bloomington: Indiana University Press.
- \_\_\_\_\_. 1981. *The Roots of Language*. Ann Arbor, Mich.: Karoma Press.
- \_\_\_\_\_. 1984. Learnability and the Structure of Parameters. Lecture delivered November 26, at the University of Massachusetts, Boston.
- Coelho, Adolfo. 1880. Os Dialectos Románicos ou Neo-Latinos na Africa, Asia e América. *Boletim da Sociedade de Geografia*, 1: 2. Série, n. 3: 129-196.
- Chomsky, Noam. 1981. *Lectures on Government and Binding: The Pisa Lectures*. Dordrecht, Holland: Foris Publications.
- D'Introno, Franco. 1982. *Teoría Lingüística, Variación Paramétrica y Español de América*. Typewritten paper, University of Massachusetts, Amherst.
- Hale, K. 1973. Current trends in linguistics. In *Diachronic, Areal, and Typological Linguistics*, ed. Thomas A. Sebeok. The Hague: Mouton.
- Hall, Robert A. Jr. 1966. *Pidgin and Creole Languages*. Ithaca: Cornell University Press.
- Kay, Paul and Gillian Sankoff. 1974. A language-universals approach. In *Pidgin and Creoles: Current Trends and Prospects*, eds. David DeCamp and Ian F. Hancock. Washington, D.C.: Georgetown University Press.
- Naro, Anthony J. 1971. The origin of West African Pidgin. Papers from the 9th Regional Meeting, Chicago Linguistic Society, 442-9. [Reprinted in *Sociolinguistics Newsletter* 5:8-11, 1974.]
- Pinker, S. 1984. *Learnability and Language Development*. Cambridge, Mass.: Harvard University Press.
- Wexler, K. and P. Culicover. 1980. *Formal Principles of Language Acquisition*. Cambridge, Mass.: MIT Press.