

4. The creation of pidgins as a possible window on language evolution

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Abstract

For some two decades now, linguists have given serious attention to the idea that restricted systems – inter alia 'modern' pidgin languages – provide a 'window' on certain facets of the emergence of language in the human species. Botha (2003: 197-201, 2006b) has identified a number of difficulties that would have to be overcome in constructing a pidgin window capable of yielding insights into language evolution. The window is still, at best, very much 'under construction,' for it lacks in its present forms various core components: 'Developing these components would require a substantial amount of work of a technical sort' (2006b: 12). But, he concludes, 'a well-constructed pidgin window on language evolution will reward us with insights and perspectives that are incentive enough for facing up to just those difficulties' (2006b: 13). This paper represents an attempt to restart work on the pidgin window construction project. My fundamental position is that the creation of 'modern' pidgin languages does indeed provide such a window on language evolution, though not along the lines that have been proposed to date.

4.1 Preliminaries

When one tracks the scholarly literature on language evolution, it becomes apparent that writers are not necessarily discussing the evolution of the same thing. One needs to be explicit about what one understands by the two terms that are constitutive of the compound noun *language evolution*. Botha (2006a: 131) characterizes *language* as a concept that designates 'a human capacity, referred to by such expressions as "the human language capacity" and "the human language faculty"; and the system(s) referred to by such expressions as "the first human language", "ancestral language", "the first form of human language" ' (Botha, 2006a: 131). In this sense *language* does not include speech or the mechanisms involved in its production and perception (which may have their own evolutionary histories). As for *evolution*, I understand (again following Botha, 2006a: 132) a process comprising various phases, 'central to which are the two referred to as "origin, emergence or first appearance (of

language in the human species"); and "subsequent development (of language in the human species)".¹

There is no direct evidence for early forms of language until the invention of writing systems – most importantly Sumerian cuneiform and Egyptian hieroglyphs – approximately 5,000 years ago. By then, we are dealing with fully developed 'modern' language (Jackendoff, 2002: 232). As for timing the emergence of language, the physical record again yields no direct information. To establish relative chronologies, researchers have examined features of early hominids – brain size and configuration, vocal tract configuration, patterns of behavior, and artifacts – that are accessible and could plausibly be supposed to correlate with language development in some way (e.g., Bickerton, 1990: 133-45, 2003: 91-92).

To appreciate the chronology problem, one need only ponder some of the time lines that have been proposed. Corballis (2003: 205), to cite but one proposal, supposes that 'language developed beyond protolanguage, probably gradually (Pinker and Bloom, 1990), over the past two million years.' He argues that language developed first as a primarily gestural system, with increasing vocal accompaniment.¹ Speech became the dominant mode following the emergence of *Homo sapiens*, within the last 170,000 years (p. 205). Autonomous vocal language, with a largely nongestural component, may have arisen sometime between 100,000 and 50,000 years ago in Africa (p. 217). MacWhinney (2002: 235), however, would push the temporal scope of inquiry even further back into the remote past. His thesis is that language evolution 'operated across the full six million years of human evolution, not just the last 100,000 years.' His model distinguishes four major periods, defined by different configurations of co-evolutionary pressures or challenges. These are the attainment of bipedalism (from 8MYA to 4MYA), the solidification of group structure during face-to-face vocal interaction (from 4MYA to 2MYA), 'the linkage of a broad set of symbolic processes to neural control mechanisms' (2MYA to 100KYA), with the linkages involving 'the growth of prosody, chant, gesture, dance, and a variety of other largely social expressions of language functioning,' and, finally, the linking of language to the production of material culture, which began in earnest about 60,000 years ago. During this last period language assumed its 'current dual patterning with organization on the phonological and syntactic levels,' although many abilities are traceable to precursors in the third period.

¹The hypothesis that language initially arose in a gestural-visual modality finds endorsement from Givón (1995: 430-34, 1998: 88-89) but is opposed by Bickerton (1990: 142) and – if only for expository convenience – Jackendoff (2002: 236).

The extreme time depth and the lack of extant data would appear to pose insurmountable obstacles to serious scientific inquiry into language evolution (cf., for example, Gould, 2002: 790; Slobin, 2002: 389). However, the problem has been taken up anew in recent years and approached in a number of interesting ways from the perspective of several disciplines, including linguistics, even if somewhat gingerly.² Botha (e.g., 2003, 2006a), in particular, has contributed in a decisive way to the development of foundational concepts for the study of language evolution. Contrary to received opinion and intuition, the main obstacle to a better understanding of language evolution is not a paucity of factual information but rather a 'poverty of restrictive theory' (2003: 7).³ In regard to the amelioration of 'evidential paucity,' he points out that accounts of the evolution of human language 'must, by their very nature, entail claims of a historical sort' that 'are put forward in the absence of direct evidence ... about events and factors that may or may not have been involved' (2006a: 130). The approach that linguists have embraced is to identify phenomena that can be observed in (or deduced from) actual instantiations of language and propose that they mirror or preserve the origins of language in *Homo sapiens* and its subsequent development. Comrie (2000), for example, considers situations in which people have created a language or part of a language *ex nihilo*, availing themselves only of certain minimal requirements for linguistic development. These situations involve feral children and related cases, creoles (albeit controversially), deaf sign language (in particular Nicaraguan Sign Language), and possibly twin languages. Other linguists have proceeded from a presumption that 'living linguistic fossils' discernible in 'modern' language can provide some insight into the processes by which human language emerged (Bickerton, 1990: 106). Restricted linguistic systems such as early child language, early adult second language acquisition, pidgin languages, and homesigns created by deaf children of nonsigning parents have been cited in the literature as 'fossils' of earlier stages of language.⁴

Such contentions are at the heart of what Botha (2006b: 130) calls the 'windows approach' to the study of language evolution. In general terms 'a phenomenon X is considered (to offer) a *window* on a distinct phenomenon Y

²Cf. Bickerton, 1990: 105-6, 2003; Hurford, 2003: 51-52; Newmeyer, 2003; Carstairs-McCarthy, 2007: 503.

³A theory will be restrictive to the extent that its characterization of a given entity 'makes it possible to discriminate in a non-arbitrary way' between that entity 'and all things which, though they may be related to it, are in fact distinct from it' (Botha 2003: 8).

⁴Linguists have adopted various other approaches, too, including argumentation based on complex design (e.g., Pinker and Bloom, 1990) – complexity being characteristic of human language – and computer modeling.

if by "looking at" X it is possible to "see" something of Y. A window on language evolution, accordingly, is a phenomenon that has properties believed to offer a 'view' on properties of some aspect or aspects of language evolution' (Botha, 2006a: 132). As we shall see in the following section, *pidgins* have been thought to offer such a 'window' on the evolution of language, but the term has not always been precisely defined. As a consequence, linguists who have been involved in the present discourse may not be referring to the same kind of contact variety (cf. Botha, 2006b: 2-3). By *pidgin language* I understand the linguistic creation of a new contact community that has need for a common means of communication for specific purposes but does not share a preexisting language that can fulfill this function. A pidgin is a restricted linguistic system that is used in limited domains (such as trade, labor) by people who retain their native languages. A pidgin language, therefore, has no native speakers (Bickerton, 1995: 29n.; Mühlhäusler, 1997: 6). One should bear in mind, however, that these criteria are necessary but not sufficient for a restrictive definition of the term. The related concept *creole language* has commonly been understood as an apparent 'synthesis *di novo* by the first generation of native speakers who received [a] Pidgin as their data input and proceeded to "create the grammar"' (Givón, 1979: 224). However, there is, as Baker (1995: 4) observes, 'currently no definition of *Creole* which is acceptable to all the people who study these languages.'

4.2 Deconstructing the conventional pidgin window

4.2.1 *Pidgins as a potential window on protolanguage*

In his book *Language and Species* (1990), Bickerton proposes that the human capacity for language evolved in two stages. The first stage probably took place with the emergence of *Homo erectus*, roughly 1.5 to 2 million years ago (Bickerton, 1990: 136-40; similarly, Carstairs-McCarthy, 1999: 74, 98; Newmeyer, 2003: 69). *Homo erectus* developed what Bickerton calls *protolanguage*, a first approximation of which could be thought of as 'modern language minus syntax' (Jackendoff, 2002: 235) or 'just handfuls of words or gestures strung together' (Calvin and Bickerton, 2000: 137). More precisely, protolanguage designates a form of communication that contains arbitrary, meaningful symbols but lacks any kind of syntactic structure (for details see Bickerton, 1990: 122-26). The next stage of language evolution is supposed to have coincided with the appearance of *Homo sapiens* between 140 and 290

thousand years ago (Bickerton, 1990: 165, 175).⁵ During the last 100,000 years, modern *Homo sapiens* displaced *Homo neandertalensis* at the same time that the archeological record shows a marked increase in the production of artifacts, which presupposes the possession of language by our species (Bickerton, 1990: 175-77; Carstairs-McCarthy, 1999: 98). This second stage marks the emergence of language as we know it, or what for clarity one could call *true language* (Bickerton, 1990: 177), *modern language* (Jackendoff, 1999, 2002: 235), *full language* (Carstairs-McCarthy, 1999: 98), *full modern language* (Botha, 2006b: 1), *full human language* (Bickerton, 1998), or *fully developed human language* (Bickerton, 1990: 137).

Bickerton (1990: 177-81, 1995: 68-75, 1998, 2000: 276, 2007: 520-21) believes that the transition from protolanguage to full language must have occurred suddenly in our species. He explicitly rejects the possibility of a gradient transition or intermediate stage that might have served as a bridge between protolanguage and full language. The emergence of various syntactic elements needed to happen virtually simultaneously: 'The principles involved are across-the-board principles: they apply everywhere, to all structures. At any given time, either they were in place or they weren't. Once they were in place, what was to stop syntax becoming immediately like it is today?' (Bickerton, 2003: 91). Bickerton (1990: 177) suggests a narrowing of the temporal range for both 'catastrophic' events – species origin and the emergence of full language – to a date of around 200,000 years ago.

Full language built on protolanguage rather than superseding it. The transition to full language involved the development of systematic grammar, which would entail the sharpening of rudimentary protolinguistic nonreferential items into grammatical items (Bickerton, 1990: 181-85) and the exaptation of thematic roles out of a 'social calculus' to 'set up the categories AGENT, THEME, and GOAL' and produce the basis for syntax (Calvin and Bickerton, 2000: 136; similarly, Bickerton, 1990: 185-88, 2000: 268-70). Syntax began with the mapping of thematic roles onto 'protolinguistic output' (Calvin and Bickerton, 2000: 137) in such a way that led to the imposition of the hierarchical structures defined by the X-bar theory and to recursivity (Bickerton, 1990: 191; Calvin and Bickerton, 2000: 138; but see Calvin and Bickerton, 2000: 223). Standing alone, argument structure cannot remove all ambiguity from syntax. In more recent work Bickerton has revised the evolutionary sequence to include a third phase, during which 'our ancestors must have been competing with one another to produce devices that would

⁵Following Crowe (1998), Corballis (2003: 213) dates this second "speciation event" to around 170,000 years ago.

make ... syntax more readily parsable, hence easier to understand automatically' (Calvin and Bickerton, 2000: 146).⁶

What is supposed to elevate Bickerton's story above mere speculation is his claim that protolanguage has left traces of itself in the contemporary world (Bickerton, 1990: 105-29). It is manifest in situations when full language has not developed: (i) on the one hand in the language of children under two years of age (Bickerton, 1990: 110-15) and (ii) on the other hand in experiments in teaching languagelike systems to apes (Bickerton, 1990: 105-10). It also surfaces when full language is disrupted. The more rudimentary a variety, the greater its window potential should be. Examples are (iii) cases of feral and abused children like Kaspar Hauser (Louden, 1999) and Genie, who are isolated from human contact and have no opportunity to acquire language during the critical period (1990: 115-18; cf. Heine and Kuteva, 2007: 203-5), (iv) pidgin languages in their early stages (1990: 118-22), and (v) possibly aphasia (1990: 127-29). Attributes of protolanguage are also discerned in the speech of nonproficient L2-learners (Calvin and Bickerton, 2000: 257).

Just as the transition from protolanguage to full language must have been 'catastrophic' in evolutionary terms, the transition from pidgins to creoles is (according to Bickerton) likewise abrupt, at least in the 'interesting' cases.⁷ Bickerton (1981: 2, 4; 1990: 169; similarly, Calvin and Bickerton, 2000: 33) uses the term *creole* to refer to a language which arose out of a prior pidgin (created by adults) that had not existed for more than a generation and was acquired as a native language by children on plantations using polyglot slave labor (contract labor in the case of Hawaii). The structural distance between a pidgin and its associated creole is immense. Characteristic of Hawaiian pidgin English, for example – and, presumably, protolanguage – are five properties that cluster together: (1) 'guesswork' identification of null elements, (2) variant word orders unrelated to function, (3) a lack of structural means for embedding

⁶For a critical appraisal of the 'exaptationist theory' articulated in Calvin and Bickerton, 2000: ch. 10, see Botha, 2003: 76-81.

⁷*Mutatis mutandis*, of course. Bickerton (1990: 171-72) cautions that all this does not furnish conclusive evidence that the original transition from protolanguage to full language took place in a similar way: 'First of all, evolutionary abruptness is not the same as everyday abruptness. An evolutionary change may be considered abrupt if it takes place in a few thousand years as opposed to a few hundred thousand. Second, while the existence of some distinct transitional mode in the contemporary world would have increased the probability that some similar mode would have existed in the past, the absence of such a mode tells us merely that, in principle, it is possible to do without one.' That said, Bickerton is nevertheless inclined to swipe the intermediate stage hypothesis with Occam's razor (further on this point in Bickerton, 1990: 177-81), though one can make cogent arguments for the opposite view. The issue of catastrophism versus gradualism in phylogeny is a contentious one.

and adjunction, (4) random absence of subcategorized arguments, and (5) the presence of some nonreferential items, but only at the 'meaningful' end of the range (Bickerton, 1990: 169). Creoles differ substantially from their antecedent pidgins in that they have all the basic features of established human languages: (1') unambiguous identification of null elements through rule-supplied patterns rather than context, (2') word order permutations clearly related to function, (3') freely available devices for sentential expansion, (4') fully subcategorized arguments in place or linkable 'to their appropriate places by regular processes,' and (5') a full array of nonreferential elements (e.g., a 50-50 proportion of grammatical to lexical items in Hawaiian Creole English) (Bickerton, 1990: 170-71).

The central point is that in the early stages, 'which are the relevant ones for present purposes, pidgin structure is not just impoverished but nonexistent, and the pidgin itself is not a true human language in the sense of the present discussion' (Bickerton, 1995: 29n.; similarly, 1990: 169, 1995: 37, 2007: 511, 516; Calvin and Bickerton, 2000: 33, 137, 257). Bickerton assumes that the diverse immigrant slave population, lacking a common lingua franca, pidginized the superstrate (European) language, to which they had only limited access. The primary linguistic data for children of their issue would be this 'chaotic and virtually structureless' pidgin itself (Bickerton, 1995: 37).⁸ While slave children may have had access to the heritage languages of their parents, there was little incentive to acquire them in such a milieu. Yet, it is striking not only how creole children are able to compile a full-fledged language on the basis of input that is 'radically mixed and degenerate' (Bickerton, 2007: 513), but also how the grammar of a creole bears the closest resemblance not to grammars of indigenous and/or immigrant (substrate) languages, nor to that of the dominant (superstrate) language, but rather to the grammars of creole languages in other parts of the world. In previous work (1981, 1984) Bickerton explained these (in neither case undisputed) facts by appealing to a 'bioprogram' for language that harks back to the emergence of *Homo sapiens*: 'Creole grammar constitutes a kind of 'inner core grammar' from which more

⁸Hurford (2003: 50) comments that 'modern linguistics has tended to characterize the overt phenomena of language, the spatio-temporal events of primary linguistic data (PLD), as "degenerate." If the input for L1-acquisition is defective even in ordinary circumstances, then linguistically diverse creole societies would have had to confront children with conditions that were extreme indeed. Even if we grant Bickerton his claim that the earliest cohorts of creole children were subject to exceptionally restricted primary linguistic data, they may not have lacked any more *relevant* input than their counterparts in 'normal' settings, as Lightfoot (e.g., 2006) has argued.

complex and varied grammars may have evolved' (1984: 188); and further: 'Creole languages form an unusually direct expression of a species-specific biological characteristic, a capacity to recreate language in the absence of any specific model from which the properties of language could be 'learned' in the ways we normally learn things' (Bickerton, 1990: 171). In his latest published statement to date, Bickerton reaffirms his position that the rapid deficit repair and apparent cross-linguistic parallels among creole languages illustrate the 'robustness of the biological template' (2007: 514).

Givón (1979: 223-26; 1995: 359-62, 402-4; 1998: 56-58) characterizes pidgins – along with early child language and agrammatic aphasia – as an extreme case of what he has called the pragmatic or pregrammatical mode of communication. Creoles possess a syntactic (or grammatical) mode of communication, like any other full language. Pidgins – at least in plantation societies using slave labor – exhibit 'an enormous amount of internal variation and inconsistency both within the output of the same speaker as well as across the speech community. The variation is so massive to the point where one is indeed justified in asserting that the Pidgin mode has *no stable syntax*' (Givón, 1979: 224, emphasis in original; similarly, Givón, 1995: 30, 1998: 60). But Givón (1998: 60-61, 93-96) attempts to show that pidgins do conform to several 'rules' that may be called 'pre-grammar' or 'proto-grammar.' These rules reflect cognitively 'natural' (i.e., transparent, iconic) meaning-form pairings that are characteristic of the pregrammatical mode. Examples are: 'Units of information that belong together conceptually are kept close temporally'; and 'predictable – or already activated – information [is] left unexpressed' (loc. cit.). Interestingly, protogrammatical rules are embedded in the grammatical mode of communication and often integrated with the morphosyntactic rules of full languages. Critical steps in the evolution of grammar, which is arguably the last major developmental phase in the evolution of language, would entail a progression from holophrasis and mono-propositional communication, to the appearance of protogrammar and multi-propositional discourse (akin to the pregrammatical pidgin mode), and then to the integration of protogrammar into the more 'arbitrary' (i.e., symbolic) encoding of the emergent grammatical mode (Givón, 1998: 92-99).

Jackendoff (1999, 2002: 235-61) argues that we can extrapolate from modern human language a sequence of partially ordered evolutionary steps or stages in the emergence of language in our species. Some of these stages are prior to protolanguage in Bickerton's sense, and some later; each is an improvement in terms of expressive power and precision. Following the lead of Bickerton and others, Jackendoff looks for traces of these stages in 'degraded' forms of modern language and relates the stages to what apes have been trained

to do (2002: 236). 'Degraded' forms of language include child language, late language acquisition, aphasia, and pidgins. In some instances Jackendoff claims to show not just that these earlier stages are still present in the brain, 'but that *their 'fossils' are present in the grammar of modern language itself*, offering a new source of evidence on the issue' (2002: 236, emphasis in original). He adds: 'It is of course never clear how relevant such evidence is for evolutionary concerns – in particular, to what degree ontogeny really does recapitulate phylogeny. Nevertheless, this is all the evidence we've got, so we must make the most of it, while recognizing that it should be taken with a grain of salt' (2002: 237).

Protolanguage 'fossils' include single-symbol utterances (holophrasis), Agent First, Focus Last (the natural mirror image of which is Topic First), Grouping (modifiers tend to be adjacent to what they modify), and nominal compounding. These semantically motivated phenomena are observable in pidgin languages and in the Basic Variety (BV) posited by Klein and Perdue (1997), which is 'a kind of minimalistic acquisition of a foreign language up to a level where basic communication can take place but no further' (Johansson, 2005: 239). In its technical sense, BV is to be understood as 'an instantiation of the essential properties of the human language capacity, and ... as the "initial fossilization point" of adult second language acquisition' (Meisel, 1997: 374).⁹ Like (early) pidgins BV is fairly close to what Bickerton (1990) describes as protolanguage (Jackendoff, 1999: 276, 2002: 249). Bickerton (1990: 120, 122-23) imputes to protolanguage a less stable word order than that in BV. Jackendoff opines that this may be partly because Bickerton's evidence comes from incipient pidgins, 'which are heavily influenced by the native language(s) of their users' (1999: 276; similarly, 2002: 249).

Some parts of language are not subject to critical-period limitations and are immune to degradation when the transmission of language is disrupted, in particular the acquisition of vocabulary, the concatenation of words, and simple semantically based principles of word order. The survival of these features – and not others (such as the details of phonology, phrase structure, and especially inflectional morphology) – in degraded forms of language may serve as evidence for their 'evolutionarily more primitive character' (Jackendoff, 1999: 276). Jackendoff's conclusion is that Universal Grammar is not simply

⁹That BV reflects creative processes underlying the human language faculty and linguistic organization independent of specific languages is not uncontested. Meisel (1997) suggests a rather different view of BV, having found evidence that casts some doubt on the claim that it is an I(nternal)-language. BV is essentially a type of early L2-interlanguage that is constrained by Universal Grammar but driven by nongrammatical cognitive processes.

'on or off' in abnormal situations. Those subcomponents that are particularly prone to disruption are 'significantly, the same ones in case after case. The robust remnant is protolanguage' (2002: 264). Jackendoff differs from Bickerton by portraying grammar not as a single unified system but as a 'collection of simpler systems,' many of which are built up as refinements of preexisting interfaces between components. Hence, the evolution of the human language faculty can be seen as 'deeply incremental' (*loc. cit.*).

4.2.2 *Discussion*

Bickerton's language bioprogram hypothesis was initially very influential and provocative of further research. But it was also highly controversial and ultimately won few supporters in creolistics, even while enjoying a more sympathetic reception in other areas of linguistic inquiry, including some work on language evolution.¹⁰ The issues are well known and call for only brief recapitulation here: (a) Contrastive studies have found less similarity among creoles than Bickerton has claimed. (b) The typological similarities that do exist across creoles find better supported alternate explanations. (c) Longitudinal studies indicate that creoles developed some of their features over longer periods of time than Bickerton has wanted to believe.¹¹ (d) Contemporary theory has moved away from the conventional notion of creoles *qua* nativized pidgins requiring the special intervention of children and from the proposition that creoles have a special status, reflecting Universal Grammar 'in a direct or privileged fashion' (Lightfoot, 2006: 152; cf. also Ragir, 2002: 282-83; Mufwene, 2008: 1n., 23-24). Slobin (2002: 386-87) is not convinced by any of the evidence or arguments for Bickerton's bioprogram. He calls the reader's attention to a body of data that shows how 'languages that are considerably more complex than pidgins can arise in interaction with adults,

¹⁰Cf., e.g., Nocentini, 1999: 472-74, albeit with some reservations and qualifications. Pinker (2003: 22-23) examines the question of whether human language resembles culturally acquired abilities or looks more like a part of the standard human phenotype. As evidence for the latter view and citing Bickerton (1981), he offers the proposition that creole children 'did not passively have the pidgin culturally transmitted to them, but quickly developed creole languages, which differ substantially from the pidgins and have all the basic features of established human languages' (p. 23). Other types of evidence marshaled by Pinker will carry the larger point, but as we shall see presently, creolization cannot be assumed to be a special kind of L1-acquisition. Kihm (2002) offers a not unsympathetic but far more cautious assessment of the language bioprogram hypothesis and its implications for the study of language evolution.

¹¹The gradualist position on creole formation appears to have made its way to evolutionary linguistics, e.g., Aitchison, 1998: 24. Tellingly, Li (2002: 91, my emphasis) writes: 'If creolization is a hint, *a few generations* probably constitute sufficient time for a grammar to emerge as speakers begin to sequence words together to form larger communicative units.'

before there are native speakers' (p. 386). The first generation of native speakers 'smoothes out' the language rather than creating new forms (Slobin, 2002: 386; similarly, Mufwene, 2008: 3, 7, 16-23). The learning processes, he concludes, are normal 'and do not reveal special capacities of the language-learning child beyond what is already known about the acquisition of 'full-fledged' languages. A creole language develops over time, in contexts of expanding communicative use of a limited pidgin language. Child learners help to push the process forward, arriving at a grammar that is more regular and automated – but they do not appear to be the innovators' (p. 387; cf. also Mufwene, 2008: 12). The transition from pidgin to creole grammar does not therefore lend support to Bickerton's postulation of a relatively abrupt transition from protolanguage to full language. If creole lexis and grammar come largely from the contributing languages and/or from adult innovation, then creole languages 'cease to be of interest for our present enterprise, since neither in lexicon nor grammar do they illustrate creation anew of a language' (Comrie, 2000: 995).

Independently of whatever probative value the formation of creole languages may or may not be for the study of language evolution, there remains the idea that pidgins have the characteristics that are most likely to have been present in early forms of human language. Pidgins were developed largely through interactions between adults who are in possession of a fully developed *faculté de langage* and have native proficiency in one or more full modern languages. These facts raise the question of how the similarities between pidgins and early human language structure 'can be related to one another in systematic way, especially since it remains unclear how the structure of pidgins is affected by the presence of the various lexifier and substrate languages that characterize the genesis of pidgin languages' (Heine and Kuteva, 2002: 393). Unlike pidgin speakers, the creators of protolanguage would not have had preexisting full languages from which to draw resources (Mufwene, 2008: 14n.).

Botha (2006a: 134-36) examines Jackendoff's position that traces of ancestral language are recoverable from 'degraded' forms of modern language. The occurrence of certain properties in the latter is taken by Jackendoff as evidence for the conclusion that protolanguage was likewise characterized by these very properties. The thesis falters on Botha's criterion of *groundedness*, which requires that the attributes of a proposed window phenomenon be well understood (Botha, 2006a: 134). Jackendoff merely offers an ad hoc list of modern exemplars, without addressing the question of what it is about a form of language that makes it 'degraded.' It will turn out that 'degradedness' should be distinguished from restrictedness. In Botha's critique (2006a: 136-37) it is

further demanded that inferences about language evolution drawn from a putative window phenomenon be *warranted*. A windows approach should provide justification for drawing inferences about facets of language evolution from modern data that represent different kinds of entities. It is not sufficient merely to assert *ipse dixit* that 'degraded' forms of language are evolutionarily primitive or language fossils. Botha's third window evaluation criterion is that of *pertinence* (2006a: 138-40). The conclusions that Jackendoff arrives at through his 'degraded' language window are, in Botha's estimation, clearly about 'the right thing,' namely the evolution of language (vis-à-vis the evolution of an entity that is distinct from language or an aspect of language that is distinct from its evolution, 2006b: 138). The essential point is that to achieve pertinence, each 'pane' in Jackendoff's window must be individually grounded and warranted. That would involve, inter alia, underpinning by a restrictive theory of what a pidgin is, a matter that we shall take up in section 3.

Mufwene's (2008) criticism of the pidgin (and creole) window concentrates on many of the foregoing points. He denies that creoles developed from pidgins at all (2008: 4, 12, 15) and prefers a strictly sociohistorical definition of *creole languages*, which are a group of vernaculars that emerged from the seventeenth through the nineteenth centuries under similar geographic, demographic, and economic conditions, viz. in (usually) tropical colonies settled by Europeans who typically spoke nonstandard varieties of metropolitan languages and who put in place plantation economies that utilized nonindigenous slave labor (Mufwene, 2000: 78). He emphasizes that what little the development of pidgins and creoles tells us about the evolution of language is *not* what has been claimed in the literature. The histories of these languages in (respectively) European trade and plantation colonies of the Early Modern era 'present nothing that comes close to replicating the evolutionary conditions that led to the emergence of modern language. Nor are there any conceivable parallels between, on the one hand, the early hominids' brains and minds that produced proto-languages posited by Bickerton (1990, 2000) and Givón (1998) and, on the other, those of both the modern adults who produced (incipient) pidgins and the modern children who produce child language, even if one subscribes to the ontogeny-recapitulates-phylogeny thesis' (2008: 2-3).

Mufwene (2008: 14, 36) does make allowance for deeper-seated structural elements that are likely to survive the collision of languages during pidginization. Incipient pidgins can be expected to preserve those structural components that are 'the most robust' and 'perhaps the most deeply entrenched' in evolutionary terms. He readily acknowledges the probable correctness of Givón's (1998: 92, 105) observations regarding gradualness in the co-evolution of language and the cognitive infrastructure necessary to carry it (2008: 3),

adding that the development of creoles and pidgins is similar only in being a gradual process (2008: 33). Here, Mufwene's position is itself problematic, for the time scales of evolutionary processes and of the processes of pidginization and creolization are incommensurable (Botha, 2006b: 8). Aside from survivability and graduality, the one other parallelism between the development of pidgins and creoles and the evolution of human language lies in inter-individual variation, the convergence of idiolectal systems through mutual accommodation, and the competition and selection of features during the emergence of communal norms (Mufwene, 2008: 2, 31, 35).

4.3 Reframing the pidgin window

At issue is whether key aspects of pidgins and pidgin formation could have had analogues in certain facets of language evolution. Arguments – *pro et contra* – have engaged the following factors: (i) the environments in which pidgins formed, (ii) the cognitive capacities of the people who created these codes, (iii) the linguistic properties of pidgins, (iv) the role of pragmatics, (v) the general nature of the processes involved in the formation of pidgins (e.g., gradualness, competition and selection of features), and (vi) the specific developmental processes involved (Botha, 2006b: 4). When reading the literature on what restricted linguistic systems might tell us about language evolution, one is struck by the emphasis on factor (iii) and the lack of an explicit recognition of pidgins as dynamic systems.¹² In this section I argue that a properly constructed pidgin window would look out not onto language structure per se but onto process, namely, the sequence of linguistic developments that led to the elaboration of minimal codes into more complex systems.

The prevailing occupation with recovery of the remotest conceivable language structure out of which modern complex forms emerged has fixed attention on 'early-stage' pidgins, the properties of which are supposed to mirror protolanguage. These highly restricted codes are what some linguists would prefer to call *jargons*, which are ad hoc, unstable, individual solutions to the problem of interethnic communication (*secondary hybridization* in the model of Whinnom, 1971). Jargons are characterized by a lack of morphology and syntactic rules (Mühlhäusler, 1997: 134). The principal communicative strategies are holophrasis, pragmatic structuring (often involving two-word concatenations), context-dependency, universals, and L1-transfer; cultural and personal factors appear to play a role as well (Mühlhäusler, 1997: 56, 119, 128). There are no social norms, nor are jargons transmissible to subsequent

¹²A notable exception is Heine and Kuteva (2007), which was published in late 2007 and was unavailable to me when I prepared the prefinal version of this article.

generations in any consistent way; they are to a great extent invented and reinvented by individuals (Mühlhäusler, 1997: 119, 138). Even if jargon speakers do not, at the outset, seek to acquire a preexisting language as a whole language, social integration or increased contact may afford them with opportunities to modify their speech in the direction of a target language.

Pidgins are the result of language creation rather than impaired or partial second language acquisition. Jargon speakers interacting with one another develop more complex, qualitatively different linguistic systems out of minimal, ad hoc codes, as communicative requirements become more demanding (*tertiary hybridization*, in the model of Whinnom, 1971). Pidgins are communal rather than individual solutions to the problem of interethnic communication. The transition from jargon to (stable) pidgin coincides with the formation of a language community and the emergence of socially accepted linguistic norms, which occurs when none of the languages in a heterogenous milieu serves as a target language (Mühlhäusler, 1997: 6, 138, 162).¹³ Linguistically, pidgins differ from jargons in the following way: 'Generally speaking, stabilization implies the gradual replacement of free variation and inconsistencies by more regular syntactic [and] lexical structures. In the former area, a pragmatic mode of speaking begins to give way to a grammatical one, whereas in the latter lexical dependency on outside resources is supplemented with internal means of lexical expansion. Most important, new grammatical devices are independent of a speaker's first language or other individual language learning strategies' (1997: 138). That pidgins with no shared history exhibit recurring similarities in structural make-up suggests that 'people appeal to innate linguistic universals when under pressure for communication' or, alternatively, the observed similarities are relatable 'to more general pragmatic and problem-solving capacities found with human beings' (Mühlhäusler, 1997: 162-63). Moreover and critically, when a highly diverse population participates in language construction, the L1-transfer that is characteristic of the jargon stage should not be of great significance for subsequent stabilization: 'The more different their areal linguistic background, the less likely is substratum influence, and the more speakers rely on universal strategies' (Mühlhäusler, 1997: 119). Unlike jargons, which can become targeted in the direction of preexisting whole languages, directionality in pidgin formation is internal; that is, the real target in these circumstances is the linguistic system that speakers

¹³Whinnom's claim that pidgins are unlikely ever to have crystallized in other than multilingual situations (1971: 104, 106; similarly, Mühlhäusler, 1997: 138) is doubtless too strong. I adopt here the weaker claim that *most* pidgin situations involve three or more groups of people, with a two-language situation leading to the development of a pidgin only when there is a 'profound social separation' of the two groups of speakers (Thomason and Kaufman, 1988: 197-98).

are actually developing (Whinnom, 1971: 105; Baker, 1997: 104; Mühlhäusler, 1997: 138; cf. also Thomason and Kaufman, 1988: 178).

In the present framework the distinction between jargons and pidgins does not represent a binary opposition. Rather, these contact varieties are part of a continuous spectrum between pragmatic and syntactic modes of communication, with jargons at the one pole, full languages (including creoles) at the opposite pole, and pidgins defining the mid-range. In three important aspects – rudimentary attempts at intergroup communication by fully languaged *individuals* versus *group* language construction, the role of L1-transfer, and the potential for targeting in the direction of a full language (resulting in interlanguage continua) – jargons differ significantly from pidgins under the restrictive definition of the latter term. Yet, some linguists who work on pidgin and creole languages 'have not regarded the distinction between jargon and stable pidgin as one deserving great attention: the two stages are often lumped together and compared jointly with creoles, which develop at a later stage' (Mühlhäusler, 1997: 138). To the extent that the distinction is drawn at all in the literature on language evolution, it is the jargon stage that is assumed to be of relevance.¹⁴ Conceptualization of an asyntactic protolanguage along the lines of 'modern' jargons seems reasonable and could even be correct. But such a window on language evolution would be grounded in a phenomenon that is actually quite distinct from stable pidgins, which are more advanced along a developmental continuum. To illustrate this point, let us briefly revisit the literature on our subject.

As is clear from Jackendoff's discussion (2002: 247), the features of BV do seem to parallel those of jargons: (a) lexical competence, (b) absence of inflectional morphology, (c) omission of contextually supplied arguments, (d) no subordination, and (e) largely semantically-based principles of word order, most prominently, Agent First and Focus Last. In a subsequent passage Jackendoff (2002: 264) writes of the severe impairment that occurs in late language learning, yielding BV and incipient pidgins (by which he must mean jargons). Benazzo (2008, this volume) writes that the initial systems of adult language learners do not seem to be strongly influenced by their L1: 'A target language-like lexicon is organized on the basis of pragmatic and semantic principles which are largely independent of the Source/Target language specifics.' The earliest stage of L2-acquisition involves neither a process of

¹⁴Unlike most linguists who have been concerned with the pidgin window, Heine and Kuteva (2007: 166) do not confine themselves to jargons but also deal with pidgins that have reached more advanced stages of development. Their principal case study, Kenya Pidgin Swahili, does not fall neatly along the jargon – (stable) pidgin – extended pidgin continuum but shows a great range of variability, including lects that approach Coastal Swahili (2007: 170).

relexification nor 'piecemeal imitation' of a native-speaker model. The differential treatment of BV and jargons would seem unwarranted. Both variety types represent a kind of minimal pragmatic response to communicative exigencies upon initiation of interlingual contact. Both originate in a common 'pre-basic' mode of intergroup communication, at which point utterances are organized as nominal structures without verbs (cf. Heine and Kuteva, 2007: 301). And both cease to be representative of early processes of human language formation as soon as L1-imposition and/or at least partial targeting become factors.

An interesting way of conceptualizing the very earliest stage of human language is suggested by Heine and Kuteva (2002: 390-91, 2007: 29-31). Their view of language change is uniformitarian, that is, they presume that diachronic processes (*primary hybridization* in the terminology of Whinnom, 1971) were the same in the past – even the very remote past – as they are in the present. With regard to language structure, however, their view is distinctly nonuniformitarian. On the basis of evidence from grammaticalization, whereby lexical items acquire specialized grammatical meanings in a unidirectional progression, they propose that what they refer to as 'early language' (2007: 4, *passim*) – language at the point at which the forces of historical change came into being – had a structure that was less complex than that which is characteristic of modern languages (2007: 30). Early language can be thought of as an essentially lexical stage of language evolution that saw the emergence of – first – one type of wordlike units 'denoting thing-like, time-stable entities, that is, nouns,' and – secondarily – another type of units 'denoting non-time-stable concepts such as actions, activities, and events, i.e., verbs' (2002: 390; similarly, 2007: 300, 302). But at this developmental stage, human language must have lacked function words and grammatical morphemes to express syntactic relations, spatial orientation or possession, and distinctions of personal deixis (pronouns) (Heine and Kuteva, 2002: 390-91, 394; 2007: 302-3). Once a noun-verb distinction crystalizes, 'many other design features can crystalize around it (Jackendoff, 2002: 259), and grammaticalization now becomes the driving force of grammatical evolution' (Heine and Kuteva, 2007: 303).

In a similar vein Hurford (2003: 52-53) wishes to show how language systems could have become increasingly complex once humans had achieved a state of language readiness. Language can be viewed as a 'cyclic interaction across generations' between I(nternal)-language and E(xternal)-language (p. 51). This way of looking at diachrony has been of importance for grammaticalization theory. Hurford offers a number of suggestions about what earlier stages of human language were like, based on the unidirectionality of

grammaticalization and on the premise that functional items originated in lexical stems. This leads him to hypothesize that the earliest languages had no articles, no auxiliaries, no complementizers, no subordinating conjunctions, no prepositions, no agreement markers, no gender markers, no numerals, no adjectives. In addition he speculates that the earliest languages had no proper names, no illocution markers, no subordinate clauses or hypotaxis, no derivational morphology, less differentiation of lexical categories (perhaps not even N, V), and less differentiation of subject and topic (2003: 53).¹⁵

The structure hypothesized for early language resembles that of 'early' or 'unstable pidgins' (Heine and Kuteva, 2002: 391-92; Hurford, 2003: 53). Beyond the jargon phase, however, pidgins display at least some grammaticalized elements (e.g., expressing negation, aspect, deixis) and hierarchical structure.¹⁶ Restricted though they may be compared to full languages, stable pidgins are not as linguistically primitive as what one might reasonably suppose the earliest conceivable human language to have been on the basis of grammaticalization theory. At its primal stage, Heine and Kuteva (2002: 394) conclude, human language does not appear to find a parallel in modern pidgins or other varieties that arise in situations of 'communicative stress.'¹⁷ It may be correct to suppose that pidgins exhibit degrees of grammaticalization that early language could not have shown, but such a conclusion would be reached from the perspective of a static outcome.

In their most recent statement, however, Heine and Kuteva (2007: ch. 4) have explicitly cast pidgins as dynamic, developing systems, which is precisely the position that is taken here. In their view the question of whether one can establish reasonable analogues between early language and pidgins yields a decidedly mixed answer. There are four main reasons why pidgins are relevant for the reconstruction of early language, all of which have to do with the way in which a language having little grammatical complexity gains complexity: (i) the rise of functional categories through the combination of existing material in novel ways; (ii) the relatively quick rate of innovation (within a few generations as opposed to centuries); (iii) the emergence of 'auxiliary' functions among regularly used collocations of two lexical items leading to the creation of grammaticalized forms; and (iv) the potential for newly evolving patterns

¹⁵Hurford (loc. cit.) notes that one could apply similar ideas to semantics (e.g., no polysemy, no metaphor, fewer hyponyms) and phonology (simple vowel systems, CV syllable structure).

¹⁶Mufwene (2008: 4n.) finds no evidence that idiolects of which pidgins are constituted are not internally systematic.

¹⁷Givón (1979: 225, emphasis in original) defines *communicative stress* as follows: 'The Pidgin-speaking community is thrown together *without a common language* but has urgent tasks to perform.'

and categories to arise independently of resources in the languages available to pidgin speakers (Heine and Kuteva, 2007: 195-98). Factors that differentiate modern pidgins from the situation of early language and appear to militate against a pidgin window are the following (Heine and Kuteva, 2007: 193-95): (v) Pidgins begin their life cycle as heavily reduced and simplified versions of full languages; the direction of change (from grammatically complex to less complex forms of language) is exactly the opposite of how language evolution must have proceeded. (vi) There are usually a number of preexisting linguistic features that survive pidginization; that is, these features are drawn directly or adapted from full languages in the mix. (vii) Pidgin speakers had at all times at least one 'functionally adequate' language from which to draw resources. (viii) Frequently, though, individual multilingualism is the rule in social encounters that give rise to pidgins. (ix) Leaving aside the issue of whether early-language speakers would have been able to access the same cognitive endowment as modern-language speakers, Heine and Kuteva (2007: 195) aver that 'pidgin speakers were able to draw on cognitive skills that would enable them on the basis of the communicative networks they were exposed to – in particular skills that were available to them to establish and express relations among different concepts.' (x) Pidgins are limited to a small number of social domains. There is no reason to suppose that early language was so restricted. As regards points v-x, I believe that the contrasts drawn between modern pidgin formation and the transition to full modern language from a protolinguistic state will prove largely illusory, if one proceeds from the restrictive definition of *pidgin* that is proposed above and from a constructive model of pidgin formation.

4.4 A constructive model of pidgin formation

Baker observes that a common thread through different accounts of how pidgin and creole languages were formed is failure: 'People tried to acquire a European language and failed, or they tried to maintain their traditional language and failed'; either way, these contact languages 'were the result of failure' (1995: 6; similarly, 1990: 107, 1994: 65-66, 1997: 91). Most pidgins and creoles, Baker believes, should not be seen as imperfect and incomplete attempts at second language acquisition. They are, initially at least, 'self-evidently successful solutions to problems of human intercommunication – languages made by and for their users over generations, drawing on the range of available resources, and tailored to their users' specific and changing communicative needs' (1990: 117; similarly 1995: 6, 13).

A no-less common theme through different accounts of language evolution is that pidgins are restructured and radically stripped down forms of preexisting full languages (cf. Jackendoff, 2002: 236; Heine and Kuteva, 2002:

393, 2007: 168; Mufwene, 2008: 13). Heine and Kuteva (2002: 391), for example, situate pidgin formation in the following context: 'In languages used in stress situations, where linguistic communication is seriously impaired, where people have only "inadequate" linguistic models at their disposal, everything that is not vital tends to be stripped off and hence language structure may be reduced to its most essential, and least dispensable, characteristics. Such characteristics are the ones most likely to have been present also in earlier forms of human language.' As regards developmental processes, Botha (2006b: 9) points out that on a priori grounds, it would seem unlikely that reduction (loss of referential and nonreferential power) and simplification (regularization) would have played a role in the first appearance of language. Conceptualization of a pidgin as a 'degraded' variety entails the unexamined assumption that its lexical source language constitutes a target language, even if access is limited: 'To comment on an all-too-frequent misconception – simplification of the lexical source language by people who did *not* know it could play no role at all, because you can't simplify what you don't know' (Thomason and Kaufman, 1988: 178, emphasis in original). If it turns out that pidgin speakers were not attempting to acquire a preexisting language, then 'degradation' is merely an artifact of contrastive analysis.

Baker's 'creativist' or 'constructive' approach (1990, 1994, 1995, 1997, 2000) rejects entirely the propositions that each pidgin and (subsequently)/or creole can be regarded as a restructured form of a preexisting language and/or the product of a special kind of second-language acquisition. The process is one of language creation (Baker, 1990: 111, 1995: 4, 1997: 91, 2000: 48); that is, pidgins and creoles are in essence what those who created them wanted them to be (1995: 13, 2000: 48). Whenever two or more groups of people lacking a common language enter into sudden and sustained contact and have a mutual interest in both intercommunication and maintenance of group identity, they are likely to start constructing a basic 'medium for interethnic communication' (MIC), although for present purposes we should perhaps want to adjust this term to 'medium for intergroup communication' or simply 'medium for intercommunication.' Their 'real, if unconscious, aim' was the development of a new language, suited to their immediate communicative needs, which they 'subsequently expanded and adapted ... as their growing or changing needs demanded, drawing at all times on the resources available' (1990: 111; similarly, 1997: 96) and by innovating.

The main function of the MIC is to serve as a supplementary code that enables communication between people who do not share a preexisting full language and for whatever reason cannot or do not acquire one. Local conditions may extend the functional role of the MIC beyond supplementation

to less marked contexts and bestow upon it a measure of social indexicality. In colonial plantation societies, for example, locally born slaves would have had far more in common with one another, due to their upbringing in the same territory, than with slaves imported from abroad. Among their shared knowledge would be proficiency in a more elaborated form of the MIC. In fact the emerging language of locally-born slaves would have become not only a more developed form of the MIC but what Baker calls a 'medium for community solidarity' (MCS), which is 'a form of speech closely related to the basic [or elaborated] MIC but sufficiently different from the latter to serve as a badge of identity for locally-born slaves enabling them to recognize each other as such on the basis of speech alone' (Baker, 2000: 54). The conventional distinction between pidgins and creoles based on whether they are the first language of some of their speakers serves no useful purpose (Baker, 1995: 4, 1997: 91, 2000: 48n.). All pidgins and creoles are – or were, formerly – MICs; many subsequently became MCSs (Baker, 2000: 48n.).

Botha (2006b: 9) refers to Baker's views in his own assessment of pidgin languages as a putative window on language evolution and expresses regret that 'what his creativist account of the genesis of pidgins and creoles might enable us to learn about the first emergence and subsequent development of human language is a question that he is not concerned with.' In the following section I explore the logical basis of the pidgin window within a constructive framework, in the sense that the analysis I outline will satisfy Botha's (2006a) three evaluation criteria: groundedness (the window proceeds from a restrictive definition of *pidgin*), warrantedness, and pertinence.

4.5 Are there creative linguistic processes in pidgin formation?

Botha (2006b: 9) suggests that 'in an assessment of the windowhood of pidgins, it may be useful to draw a distinction between the creation and recreation of linguistic objects.' Processes of creation would produce new linguistic structures and grammatical categories *de novo*, that is, without reference to other, preexisting linguistic objects. Processes of re-creation, by contrast, would produce new linguistic objects by 'doing something' to other, preexisting linguistic structures and categories. If creative processes can be shown to have played a role in the instantiation of a MIC, 'the next pertinent question would be whether they are likely to have had analogs in the evolution of language' (Botha, 2006b: 10).

In the literature, re-creation often denotes the replication of language systems in normal, intergenerational language transmission. Of course, these systems are not perfectly replicated across successive generations of speakers.

They undergo modifications that are (or are not) stabilized by selection. Initially, selected innovations are manifest in structured variability, which a speech community can maintain indefinitely. However, actual usage and/or social valuation may gradually bring about the elimination of one of the competing variants. In targeted second language acquisition speakers attempt to re-create a preexisting language, even though the primary aim may be more one of effecting communication than of achieving full, natively-like proficiency. Replication 'errors' in interlanguage versions of the target language will reflect the imposition of L1-elements as compensation for speakers' limited proficiency, alongside adaptation of target-language resources (e.g., overgeneralization, neologism) and avoidance of features that are difficult to perceive and parse (most famously inflectional morphology, tonal distinctions). The general view probably is that most, if not all features of pidgins and creoles derive from preexisting languages and are of the re-creative type (cf. Baker, 1994: 65, 1997: 96). Mufwene (2008: 26) goes so far as to assert that 'one is hard pressed to find in creoles any grammatical features that have not been selected from the nonstandard varieties of relevant European vernaculars or in their substrate languages.'

In principle the 'resources available' during pidgin formation include all of the languages known to the participants, as well as certain universal aspects of the human linguistic capacity. In practice, however, the contribution of nonlexical input materials depends on the contact environment. In many contact situations the lexifier (superstrate) language is socially remote. Recall, too, that the more diverse the group that bears the burden of constructing a MIC, the greater the degree of discontinuity between the developing system and languages in the mix. A highly heterogeneous linguistic environment tends to prevent the selection of linguistic forms characteristic of any single group of speakers: 'Put differently, in the absence of sufficient overlap and agreement among the speakers of the various jargons in such a situation, universally motivated solutions need to be adopted' (Mühlhäusler, 1997: 138).

Creative processes would produce new objects out of content morphemes and their pragmatically motivated juxtaposition. To substantiate this claim, we should want to examine the formation of a basic MIC, but once again, there is a significant empirical obstacle. Such a phenomenon has never been studied *in situ* and is recoverable only through reconstruction.¹⁸ Longitudinal studies of some extended pidgins (especially Tok Pisin) and creoles (Hawaiian Creole English) in the Pacific have yielded data closer to the initial point of contact (Baker, 2000: 48; cf. also Thomason and Kaufman,

¹⁸According to Baker (2000: 48), no data from the first half century of contact are currently known for any Atlantic territory where an English-based creole is subsequently attested.

1988: 181, Mühlhäusler, 1997: 187).¹⁹ My own research program on the formation of a MIC in southern Africa during the second half of the seventeenth century and its subsequent elaboration in the eighteenth century provides important supporting evidence for the constructive model.

A caveat is perhaps in order here. In several respects my position runs contrary to prevailing views on language contact in colonial southern Africa during the Dutch East India Company era. Den Besten (2006b) sees the formation of the Cape Dutch Pidgin mainly in terms of substrate choices and superstrate choices, both of which would, of course, indisputably presuppose existing structure. He does acknowledge that creative solutions to the problem of intergroup communication played a role and may tell us something about language evolution. 'Yet,' he asks, 'even these instant grammaticalizations presuppose structure. However is creation *ex nihilo* possible at all?' In what follows I shall address myself to this specific question by tracing the development of the earliest attested meaningful entities in the Pidgin.

From the 1590s, English and Dutch ships en route between Europe and the Indies regularly put in at Table Bay, for the refreshment of tired and sick crews. The Dutch East India Company established a permanent outpost there in 1652, which inevitably, perhaps, proved expansive. The indigenous Khoikhoi used jargonized and in some cases more advanced interlanguage versions of Dutch. With the introduction of a slave-labor economy in 1658, the contact situation in the Cape Colony gave rise to a basic, stable MIC by roughly 1713, which we shall call the Cape Dutch Pidgin. Slaves were drawn first from Angola and Dahomey. Subsequently, the Cape Colony turned east for most of its slaves – to the Indonesian archipelago, the Indian subcontinent, Ceylon, Madagascar, the Mascarene Islands, and Mozambique, acquiring the most diverse slave population of any known slave society (Shell, 1994: 40-46). Moreover, this society interacted not only with the dominant European caste and among themselves, they also had to communicate with native peoples in a bonded workforce. Proletarianization of indigenes commenced with the seasonal employment of itinerant Khoikhoi as wage laborers and culminated in their enserfment by the last quarter of the eighteenth century (cf. Shell, 1994: 26-34). Many San (Bushmen) people were kidnapped by armed settler commandos and forced to work on farms. Members of a labor caste – enslaved, enserfed, and impressed – created and elaborated a MIC not through the targeted, albeit imperfect acquisition of the Dutch spoken by the dominant

¹⁹The principal case study of Heine and Kuteva (2007: ch. 4), Kenya Pidgin Swahili, 'was spoken in up-country Kenya in the 1960s and 1970s, when the first-named author had a chance to work on it' (p. 207).

European caste but rather by constructing a system that suited their communicative intent.

At the initial point of contact, all parties used reduced versions of their own languages together with gestures in order to achieve basic communication. These encounters led to the negotiation of sound-meaning correspondences that are a prerequisite for the construction of an actual MIC. To illustrate this process, let us consider some data from the rudimentary Dutch-English-Khoikhoi trade jargon that arose in precolonial southern Africa. On September 9, 1601 the fleet of Sir James Lancaster put in at Saldania, as Table Bay was known to mariners at the turn of the seventeenth century.²⁰ An anonymous diarist describes how his comrades used gestures supplemented by vocalizations thought to be universally understood in order to obtain livestock from the Khoikhoi:

- (1) Then [the General] himselfe went presently a-land to seeke some refreshing for our sicke and weake men; where hee met with certaine of the Countrey people, and gave them divers trifles, as Knives and peeces of old Iron and such like, and made signes to them to bring him downe Sheepe and Oxen; for he spake to them in the Cattels Language (which was never changed at the confusion of Babel), which was *Moath* for Oxen and Kine, and *Baa* for Sheepe... . Now within twelve dayes they ceased to bring us any more Cattell. But the people many times came downe to vs afterward; and when we made them signes for more Sheepe, they would point vs to those wee had bought [grazing] ... The people of this place are all of a tawnie colour, of a reasonable stature, swift of foot, and much giuen to picke and steale: their speech is wholly uttered through the throate, and they clocke with their tongues in such sort, that in seven weeks which wee remained heere in this place, the sharpest wit among us could not learne one word of their language; and yet the people would soone vnderstand any signe wee made to them (Raven-Hart, ed., 1967: 23).²¹

While individual, ad hoc verbal solutions to the problem of intergroup communication would be the expected development during the jargon phase,

²⁰After the Portuguese admiral Antonio de Saldanha, who anchored his fleet in the present Table Bay in 1503. A century later, the Dutch applied the surname to what is today Saldanha Bay, which lies roughly 90 kilometers northwest of Table Bay.

²¹Cognates are presumably attested in Nama *gamab* 'ox', *gamas* 'cow', *güb* 'wether', *güs* 'ewe' (Rust 1969: 69, 136), Korana *gomab*, *gomäs*, *güb*, *güs* (Meinhof 1930: 83-84).

there are early on indications of lexicalization. Edward Terry, a chaplain in an English fleet that landed at the Cape in 1616, relates how

- (2) there are great store of cattle, as little beeves, called by the barbarous inhabitants *Boos*; and sheep, which they call *Baas*, who bear a short coarse, hairy wool (Raven-Hart, ed., 1967: 82, my italics).

English and/or Dutch onomatopoeic words imitating the lowing of cattle and bleating of sheep were quickly conventionalized as trade terms for these animals.²² The lexicalization of these terms for 'ox, cow' and 'sheep' is confirmed by the witness of other European travelers: *bou* 'an ox', *bae* 'a sheep' (Cornelius Matelief, 1608, in Raven-Hart, ed., 1967: 38), *booes* 'beeves', *baas* 'sheepe' (Christopher Farewell, 1614, in Raven-Hart, ed., 1967: 66), *boe* 'an ox', *ba* 'a sheep' (Hondius 1652 [1952: 29]). Nienaber (1963: 411-12) related *boo/bou* to an English variant *boo(h)* for the lowing of an ox, which is supported by Dutch *boe* 'moo'.

By the establishment of the Dutch East India Company refreshment station at the Cape in 1652, another form, *boeba* has appeared and is consistently glossed as 'ox or cow' (Ten Rhyne, 1686 [1933: 154]) in our source material.

- (3) *vraeghden hun off se ossen off boebas hadden; daerop een hunner alleen (synde doen met haer 15 à 16 sterck) antwoorde, seggende: 'Caep, Caep,' daer uijt te verstaen was met de boebas, schaeps ende cramerij, alsoo hier voor haer ende 't vee (soo se mede wesen) niet te eeten viel, vertrocken waren (extract from the journal kept by the bookkeeper Fredrick Verburgh, November 3, 1652, in Van Riebeeck, *Daghregister*. Bosman and Thom eds., 1952: 399)*
'Asked them whether they had any oxen or *boebas*, to which one of them all (they were 15 or 16 strong) answered, saying: 'Cape, Cape.' From this was to be understood that they had left with the *boebas*, sheep, and wares, there being nothing here (as they showed us) to eat for them and their cattle.'
- (4) *Bravas com Kapiteyn, die Kapiteyn ons van witte boeba geme (Ten Rhyne, 1686 [1933: 140]) 'Great is that chief, the chief (who) will give us white oxen.'*

²²Cf. Nienaber, 1963: 214-15, 411-12, 447; Den Besten, 1986: 197, 1987: 15, 1989: 219.

The sigmatic plural marker in *boebas* (3) reflects the gratuitous addition of the Dutch writer; the actual pidgin form is *boeba* in (4). Den Besten (1986: 197, 1987: 15, 1989: 219) derives *boeba* from Dutch *boe* 'moo', to which the Khoikhoi inflectional morphemes *-b-* (masc. sg.) and *-a* (acc.) appear to have been affixed.²³ Integration of *boe* into local Khoikhoi dialects as a loan word is certainly thinkable, though one would then be hard-pressed to explain an apparent reinflection in *buba-a* [sic] (Valentyn 1726 [1973: 80]), presumably with the same accusative suffix, and possibly also in *bubaâ* (Kolbe 1719 [1727: 1.430]). There is no plausible reason to suppose that *boe* was borrowed into Khoikhoi and then reintroduced into the Cape Dutch Pidgin with L1-morphology. It is far more likely that *boeba* was generated in the MIC out of the raw concatenation of *boo/boe* + *baa*, to denote 'livestock, collectively cattle and sheep'. Ten Rhyne (1686 [1933: 134n.]) reported *boebaes toebak*, which I would interpret as the MIC exponent of 'livestock tobacco', referring to one of the commodities that Europeans offered in exchange for Khoikhoi oxen, cows, sheep, and skins.²⁴ The interpretation of this compound is informed by the composite meanings of the morphemes, pragmatics, and context.

The larger point is the arbitrariness of linguistic signs, the capacity for which is central to language and a prerequisite for language genesis (cf. Comrie, 2000; Hurford, 2003: 48), and their mutability over time. The nascent Cape Dutch Pidgin early on acquired two referential morphemes – themselves the product of sound symbolism – from which its users then created a compound of an exocentric type. *Boeba* is independent of the morpheme-source languages (Dutch and English) and the substrate Khoikhoi dialects (cf. Nama /*goan* 'livestock', Rust, 1969: 114). Taking the philological record at face value, one surmises that the cohort of Europeans which landed at the Cape in 1652 under the command of Jan van Riebeeck construed *boeba* as the local term for 'cattle'. Indigenes appear to have accepted the narrowing of the compound's semantic scope for trading purposes, perhaps after the introduction

²³Nienaber (1963: 412) interpreted *boeba* as containing an onomatopoeic expressive sign but did not attempt to parse it further.

²⁴According to Ten Rhyne (1686 [1933: 134]), 'mercaturae peritum, quandoque plures cum aliquot militibus ad eos delegat Gubernator nostras cum *tabaci*, vel *Virginiani*' (the governor, our countryman, sends to them [i.e., the Khoikhoi] one [person] or more experienced in trade, accompanied by some soldiers, with tobacco, actually Virginian). In a footnote explaining 'cum *tabaci*, vel *Virginiani*,' Ten Rhyne added 'Boebaes toebak illis dicti' (*boebaes toebak* [is] said by them [i.e., the Khoikhoi]). Nienaber (1963: 476) rightly wondered whether Ten Rhyne has correctly identified *boeba*, which he listed among the 'Mere *Hottentotonica*' and glossed as 'ox or cow' (Ten Rhyne 1686 [1933: 154]); similarly, Valentyn and Kolbe, loc. cit.). The sigmatic element in *boebaes toebak* could be the West Germanic genitive singular ending, as Den Besten (2006a: 119) believes.

of Dutch *schaap* into the developing MIC, as in *etom schaep* 'eating sheep' (Dutch *eten* 'eat') in reference to the gift of a prime wether presented to the leader of a Dutch trading party as a gesture of good will (Ten Rhyne, 1686 [1933: 136n.]). In order for semantic shift to bring about a noncompositional relexicalization (with two pidgin words becoming one), the phonological form of *boeba* in the meaning of 'livestock' cannot have retained any iconic similarity with attributes of its referent.

As pointed out above, the influence of preexisting full languages is most likely to occur in the jargon phase, especially when only two languages are involved and none of the parties are concerned with accurate replication. European and Khoikhoi influences have been cited as the major factor in the generation of the syntactic compound *boebasibier* 'milk', which Ten Rhyne (1686 [1933: 154]) listed under the rubric 'Corrupta Belgica.' Nienaber (1963: 383) proposed two possible resolutions: *boebasi-bie(r)* 'cow-ADJ beer/drink/milk' in which *-si-* is to be equated with the Dutch adjectival suffix *-s* (inflected form *-se*), or *boeba-si-bie(r)* 'cow POSS beer/drink/milk' in which *si* is a monophthongized allomorph of the Early Modern Dutch possessive pronoun *sij(n)* 'his, its' (*zijn/z'n* in contemporary spelling) or (more plausibly in Nienaber's view) a Khoikhoi possessive morpheme *di*, of which *ti* and *si* are variant forms. Den Besten (2006a: 118, 2007: 152-53) favors an adaptation of the Dutch possessive construction [DP_i – pron._i – NP], as in *die hond z'n neus* (that dog POSS nose) 'that dog's nose', out of which arose the Afrikaans construction with invariant *se* (*die kinders se boeke* [the children POSS books] 'the children's books'). Nienaber (1963: 383) related the third constituent of the compound to a Khoikhoi stem *bi-* (cf. Korana *bī-b* 'milk', Meinhof, 1930: 81), which Europeans may have misapprehended as *bier* 'beer' (cf. Den Besten, 1989: 221).

Yet, substrate and superstrate calquing cannot be regarded as the primary means of lexical expansion in the Cape Dutch Pidgin. The philological record shows evidence of pidgin-internal, word-level compounding in the nonce form *boeba kros* 'ox skin', which is preserved for posterity in the journal of Pieter van Meerhoff from 1661 (Godée Molsbergen, ed., 1916: 54). The writer directly quotes two pidgin-speaking Khoikhoi companions who have called his attention to a party of armed Namaquas standing above them on a hill. *Kros* is derivable from Khoikhoi root *khō-* 'skin, hide' (Nama *khō-b*, Korana *khō-b*) plus the diminutive suffix *-ro* and the feminine singular termination *-s* (cf. Nienaber, 1963: 332-33; Den Besten, 1987: 15). The form entered the Cape Dutch Pidgin and eventually Afrikaans as monomorphemic *karos* ~ *kros* 'kaross, i.e., a wrap, cloak, or blanket made of skins'. What Van Meerhoff's Khoikhoi interlocutors refer to are actually shields made of dried ox hide.

Boeba kros is correctly assigned its semantics from context, but unlike *boeba* 'livestock', it is not the product of free or 'unregulated' concatenation (the term is from Jackendoff, 2002: 250). At this more advanced point in the development of the Cape Dutch Pidgin, the mapping between semantic roles and linearly ordered form is mediated by the principle that groupings of meaningful elements can be structured from heads.

By all accounts, the presyntactic mode of communication is lexically driven; the provision of a minimal lexicon containing regularly used items is a prerequisite for language formation (Givón, 1995: 30, 360, 1998: 56, 92; Comrie, 2000: 1000; Mufwene, 2008: 25). With tertiary hybridization, stabilization of myriad jargons into a pidgin implies a transition from noncombinatorial juxtapositions of meaningful elements to true phrase structure. The primary mechanism by which larger objects are created is the interpretation of concatenated lexical items as asymmetric structures organized around a head. The X-bar-theoretic format and category labels are available to MIC creators through Universal Grammar, while communicative success determines the selection of features (semantic and formal) for individual lexical items and their relations with other elements.

From the second half of the seventeenth century, developers of the Cape Dutch Pidgin expanded their MIC structurally as well as lexically in response to changing communicative needs. The first step to actual syntax was the crystallization of the Head Principle, which enabled a basic merge operation combining two lexical items, one of which projects a functional or lexical category. Syntactic combination was augmented by a simple move operation.

The basic structure of a Cape Dutch Pidgin sentence may be reconstructed as a speech-act or assertion projection, the value of which could either be either positive (Σ P) or negative (NegP):

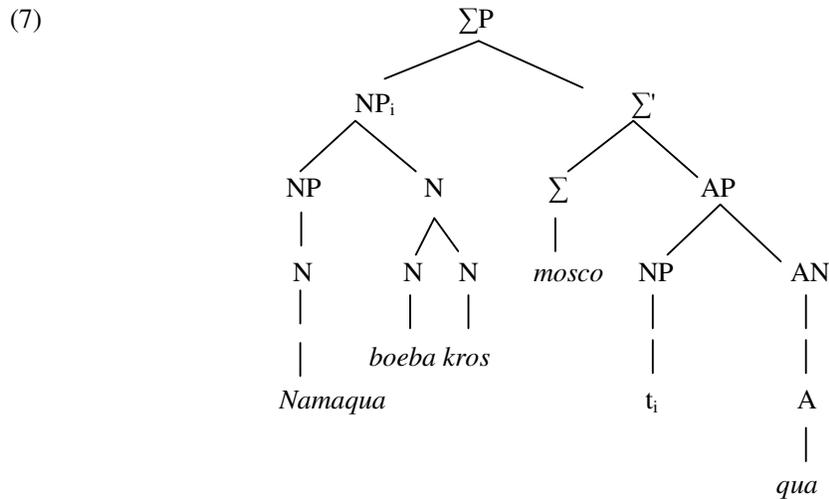


This structure is not drawn from any of the full languages represented at the old Cape. It is the result of a process of creation that is wholly independent of the 'available resources,' save for lexical sourcing.

Consider our old friend *boeba kros* 'ox skin' in its full context:

- (6) Mr. Pieter, Namaqua Namaqua boeba kros moscoqua (Journal of Pieter van Meerhoff, 1661; in Godée Molsbergen, ed., 1916: 54).

Resolution of *moscoqua* has been a traditional crux, and arguments buttressing the present interpretation are reserved for a full discussion elsewhere. The constituent *qua* may be plausibly seen as Dutch *kwaad* 'angry' (Godée Molsbergen, ed., 1916: 54n; Den Besten, 1986: 214-15, 1987: 15, 38n.), the apocope of final *-d* being a common phonotactic adjustment among Khoikhoi speakers (Nienaber, 1963: 361). The morpheme *mosco*, which alternates with *moeske* and *musku* in our Cape Dutch Pidgin source material, represents the agglutination of Khoikhoi *mu-ts ko* (see-2 sg. ASP) 'Have you seen?' (cf. Meinhof, 1930: 61). The structure of the Cape Dutch Pidgin sentence in (6) is shown in (7):



Cape Dutch Pidgin *mosco* and its variants have the illocutionary force of a question ('Haven't you caught sight of X? Don't you see that X is the case?'), affirmation ('You are surely aware that X is the case'), or command ('Look!'), with the intended perlocutionary effect of making the interlocutor pay heed to what is in plain sight or establishing what should be shared knowledge or a familiar truth. A full and complete rendering of (6) would be: 'Master Pieter, Namaquas! Look! You can see that the Namaquas have shields made of dried ox hide and are hostile (or dangerous)'.

4.6 The pidgin window within a constructive model of language genesis

We turn now to the matter of furnishing a warrant or license for inferences drawn about facets of language evolution from phenomena of pidgin formation. Botha (2006b: 12) articulates this requirement as follows: 'Why is it justified at all to draw conclusions about facets of language evolution – language evolution being the kind of entity that it is – from data about properties of aspects of pidgins – pidgins being the different kind of entity they are?' In other words what is needed is a bridge theory for moving inferentially from the domain of pidgins to that of the development from simple to more complex systems subsequent to the first appearance of protolanguage.

The presence of a lexicon that allows for arbitrary sound-meaning correspondences is presumed to be the minimal requirement for the creation of grammar. The constructive model of pidgin formation postulates a lexicon (however impoverished) as a minimal level of input for a basic MIC within a sufficiently large community. The pressures driving the stabilization of pidgins in European colonies where tertiary hybridization is a factor can be related to a need for predictability and learnability. Having created a basic MIC, participants in contact situations could gradually expand the potential of the developing system 'unless or until changing circumstances deprived it of its usefulness or desirability' (Baker, 1995: 13). If a pidgin is deployed in new domains, its users will generate the linguistic objects necessary to meet the communicative exigency. True enough, pidgin speakers have one or more fully developed languages from which to draw resources. In contact situations bringing together highly diverse populations, however, innovative solutions to the problem of interethnic communication are preferred over the adoption of patterns that are characteristic of one group. Simply put, 'people can create new rules' (Baker, 1995: 8). Transfer from preexisting full languages is relatively limited. The contribution of the contact languages seems to depend on how far the MIC has developed and what speakers of these languages could offer to advance that development (Mühlhäusler, 1997: 182, 186; Baker, 1997: 106).

The bridge theory licensing the application of inferences from the creation and elaboration of pidgins to the development of modern language out of protolanguage would begin with a dominant postulate in evolutionary linguistics, namely, the emergence of a lexical component prior to the syntactic one (Bickerton, 1990: 131). Recent 'holistic' proposals that words arose out of secondary fractionation of longer, noncompositional utterances have been challenged on empirical and conceptual grounds; see the extensive and thoroughly documented discussion in Tallerman (2007). We may plausibly suppose a synthetic model of protolanguage in which nouns and verbs are

categories that already have a mental representation in early hominids and have come to be represented as words (Tallerman, 2007: 580). A theory of protolanguage needs only to account for the development of nouns and verbs (Tallerman, 2007: 596); all other syntactic categories and the principles that put words together into structures are presumed to have come later.

A second aspect of the bridge theory would follow from the observation that 'the selection pressures driving evolution from one stage to the next, can be related to the increasing complexity of proto-human society' (Johansson, 2005: 239). If this assertion is defensible, then it is reasonable to derive the following corollary: Human language commenced with the emergence of more or less discrete communication patterns among and within small groups between which there was little contact at the outset.²⁵ It is the establishment of cross-group communication networks that triggered the structural elaboration of linguistic systems commensurate with the emergence of new communicative domains among our hominid ancestors. As with pidgin formation, the negotiation of these systems implies the creation of and competition among linguistic features, which were selected and grouped together according to their communicative efficacy and social functions.

Here, one should recall that pidgins are typically used in a limited set of domains requiring communication between groups of people who do not share a common language. It is the interlingual function that is at the core of a restrictive definition of *pidgin*. Heine and Kuteva (2007: 195) can find no reason to assume that early human language was similarly restricted. Perhaps, but it does not follow that an elaborated protolanguage serving as an auxiliary code would have been immediately institutionalized beyond the narrow social context of intergroup communication among early hominids. It would be difficult to deny that pidgins are 'incapable of filling the needs of first-language communicators and inadequate even for some of the requirements of their second-language users' (Mühlhäusler, 1997: 162). But then it must also be true, *mutatis mutandis*, that elaborated protolanguage might have been a rather more powerful device than would have been necessary to meet ordinary, in-group needs prior to the permanent establishment of broader communicative networks.

Whereas agents of pidgin formation are equipped with a modern language faculty, early hominids probably lacked more than an inchoate version of that endowment. The question that presents itself is whether the same or similar creative processes discernible in pidgin formation could have

²⁵Even Mufwene (2008: 8) concedes that what 'the relevant colonial histories' show is not only that contact 'has generally played a central role in recent language speciation,' but 'most likely also in earlier stages of language evolution of the past 10,000 years or so.'

taken place with a relatively less evolved language faculty. At some point in the evolution of syntax a transition was made from noncombinatorial to combinatorial organization. All relevant cognitive capacities being in place, we should expect the same processes to have effected a variety that was developmentally more advanced than protolanguage. Contact between groups of early hominids expanded the repertoire of meaningful elements and facilitated the creation of new combinations. Early hominids could then arrive at an analysis of regularly occurring collocations as constituents of larger objects. This analysis would have begun with 'the most local relation' (Chomsky, 1995: 397), viz. the head-complement relation. For a given pair, α and β , one or the other projects and is the head, while the other serves as a complement, whence $[\alpha [\alpha, \beta]]$ or $[\beta [\alpha, \beta]]$. This basic configuration was subsequently associated with an operation (merge) that would form larger objects out of those already extant. At a still later evolutionary stage, this simple structure became a more complex object constructed from additional elements, most notably, morphemes that implement the specifier relation to the head. In modern full language heads become the labels of the complexes formed (Chomsky 1995: 398). In evolutionary terms these labels obtain from semantic primes such as 'affirmation,' 'negation,' 'time-stable,' 'non-time-stable,' 'temporal location anterior to the time of reference' that are reified in modern language as ΣP , NegP, NP, VP, T(ense)P, and the like.

4.7 Summation

The creation of pidgin languages does indeed provide a window on language evolution, though not along the lines proposed by Bickerton (e.g., 1990), Jackendoff (1992, 2002), and others. The essence of pidgin formation is language construction rather than targeted, albeit imperfect L2-acquisition. Of greatest probative value is the instantiation of pidgin structures that are not selected from pre-existing 'input materials' but reflect language-independent solutions to the problem of intergroup communication. This type of linguistic creation occurs during tertiary hybridization, when a lexifier language is socially remote, and the linguistic milieu is highly diverse.

The pidgin window proposed here looks out not onto an antecedent protolanguage, that is, the stage characterized by the 'development of a phonological combinatorial system to enlarge open, unlimited class of symbols (possibly first syllables, then phonemes)' and 'use of symbol position to convey basic semantic relations' (Jackendoff, 2002: 238). Rather, the window offers a view on the progression of the first forms of language to more elaborated, interconnected linguistic systems, with hierarchical relations and lexical and functional categories.

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