

## SUBSTRATE INFLUENCE IN CREOLES AND THE ROLE OF TRANSFER IN SECOND LANGUAGE ACQUISITION

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This article discusses how research on language transfer in the field of SLA can help to explain the origins of substrate influence in creoles and provide answers to more difficult questions concerning the distribution and verification of substrate features. First, it argues against the view that both SLA and transfer are not involved in the genesis of pidgin and creole languages. Then the view is presented that, as described in the SLA literature, transfer is not just a consequence of second language learning but also of second language use, and it serves as a communication strategy when the need arises. Such a strategy may be used by speakers of either a prepidgin or an already established pidgin when its functional use is being rapidly extended. Sociolinguistic perspectives on transfer in SLA, described next, throw some light onto the question of why substrate features remain in pidgins and creoles. Research on transfer in SLA also provides important insights into the specific factors that may have affected substrate influence in creoles. Evidence is presented that some transfer constraints discovered in SLA research—rather than other proposed factors such as so-called functional expendability—still provide the best explanation for the absence of particular substrate features in creoles. Finally, it is shown that tests proposed for verifying instances of L1 influence in interlanguage could be adapted for verifying instances of substrate influence in creoles.

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It is now well established that many creoles exhibit some combination of phonological, morphosyntactic, and semantic features of the ancestral languages of their speakers—that is, the substrate languages (e.g., Corne, 1999; Keesing, 1988; Lefebvre, 1998a; Lumsden, 1999a; McWhorter, 1997; Migge, 1998; Siegel, 2000). For example, in Bislama (spoken in Vanuatu) the lexicon is mainly from English (the superstrate or lexifier language), but many of the morphosyntactic features are not, such as the subject referencing pronoun and the transitive marker on the verb illustrated in (1).

- (1) a. *Man ya i stil-im mane.*  
*man DET 3SG steal-TR money*  
 “This man stole the money.”  
 b. *Ol woman oli kat-em taro.*  
*PL woman 3PL cut-TR taro*  
 “The women cut the taro.”

However, these features are typical of the Eastern Oceanic substrate languages such as in Arosi (2a) and Kwaio (2b).

- (2) a. *E noni a ome-sia i ruma.*  
*ART man 3SG see-TR.3SG ART house*  
 “The man saw the house.”  
 b. *Ta'a geni la a'ari-a go'u.*  
*people female 3PL carry-TR taro*  
 “The women carried taro.”

In Bislama, forms originally from English (i.e., *he*, *all he*, and *him* or *them*) are used as subject referencing pronouns and transitive markers in patterns similar to those in the substrate languages, although in comparison far less complex in the number of different forms involved.

One challenge in the study of creole languages has been the problem of explaining how such substrate influence occurs in general and providing answers to some more difficult specific questions:

1. Why do some creoles have more substrate features than others?
2. Why do creoles have more substrate features than their pidgin predecessors even though creole speakers, unlike pidgin speakers, never knew the substrate languages?
3. Why do some substrate features end up in creoles but others do not?
4. How can we determine whether particular features of a creole are the result of substrate influence?

In this article, I discuss how research on language transfer in the field of SLA can help to solve the problem of substrate influence in creoles. First, I briefly describe the process of transfer and how creolists have used it to account for substrate influence in general. Next, I refute some arguments that have been given against the role of transfer in creole development and present three

kinds of evidence suggesting that targeted SLA was involved in the genesis of pidgins and creoles. Finally, I draw on SLA research to provide some answers to these questions.

### SUBSTRATE INFLUENCE AND TRANSFER

To find a solution to the problem of how substrate influence occurs, we must look first at the role of individuals and identify a psycholinguistic process that results in the use of features of one language (A) when speaking another language (B). Only later do different social processes result in the community incorporating these features of A in the way they speak B.<sup>1</sup> One such psycholinguistic process occurs when people try to acquire or communicate in another language that they do not know well. It is called interference or, more commonly, language transfer. In this context, the term *transfer* refers to a form of crosslinguistic influence found in SLA and involves “carrying over of mother tongue patterns into the target language” (Sharwood Smith, 1996, p. 71), or more accurately, into the interlanguage (IL). Transfer in SLA may be phonological, morphosyntactic, or semantic, and either positive or negative. Here I consider only negative transfer—where the first language (L1) pattern differs from that of the target or second language (L2). I will also concentrate on morphosyntactic and semantic transfer—where forms and structures of the L2 are reinterpreted or reanalyzed according to the syntactic and semantic properties of the L1.

Many creolists now believe that transfer of features in adult SLA at an early stage of development provides the answer to the question of how creoles acquire substrate features (e.g., DeGraff, 1999; Mufwene, 1990; Siegel, 1997, 1999; Wekker, 1996). My view (Siegel, 1999, p. 2) is that, in attempting to speak a common L2, individuals transfer features from their L1 (the substrate languages) onto forms of the L2. This L2 may be some form of the superstrate language or a contact variety (a pidgin) lexified by the superstrate. These L2 forms with L1 properties join the pool of variants that are used in the contact situation. When the community begins to shift from their L1 to the contact variety, leveling occurs: the elimination of some variants and the retention of others, which include some resulting from transfer. Thus, rather than features passing directly from the substrate languages into the creole, features are first transferred by individuals in using an L2 in the contact situation, and a subset of these features is later retained by the community when the creole emerges.

Some scholars have discussed similar processes in accounting for substrate influence in various creoles, but they have used different terms. With regard to Melanesian Pidgin, Keesing (1988) used the term *calquing* but did not make it clear how and when this process occurs. Writing about Haitian Creole, Lefebvre (1986, 1996, 1997) and Lumsden (1996) used the term *relexification*. However, in recent work, they have shown its relationship to L1 transfer. Lefebvre (1998a) made it clear that

the type of data claimed to be associated with the notion of transfer in creole genesis corresponds to the result of the process of relexification. . . . That is, it is claimed that substratal features are transferred into the creole by means of relexification. (p. 34)

Lumsden (1999b, p. 226) claimed that relexification “plays a significant role in second language acquisition in general” and used the term *negative transfer error* to refer to an example of the process. Migge (1998, p. 259; 2000, p. 230) concluded that substrate “retention” was the key process in the formation of so-called Surinamese Plantation Creole. However, she described this process as consisting of the retention of the syntactic and semantic behavior of features of the primary substrate languages with relexification from the superstrate. This is basically the same process as transfer in SLA. Finally, in her discussion of mechanisms of contact-induced language change, Thomason (2001, p. 147) stated that one strategy “is to maintain distinctions and other patterns from the learners’ native language (their L1) in constructing their version of TL [target language] grammar, by projecting L1 structures onto TL forms.” Again, this is another way of describing grammatical transfer.

### Arguments against the Role of Transfer

However, the role of transfer in SLA in creole genesis is far from being universally accepted among creolists because of one or more of the following arguments: (a) Transfer in SLA is not so commonplace, (b) transfer cannot account for the kinds of substrate influence found in creoles, and (c) SLA is not involved in pidgin and creole genesis.

The first argument derives from the belief widely held in the SLA field in the 1970s and early 1980s that L2 acquisition mirrors L1 acquisition (the L2 = L1 hypothesis), and thus transfer does not have a major role in determining IL features. Meisel (1983a), for example, argued that universal strategies of simplification are more significant than transfer in SLA and therefore are more influential in pidgin and creole genesis. However, later in the 1980s, the importance of transfer in SLA was once again recognized and research in the area increased dramatically (see Ellis, 1994).

A great deal of discussion in recent SLA literature has revolved around the question of whether the principles of Universal Grammar (UG), especially parameter settings, are available to L2 learners. In this context, the L2 = L1 hypothesis has recently appeared in another guise in a key article by Epstein, Flynn, and Martohardjono (1996). They argued against what they call the “no access” hypothesis and the “partial access” hypothesis and argued for the “full access” hypothesis, which “asserts that UG in its entirety constrains L2 acquisition” (p. 677). This hypothesis again downplays the role of transfer, which in this context is viewed as the use of prior linguistic knowledge in the construction of the L2 grammar.

However, other hypotheses or models accept the continuing access to UG

but still allow for the role of transfer (which clearly seems to occur in SLA data). One of these is the Minimal Trees hypothesis of Vainikka and Young-Scholten (1996a, 1996b), which claims that there is partial transfer in SLA in that the lowest projection (VP) is transferred from the learner's L1. Another is the Weak Transfer–Valueless Features hypothesis (Eubank, 1993–1994, 1996), which claims that both lexical and functional projections transfer but not the values [ $\pm$ strong] of inflectional features (as these are determined by the morphology). A third model is the Full Transfer–Full Access hypothesis (Schwartz, 1996, 1998; Schwartz & Sprouse, 1996). According to this model, SLA in adults and children depends on three components: the L2 initial state, UG, and L2 input. Significantly, the L2 initial state comprises the entirety of the L1 grammar. In other words, all of the abstract syntactic properties of the L1 are initially transferred (Schwartz, 1998, p. 147). Thus, IL development is constrained by both the L1 grammar and UG.<sup>2</sup> This model has received a great deal of independent support in the recent literature (e.g., Bhatt & Hancin-Bhatt, 1996; Camacho, 1999; Slabakova, 2000).

The second argument against the role of SLA transfer in substrate influence is that the theory of transfer cannot account for the kinds of substrate influence that are found in some creoles, when the characteristics of the substrate (L1) and superstrate (L2) languages are considered. For example, McWhorter (1996) stated that: “Kellerman’s (1983) ‘psychotypology hypothesis’ proposes that L2 learners only transfer L1 features for which there appears to be some model in the L2” (p. 485). He continued, though, to explain that creoles “regularly incorporate L1 features for which the L2 presents no model” and presented the following example from Sranan:

The sentence *a buku de na tafra ondro* (the book is LOC table under), i.e., “The book is under the table” surely had no English model in any dialect; instead, here we have an example of a clear calque upon a West African language. (p. 485)

However, there is plenty of evidence that this kind of transfer does occur in SLA, especially with regard to word order, even when there is no model in the L2 (see Kellerman’s, 1995, discussion of so-called Transfer to Nowhere). For example, refuting claims made by Rutherford (1983, 1986) and Zobl (1983, 1986) about the nontransferability of basic word order, Odlin (1990) described several counterexamples, including transfer of Japanese and Korean OV word order into English.<sup>3</sup> More recently, Schwartz (1998) presented an impressive array of examples of word-order transfer, including OV order into English by Turkish learners and N-Adj order into German by Italian and Spanish learners. She also described in detail a study by Hulk (1991) in which large proportions of Dutch early learners of French judged as acceptable sentences with word orders that are unacceptable in French but acceptable in Dutch (see Table 1).

The third argument for not accepting the role of transfer in SLA in creole genesis is the belief that SLA is not involved but rather the creation of a new

**Table 1.** Word-order judgments of Dutch learners of French

Sentence type	Dutch	French
SAuxOV	<i>Jan heeft de aardbeien <u>gegeten</u>.</i> “Jan <u>has</u> the strawberries <u>eaten</u> .”	<i>*Jean <u>a</u> les fraises <u>mangé</u>.</i>
COMP SOV	<i>(Ik geloof) dat Jan de aardbeien <u>at</u>.</i> “(I believe) that Jan the strawberries <u>ate</u> .”	<i>*(Je crois) que Jean les fraises <u>mangé</u>.</i>

language. Two versions of this argument, which I will call *creativist perspectives*, are found in the literature. First, Bickerton (1981, 1984, 1988, 1999a, 1999b) has stated that creoles are created by children learning their L1 in the absence of any fully developed linguistic model. This abrupt creolization occurs “in the space of a single generation” (1999b, p. 49) among the first generation of locally born children of plantation slaves or indentured laborers. Thus, creole genesis is the result of L1 acquisition, not L2 acquisition. However, there is now a great deal of evidence that creole genesis may occur over the space of more than one generation and that adults and SLA are involved (e.g., see Arends, 1995). In fact, the archival research by Roberts (1998)—which Bickerton (1999b, p. 51) mentioned as supporting the abrupt creolization of Hawai‘i Creole English (HCE)—shows that (a) the first locally born generation was bilingual in a variety of English and their parents’ language, and (b) it was largely the second locally born generation, rather than the first, who became the original monolingual speakers of HCE (see Roberts, 2000).

A second, very different creativist perspective comes from Baker (1990, 1994, 1997, 2000). His view, which he calls the *constructive approach*, is that SLA is not relevant in the early stages of pidgin and creole development because the people of different ethnolinguistic backgrounds in contact situations are generally interested not in acquiring the language of the other groups but rather in constructing a new “medium for interethnic communication” (2000, p. 48). Thus, in most cases there is no existing target language (TL) as such; instead, the groups in contact unconsciously draw on the range of available resources as well as come up with innovations to solving communication problems. Additionally, the participants adapt features of their own languages for easier communication (e.g., by dropping inflections) so that no one gets exposure to the normal varieties used by native speakers.<sup>4</sup>

Although it is difficult, if not impossible, to know for certain the linguistic intentions of people in past contact situations, there is evidence, contrary to Baker’s view, that at least in some situations the lexifier language was the target at some stage. For example, as I have pointed out before (Siegel, 1999, pp. 11–12), speakers of Melanesian Pidgin in New Guinea once thought they were speaking “the language of the whites,” which explains its earlier name, *tok waitman* (see Mühlhäusler, 1979, p. 118). Also, Shnukal (1988, p. 6), referring

to speakers of Torres Strait Creole in the past, mentioned “the widespread belief that it was English.”<sup>5</sup> The names for many creoles, as used by their speakers, also demonstrate a belief that these languages are substandard versions of the lexifier language; for example: “Broken” (from broken English) for Torres Strait Creole, “Pidgin” or “Pidgin English” for HCE and Australian Kriol, and “Patwa” for Jamaican Creole and other Caribbean creoles.

### Evidence of the Involvement of SLA in Pidgin and Creole Genesis

Three kinds of evidence suggest that targeted L2 acquisition is involved in the creation of pidgins and creoles. First, some lexical features appear to demonstrate misinterpretation by learners rather than any kind of adaptation by native speakers for easier communication. These are examples of recutting or fusion of word boundaries, such as *zafè* “matter, affair” in Haitian Creole (from French *les affaires*) and *tamana* “father” in Pidgin Fijian (from Fijian *tama-na* [father-3sg] “his or her father”).

Second, there are many similarities between features of pidgins and creoles and those found in learners’ L2 varieties (or ILs). For example, in their investigation of 40 learners in the European Science Foundation project on adult language learning, Klein and Perdue (1997) found that one-third acquired only what they call “the basic variety.” This is characterized by several structural features that are typical of restricted pidgins in general such as Pidgin Fijian and Pidgin Hindi (Siegel, 1987, p. 321). Some of these are:

1. No inflections
2. Lexical items used in invariant form (multifunctionality)
3. Lost lexical items from the L2 (the lexifier) but some from the L1
4. Use of temporal adverbs, rather than grammatical markers, to indicate temporality
5. “Boundary markers” to express the beginning or end of some situation, such as *work finish* “after work is/was/will be over” (see also Becker & Veenstra, this issue)

With regard to specific creoles, Véronique (1994) described many formal similarities between data from the ILs of early L2 learners of French and features of French-lexified creoles. These include the following (p. 133):

1. Lack of formal distinction between word classes, especially between nouns and verbs
2. NP and VP morphology largely lacking (compared to French)
3. Some nouns used without articles
4. /i/ or /li/ as a preposed predicate marker
5. Verbs developing two forms: the bare stem and stem + /e/<sup>6</sup>
6. Extended use of so-called presentationals /jāna/ and /se/ “there is”

He concluded (p. 133) that: “The similarities between FBCs [French-based creoles] and ILs illustrate early attempts of naturalistic learners to understand and use TL input, to ‘crack the code’.”

On the other hand, Véronique (1994) noted that there are some differences between the ILs and the French-based creoles. One of these is the absence in the ILs of the postposed determiner *la*, which is found in French creoles. However, in another study comparing L2 French with French creoles, Mather (2000) did find the postposed determiner *la*, modeled on the French postposed deictic *là*. Significantly, the feature occurred in the IL of L1 Ewe speakers, and postposed determiners are found in Ewe. (The learners of French in Véronique's study were L1 speakers of Moroccan Arabic, which does not have postposed determiners.)<sup>7</sup> The sentences in (3) are from Lafage (1985, cited in Mather, p. 250).

- (3) Ewe: *nyɔnu-à*  
*woman-the(SG)*  
 L2 French, L1 Ewe: *N'y a qu'à pousser auto-là.*  
 Standard French: *Il n'y a qu'à pousser l'auto.*  
 "All you need to do is to push the car."

This is similar to the postposed definite determiner of Haitian Creole, which, as Lefebvre (1998b, p. 94) has argued, mirrors the position and functions of the definite determiner in Fon (a language closely related to Ewe), as illustrated in (4).

- (4) *M manje krab la.* Haitian Creole  
*N du ason o.* Fon  
*I eat crab DET*  
 "I ate the crab (in question, that we know of)."

Mather also reported on the following other features found in both the speakers' L1 and their IL as well as in French-lexified creoles:

1. Ø indefinite marking (p. 249)
2. Postposed possessive pronouns (p. 252)
3. Postposed demonstratives (p. 253)
4. SVO order with pronominal objects (p. 253)
5. Reduplication to intensify meaning of adjectives and adverbs (p. 257)

He concluded that these features—as well as others, including serial verbs and absence of gender marking—occur “as a result of L1 transfer or other SLA strategies” (p. 258).

However, like Véronique (1994), Mather (2000) noted that there were no examples of typical creole tense-mood-aspect (TMA) markers in the IL of learners of French. I have found evidence, nonetheless, of a parallel to a creole preverbal TMA marker in the IL of advanced learners of English (Siegel, 2000, p. 222): the use of *has* or *had* by Portuguese learners to mark relative past events normally marked only with simple past tense in English.

- (5) a. *M has worked in R in 1970.* (Nicolacópulos, 1976, p. 24)  
 b. *The oldster can remember everything that had happened some years ago.* (Frota, 1981, p. 42)<sup>8</sup>



This usage is similar to preverbal *hæd* (derived from English *had*) in HCE, a variant of *bin* or *wen* used to mark relative past tense, as in (6).

- (6) *Laes yia dei hæd plei widaut nomo koch.*  
 “Last year they played without any coach.” (Bickerton, 1977, p. 340)

It is significant that Portuguese was one of the most influential substrate languages when HCE began to emerge.<sup>9</sup>

The third kind of evidence that SLA was involved in creole genesis involves the striking similarities between some features of creoles and indigenous varieties, which clearly evolved through L2 acquisition with the lexifier as the target. This is especially striking with HCE and Singapore Colloquial English (SCE), which share the same lexifier and have significant substrate groups with typologically similar languages (Cantonese and Hokkien); examples are given in (7).

- (7) a. The use of *already* as a completive aspect marker:  
 HCE: *Yu wen it lanch awredi?*  
 “Have you eaten lunch yet?”  
 SCE: *I only went there once or twice already.*  
 “I’ve been there only once or twice.” (Platt & Weber, 1980, p. 66)
- b. Specific-nonspecific distinction made in NPs with specific NPs known or unknown to the listener marked by different articles and nonspecific NPs unmarked:  
 HCE: *Jawn bai da buk.* [specific, known]  
 “John bought the book (that you already know about).”  
*Jawn bai wan buk.* [specific, unknown]  
 “John bought a particular book (but one you don’t know about).”  
*Jawn bai buk.* [nonspecific]  
 “John bought a book (or books).”  
 SCE: *I didn(t) buy the dress lah* (that had been discussed before). [specific, known]  
 “I didn’t buy the dress.”  
*I take one passenger to East Coast Road.* [specific, unknown]  
 “I took one passenger to East Coast Road.”  
*I want to buy bag.* [nonspecific]  
 “I want to buy a bag.” (Platt, Weber, & Ho, 1984, pp. 55–57)
- c. The same word used with possessive and existential functions:  
 HCE: *Get wan wahini shi get wan data.*  
 “There is a woman who has a daughter.” (Bickerton, 1981, p. 67)  
 SCE: *Here got many nice houses.*  
 “There are many nice houses here.”  
*I got two brother, one sister.*  
 “I have two brothers, one sister.” (Platt & Weber, p. 61)

## L2 ACQUISITION AND L2 LANGUAGE USE

Even if we accept the point of view that people in contact situations do not try to acquire another language but rather create one, we still have to accept the fact that they eventually do use an L2. The overall field of SLA can be

divided into two main areas of research—L2 acquisition and L2 use—and many scholars have emphasized this distinction (e.g., Ellis, 1994, p. 13; Kasper, 1997, p. 310). Gass (1998, p. 84) also pointed out this distinction and stated that the two areas actually come under a broader heading of “second language studies.” However, some scholars, such as Firth and Wagner (1997, 1998), have questioned the separation of acquisition and use in the field of SLA (or L2 studies). From the work of scholars such as Firth (1996), Wagner (1996), and Rampton (1995), it is clear that SLA research is thought to encompass L2 use.

The notion of transfer is relevant to both L2 acquisition and L2 use. For example, Faerch and Kasper (1987, p. 112) defined transfer as “a psycholinguistic procedure by means of which L2 learners activate their L1/Ln knowledge in developing or using their interlanguage.” It may be that some kinds of transfer are more common in the early stages of L2 development involving L2 acquisition, whereas others are more common in the later stages involving L2 use. This might explain the inconsistent research findings regarding the relationship between L1 influence and L2 proficiency (Jarvis, 2000, pp. 247–248). It might also explain the different kinds of substrate influence we find in pidgins and creoles. In the following two sections, I discuss SLA research on transfer first with regard to L2 acquisition and then with regard to L2 use and show how each is significant to understanding aspects of pidgin and creole development at various times.

### Transfer in L2 Acquisition

L2 acquisition, as opposed to L2 use, is concerned with the gradual attainment of linguistic competence in the L2, or, in other words, with the learning of the L2 grammar. Transfer in L2 acquisition is the result of learners making use of L1 knowledge in constructing the L2 grammar. There are two ways of conceiving of this use of L1 knowledge. First, it can be a basis for establishing hypotheses about L2 rules and items (Faerch & Kasper, 1987, p. 114). It can also be the initial state, as described by Schwartz (1996, 1998), so that the L1 grammar is gradually restructured to become more like the L2 grammar. In terms of mainstream linguistic theory, L2 learners start out with the parameter settings of their L1. This explains the transfer of word order, as previously described. Referring to White (1991), Sharwood Smith (1996) noted that UG is relevant to SLA but that “learners assume that L1 parameter settings will work for L2 unless *evidence turns up to disconfirm this assumption*” (p. 75, emphasis in original). According to Schwartz (1998), the way that progress toward the L2 or TL takes place is that input that cannot be accommodated to the L1 grammar causes the system to restructure. She observed: “In some cases, this revision may occur rapidly; in others, much more time may be needed” (p. 147).

For basic word order, the revision does seem to occur very rapidly. This is most probably because basic word order is quite a salient structural characteristic (Comrie, 1997, p. 369; Odlin, 1990, p. 110). In other words, learners nor-

mally have metalinguistic awareness of rules for the ordering of verb and object unless there are many rules involving structural detail (as in German and Dutch). If we assume that SLA is relevant to pidgin and creole genesis, then this would explain why the word order of the substrate languages is not usually maintained in the resultant contact language.<sup>10</sup> Minimal exposure to the lexifier language would have caused rapid restructuring.

Then the question becomes: Why would other substrate features remain? The answer may be that other L2 features are not so accessible to consciousness. For example, Lightbown and Spada (2000) reported that L1 English learners of French have no metalinguistic awareness of the rules they use for adverb placement and therefore do not notice how their English sentences differ from those of French. They concluded, therefore, that positive evidence is not sufficient to lead to acquisition. Similarly, White (1991) argued that L2 learners, unlike L1 learners, need negative evidence to reset some parameters. In more general terms, Schwartz (1998) wrote:

Convergence on the TL grammar is not guaranteed; this is because unlike L1 acquisition, the L2 starting point is not simply open or set to “defaults,” and so the data needed to force L2 restructuring could be either nonexistent or obscure. (p. 148)

If input from the lexifier language was restricted in pidgin and creole development, as most creolists believe, then these insights from SLA theory would explain the retention of substrate features. This point of view has been expressed in different terms by DeGraff (1996):

If target PLD [primary linguistic data] in L2A [second language acquisition] remain (moderately) below threshold T [the level needed for UG-constrained learning to occur], then the adult learner might have no other choice but to resort to the relexification-like strategies that make use of L1 settings. (p. 723)

In the case of creoles, such as Sranan (previously mentioned), which have preserved aspects of basic word order from their substrate languages, we would have to assume that there was very little input from the lexifier. This is indeed what occurred in Suriname: The lexifier, English, was the language of the colonial power only from 1651 to 1667, after which it was replaced by Dutch (Adams & Smith, 1995, p. 219).

### Transfer in L2 Use

Many SLA researchers think of transfer primarily as a feature of L2 performance rather than acquisition. Referring to “the demands made on L2 processing systems by various kinds of tasks,” Kellerman (1995) noted that “what can be seen . . . is not so much the role of the L1 in L2 *development*, but its role in second language *use*” (p. 130, emphasis in original). Meisel (1983b, p.

44) referred to transfer as “a strategy of second language use.” According to this view, transfer is considered to be a communication strategy, or a means for overcoming communication problems.<sup>11</sup> Sharwood Smith (1986, p. 15) stated that crosslinguistic influence (or transfer) typically occurs in two contexts: (a) “overload” situations or “moments of stress” when the existing L2 system cannot cope with immediate communicative demands, and (b) “through a desire to express messages of greater complexity than the developing control mechanisms can cope with.” Jarvis and Odlin (2000, p. 537) described transfer in L2 use as a strategy for coping with the “challenges of using or understanding a second language.”

If we conceive of transfer in this way, then we can understand the answer to another, specific problem of substrate influence previously mentioned: Why do creoles have more substrate features than their pidgin predecessors even though creole speakers, unlike pidgin speakers, never knew the substrate languages? Tok Pisin (spoken in Papua New Guinea) is an expanded pidgin, closely related to Bislama, which is now being acquired as an L1 by large numbers of children. Sankoff (1994) showed that children who speak Tok Pisin as their L1 use the preverbal particle *i-* with serial verbs in a pattern that is quite similar to that of the Austronesian substrate languages. However, earlier generations of speakers of Tok Pisin, who were bilingual in the substrate languages, did not use this similar pattern. Sankoff believes that the substrate languages are the source of the pattern used by the children and asked (p. 312): “Why should such a development be realized by speakers who are clearly more distant from the Austronesian substrate than their grandparents or great grandparents were?”

The explanation seems to be that this was an innovation of their parents. A pidgin is used only for restricted purposes, and its grammar is restricted to match. When the use of a pidgin is extended into new areas, its grammar is also expanded. We have seen that, to compensate for shortcomings in their L2, speakers may fall back on their L1. In this case, when the need arose (e.g., in using the pidgin L2 for a new function), its speakers fell back on their L1 (one of the Austronesian substrate languages) to provide missing grammatical structures. Sankoff (1994, p. 315) expressed it this way: “It may be that when people want to express complex ideas they have not previously needed to communicate in the new language, they find themselves drawing more deeply from the resources of their native languages.” In other words, people transfer features from their L1 into their L2 (Tok Pisin in this case) as a communication strategy in L2 use. Of course, the ultimate extension of use of a pidgin L2 is when speakers shift to it as their primary language, which they then pass on to their children. Thus, Sankoff concluded that “maximal influence is exerted from a substrate not when initial contact occurs, but just at the point of language shift” (p. 314). This influence is in the form of transferred features that are then passed on to and acquired by the children.

A similar problem of substrate influence occurs with regard to HCE. Roberts (1998) has shown that three key features—the nonpunctual aspect

**Table 2.** Functions of HCE *stei* compared to Portuguese *estar* and nonpunctual markers in other creoles

Functions	HCE <i>stei</i>	Portuguese <i>estar</i>	Other creoles nonpunctual
Progressive marker	+	+	+
Habitual marker	-	-	+
Inchoative with statives	-	-	+
Copula with adjectives	+	+	-
Copula with locatives	+	+	- <sup>a</sup>
Perfective marker	+	+	-

<sup>a</sup>Some West African creoles are exceptions in having the same morpheme as the progressive marker and the copula for locatives.

marker *stei* (or *ste*), combinations of TMA markers (*wen*, *stei*, *gon*), and *fo* introducing clausal complements—first appeared in published texts in the early 1920s and are attributed to the speech of the locally born children who were monolingual speakers of the creole. This leads to the conclusion that these features were innovations of the children. However, a detailed examination of the three features reveals striking similarities with one of the substrate languages, Portuguese (Siegel, 2000). In fact, in terms of these features, HCE is more similar to Portuguese than to other creoles. For example, the functions of the HCE nonpunctual marker *stei* are the same as those of Portuguese *estar*, as shown in Table 2. How can this be explained?

As already mentioned, Roberts (1998, 2000) demonstrated that the first generation of locally born children of the immigrant laborers were generally bilingual in a form of English and their parents' language and that it was largely the second generation of locally born children, rather than the first, who became the original speakers of HCE. This occurred during the period from 1905 to the early 1920s. The dominant ethnic group at this time, in terms of numbers (of locally born second generation) and prestige, was the Portuguese.<sup>12</sup> Roberts (2000, p. 266) also showed that the Portuguese were the first immigrant group to shift from their ancestral language. Thus, adult members of the first locally born generation, bilingual in Portuguese, adopted the existing pidgin as their primary language and passed it on to their children, who acquired it as their L1. Therefore, it was likely that the grammatical innovations were the result of transfer by these adults, not the inventions of the children.

When the innovations first occurred, they were the result of a communication strategy and not firmly established in the grammars of all adult speakers. This may be why they were not reported in published sources. Nevertheless, the innovations were added to the pool of variants that were used for communication and perhaps would have been incorporated into the pidgin over a long period of leveling. However, leveling is accelerated when nativization oc-

curs (Siegel, 1997), and thus the children rapidly regularized these innovations and integrated them into the grammar of the newly emerged creole. (As these features occurred more regularly in the speech of the children, they became more noticeable and were subsequently recorded in published texts.) This scenario would support the statement by DeGraff (1999), following Slobin (1977), that “adults are *innovators* whereas children are *regulators*” (p. 488, emphasis in original). Referring to Sankoff (1994) and Newport (1999), DeGraff concluded that “in L1A [first language acquisition] children amplify and restructure certain (substrate-based) innovations introduced through L2A [second language acquisition] by adults, and they incorporate (previously less-than-stable) innovations into permanent and stable parts of their grammars” (p. 507). In light of SLA research on transfer, I would agree with this conclusion except that instead of “innovations introduced through L2 acquisition,” I would say innovations introduced through transfer in L2 use.

In summary, it has been demonstrated that transfer in pidgin and creole genesis can occur in the earliest stage of development as part of L2 acquisition as well as in the latest stage of development as part of L2 use. With regard to pidgin and creole genesis, we would not expect evidence of transfer typical of early acquisition (e.g., basic word-order transfer) unless there was extremely limited contact with the lexifier. (We might expect, though, other evidence of early acquisition, such as reduced inflection and multifunctionality.) However, we would expect more evidence of transfer typical of later language use, such as TMA markers.

### **SOCIOLINGUISTIC PERSPECTIVES ON TRANSFER IN SLA**

In the majority of cases in which the emerging contact language did remain in contact with its lexifier, it is still necessary to explain why acquisition did not progress further. In other words, why did pidgin and creole grammars remain distinct from those of their lexifier? The early SLA literature contains a great deal of work on factors that lead to so-called imperfect SLA. The sociopsychological models consider individual factors such as motivation and social identity as well as sociostructural factors such as relative size, status, and power of the L1 and L2 groups (for an overview, see Ellis, 1994; Siegel, 2003). However, more recent work has criticized these models and branched out into new directions. For example, Tollefson (1991, pp. 72–76) pointed out that these models imply that learners are free to make choices about when they interact with L2 speakers or whether they are motivated to integrate with the L2 culture. Thus, lack of L2 attainment can be blamed on the individual learner. These approaches do not pay enough attention to the sociohistorical factors of power and domination that limit the choices available to learners. Ethnographic studies such as those by Peirce (1995), McKay and Wong (1996), and Siegel (1996) take these factors into account and also adopt the post-structuralist view that people have multiple and changing social identities.

Another more recent perspective in the SLA literature is that a variety that

differs from that of an idealized native speaker does not necessarily represent failure in attaining L2 competence. As Rampton (1997, p. 294) observed: "People are not always concerned with improving their L2 interlanguage." In addition to expressing a particular identity of the speaker, it may also be used to show solidarity with a peer group or to indicate attitudes toward society in general. For example, stylized South Asian English is used by the adolescents in England studied by Rampton (1995) not because of any lack of proficiency in local varieties of English but for joking and ridiculing racist attitudes. As Firth and Wagner (1997, p. 292) observed, nonnativelike structures may be "deployed resourcefully and strategically to accomplish social and interactional ends." Furthermore, the decision not to use nativelike L2 forms or not to use the L2 at all may represent a form of resistance, which alongside achievement and avoidance is another kind of communication strategy (Rampton, 1991, p. 239). It follows, then, that in many situations nativelike proficiency is not the target of language learning.

Both of these recent perspectives are relevant to pidgin and creole genesis and provide explanations other than "lack of success" or "failure" in acquiring the lexifier that have been justifiably criticized by creolists such as Baker (1994). The second perspective would certainly support Roberts's (2000, pp. 273–274) view that an important factor in the development of HCE was its prestige as a marker of local identity. Certainly, this covert prestige remains true today, and it is significant in preventing wholesale acquisition of more standard English just as it was in the past.

Getting back to transfer, in discussing how group solidarity is a key factor in the persistence of low-prestige, nonnative L2 varieties in individuals, Faerch and Kasper (1987, p. 124) pointed out:

In certain types of IL communication, 'low-prestige language varieties' may be interpreted as IL varieties with high transfer load. The clearest case for this phenomenon of transfer is ethnic minority groups marking their group-membership by preserving features of the L1 when using the dominant L2.

Thus, transfer in L2 use is seen as a source of many of the features that are markers of nonnative speaker identity—markers that give a nonnative variety its covert prestige. With regard to pidgins and creoles, it can be said that many such markers are the result of transfer of features from the substrate languages.

### **CONSTRAINTS ON TRANSFER**

One problem with the substrate hypothesis is that it has failed to articulate a set of principles or constraints to explain why some substrate features end up in a pidgin or creole, whereas others do not. Given that transfer in L2 acquisition and use appears to solve some of the problems of substrate influence, research on transfer constraints in SLA may provide important insights into the specific factors that may have affected the degree of substrate influence in pidgins and creoles.

In an earlier article (Siegel, 1999), I surveyed the literature on proposed transfer constraints and examined which ones best accounted for the absence of certain core Oceanic substrate features in Melanesian Pidgin, such as a preverbal reciprocal marker and the marking of inalienable versus alienable possession. I identified some specific constraints that seem to affect the availability and retention of substrate features. These have to do with the linguistic properties of both the superstrate (lexifier) and the substrate languages. The most important factors appear to be perceptual salience and congruence. First, for a substrate feature to be transferred, it must have “somewhere to transfer to” (Andersen, 1983, 1990). That is, there must be a morpheme (or string of morphemes) in the superstrate that can be used or reanalyzed according to the rules of the substrate. This superstrate morpheme or string must be perceptually salient (i.e., a separate word or words, or at least a stressed syllable), and it must have a function or meaning related to that of the corresponding substrate morpheme. Second, the substrate and superstrate morphemes should be syntactically congruent, at least superficially. The absence of such a morpheme in the superstrate or the lack of structural congruence constrains transfer and thus the availability of the particular substrate feature.

In light of the preceding discussion, the notion of this so-called congruence constraint clearly needs some revision. First of all, if we accept Schwartz’s (1996, 1998) model of the L1 being the initial state for L2 acquisition, then there can be no constraint on transfer at the point of initial L2 acquisition. Instead, the congruence constraint would apply only to whether an initially transferred feature is retained. For example, with regard to basic word order, if a lack of congruence with the L2 is perceived, then the IL would be restructured to conform to the L2 data. However, if an L2 feature is misinterpreted as being parallel in function and position to a feature in the L1, then restructuring would not occur. Second, it is clear that the congruence constraint cannot apply in situations in which there is little or no input from the original L2 (i.e., in situations, such as Suriname, in which the original lexifier had been removed).<sup>13</sup> This analysis actually corresponds to that of Andersen (1990). In addition to his Transfer to Somewhere principle, he introduced the Relexification Principle (p. 62) to account for basic word-order transfer as found among Japanese speakers of Hawai’i Pidgin English (Nagara, 1972): “When you cannot perceive the structural pattern used by the language you are trying to acquire, use your native language structure with lexical items from the second language.”<sup>14</sup> Andersen further stated:

It may be the case that, in settings where pidgin languages develop, there is not enough input from the target language available to promote transfer based on the Transfer to Somewhere principle, and relexification is the only resource the learner has. (p. 63)

With these revisions in mind, I believe that the congruence constraint still provides the best explanation for the absence of particular substrate features in creoles. However, in a recent paper, McWhorter (2002) proposed an alter-



native explanation for the absence of certain features in creoles. He argued that features not specified by UG are “ornamental, rather than fundamental, to human language” (p. 4). Given that such features are “functionally expendable,” they will not be found in pidgin languages, which are “expressedly designed for only basic communication” (p. 15). Thus, these “inessential” features are not found in creoles because of “the fact that creoles began as pidgins” (p. 28). For example, McWhorter claimed that overt marking of the distinction between alienable and inalienable possession (one of the features I dealt with) is not found in creoles because it is “an ‘ornamental’ grammatical feature, quite possible within a natural language but by no means necessary to it” (p. 15). McWhorter suggested that this feature and five others described in his paper be added to Bickerton’s (1987) list of features that are absent in creoles because they are superfluous to basic communication, or they require long periods of evolution to emerge, or both. These features are in contrast to the 10 “minimal grammatical functions that must be discharged” in a natural language, listed by Bickerton (1988, p. 278) and presumably found in all creoles.<sup>15</sup>

There are two problems with this proposal (besides the need for some independent criteria about what is ornamental in a language and what is fundamental). First, there is evidence that creoles do have some of these allegedly ornamental features. For example, Tayo, a French-lexified creole spoken in New Caledonia, has one feature, an evidential marker, that McWhorter (2002) claimed is generally absent in creoles.<sup>16</sup> In Tayo, the preverbal marker *āke/ke* (from French *rien que* “nothing but, just”) indicates some degree of subjective reality (i.e., the speaker is bearing witness to the truth of the statement), as illustrated in (8).<sup>17</sup>

- (8) a. *Ma ke ule vyā.*  
 1SG REAL *want come*  
 “I really want to come.” (Chris Corne, personal communication,  
 December 15, 1998)
- b. *Sola āke fe ā grā barach si larut.*  
 3PL REAL *make a big barricade on road*  
 “They’ve [really] made a big barricade on the road.” (Siegel, Sandeman,  
 & Corne, 2000, p. 93)

My explanation is that this feature is found in Tayo because preverbal markers of asserted or insisted reality are found in all three key substrate languages (Cèmuhi, Drubea, and Xârâcùù). Additionally, there is a salient string of morphemes in French that can occur preverbally and that could be (mis)-interpreted as having a similar function, as illustrated in (9).<sup>18</sup>

- (9) a. *Lé tèko pwölu.* Cèmuhi  
 3PL REAL *dance*  
 “They are dancing (The dance is in full swing).” (Rivierre, 1980, p. 103)
- b. *Nri pā ngere-re ye.* Drubea  
 3PL REAL *think-NONSTATIVE 1PL*  
 “They think of us.” (Païta & Shintani, 1990, p. 27)

- c. È *và piicè chaà péci.* Xârâcùù  
 3SG REAL look for ART book  
 “He is really looking for a book.” (Moyses-Faurie, 1995, p. 121)

The second problem with the proposal is that one of the “minimal grammatical functions” supposedly found in all creoles is absent in creolized Melanesian Pidgin: a reciprocal marker. My explanation is that there is no preverbal form in the lexifier, English, that could be reanalyzed as a marker of reciprocity parallel to the preverbal reciprocal markers in the substrate languages (Siegel, 1999, pp. 34–35). In other words, there is no congruent structure and thus nowhere to transfer to. On the other hand, Australian Kriol, which also is lexified by English, does have a reciprocal marker, *-gija* (from English “together”), as illustrated in (10).

- (10) *Dei oldei dringg-im-bat biya en faitfait-gija.*  
 3PL always drink-TRANS-CONT beer and fighting-RECIP  
 “They’re always drinking beer and fighting each other.” (Munro, 2000, p. 6)

Munro (p. 7) reported that a reciprocal suffix is found in four out of the five key substrate languages she has examined, as shown in this sentence from Mara in (11).

- (11) *Rangbala-nyi-rlana.*  
 hit.3PL-DUR.PA.PUN-RECIP  
 “They hit each other.” (Heath, 1981, p. 205)

The form *together* in English occurs in the same postverbal position as the reciprocal markers of the substrate languages and has some shared function or meaning. Thus, it could be misinterpreted as corresponding to the substrate structure, and transfer could occur. So the congruence constraint on transfer, based on SLA research, still seems to offer the better explanation for the presence or absence of substrate features in creoles that are in contact with their lexifiers or have been for an extended period of time.

## VERIFYING SUBSTRATE INFLUENCE

The question of whether particular features of pidgins and creoles are the result of substrate influence still causes a great deal of controversy. McWhorter (1996) proposed four tests to determine whether a particular construction in a creole is an instance of transfer from a particular substrate language. The tests are questions, and if the answer to any one is “no” then transfer cannot be definitely assumed (pp. 470–471):

1. Was this [substrate] language well represented numerically in the founding stages of the language?
2. Is this construction relatively marked crosslinguistically? If not, does the manifes-

tation of this construction in the creole language match the particular configuration in the candidate substrate language closely?

3. Does this construction regularly appear in creoles of other lexical bases with the same substrate?
4. Is this construction of robust semantic substance?

From what has been previously described, there are a few problems with these tests. With regard to question 1, it has been shown that transfer may occur in the early or late stages of development, and different substrate groups may be involved at different stages. For example, with HCE, Hawaiian was the most influential substrate language in the early stage but Cantonese and Portuguese were in the later stages (Siegel, 2000). With regard to question 3, I have demonstrated that the congruence constraint may affect whether a substrate feature is transferred and retained. This depends on features of both the superstrate and substrate languages, so it is possible that different superstrates (lexifiers) will have different patterns of substrate influence with the same substrate. For example, as previously mentioned, French-lexified creoles in the Caribbean have a postnominal definite article *la* parallel to that of the key African substrate languages. To the best of my knowledge, however, English-lexified creoles with the same substrate languages do not have a postnominal definite article. An explanation may be that French has the commonly used postnominal deictic marker or discourse marker *là*, which shares some functions with the substrate determiner in the same position, but English has no such postnominal morpheme. Consequently, there was somewhere to transfer to in French but not in English. With regard to question 4, McWhorter claimed that items of little or no semantic content, such as copulas and complementizers, are not transferred. However, my recent work on HCE (Siegel, 2000) provided evidence that the patterns of use of the Portuguese copula *estar* and the complementizer *para* were transferred on to forms *stei* and *fo* in the creole.

Again, the SLA literature offers an idea about alternative tests for substrate influence. Jarvis (2000, p. 253) proposed three types of empirical evidence that can be used to establish convincingly that IL behavior exhibits L1-related effects, or, in the terms used in this paper, that certain structures in the IL are derived from language transfer from the L1. These are:

1. intra-L1-group homogeneity in learners' IL performance
2. inter-L1-group heterogeneity in learners' IL performance
3. intra-L1-group congruity between learners' L1 and IL performance

He suggested that L1 influence could be established by the presence of two of these three types of evidence. In other words, we can assume there was transfer when two of the following can be verified: (a) Learners with the same L1 exhibit the same IL features with the same target L2, (b) learners with different L1s exhibit different IL features with the same target L2, or (c) similarities exist between learners' IL features and features of their L1 (p. 253).

These types of evidence could be adapted as a test for substrate influence in creoles. We could assume there was substrate transfer when two of the following can be verified: (a) Creoles and L2 varieties (or ILs) with the same lexifier or target language and the same substrate languages exhibit the same features, (b) creoles with the same lexifier language but different substrate languages exhibit different features, or (c) similarities exist between the features of the creole and the features of the substrate languages.

Of course, evidence of the third type is what is usually presented in accounts of substrate influence, but, as Sebba (1997, p. 184) pointed out, to be convincing these similarities need to be striking rather than unsurprising. This type of evidence also corresponds to McWhorter's (1996) second test, though evidence of the other types is rarer. With regard to the first type, I showed two examples in the studies of learners' varieties of French done by Véronique (1994) and Mather (2000). With regard to the second type, my study (Siegel, 2000) concluded that some of the features of HCE, such as the TMA markers and clausal complements, are actually quite different from those of other creoles with different substrates. More investigations looking for evidence of these first two types would be very beneficial research to the field of pidgin and creole studies.

## CONCLUSION

In summary, evidence seems to show that transfer in both L2 acquisition and L2 use plays a part in the development of pidgins and creoles, thus providing answers to some of the difficult questions about substrate influence. Although the genesis of a contact variety is obviously not the usual outcome described in the SLA literature, some of the same processes are involved. This article has shown how SLA research can provide insights into the origins of particular creole features, the role of transfer at both the early and later stages of pidgin and creole development, the reasons for the retention of transferred features, constraints on substrate influence, and a research agenda for verifying substrate influence.

## NOTES

1. Consequently, it is necessary to look beyond most of the literature in language contact and contact-induced language change. This is because notions such as substratum interference or shift-induced interference (e.g., Thomason & Kaufman, 1988) refer to the end results of the social processes as reflected in language change rather than to the individual mechanisms that led to the changes in the first place.

2. According to all of the hypotheses, the principles of UG constrain the properties of IL like those of any natural language. However, according to the Full Transfer–Full Access hypothesis, in contrast with the others, UG does not play a role in determining which particular properties can be transferred.

3. The transfer of Japanese SOV word order into Japanese Pidgin English in Hawai'i is documented by Nagara (1972).

4. However, Baker does allow for the transfer of features into a preexisting pidgin (personal communication, June 14, 2002).

5. Although the indigenous inhabitants of New Guinea and the Torres Strait may have been addressed by some Whites in foreigner talk or an established pidgin, such as East Australian Pidgin

English (Baker, 1993; Baker & Mühlhäusler, 1996), they still had opportunities to hear Whites talking to each other in established varieties of English.

6. Note that this feature is found only in some French-lexified creoles, such as those of Réunion and Louisiana (Alleyne, 2000, pp. 129–130). It is also found in Mauritius, where it was a later rather than early development (Baker & Corne, 1982, pp. 64–78).

7. Zobl (1982) illustrated that the developmental sequence for determiners in the L1 acquisition of French includes a stage in which the postposed deictic *là* is used as a determiner. In the L2 acquisition of French, this stage is skipped when the learner's L1 has prenominal determiners but not when the L1 has a postnominal deictic as for example Vietnamese does. Significantly, Pidgin French in Vietnam also has the postposed determiner *la*. Further research is required to determine whether postposed articles or deictics are found in the substrate languages of other French-lexified pidgins and creoles with this feature.

8. In Portuguese, what is traditionally called the perfect tense uses a form of *ter* “have” followed by the verb (past participle) to mark an action that began prior to another action in focus, as illustrated in (i) and (ii).

- (i) *Esta semana tenho visto a minha mãe todos os dias.*  
 “This week I’ve seen my mother every day.” (Willis, 1965, p. 210)
- (ii) *(Elas) tinham partido.*  
 “They had left.” (Willis, p. 202)

9. Other substrate languages included Hawaiian, Cantonese, Japanese, Spanish, Korean, and various languages from the Philippines.

10. For example, the SOV word order of Japanese Pidgin English in Hawai’i was a transient feature and was not found in the stabilized Hawai’i Pidgin English.

11. Another such strategy is codeswitching to the L1. Transfer, however, involves the continued use of L2 lexical items rather than switching to the L1.

12. Population figures for the second locally born generation are not available, but we know that on average their parents were born in Hawai’i at least 15 years earlier. Figures for the locally born population in this period (Roberts, 2000, p. 265) illustrate the dominance of the Portuguese compared to the other two largest groups. The numbers of locally born in 1890 were 4,117 Portuguese, 1,451 Chinese, and 250 Japanese; in 1896 there were 6,959 Portuguese, 2,234 Chinese, and 2,078 Japanese; and in 1900 there were 10,604 Portuguese, 4,026 Chinese, and 4,877 Japanese.

13. This was previously recognized by Siegel, Sandeman, and Corne (2000, p. 83), who stated that the constraint applies “especially in situations where the emerging creole remains in contact with its lexifier.”

14. However, because of the variation that occurs in the data, Andersen (1990, p. 62) noted: “As stated this principle is still too imprecise.”

15. These grammatical functions are

- (a) articles, (b) tense/aspect/modality forms, (c) question words, (d) a pluralizer, (e) pronouns for all persons and numbers, (f) forms to mark oblique cases, (g) a general locative preposition, (h) an irrealis complementizer, (i) a relativizing particle, (j) reflexives and reciprocals. (Bickerton, 1988, p. 278)

16. Here I adopt the view of evidentiality that includes epistemic modality—more specifically, grammatical specification of the probability of the truth or reality of the proposition (Dendale & Tasmowski, 2001).

17. Examples of the use of *rien que* in French are: *la vérité, rien que la vérité* “the truth and nothing but the truth”; and *rien que d’y penser ça me rend furieux* “just thinking about it makes me furious.” Ehrhart (1993, p. 167) described the function of this marker as expressing emphasis, but this analysis is inadequate. On the basis of Corne’s earlier fieldwork, Siegel et al. (2000, pp. 92–93) tentatively analyzed it as a marker of asserted reality. Corne’s later fieldwork confirmed this analysis (personal communication, August 19, 1998).

18. Tone marking in Cèmuhî and Drubea is not shown here.

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